

Progressing Protective Factor Assessment – Assessing the Construct Validity of the
Structured Assessment of Protective Factors for violence risk – Sexual Offence version
(SAPROF-SO)

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Abstract

Most current sexual offence-specific risk assessment tools utilise risk factors, focusing on individual weaknesses and deficits rather than potential strengths which may promote desistance from future offending. An increasing focus on so called protective factors has led to the development of measures that include these factors to understand the role they play in risk prediction. The current study is part of a longitudinal validation study of the Structured Assessment of Protective Factors for violence risk – Sexual Offence version (SAPROF-SO), a recently developed measure of protective factors against sexual offending. The study aimed to build on earlier research by examining the construct validity of proposed protective factors and internal consistency of hypothesised domains (internal capacity, prosocial identity, prosocial connection, stability and professionally-provided support) in a self-selected sample of New Zealand men with convictions for a sexual offence ($N = 60$). Construct validity was examined by exploring relationships between SAPROF-SO scores, risk assessment scores and a measure of wellbeing. As hypothesised, the SAPROF-SO demonstrated moderate independence from risk measures and a moderate relationship with wellbeing. Internal consistency was generally good for all but one proposed SAPROF-SO domains. The findings highlight the potential value of protective factors in risk assessment, with further research needed to examine how to best integrate them into current assessment practices. Limitations of the current study and implications for future research are discussed.

Keywords: protective factors, SAPROF, sexual offending, desistance, risk assessment, validity

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Introduction – Relevance of the Current Research

The assessment of an individual's risk of reoffending is an important task for professionals working in correctional/forensic psychology, particularly for individuals with convictions for a sexual offence. Risk assessment measures that have been appropriately validated are used to inform decisions about monitoring and supervision of individuals who have offended previously, based on their predicted level of risk. Risk assessment is a practice that has progressed significantly in the last two decades with respect to how risk is conceptualised and understood in risk assessment practices. Progress reflected in four generations of risk assessment has seen the development of tools designed to help better predict different and categorise risk, assessing risk factors that may increase the likelihood of reoffending (Bonta & Andrews, 2007). More recently, protective factors have been gaining traction in risk assessment as the demand in clinical practice grows for a strengths-based approach to aid current risk prediction tools, particularly for individuals who have sexually offended (Thornton, 2016b). Protective factor assessment is very much in its infancy, given that there are few validated protective factor-driven tools. There are also concerns regarding how protective factors are defined and whether they genuinely measure something different to risk factors (Fortune & Ward, 2017). To improve risk prediction, new protective factor tools must address these concerns. The current study aims to further explore how protective factors fit in assessment practices by assessing the construct validity of a recently developed protective factor-driven tool, the Structured Assessment of Protective Factors for Violence Risk – Sexual Offence version (Willis, Thornton, Kelley & de Vries Robbé, 2019).

The forthcoming paragraphs will explore the evolution of risk assessment, overviewing relevant tools to help capture the changes made between each of the four generations, leading into a discussion on risk factors and the limitations they pose. Links will be made to sexual

offence-specific risk factors and risk prediction for those with sexual offence convictions, a subgroup of offending that has historically been approached with some caution (Thornton, 2016a). The development and use of protective factors in risk practices will then be examined, leading into a discussion of protective factor-driven assessments, namely the SAPROF-SO.

Evolution of Risk Assessment

First Generation

The first generation of risk assessment was characterised by unstructured professional judgement. For many decades, risk assessment and decisions relating to security and supervision for those who offended were made by correctional staff based on their personal experience and opinion (Bonta & Andrews, 2007). Professional judgement was a convenient and inexpensive way to assess risk, despite the lack of consistency and potential bias that exists. Walker and O'Rourke (2013) provided a consensus summary of the issues surrounding unstructured professional judgement, by stating they were an unclear route that was based solely on opinion which may well vary from person to person. In other words, personal judgements of risk were subjective rather than empirically informed, with a clear lack of structure resulting in practices that lacked predictive accuracy

Second Generation

The late 20th century saw a rise in demand for tools that used a structured approach to predict risk given that literature reviews consistently highlighted the ability of such tools to predict risk and human behaviour more accurately than professional judgement alone (Bonta & Andrews, 2007). As a result, two primary frameworks were developed that would become staples of risk assessment practices: actuarial risk assessments and structured professional judgement (SPJ) tools. Actuarial assessments weight information and combine them based

solely on fixed, specific rules to score and/or categorise individuals. SPJ approaches assess and combine information based on professional discretion and tool-specific guidelines, largely without the use of a set numeric formula. Actuarial tools were developed from the second generation onward, preceding SPJ measures (which would not be introduced until the third generation of risk assessment). Structured risk assessment tools distinguished different risk levels through the assessment of empirically derived factors. Specifically, second generation tools relied on static risk factors to predict and/or categorise an individual's risk of reoffending, with clinicians scoring client risk based on available information. A static risk factor refers to a historical, unchangeable through intervention characteristic of an individual who has previously offended that is seen to increase their risk (Bonta & Andrews, 2017), such as a person's prior criminal history. In risk assessment, an actuarial tool would see item scores summed and total scores correspond to relative risk categories. Nominal categories (e.g., low, moderate, high etc) were used for a long time, with risk often described today using a five-level risk classification system (e.g., below average, average, above average etc).

It is important to note that many of the current tools used in risk prediction are based on empirical research and, as such, are atheoretical in nature. Risk assessment tools developed from the second generation onward were born out of the dominant Risk-Need-Responsivity (RNR) model, with a focus on empirically identified risk factors an integral part of the process. Developed by Andrews, Bonta and Hoge (1990), the RNR model is widely considered the most influential framework in correctional/forensic psychology assessment and treatment. The model is focused on the three core principles. The risk principle states that the assessment or treatment of an individual who has offended must be appropriate to their risk of reoffending. The need principle revolves around identifying also referred to as criminogenic needs that may help inform treatment targets. Criminogenic needs are characteristics or traits of a person that relate to the likelihood of recidivism, which are referred to in risk assessment as dynamic risk

factors (Bonta & Andrews, 2017). Responsivity involves delivering a treatment or intervention for an individual who has offended in a manner that is consistent with the ability, learning style, strength and motivation of that person.

Measures developed during this period were driven by static risk factors. The Static-99R (Helmus, Thornton, Hanson & Babchishin 2012) is a risk assessment tool that used to predict the risk of sexual recidivism for individuals with prior sexual offence convictions. The factors on this tool are scored and tallied together, with a higher score indicating an individual is at a greater risk of reoffending. Items in the Static-99R capture victim characteristics (e.g., *Any unrelated victims*) and offence-related factors (e.g., *Prior sentencing dates*) empirically associated with an increase in risk. Sexual offence-specific tools (like the Static-99R) contain items that were relevant to many samples of individuals with sexual offence convictions, highlighting a strength of static risk factors (see Helmus, Hanson, Thornton, Babchishin & Harris, 2012 for a discussion). Bonta and Andrews (2017) provided a summary of these limitations by stating that while static risk factors hold value in risk prediction, they are limited largely by their connection to an individual's criminal history. Additionally, static risk tools make risk an unchangeable constant, despite evidence that risk can and does change over time. As a result, static risk factors alone cannot account for a complete understanding of an individual's current level of risk.

Third Generation

The limitations of static risk factors led to the development of both actuarial and SPJ-framed tools that included dynamic risk factors, signalling a shift into the third generation of risk assessment. Dynamic factors are behavioural, social and/or psychological characteristics of a person that have the potential to change over time and subsequently increase or decrease risk for someone who has previously offended (Bonta & Andrews, 2017). These potentially

intervenable factors are also known as criminogenic needs. Analysis of 201 non-recidivist and 208 recidivist case files by Hanson and Harris (2000) highlighted two distinct types of dynamic risk factor: stable and acute.

Stable dynamic risk factors reflect relatively enduring propensities for someone who has offended (such as an ongoing association with antisocial peers or family members). The concept of enduring propensities relates to long-term vulnerabilities in the form of potential risk factors that arise as a result of the interaction between an individual's environment and the strength of a given propensity (Thornton, 2016a). Understanding stable dynamic risk factors requires an understanding of the enduring propensities that exist for that person, be it in their interaction with their environment, other people or ways of thinking. Bonta and Andrews (2017) also note that stable dynamic factors, whilst potentially enduring over time, can be reduced. However, Ward and Fortune (2016) have suggested that stable factors are better understood as causal processes associated with offending, with the process itself requiring change rather a risk factor itself. Acute dynamic risk factors are factors that are subject to immediate or rapid change that precede imminent reoffending (such as an inability to deal with negative emotions). Acute factors reflect circumstances or situations that act as a catalyst for potentially rapid shifts in risk (Bonta & Andrews, 2017). As such, acute factors require assessment and monitoring on a more frequent basis.

Several stable dynamic risk factors have been identified and incorporated in various tools when predicting risk for those with sexual offence convictions. The STABLE-2007 (Hanson, Harris, Scott & Helmus, 2007) is one example, where risk-relevant propensities capable over changing over months or years for adult males with convictions for a sexual offence are measured. Stable dynamic factors included in this tool were grouped into domains measuring similar areas of potential risk, such as intimacy deficits (e.g., *Hostility towards woman*), general (e.g., *Impulsive Acts*) and sexual self-regulation (e.g., *Sex as coping*),

alongside *Significant social influences* and *Cooperation with supervision*. *Sex as coping* is an example of a sexual offence-specific stable dynamic risk factor, where an individual may use sex to deal with emotions that could be dealt with in a healthier way. As a risk factor, sex as coping would be an enduring propensity that may increase risk if this was a factor in the context of previous offending. As such, understanding individuals enduring propensities is key in predicting risk based on ongoing behaviours.

Much like stable dynamic risk factors, acute risk factors have been integrated into risk measures for the purpose of predicting and monitoring risk factors subject to imminent change that may signal the onset of offence-related behaviours. The ACUTE-2007 is a seven-item tool developed alongside the STABLE-2007 that assesses acute factors to predict general and sexual recidivism. *Victim access* is a sexual offence-specific acute factor, given that an individual may live near to a person that they previously offended against. Whether stable or acute, dynamic risk factors allow for risk to be predicted and monitored at each assessment, which is particularly useful in community supervision settings. Risk assessment tools that incorporate acute dynamic risk factors may therefore allow for an individual's current risk to be predicted with greater confidence.

The development of risk measures that included dynamic factors did by no means signal the end for static risk tools. Conversely, static and dynamic risk tools used conjointly in risk assessment demonstrated incremental predictive validity (i.e., both tools used together in assessment had a greater ability to predict recidivism than each tool alone did). Brankley, Babchishin and Hanson (2019) undertook a meta-analysis of 21 studies assessing the predictive accuracy of the STABLE-2007. All 13 STABLE-2007 items significantly predicted sexual recidivism, with an average AUC of .67. The strength of using dynamic risk factors in risk prediction is therefore an invaluable one, given the potential ability to capture change (compared to the historical, unchangeable through intervention nature of static risk factors).

Scholarly debate has often surrounded actuarial versus SPJ approaches, despite both using empirically derived risk factors to predict risk. Actuarial measures were generally favoured for their interrater reliability and predictive validity, based on the use of validated risk factors to inform strict scoring criteria. A meta-analysis of human behaviour literature by Grove, Zald, Lebow, Snitz and Nelson (2000) found tools that used an actuarial framework were more accurate at predicting behaviour than professional judgement tools in more than a third (33-47%) of the 136 studies included in analyses. SPJ approaches were favoured by others due to the focus on how risk factors manifest for each individual, whilst also examining how different groupings of risk factors could increase risk for different individuals (Guy, Packer & Warnken, 2012). The use of personal discretion, which is central to SPJ approaches, has been argued to lower reliability and validity, and thus actuarial measures are viewed as possessing greater predictive ability. Nonetheless, both approaches were seen to have value in risk assessment practices, with the limitations of each important in the development and validation of modern risk tools.

Fourth Generation

In recent years, a fourth generation of assessment has been introduced, with tools developed to help bridge the gap that exists between risk assessment and supervision (e.g., Giguere & Lussier, 2016). Fourth generation tools are also reported to be more receptive to an individual's treatment and intervention needs. Third and fourth generation risk assessment tools are often discussed in tandem in empirical research, given the similarities between measures. Furthermore, the predictive validity of both third and fourth generation risk assessment tools, despite being significantly more accurate than first and second-generation tools, is thought to be relatively similar (Giguere & Lussier, 2016). As such, empirical reviews suggest that fourth generation tools may offer little more than third generation measures with respect to prediction of risk.

Developing Valid Risk Assessment Tools

Exploring reliability and validity is an important part of developing any new psychometric tool for use in clinical assessment. For any widely used assessment tool, a plethora of validation studies exists to explore reliability and validity of what it intends to measure across different countries, cultures and settings. Once interrater reliability (the degree of agreement between scorers) has been established, the validity of a tool can be explored with some degree of confidence (e.g., McHugh, 2012).

Construct validity refers to whether a tool measures what it sets out to measure (Cronbach & Meehl, 1955). For example, a risk assessment tool would have support for construct validity if items in that tool were found to indeed measure risk. Construct validity is commonly explored by investigating relationships between a new risk assessment tool and a validated risk assessment tool and considers convergent validity and divergent validity. Convergent validity refers to the degree to which measures of the same construct that claim to be related are, in fact, related. The relationship between two constructs can either be a positive or negative one. Conversely, divergent validity refers to the degree to which measures of a construct that are expected to have no relationship are, in fact, not related. Before risk can be predicted with any degree of certainty, the constructs of a given risk assessment tool must be validated as measuring what they claim to. Such a concept is particularly important in protective factor assessment, given the ongoing debate surrounding whether protective factors do indeed represent a construct different from risk factors (see Cording and Beggs Christofferson, 2017 for a discussion). Predictive validity, which is the ability of an assessment tool to predict reoffending (APA, 2019), is more likely when construct validity is supported. Therefore, it makes sense to first develop a tool with reasonable construct validity before testing predictive validity.

Several tools have been developed and validated for assessment of individuals with sexual offence convictions. The Static-99R is the most commonly used sexual recidivism risk assessment measure (Kelley, Ambroziak, Thornton & Barahal, 2018) comprised of 10 static risk factors. The first Static-99R validation revealed moderate predictive accuracy for sexual recidivism (AUC = .72) and violent (AUC = .69) recidivism among individuals with various sexual offence convictions. (Helmus, Babchishin, Hanson & Thornton, 2009). Similar AUCs were reported in subsequent validation studies (e.g., Rettenberger, Matthes, Boer & Eher, 2010; Reeves, Ogloff & Simmons, 2018). Lower predictive validity was found for other tools used to assess sexual recidivism. For example, Kanters et al. (2017) observed low to moderate predictive validity using SVR-20 (Boer, Hart, Kropp & Webster, 1997) total scores (AUC = .62). The actuarial Sex Offender Risk Appraisal Guide (SORAG) (Quinsey, Harris, Rice & Cormier, 2006) was also found to have lower predictive validity (AUC = .66) of sexual recidivism than the Static-99R (e.g., Rettenberger, Rice, Harris & Eher, 2017). The tools described above represent only a small number of measures used to assess individuals with sexual offence-related convictions. Actuarial tools have generally performed better in the prediction of sexual offence-specific risk compared to SPJ tools (Hanson et al., 2017), which was a consideration in the development of the SAPROF-SO.

Limitations of Risk Factors

While substantial gains have been made across the generations of risk assessment, several limitations of current risk assessment practices remain. One such limitation relates to risk factors and their inability to account for an individual's personal or environmental strengths that may reduce reoffending (de Vries Robbé, Mann, Maruna & Thornton, 2015). Many risk factors used in violent and sexual offending assessment reflect the absence of a prosocial, healthy skill or tendency of an individual. Tools incorporating such factors therefore

focus on absences and ‘not-present’ tendencies, rather than considering what prosocial skills an individual possesses that may promote desistance (de Vries Robbé et al., 2015a). Willis, Yates, Gannon and Ward (2013) explored this notion further, suggesting that risk factor assessment is deficit focused and does not account for what is going well in an individual’s life. Assessments that only include risk factors are also theorised to be biased and over-predict the risk of reoffending, given that potential strengths and factors protecting an individual are ignored (e.g., Rogers, 2000). Several studies have also found that risk factor assessment is unable to accurately identify groups with a truly high risk of reoffending (especially sexual reoffending). For example, Beggs and Grace (2010) completed an independent validation study of the ^{VRS-SO} using a sample of adult males convicted for child molestation offences in New Zealand ($N = 218$). Individuals assessed as high risk ($n = 16$) had a reconviction rate of 56% after an average follow up of 12.2 years. Considering static risk alone, Hanson, Harris, Helmus and Thornton (2014) found only 22% of individuals assessed as high-risk (i.e., those in the above average or well above average risk categories based on the five level classification system) by the Static-99R were reconvicted at five-year follow up. These findings exist despite a good level of predictive accuracy for recidivism using risk assessment tools such as the Static-99R (AUC = .71) (Helmus et al., 2012), the SORAG (AUC = .69) and the SVR-20 (AUC = .71) (Rettenberger et al., 2010). So, whilst tools can predict risk, those at a truly high risk of sexual recidivism are not identified, leaving arguably the most important part of risk prediction in a position of uncertainty. Furthermore, tools are designed so that resources can be appropriately allocated, with only those of the highest risk more intensively managed – which has significant financial costs and limits the individual’s autonomy.

Ward and Beech (2014) believe that dynamic risk factors, whilst complex, are ambiguous and do not accurately predict the nature of sexual offending well. Such factors are often composite, with different underlying aetiologies used to distinguish risk factors. Perhaps

measuring underlying aetiologies/causes would make risk factor tools more accurate, by virtue of understanding what makes a risk factor. Further discussions by Heffernan, Wegerhoff and Ward (2019) suggested that dynamic risk factors were overly simplified, and that understanding causal mechanisms underlying risk factors will be crucial in theory development and empirical research. The authors provided a well-articulated summary in stating that dynamic risk factors identify a range of possible difficulties for individuals who have offended but fail to accurately identify the actual problem.

Protective Factors: The Next Generation of Risk Assessment?

In response to limitations of risk factor driven assessment, an increasing amount of focus has been placed on protective factors in terms of how they are defined and their potential to improve risk assessment practices. Some have described protective factors as the absence of risk factors (Zeng et al., 2015), others as factors that interact with risk factors to negate their impact on behaviour (Farrington, Ttofi & Piquero, 2016). de Vries Robbé et al. (2015) define protective factors as features of an individual's life, environment and/or context that are associated with desistance from reoffending among individuals who have previously offended. Where risk factors largely focus on deficits, protective factors focus on strengths, and are sometimes referred to as protective strengths. The study of desistance involves understanding the process of ceasing offence-related behaviour after ongoing, repeated engagement in crime (Laws & Ward, 2011). Protective factors are aspects of an individual's environment, personal, social and emotional life that reduce the influence of criminogenic needs and/or promote desistance. Some researchers have theorised that some protective factors existed independently of risk factors and are a unique construct (e.g., de Vries Robbé, de Vogel, Wever, Douglas and Nijman, 2016). Other protective factors were conceptualised as existing on a continuum relative to risk factors (de Vries Robbé et al., 2015). For example, negative social influences

are considered a risk factor, and exist on the same continuum as a prosocial social network which is a proposed protective factor. Risk factors and protective factors therefore have the conceptual ability to exist at the same time, if an individual is known to associate with prosocial others in one context and antisocial peers in another. Many definitions of protective factors have centred around strengths, which could be conceptually linked to overall wellbeing and life purpose. However, to the authors knowledge, no previous studies have examined the relationship between hypothesised protective factors and measures of wellbeing, such as the five pillars of wellbeing captured in the Positive emotion, Engagement, Relationships, Meaning and Accomplishment (PERMA) Profiler (Butler & Kern, 2016).

Protective factors, as a relatively new construct in risk assessment, have been critiqued in several ways. Primarily, desistance literature has suggested that the definition of protective factors as opposites of risk factors is conceptually flawed. Heffernan and Ward (2017) refer to protective factors having similar issues with dynamic risk factors, in that they are empirically derived constructs that fail to tell us much about why an individual offended and therefore inform treatment. Furthermore, the authors claim that while risk measures serve a different purpose to treatment, they do not align with one another as much as they could (in the context of fourth generation risk assessment). Helmus (2018) has suggested the vague nature of protective factor definitions has led to discussions around whether they are indeed new constructs or whether they simply measure existing factors more effectively. The ‘central eight’ risk factors have been used to categorise risk factors, and protective factor literature has often leaned on the reverse of these categories to define proposed protective factors. The relationship between risk and protective factors is therefore a murky one, with different perceptions on how each is related to the other. Cording and Beggs Christofferon (2017) provided a well-articulated summary of this uncertainty by stating the importance of examining construct validity for proposed protective factors, otherwise risk is merely being measured in a different way. Despite

this, protective factors have been framed as important to consider for risk assessment, with an extended focus on various personal, social and environmental factors that may add to a tools ability to predict risk.

The Incorporation of Protective Factors into Contemporary Risk Assessment Practices

Some risk assessment tools have attempted to integrate protective factors, while others are a stand-alone tool designed to be used with a risk assessment tool. The Inventory of Offender Risk, Needs, and Strengths (IORNS; Miller, 2006a) is a 130-item self-report measure that assesses static, dynamic and protective factors/strengths related to general, violent and/or sexual offending in adults. The IORNS includes a total risk index for the sum of static (12 items) and dynamic (79 items) factors minus protective (26 items) factors to generate an overall risk index. Protective items on this scale were categorised as either personal (factors related to desistance from offence-related behaviour) or environmental (prosocial support from family and peers) resources. Reliability analysis of the IORNS indicate moderate to high levels of internal consistency for the static ($\alpha = .73$) dynamic ($\alpha = .91$) and protective ($\alpha = .85$) indices (Miller, 2006b). Further validation by Miller (2015) indicated high predictive validity for the protective strengths scale (AUC = .86) among a sample of males with convictions for a sexual offence ($N = 110$). Despite only containing a small number of protective factors relative to risk factors, the IORNS provides an actuarial way to understand how protective factors may influence certain areas of risk.

The Dynamic Risk Assessment for Offender Re-entry (DRAOR; Serin, 2007, 2017) is an SPJ tool comprised of three domains: stable dynamic risk factors, acute dynamic risk factors and protective factors. The DRAOR was designed to assess general and/or violent recidivism, allowing supervising agents such as probation officers to continually assess an individual's circumstances. The six protective factors assessed in the DRAOR represent positive

characteristics that may protect an individual from reoffending, including responsiveness to advice, prosocial identity, social support, social control, high expectations and costs/benefits. The DRAOR was found to have good predictive accuracy for recidivism among a sample of 391 males serving community supervision orders in the United States (Chadwick, 2014). The DRAOR has been routinely used in New Zealand since 2010 and showed incremental predictive validity over the Roc*RoI static risk tool for violent and general recidivism (Averill, 2016). However, the DRAOR did not demonstrate incremental predictive validity for sexual recidivism, despite the protective factor domain predicting desistance from reoffending for general, violent and/or administrative offences. One explanation offered was that DRAOR items (in particular, protective factors) were not sexual-offence specific, and thus did not significantly predict sexual recidivism/desistance for individuals with sexual offence convictions. It is therefore unclear what protective factors might promote desistance from sexual recidivism, and if protective factors hold value in risk assessment for men with sexual offence convictions.

The Short-Term Assessment of Risk and Treatability (START) (Webster, Martin, Brink, Nicholls & Middleton, 2004), is an SPJ tool containing 20 dynamic risk/strength items that explores the issues and challenges of adults with mental illnesses at risk of adverse outcomes (e.g., violent recidivism). Those using the tool are encouraged to designate “critical” risks or “key” strengths when engaging in regular clinical assessments. Empirical studies have shown the START to be an effective tool to assist in planning and managing those at risk of violent behaviour, demonstrating construct validity with other protective factors tools and inter-rater reliability (Intraclass Correlation Coefficient, ICC = .87) (Nicholls, Brink, Desmarais, Webster & Martin, 2006). However, a meta-analysis of studies examining the predictive validity of the START by O’Shea and Dickins (2014) revealed the strengths scale inconsistently predicted desistance from aggressive and/or violent behaviours. Additionally,

many of the protective factors in the START have not been examined in samples of men with sexual offence convictions, and thus the predictive validity of the protective factor items is not clear.

Attempts to incorporate a protective factor scale in risk tools produced mixed results with respect to improving sexual recidivism risk assessment over risk tools alone. The validity results are an important point of consideration when justifying the current study, given the ambiguity surrounding protective factor definitions. The inconsistent findings led to discussions on how protective factor scales (and ultimately, protective factor driven tools) could be refined to improve prediction for individuals with sexual offence convictions.

The Structured Assessment of Protective Factors for violence risk (SAPROF)

The need for protective factor-driven assessment in clinical settings led to the development of the SAPROF (de Vogel, de Ruiter, Bouman & de Vries Robbé, 2012), a tool focused solely on protective factors. The SAPROF is one of the only current measures of protective factor assessment for violent offending and is designed to be used in combination with SPJ or actuarial risk assessment tools. The tool contains 17 protective factors scored on a three-point scale (0-2) across three scales; internal factors (e.g., *Intelligence* and *Coping*), motivational factors (e.g., *Motivation for treatment* and *Life goals*) and external factors (e.g., *Social network* and *Living circumstances*).

Validation studies of the SAPROF has shown the measure to have good psychometric properties. The first SAPROF validation study was completed by de Vries Robbé, de Vogel & de Spa (2011) among a cohort of 126 psychiatric patients with convictions for violent offences. The SAPROF and a risk factor tool (HCR-20) were retrospectively rated from file information. SAPROF total scores showed an excellent level of inter-rater reliability (ICC = .88), with total scores producing slightly better predictive validity for desistance from violent offending (e.g.,

1-year follow-up, $AUC = .85$) than final protection judgements (e.g., 1-year follow-up, $AUC = .82$). Importantly, incremental predictive validity was supported, with combined SAPROF-HCR-20 total scores significantly predicting violent recidivism ($AUC = .85$). The findings support proposed SAPROF protective factors demonstrating predictive validity over and above HCR-20 risk factors alone. The authors later examined post-treatment assessments of risk for individuals who completed offence-specific treatment ($N = 108$). The results highlighted the ability of the SAPROF to be sensitive to change, coupled with the association between protective factor assessment and decreases in violent recidivism over time (de Vries Robbé et al., 2015). In a prospective study, Persson, Belfrage, Fredriksson and Kristiansson (2017) followed a group of Swedish forensic psychiatric patients ($N = 193$) for one year during care, probation or prison. Interrater reliability was excellent for SAPROF total scores ($ICC = .86$), with total scores also demonstrating greater predictive validity for (no) actual and/or threatened violence ($AUC = .78$) compared to prediction of actual and/or threatened violence for established measures of risk (e.g., Level of Service Inventory-Revised, $AUC = .70$). It is important to note that participants with convictions for a sexual offence ($n = 28$) were categorised under violent offences, meaning the predictive validity of desistance from sexual offending was not specifically explored. The SAPROF was also examined retrospectively alongside risk measures in a low-crime nation, Japan (Kashiwagi et al., 2018). Analysis of case files for forensic psychiatric inpatients ($N = 95$) found similar results to the original validation study by de Vries Robbé et al. (2011). Inter-rater reliability was moderately strong for SAPROF total scores ($ICC = .70$). The study also found predictive validity for desistance from violent offending (which, similar to other validations, included sexual offences) for combined HCR-20-SAPROF total scores ($AUC = .87$) was greater than the predictive validity for violent recidivism using the HCR-20 total scores alone ($AUC = .79$) after a six-month observation period.

Validation studies specifically examining the predictive validity of the SAPROF for individuals with sexual offence convictions were less consistent. Small predictive validity (AUC = .53) was found when SAPROF total scores were used to examine desistance from sexual recidivism in a retrospective study of incarcerated males with sexual offence convictions in Austria ($N = 450$) (Yoon et al., 2018). Additionally, SAPROF scores did not add incremental predictive validity above and beyond the SVR-20 for any sexual recidivism categories. Conversely, de Vries Robbé, de Vogel, Koster and Bogaerts (2014) found SAPROF total scores had good predictive validity for desistance from sexual recidivism at three-year (AUC = .76) and long-term ($M = 15$ -year) (AUC = .71) follow-up, outperforming predictive validity of Final Protection Judgements (AUC = .65). Overall, validation studies have highlighted the predictive validity of the SAPROF in different correctional and cultural settings, with good interrater reliability based on the summarised research. Support for predictive validity of the SAPROF suggests that protective factors may strengthen current risk assessment practices. However, the varied AUCs for predictive validity of desistance from sexual recidivism suggests that protective factors did not capture protection well for individuals with sexual offence convictions. The retrospective design for some validation cohorts was another potentially limiting factor.

The SAPROF has also demonstrated good construct validity. Among a sample of participants at a forensic mental health unit ($N = 100$), Abidin et al. (2013) found the SAPROF had a strong positive correlation ($r = .81, p < 0.01$) with the “Strengths” scale on the START, supporting convergent validity of the SAPROF. SAPROF total scores also demonstrated good internal consistency ($\alpha = .88$). Similar correlations were found between the SAPROF and the START among a sample of 50 Canadian psychiatric patients (Oziel, 2016). The SAPROF protective factors therefore appear to be tapping into a similar construct to those measured by the STARTs strengths scale. The authors also found negative correlations between the

SAPROF and measures of risk such as the HCR-20 and the vulnerabilities scale of the START, further supporting convergent validity. Support for divergent validity was limited to the external SAPROF subscale, with no correlation between external protective factors and measures of general functioning and mental state. SAPROF total scores and Structured Assessment of Violence Risk in Youth (SAVRY; Borum, Bartel & Forth, 2006) protective scores had a large positive correlation ($r = .75, p < .01$), and SAPROF total scores had a large negative correlation with SAVRY risk scores ($r = -.77, p < .01$). The research summarised above supports construct validity of the SAPROF, indicating that protective factors were likened to individual strengths, and tapped a construct different to established risk factors. To the best of the researcher's knowledge, no studies have examined the internal consistency of SAPROF domains, with support for total score internal consistency limited to Abidin et al.'s (2013) validation.

Convergent validity findings for the SAPROF were generally limited to subscales of risk measures, which limits the implications made regarding the ongoing definitional ambiguity of protective factors. Additionally, protective factors have been speculated for individuals with sexual offence convictions, but currently there is no tool to measure them (de Vries Robbé et al., 2015a). The SAPROF (and other existing risk assessment tools) factors were empirically identified, and as such lack theoretical cohesion. Examining the correlation between items on a strengths-based tool and similar constructs (such as wellbeing) is one approach that could be used to explore convergent validity of a strengths-based tool. The lack of clear definitions, coupled with the need to understand what factors might promote desistance from sexual offending, could be addressed with the development of a sexual-offence specific tool that demonstrates construct validity.

Improving Protective Factor Assessment – Introducing the SAPROF-SO

The growing volume of protective factor/strengths-based research has partially satisfied the calls for an understanding of how protective factors can be operationalised and used in risk assessment. Initially, the positive impact of personal and environmental strengths promoting desistance received little attention in risk assessment practices, particularly for individuals with violent and/or sexual offence convictions (de Vries Robbé, de Vogel & Douglas, 2013). Born out of the concerns regarding deficit-focused assessment practices, professionals sought for a theoretically informed way to frame protective factors in clinical practice (i.e., assessment and treatment). The Good Lives Model (GLM; Ward, 2002) is a prominent strengths-based framework grounded in human rights, focussing on an individual's capabilities, rather than their deficits, to promote desistance from offending. An assumption of this framework is that individuals value experiences, mindsets and personal characteristics (known as primary human goods), which contribute to a heightened sense of wellbeing and satisfaction with life. The GLM framework aligns with protective factor literature, and whilst they have become popular in treatment, assessment tools have yet to catch up in this regard.

The Structured Assessment of Protective Factors for violence risk - Sexual Offence version (SAPROF-SO) reflects an extension and modification of the original SAPROF, allowing for a greater number of protective factors to be assessed (Willis et al., 2019a). The SAPROF-SO is comprised of five domains that represent the 24 proposed protective factors. These domains are internal capacity, prosocial identity, prosocial connection, stability and professionally provided support. The SAPROF-SO aims to find greater balance between theory and empiricism, whilst also providing a platform for understanding how protective factors operate in risk assessment. Protective mechanisms that operate within each of the proposed protective factors were integrated in the scoring instructions to help understand how they may operate, with mechanisms fitting broadly into two categories (see Thornton, Kelley & Nelligan 2017 for a discussion). The first mechanism category is control, referring to the processes that

restrain urges to engage in antisocial or other behaviours that are seen to increase risk factors. Control may stem from numerous sources, such as internal control (e.g., ability to perspective take), informal social control (e.g., being accountable to prosocial others), or formal social control (e.g., incarceration). Prosocial reward refers to experiencing a rewarding lifestyle that reinforces living in a prosocial manner, a protective mechanism that closely aligns with the underlying assumptions of the GLM. In other words, protective factors might operate by providing meaningful and fulfilling sources of primary human goods. Doing so will attempt to close the gap between the atheoretical nature of risk assessment (with identified mechanisms speaking to why an item might be associated with desistance/recidivism).

The SAPROF-SO differs from the original SAPROF in numerous ways. Items have been organised in a way that promotes clinical reasoning, the response scale has been expanded to be more sensitive to subtle changes, and the coding sheet accommodates ratings for different contexts, in recognition that the level of protection present may change across different contexts. The most significant change is the inclusion of protective factors that are specific to sexual offending (e.g., *Prosocial sexual interests*). All original SAPROF items were included, but many were refined. For example, *Intelligence* was replaced with *Intact cognitive functioning*, as scoring on an intelligence test may not reflect a person's true intellectual capacity (i.e., they may have suffered head trauma leading to issues with short-term memory). The SAPROF-SO is being developed initially as an actuarial tool to help reduce bias, based on the predictive validity of SAPROF total scores compared to final protection judgements.

The inter-rater reliability of the SAPROF-SO was first assessed by Willis, Kelley and Thornton (2019), alongside construct validity among a sample of adult males who had been convicted of a sexual offence. Inter-rater reliability was examined by three independent raters who coded a sample of high-risk participants from the United States ($n = 40$) and a routine sample of participants from New Zealand ($n = 40$). The New Zealand sample comprised the

first 40 cases in the longitudinal study from which the sample in the current study was drawn from, with support for interrater reliability and construct validity. The protective factors and domains are proposed as theoretically meaningful but have yet to be tested for internal consistency, or factor analysed. Specific items within each domain will be reviewed in the methods section.

Internal Capacity

Items in this domain refer to characteristics and/or traits within a person that are hypothesised to have a protective effect against future offending. A person with a high level of internal capacity will display prosocial thought patterns and internal processes that serve to mitigate the likelihood of sexual reoffending occurring. The term internal capacity was borrowed from the GLM (Ward, 2002), and is defined as conditions internal to an individual (such as skill level or ability to secure goods). Furthermore, the mechanisms operating for someone with high internal capacity would be a greater ability to achieve goals and goods in a prosocial way. The skills required for someone to achieve high levels of internal capacity revolve around seeing oneself as competent, overcoming barriers to achieving internal goals and relating with others. Problems with internal capacity may be the result of early experiences of adversity and early learning experiences, and indeed we have research highlighting early adversity being more prevalent in the lives of individuals who have sexually offended. In a study of men who had sexually offended in the United States ($N = 679$), Levenson, Willis and Prescott (2016) used the Adverse Childhood Experience (ACE) scale (Felitti et al., 1998) to determine the prevalence of negative childhood experiences within this sample. The results highlighted several patterns relating to the nature of upbringing for these men, with verbal abuse (53%), divorced parents (54%), substance abuse in the home (47%) and physical/sexual abuse (42% and 38%) the most prevalent adverse childhood experiences reported. More than 45% of the sample reported experiencing 4 or more adverse childhood experiences, with those

scoring higher also reporting lower educational and financial success. The presence of adverse childhood experiences has also been linked to the development of an insecure attachment style, which may lead to internal issues in behavioural, cognitive and/or emotional domains (Grady, Levenson & Bolder, 2017). Additionally, individuals who sexually offend are less likely to have a secure attachment style and more likely to have an anxious or avoidant attachment style (Ward, Hudson, Marshall & Siegert, 1995). It is important to acknowledge that adverse childhood experiences (captured in the proposed protective factor *Secure attachment in childhood*) do not always result in internal capacity deficits. Examination of the US National Survey of Children's Health by Bethell, Newacheck, Hawes and Halfon (2014) found resilience offset some aspects of adverse childhood experiences, leading to better school engagement compared to children who lacked resilience skills. Receiving higher scores on items in this domain requires the use of prosocial skills (informed by the GLM and influencing how proposed items in this domain may operate). For example, an individual with a range of coping strategies for stressful situations would score higher than an individual who attempts to isolate themselves to avoid stress. Furthermore, adverse childhood experiences (which are common among men with sexual offence convictions) may leave people vulnerable with lower levels of internal capacity.

Prosocial Identity

Prosocial identity items in the SAPROF-SO refer to positive attitudes and beliefs a person has about themselves that are hypothesised to have a protective effect against future sexual recidivism. An examination of individuals in a multi-year longitudinal study ($N = 1,380$) in the United States found that those who felt a strong sense of identity and self were less likely to engage in criminal behaviour (Rocque, Posick & Paternoster, 2016). Those who felt they had little sense of identity were more likely to engage in antisocial or even criminal behaviour. Desistance literature has also explored the idea of cognitive transformation, which is the

constructive shift in one's narrative identity (Maruna, 2001). Factors that positively aid this cognitive transformation allow for individuals who have previously offended to find meaning and prosocial goals to focus on. The cognitive transformation theory of desistance is often linked to changes and developments in one's social identity and thus aligns strongly with the theoretical framework of this SAPROF-SO domain. An examination of post-release experiences using the Life History Interview Protocol by Harris (2014) revealed the importance of cognitive transformation in the treatment process for men with sexual offence convictions. All but three participants ($n = 18$) revealed components of cognitive transformation during their interviews, with most of this group speaking about the powerful impact treatment had on their identity, their insight into offence-related behaviour and their understanding of harm. Those who displayed a high level of cognitive transformation often sought to share their experiences with others and engage openly about previous offence-related behaviours. Prosocial identity literature is clearly linked to the GLM concept of a "good life plan", wherein individuals strive to develop an internal model aimed at living a life that is personally meaningful and fulfilling (Willis et al., 2019a). Efforts to implement these plans are considered when scoring items in this domain; for example, an individual would score higher on the goal-directed living item if they were able to articulate a plan for the future with behavioural evidence that the person is working toward goals, compared to an individual who had not done so. The development of a meaningful internal model may therefore have a protective effect against recidivism if said identity is developed in a prosocial manner.

Prosocial Connection

Items in the prosocial connection domain refer to social connections that serve a protective effect against future sexual reoffending. The prosocial connection domain explores the presence of prosocial, dynamic relationships and engagement in prosocial activities, and are theoretically informed (in part) by informal social control. Informal social control is based

on the concept that prosocial bonds to family, learning and other activities (e.g., work) promote desistance from reoffending and serve to diminish the role of antisocial or criminal actions that have some continuity throughout an individual's life (Laub & Sampson, 1993). It is important to note that prosocial connection items do not necessarily focus on social networks, rather ways informal social control might strengthen them through daily activities. Risk assessment literature has noted the importance of informal social control as a predictor for both general and sexual offending. Recidivism analysis by Kruttschnitt, Uggen and Shelton (2000) found that upon release from prison, participants with a sexual offence conviction who did not go on to reoffend had varying levels of informal social control (i.e., an intimate relationship or stable employment). These findings reaffirm the importance of prosocial engagement for men with sexual offence convictions, which may have a protective effect against recidivism upon the completion of a prison sentence (Kruttschnitt et al., 2000). Prosocial connection has theoretical links to the prosocial identity domain, wherein working on self-identity for those who have offended may very well lead to engagement with prosocial others and activities (Paternoster & Bushway, 2009). Similarly, the GLM assumes offence-related behaviours result from difficulties in seeking relatedness and community – two primary human goods associated with human connection. As such, the SAPROF-SO considers the extent to which different activities bring someone in contact with prosocial others. Using the item *Leisure activities* as an example, an individual who runs on a trail by themselves would score lower than an individual who attends a weekly running club with prosocial others.

Stability

SAPROF-SO stability items are contextual factors that have a protective effect against future offending. Maintaining stability is hypothesised to promote engagement with and achievement of prosocial goals and rewards that promote desistance from future offending. Stability upon release from prison may be difficult to achieve for those who have sexually

offended given the public perception of sexual offences and offending in general (e.g., Levenson, 2008). Few empirical studies have examined the link between financial stability and desistance from sexual offending. An assessment of factors promoting desistance after treatment by Bartle (2012) noted that a stable financial situation may reduce the need to seek financial reward in antisocial ways. The examination of release plans for recidivists and non-recidivists by Willis and Grace (2008, 2009) found that the non-recidivist group were more likely to have a stable housing plan upon their release from prison. Financial stability and housing stability serve to provide resources that allow for self-control and the attainment of prosocial goal-setting strategies (Willis et al., 2019a). Stability items may therefore act as important protective factors, providing consistency and regularity in two broad life areas (that may ultimately influence other domains and areas of wellbeing).

Professionally Provided Support

The final domain contains items that refer to support from professionals that may serve to protect against sexual recidivism. Professionally provided support items reflect additional resources and support provided by others, which are particularly important for those with less protection in other domains and additionally for those with cognitive and/or mental health issues (Willis et al., 2019a). Formal social control is a theory from desistance research used to inform this domain. Interviews with 77 individuals on registries as a result of a sexual offence convictions in the United States indicated that probation/parole laws acted as formal social control for more than 50% of participants (Cooley, Moore & Sample, 2017). Additionally, sexual offence-specific treatment that adhered to all three RNR principles has shown to be the most effective at promoting desistance from sexual recidivism (Hanson, Bourgon, Helmus & Hodgson, 2009). Research using the original SAPROF found that the need for protection in the professionally provided support domain decreased when protective factors in other domains strengthened (de Vries Robbé, de Vogel, Douglas & Nijman, 2015). As an example, an

individual who has a prosocial support network and the ability to form emotionally meaningful bonds with other adults may not need as much protection from a counsellor.

The domains and protective factors described above are theoretically informed and have not yet been empirically validated. Additionally, they have not been analysed for internal consistency, which is an important component of the current study. Many of the proposed protective factors in the SAPROF-SO were derived from the original SAPROF. However, some of the factors are new and were not in the original SAPROF. As a new assessment tool, little is currently known about the psychometric properties of the SAPROF-SO. The first validation study of the SAPROF-SO revealed excellent inter-rater reliability, with an average measure ICC of .98 for total scores (Willis et al., 2019b). Support for inter-rater reliability is an important step in refining the SAPROF-SO and allows for the construct validity of the SAPROF-SO to be examined, which is the purpose of the current study.

Risk Assessment: The New Zealand Context

Various sexual recidivism risk assessment tools are used in New Zealand. The Violence Risk Scale – Sexual Offence version (VRS-SO; Wong, Olver, Nicholaichuk & Gordon, 2017), which includes assessment of static and dynamic risk as well as treatment change, is commonly used by psychologists to allocate individuals to appropriate prison-based treatment programmes and in risk assessment reports for the Courts and Parole board. Other tools are used routinely in community settings and completed by the supervising probation officer, including the STABLE 2007 and the ACUTE-2007. These tools are relevant to the current study and are described in the methods section.

The Current Study

The current study aims to build on recent research on the reliability and validity of a protective factor measure for predicting desistance from sexual offending. The study aimed to test the construct validity of the SAPROF-SO to examine whether proposed protective factors measure something different to risk factors. More specifically, the current study aimed to explore relationships between proposed protective factors and both risk factors (across several risk assessment tools) and a measure of wellbeing. The current study used validated risk assessment tools that are used to predict risk for men with sexual offence convictions in New Zealand (such as the STABLE-2007, ACUTE-2007 and Static-99R) and an established measure of wellbeing (PERMA Profiler). The self-selected sample was comprised of men who had been convicted of a sexual offence in New Zealand and were participants in a longitudinal SAPROF-SO validation study. Additionally, the current study aimed to examine the internal consistency of SAPROF-SO domains, which was not a focus of the first validation study by Willis et al. (2019b).

A hypothesis related to internal consistency was as follows:

- 1) The SAPROF-SO will demonstrate acceptable internal consistency in all domains except Stability (comprised of only two items).

Hypotheses related to convergent and divergent validity were as follows:

- 2) SAPROF-SO scores will have a moderate to high correlation with measures that reflect current functioning and behaviour (ACUTE-2007 and scores) and a small to moderate correlation with measures that reflect stable, long-term functioning (STABLE-2007 scores).
- 3) SAPROF-SO domain and total scores will correlate positively with PERMA-Profiler overall wellbeing scores. That is, participants who report higher wellbeing will have higher SAPROF-SO scores compared to participants who report lower wellbeing.

- 4) SAPROF-SO total scores will have no relationship with Static-99R scores.

Methods

Participants

Participants ($N = 60$) were adult males involved in a longitudinal study involving protective factor assessment for men with sexual offence convictions. Eligible individuals were defined as biologically born males who were at least 18 years old, had a conviction for a sexual offence and had served a term of imprisonment that they had either completed or been released from. An additional criterion for inclusion in the study was for participants to have a score greater than 0 on the Automated Sexual Recidivism Scale (ASRS; Skelton, Riley, Wales & Vess, 2006), reflecting at least a medium-low risk of sexual recidivism. Participants voluntarily consented to take part in the longitudinal study between mid-2018 and mid-2019. The current study used two primary methods of recruitment. One method involved distributing participant information sheets (attached in Appendix A) detailing the longitudinal study and consent to be contacted forms (attached in Appendix B) to the probation officer of eligible participants. The New Zealand Department of Corrections provided contact details for probation officers supervising eligible men. The consent to be contacted form contained a short paragraph seeking the individual's permission to be contacted by a member of the research team to provide further information about the study. Those who agreed to be contacted were given space to provide their name, date of birth and a preferred method of contact (phone call, text message or email). The signed consent to be contacted forms were then returned to a probation officer who subsequently sent the form to the research team. The second method of recruitment involved in-person recruitment at relapse prevention/maintenance groups in the community, which are attended by men who have completed specialised treatment programmes for men convicted of sexual offences against children. The Kia Marama special treatment unit (located at Rolleston Prison near Christchurch) and the Te Piriti special treatment unit (located at Auckland Prison)

target men with an ASRS of 2 or higher, and therefore met ASRS eligibility criteria. These men were similarly given participant information sheets and consent to be contacted forms. Signed forms were returned directly to the researchers. In total, 36 participants were recruited through probation officer contact, and 24 were recruited directly from post-treatment maintenance groups in the community.

Participant ages ranged from 22 years old to 81 years old ($M = 49.1$, $SD = 13.69$), with all men serving the sentence for their index offending in a New Zealand prison. Several ethnic backgrounds were represented, with most participants identifying as New Zealand European (68.3%, $n = 41$) and others identifying as Māori (28.3%, $n = 17$) and Pacific Peoples (3.3%, $n = 2$). Participants' Static-99R scores ranged from -3 to 8, with a mean of 2.33 ($SD = 2.38$), indicating that participants were in the average risk category for sexual reoffending. All participants were on some form of release conditions at the time of consenting to participate in the study, with one participant having completed his post-release conditions the day prior to being interviewed. These release conditions ranged from standard release conditions (e.g., must report to a probation officer every week, must not associate with anyone under the age of 16) to special conditions (e.g., individual is subject to GPS monitoring) and Extended Supervision Orders (ESO). An ESO is used to monitor and manage an individual deemed to be at high risk of sexual recidivism upon release from prison, and typically involves stricter conditions and 24/7 electronic monitoring for a period of either five or ten years. A total of 33 participants were on standard, 'low control' conditions, and 27 were on special conditions (including men on ESOs).

Participants in the study were convicted of various kinds of sexual offences, with these convictions representing different contact and non-contact offences. A contact offence refers to a physical act (e.g., rape, or indecent assault of a child under 12), and a non-contact offence refers to a sexual offence with no physical element (e.g., accessing child exploitation material

on the internet). Considering offence histories, most participants had convictions for contact offending against children (0-12 years; 65%, $n = 39$), female victims (78.3%, $n = 47$) and non-familial acquaintances (60%, $n = 36$). Approximately half of the sample had a conviction or charge for contact offending against teenagers (51.7%, $n = 31$) and a family member (48.3%, $n = 29$). Approximately one third of the sample had convictions or charges for contact offending against male victims (35%, $n = 21$) and for non-contact offending (41.7% $n = 25$), with traditional non-contact offences being the most common in the sample (26.7%, $n = 16$). Child exploitation/sexual abuse images offences (13.3%, $n = 8$), contact offences against strangers (6.7%, $n = 4$) and other non-contact internet related offences (1.7%, $n = 1$) were less common.

Measures

Structured Assessment of Protective Factors for violence risk – Sexual Offence version (SAPROF-SO)

The SAPROF-SO is an assessment tool that is clinician-scored based on all available information. Developed with actuarial risk assessment in mind, the SAPROF-SO is made up of 24 different items representing proposed protective factors that have theoretical and/or empirical links to a reduction in risk of sexual reoffending (Willis et al., 2019a). The SAPROF-SO is derived from the original SAPROF and contains modifications to items from that tool, alongside new items that are informed by sexual offending literature and theory. The 24 protective factors are categorised into five theoretically informed domains. These domains are internal capacity, prosocial identity, prosocial connection, stability and professionally-provided support.

Internal capacity items are *Intact cognitive functioning* (intelligence and general cognitive abilities), *Secure attachment in childhood* (the presence of a close, warm, loving

relationship with at least one prosocial adult in the first 18 years of life), *Adaptive schema* (global representations of the self and others that are adaptive), *Empathy* (taking the perspective of others and helpful responding), *Coping* (managing general life stressors in effective ways), *Self-control* (managing impulses and delaying immediate gratification) and *Sexual self-regulation* (regulation of sexual impulses and evidence of normative sex drive). Items in the prosocial identity domain are *Prosocial sexual interests* (interest in and arousal to consenting adult sex), *Prosocial sexual identity* (acceptance of a prosocial adult sexual orientation), *Goal-directed living* (prosocial, meaningful goals for living that drive prosocial behaviour), *Motivation for managing risk* (motivation to manage risk factors associated with sexual offending) and *Attitudes toward rules and regulations* (acceptance of the importance of rules/regulations and willingness to comply). Prosocial connection items are *Work* (stable and suitable paid or voluntary work that is intrinsically motivating), *Leisure activities* (engagement in structured, enjoyable activities with prosocial others), *Social network* (a prosocial and supportive group of people who are not paid to be with the individual), *Emotional connection to adults* (emotionally intimate bonds with other adults) and *Intimate relationship* (romantic, physical relationship of good quality and stability). Items in the stability domain are *Housing stability* (access to stable accommodation) and *Financial management* (steady income and sound financial management). Finally, items in the professionally provided support domain are *Sexual offence-specific treatment* (availability of appropriate treatment services), *Medication* (motivation efficacy and compliance), *Therapeutic alliance* (presence of a warm, positive alliance), *Supervised living* (a living situation in which people are either formally or informally supervised) and *External control* (court-ordered or mandatory supervision and/or treatment). SAPROF-SO items are scored on a 0 – 4-point scale with three *anchor points*: A score of 4 indicates the clear presence of an item, a score of 2 indicates an item is present to some extent, and a score of 0 indicates an item that is very rarely present or not present at all. A score of 1

or 3 is applied when an individual exceeds the criteria for one anchor point score (i.e., a 0 or a 2) but does not meet the criteria for the next anchor score. If a rater cannot decide between two scores, the anchor score is always used.

The first analysis of the psychometric properties of the SAPROF-SO was completed by Willis et al. (2019b) with a high risk and routine sample. The results showed a good level of inter-rater reliability for both domain and total scores in the SAPROF-SO. ICCs for both the high risk (ICC = .90) and routine (ICC = .94) supported excellent inter-rater reliability. Construct validity was also supported, with SAPROF-SO total scores correlating strongly with VRS-SO change ($r = .72, p < .001$) and moderately with VRS-SO post-treatment dynamic scores ($r = -.38, p = .015$) in the high-risk sample. Additionally, SAPROF-SO total scores had no relationship with Static-99R scores across both samples.

Static-99R

The Static-99R (Helmus et al., 2012) is an assessment tool with 10 items based on readily available demographic (e.g., *Age at release from index sex offence*) and criminal history/victim information (e.g., *Any stranger victims*). The Static-99R is the most common assessment tool used by professionals when working with individuals who have sexually offended (Kelley et al., 2018). Total risk scores for this tool range from -3 to 12 with each item scored based on the presence or absence of that item for each individual. Risk scores are then interpreted on a five-level risk classification system: I – very low risk (scores of -3 and -2), II – below average risk (scores of -1 and 0), III – average risk (scores of 1, 2 and 3), IVa – above average risk (scores of 4 and 5) and IVb – well above average risk (scores of six or higher) (Hanson, Babchishin, Helmus, Thornton & Phenix, 2017). A validation study by Helmus, Hanson et al. (2012) indicated that the Static-99R has a high level of inter-rater reliability across multiple contexts and has a moderate predictive validity for reoffending. In the current study,

the Static-99R was scored based on file information made available from the New Zealand Department of Corrections for each participant. In most cases, this included recent probation officer notes, criminal history reports and psychological assessment and treatment reports (if available). If psychologist reports were unavailable, court advice and sentencing documents were used.

STABLE-2007/ACUTE-2007

The STABLE and ACUTE-2007 (Hanson et al., 2007) are two separate tools that are often used alongside one another in the assessment of an individual's dynamic risk. Hanson et al. (2007) developed both measures based on their dynamic supervision project aimed at improving risk assessment for individuals who had committed a sexual offence by targeting offence-specific stable and acute dynamic risk factors. The current tools were developed based on empirical recommendations made from the creation and validation of the STABLE/ACUTE-2000 (Fernandez, Harris, Hanson & Sparks, 2014; Hanson, Helmus & Harris, 2015).

The STABLE-2007 assesses 13 risk factors that have empirical evidence linking them to sexual recidivism (e.g., *General social rejection*, *Impulsivity* and *Negative emotionality*) and is scored on a 0-2-point scale. A score of 0 indicates no problem is evident relative to a stable risk factor, a score of 1 indicates some problem is evident and a score of 2 reflects the presence of a significant problem. A total score of 0-3 indicates low risk, a score of 4-11 reflects moderate risk and any score above 12 is deemed high risk. The STABLE-2007 has three domains: Intimacy deficits (five items), general self-regulation (three items) and sexual self-regulation (three items). Two items (*Significant social influences* and *Cooperation with supervision*) are not categorised into a domain. Emotional identification with children is only scored for individuals who have a victim under the age of 14 (Hanson et al., 2007). Therefore,

a maximum score of 26 is possible for those with convictions for sexual offences against children, and 24 for those with other sexual convictions.

Findings from the first STABLE-2007 validation study by Hanson et al. (2007) found that total scores had high inter-rater reliability ($ICC = .89$). Subsequent validation studies have found the STABLE-2007 to have strong incremental predictive validity when assessed alongside the Static-99R among a sample of Canadian adult males with convictions for a sexual offence ($N = 768$) (Hanson et al., 2015). Eher et al. (2012) reported excellent ICCs for the STABLE-2007 ($ICC = .90$) among a sample of 263 males with convictions for a sexual offence in an Austrian prison setting. The STABLE-2007 alone also had a moderate level of predictive validity for sexual recidivism ($AUC = .71$), and a greater predictive accuracy for sexual recidivism ($AUC = .76$) and violent recidivism ($AUC = .73$) when combined with the Static-99 (Eher et al., 2012). A recent meta-analysis of STABLE-2007 literature was completed by Brankley, Babchishin and Hanson (2019), with all 13 factors found to significantly predict sexual recidivism. The STABLE-2007 was also found to have incremental predictive validity with the Static-99R (Brankley et al., 2019).

The ACUTE-2007 assesses seven items related to general recidivism (e.g., *Emotional collapse*) and sexual recidivism (e.g., *Victim access*) which are scored on a 0-2-point scale. A score of 0 indicates no problem is evident relative to an acute risk factor, a score of 1 indicates some problem is evident and a score of 2 reflects the presence of a significant problem. The ACUTE-2007 has two total scores: A sex/violence total for four items related to sexual and violent recidivism, and a general recidivism score based on all seven risk factors. Sex/violence total scores can range from 0-8, with recidivism risk separated into three categories: 'low priority' (a score of 0), 'moderate priority' (a score of 1) and 'high priority' (a score of 2 or more). The general recidivism total is scored from 0-14 and is categorised in a similar way to the sex/violence total: A score of 0 reflects 'low priority', a score of 1-2 reflects 'moderate

priority’, and a score of 3 or more indicates ‘high priority’. Probation officers or other supervising agents in the community will score the ACUTE-2007 on a regular basis (i.e., weekly or fortnightly) to capture potential variations to an individual’s acute dynamic risk factors.

Validation studies have found support for the reliability and validity of the ACUTE-2007. In the development study, inter-rater reliability for acute factors ranged from good to excellent, with a mean item ICC of .90 (Hanson et al., 2007). Within the development sample, the ACUTE-2007 showed a moderate ability to differentiate non-recidivists and those at imminent risk of sexual recidivism (AUC = .72). A more recent study by Babchishin (2014) indicated that ACUTE-2007 scores positively correlated with STABLE-2007 scores, with items measuring similar constructs found to significantly correlate with one another. These findings are relevant given the moderate predictive accuracy of the co-developed STABLE-2007, as mentioned above. Additionally, the authors found that most item and ACUTE-2007 total scores significantly predicted any recidivism, despite only two items across time (sexual preoccupation and rejection of supervision) significantly predicting sexual recidivism (Babchishin, 2014).

Positive Emotion, Engagement, Relationships, Meaning and Accomplishment (PERMA) Profiler

The PERMA-Profiler is a 23 item self-report instrument developed by Butler and Kern (2016) that contains 15 items assessing five domains of wellbeing: positive emotion, engagement, relationships, meaning and accomplishment. The PERMA theory of wellbeing was developed by Seligman (2011). The additional eight items include one measure of overall happiness, three negative emotion items measuring sadness, anxiety and anger, three items measuring self-perceived physical wellbeing and a measure of loneliness. Participants respond to statements such as “In general, how often do you feel joyful?” (relating to positive emotion)

using an 11-point Likert scale from 0 to 10, with variable response anchors depending on the question, such as: 0 = never, or not at all, and 10 = always, or completely. PERMA domain scores are calculated as the average of the three items comprising that domain. The average of all items from the five PERMA domains and the additional item on overall happiness create a total score, providing a subjective index of a participant's overall wellbeing. Domain scores are also calculated for negative emotion and health, whilst loneliness is a stand-alone item.

The PERMA-Profiler has demonstrated acceptable psychometric properties. In the development sample, Butler and Kern (2016) found support for excellent internal consistency of overall wellbeing scores ($\alpha = .94$), with all wellbeing domains having a Cronbach alpha greater than .80. Construct validity was also supported, with strong correlations observed between PERMA items and other measures of wellbeing (i.e., life satisfaction, $r = .76$) and distress (i.e., depression, $r = -.61$) used to develop the measure. A comparison of PERMA-Profiler and Subjective Well-being (SWB; Diener, 1984) model self-report survey results among a sample of 517 adults revealed an excellent correlation between the two measures ($r = .98$) (Goodman, Disabato, Kashdan & Kauffman, 2017). Thus, the PERMA-Profiler items have support as valid measures of overall wellbeing.

Procedure

Eligible men who signed the consent to be contacted sheet were then contacted either by email, telephone call or text message to discuss the study in more detail. The justification for the research, why they were eligible, what participation involved, and the confidentiality of the research process were among items discussed. If individuals agreed to take part, an interview time was scheduled.

Participants were interviewed by telephone and audio recorded, so that interviews could be stored on a secure cloud database and reviewed for scoring later. Prior to the start of the

interview, participants were encouraged to ask any questions they had about the study and reassured of confidentiality. Informed consent was obtained verbally before the start of the interview. The consent process involved reviewing the contents of the consent form attached in Appendix C, and ensuring the participant understood and responded to each statement prior to the start of the interview. The interviews were semi-structured, with the interviewer asking questions related to the 24 protective factors in the SAPROF-SO (interview guide with SAPROF-SO items attached in Appendix D). The interview started with the researcher explaining that the focus of the study was on current circumstances and what had been happening in the participants day-to-day life in the last six months or so. Questions acted as prompts to ascertain the presence or absence of a given protective factor, generally within the last six months. For example, a question used to determine the presence of *Empathy* was “Have there been any situations in the last six months where you have needed to help someone out?”. The interviews were generally between 45 minutes and 90 minutes long. Once the interview had concluded, participants were sent a follow-up questionnaire on offence-related behaviour (collected as part of an ongoing longitudinal study and not relevant to the current study) and general wellbeing (i.e., the PERMA) either online or by secure post. Participants were also offered the choice to complete the questionnaire over the phone with an independent researcher to accommodate any reading, writing or general learning difficulties. Participants were given a code to input when completing the questionnaire and their responses were integrated into a database by an independent researcher. Numerical codes were used to match participants responses to follow-up questionnaires whilst also helping to keep participant responses confidential from interviewers to encourage honest responses to offence-related behaviour questions. In total, 41 participants were sent the questionnaire online by email, 13 participants were sent the questionnaire by post and six completed the questionnaire with an independent researcher by telephone. There were six participants who did not complete the

follow-up questionnaire. Participants were sent a \$40 grocery or petrol voucher upon the interviewer being notified (by an independent researcher) that they had completed the questionnaire. Collateral information was then gathered from databases maintained by the New Zealand Department of Corrections, at a Department of Corrections site. Collateral information obtained included risk assessment scores, probation officer case notes from the last six months, and when available, the most recent psychological assessment and treatment reports. All collateral information was redacted to remove any identifying information related to the participant or any third party before being removed from the Corrections site. These documents were stored on a secure cloud database that was only accessible to the researchers involved in the study. Proposed SAPROF-SO protective factors were then coded based on all information collected.

Psychological assessments and/or psychological treatment reports were not available for two participants. In the absence of the aforementioned documents, judge sentencing notes and court advice documents were sourced to gain information on a participant's background, offence-related behaviours and the circumstances which led to their conviction.

Ethics Statement

The longitudinal study which the current research was a part of was reviewed and approved by University of Auckland Human Participants Ethics Committee and the Department of Corrections Research and Evaluation Steering Committee.

Results

Descriptive statistics about the SAPROF-SO, the PERMA and measures of risk were explored first. Domain and total scores for the SAPROF-SO, alongside the PERMA and STABLE-2007 domains were then measured for internal consistency, to examine whether items measuring risk/protection were scored consistently. Finally, construct validity of the SAPROF-SO was examined by analysing the correlation the tool shared with several measures of risk and the PERMA.

Descriptive Statistics

SAPROF-SO

Adequate information for rating proposed protective factors was generally available, given that researchers had access to interview recordings and file information for all participants. Few items were unable to be scored, with omitted items typically coming from the internal capacity (e.g., *Sexual self-regulation*) and prosocial identity (e.g., *Motivation to manage risk*) domains. Table 1 shows the range of scores for items, domains and total scores for the current sample, alongside the number of valid ratings, means and standard deviations. Omitted items were replaced with the sample mean in the calculation of domain and total scores and scores of Not Applicable (N/A) or Not Relevant (N/R) were replaced with scores of 0 (protective factor not present). *Intimate relationship* had the lowest score among participants ($M = .97, SD = 1.55$), with sexual offence-specific treatment being the highest rated item ($M = 3.74, SD = 0.94$). Prosocial connection scores were low relative to the maximum possible domain score of 20 ($M = 8.32$), and stability scores were comparably high relative to the maximum possible domain score of 8 ($M = 6.30$). For total SAPROF-SO scores, participant scores ranged from 17 to 81 ($M = 53.01, SD = 16.16$), with the maximum possible score being 96, reflecting the presence of all proposed protective factors. The stability and professionally provided support domains had much lower variance than the other domains.

Table 1

SAPROF-SO Descriptive Statistics

SAPROF-SO Items and Domains	<i>n</i> valid ratings	Mean	SD
Internal capacity			
1. Intact cognitive functioning	60	3.02	1.31
2. Secure attachment in childhood	59	1.42	1.29
3. Adaptive schema	59	2.12	1.35
4. Empathy	59	2.07	1.38
5. Coping	59	2.54	1.18
6. Self-control	59	2.76	1.45
7. Sexual self-regulation	58	1.93	1.46
Subtotal (possible range: 0 – 28)	60	15.86	6.59
		(obtained range 1 – 27)	
Prosocial identity			
8. Prosocial sexual interests	60	2.00	1.45
9. Prosocial sexual identity	60	2.33	1.97
10. Goal directed living	59	1.71	1.08
11. Motivation to manage risk	56	2.46	1.22
12. Attitude toward rules and regulations	60	2.92	1.23
Subtotal (possible range 0 – 20)	60	11.43	5.27
		(obtained range 1 – 19)	
Prosocial connection			
13. Work	60	1.27	1.67
14. Leisure activities	59	1.00	1.39
15. Social network	60	2.90	1.12
16. Emotional connection to adults	59	2.19	1.33
17. Intimate relationship	59	0.97	1.55
Subtotal (possible range 0 – 20)	60	8.32	4.62
		(obtained range 0 – 18)	
Stability			
18. Housing stability	60	3.67	0.71
19. Financial management	60	2.63	1.19
Subtotal (possible range 0 – 8)	60	6.30	1.56
		(obtained range 2 – 8)	
Professionally provided support			
20. Sexual offence-specific treatment	39	3.74	0.94
21. Medication	6	2.83	1.33

22. Therapeutic alliance	51	3.37	0.98
23. Supervised living	60	1.45	0.77
24. External control	60	2.25	0.82
Subtotal (possible range 0 – 20)	60	11.10	2.24
		(obtained range 2 – 16)	
<hr/>			
Total score (possible range 0 – 96)	40	53.01	16.16
		(obtained range 17 – 81)	

Note. SAPROF-SO = Structured Assessment of PROtective Factors – Sexual Offence version. SAPROF-SO items are rated 0-4. Missing data replaced with sample mean in calculation of subscale and total scores. Not applicable ratings replaced with scores of 0.

PERMA

Descriptive statistics for overall wellbeing scores and the five wellbeing subscales (positive emotion, engagement, relationships, meaning and accomplishment) are displayed in Table 2, alongside additional subscales reporting negative emotion, health, happiness (single item) and loneliness (single item). Possible scores for each subscale ranged from 0 to 10, with a higher score reflecting a higher level of subjective wellbeing and a lower score reflecting the opposite. Participants scored highest on the Accomplishment subscale ($M = 7.28$) and lowest on the Positive Emotion subscale ($M = 6.33$). Overall wellbeing scores for participants ranged from 1.94 to 9.59, based on the same 0 to 10 scale described above, with a mean wellbeing score of 6.66 ($SD = 1.68$) and a median score of 6.97 indicating an above-average level of perceived wellbeing. The mean score for happiness, which is captured as a single item, was similar to overall wellbeing scores ($M = 6.91$, $SD = 2.33$). PERMA data were not available for some participants ($n = 6$) due to questionnaires not being returned to the researcher in time for analysis.

Table 2.

Descriptive Statistics for PERMA-Profiler

Subscale	Mean	SD	Possible range	Obtained range
1. Positive emotion	6.33	2.23	0 – 10	0.67 – 10
2. Engagement	6.46	1.75	0 – 10	1.50 – 10
3. Relationships	6.61	2.17	0 – 10	1.67 – 10
4. Meaning	6.56	2.38	0 – 10	0 – 10
5. Accomplishment	7.26	1.74	0 – 10	2.50 – 10
6. Negative emotion	3.55	1.87	0 – 10	0 – 7.33
7. Health	6.23	1.85	0 – 10	1 – 9.33
8. Loneliness	4.11	3.02	0 – 10	0 – 10
9. Happiness	6.91	2.33	0 – 10	0 – 10
Overall wellbeing	6.66	1.68	0 – 10	1.94 – 9.50

Note. Loneliness and Happiness measured as a single item

ACUTE-2007

Ratings for ACUTE-2007 assessments were typically available within the six months prior to the participants' interview. Of the total number of participants with ACUTE-2007 data available ($n = 48$), two assessments (4.2%) were sourced beyond six months due to no available records in the six months pre-interview. One assessment was collected eight months prior to interview for the current study and was included in further analyses. The other ACUTE-2007 assessment was obtained from file information during the participant's time in a sexual offence-specific treatment programme in prison, 51 months (i.e., four years and three months) prior to being interviewed for the current study. The ACUTE-2007 data for the latter participant was subsequently excluded from analyses, given that acute dynamic risk factors measured some time ago were not likely to be relevant at interview. On average, participants were interviewed for the current study within one month of being assessed using the ACUTE-2007 ($SD = 1.40$). In total, this equated to 72.9% ($n = 35$) of participants who had ACUTE-2007 data available.

Information relating to ACUTE-2007 sex/violence (the sum of the four acute factors related to sexual and/or violent risk), general recidivism scores (the sum of all seven acute factors measured), and item scores can be found in Table 3. Overall, ACUTE-2007 general recidivism scores ranged from zero to six, with a mean of 2.10 ($SD = 1.63$), reflecting risk of a moderate priority. Sexual/violence risk was also of a moderate priority in the current study ($M = 1.73$, $SD = 1.40$). Participants scored highest on victim access and lowest on both substance abuse and emotional collapse.

Table 3

ACUTE-2007 Descriptive Statistics

ACUTE-2007 items and domains	Mean	SD	Obtained Range
1. Victim access	0.67	0.52	0 – 2
2. Hostility	0.21	0.41	0 – 1
3. Sexual preoccupations	0.48	0.58	0 – 2
4. Rejection of supervision	0.38	0.57	0 – 2
5. Emotional collapse	0.10	0.31	0 – 1
6. Collapse of social support	0.19	0.39	0 – 1
7. Substance abuse	0.10	0.37	0 – 2
Sex/violence score	1.73	1.40	0 – 6
General recidivism score	2.10	1.63	0 – 6

Note. Sex/violence score is the sum of victim access, hostility, sexual preoccupations and rejection of supervision scores. General recidivism score is the sum of all seven items.

STABLE-2007

STABLE-2007 data were available for less than one third of participants ($n = 17$). The length of time between STABLE-2007 assessment and interview for the current study varied, with eight participants (47.1%) interviewed within six months of STABLE-2007 assessment. STABLE-2007 assessments for the remaining participants took place at dates ranging from nine months to 108 months (i.e., 12 years) prior to being interviewed for the current study. Given that STABLE-2007 assessments were completed several years before the SAPROF-SO

interview and may not reflect current functioning, a cut-off point of three and a half years was decided on. Only 12 assessments (70.6%) were completed within this cut off point, which was justified due to previous empirical studies suggesting STABLE-2007 scores were predictive for at least the same amount of time (e.g., Eher et al., 2012). STABLE-2007 assessments completed beyond this time period were excluded from further analyses. For the retained STABLE-2007 assessments ($n = 12$), the mean number of months between interview for the current study and STABLE-2007 assessment was 9.08 ($SD = 14.34$).

Descriptive information relating to item and total scores for STABLE-2007 can be found in Table 4. Total risk scores ranged from 4 (low) to 20 (high) out of a possible 26, with a mean score of 9.82 ($SD = 4.08$) indicating a moderate risk of recidivism. Participants scored highest on the deviant sexual interests item ($M = 1.41$, $SD = .80$) and lowest on the hostility toward women item ($M = .29$, $SD = .47$).

Table 4.

STABLE-2007 Descriptive Statistics

STABLE-2007 Items and Domains	Mean	SD	Obtained Range
1. Significant social influences	0.88	0.93	0 – 2
2. Capacity for stable relationships	1.18	0.53	0 – 2
3. Emotional identification with children	0.35	0.49	0 – 1
4. Hostility toward women	0.29	0.47	0 – 1
5. General social rejection	0.76	0.56	0 – 2
6. Lack of concern for others	0.59	0.62	0 – 2
7. Impulsive acts	0.65	0.61	0 – 2
8. Poor problem solving skills	0.88	0.78	0 – 2
9. Negative emotionality	0.76	0.83	0 – 2
10. Sex drive/sexual preoccupation	0.88	0.60	0 – 2
11. Sex as coping	0.65	0.49	0 – 1
12. Deviant sexual preferences	1.41	0.80	0 – 2
13. Cooperation with supervisors	0.53	0.62	0 – 2
Total score	9.82	4.08	4 – 20

(Possible range 0 – 26)

Internal Consistency

Internal consistency for those measures used in the current study hypothesised to tap a similar underlying construct (i.e., the SAPROF-SO and the PERMA), as well as the STABLE-2007, were examined before construct validity analyses were carried out. The 24 SAPROF-SO items demonstrated good internal consistency ($\alpha = .89$). For the SAPROF-SO, four of the proposed domains demonstrated fair to good internal consistency. The internal capacity and prosocial identity domains demonstrated good internal consistency, with the Cronbach alpha coefficient for each domain being .83 and .81, respectively. The professionally provided support ($\alpha = .71$) and the prosocial connection ($\alpha = .66$) domains had acceptable levels of internal consistency. The stability domain had unacceptable internal consistency ($\alpha = .41$) and was not included in subsequent analyses.

The PERMA largely demonstrated acceptable to good levels of internal consistency across domains and overall wellbeing in the current study. Overall wellbeing demonstrated excellent internal consistency, with an alpha of .92. Positive emotion ($\alpha = .85$) and meaning ($\alpha = .89$) had good internal consistency, while accomplishment and relationship had acceptable internal consistency with alphas of .66 and .63, respectively. The engagement domain fell well below accepted internal consistency alpha scores ($\alpha = .42$) and was not retained in further analyses.

Internal consistency was also examined for the domains that comprise the STABLE-2007. All domains demonstrated unacceptable to poor levels of internal consistency; the general self-regulation domain had a Cronbach alpha of .54, whilst the intimacy deficits domain had an alpha of .41. Additionally, the sexual self-regulation domain had a negative alpha (-1.21), indicating the sample size for the current study was too small (see Tavakol & Dennick, 2011 for a discussion). Given previous validation studies of the STABLE-2007 and a lack of

data for the current study, the latter is assumed, and STABLE-2007 domain scores were not included in subsequent analyses.

Construct Validity

Convergent validity was assessed by examining correlations between SAPROF-SO domain and total scores with measures of dynamic risk and the overall wellbeing score from the PERMA profiler. Overall, the SAPROF-SO had a moderate negative correlation with total ACUTE-2007 scores ($r = -.40, p < .01$), further supporting convergent validity. The SAPROF-SO had a negative correlation with total STABLE-2007 scores ($r = -.40, p = .11$), which was not statistically significant. However, both Pearson correlation coefficients were of moderate strength, partially supporting the hypotheses relating to convergent validity of the SAPROF-SO.

Divergent validity was examined by computing correlations between SAPROF-SO domain and total scores with Static-99R total scores. As hypothesised, there was no relationship between SAPROF-SO total scores and Static-99R total scores ($r = -.03, p = .82$). Generally, there were no meaningful relationships between SAPROF-SO domains and Static-99R total scores. A weak, negative correlation was observed between the Static-99R and the internal capacity domain ($r = -.21, p = .10$). However, the correlation was small in strength and not statistically significant. Divergent validity of the SAPROF-SO was therefore supported.

Additionally, there was a moderate positive correlation between SAPROF-SO total scores and PERMA total scores ($r = .45, p < .001$). The Pearson correlation coefficient was moderate in strength, which supports convergent validity of the SAPROF-SO. Further analyses demonstrated positive correlations to varying degrees of strength and significance for SAPROF-SO domains and PERMA wellbeing scores. The prosocial identity domain ($r = .47, p < .001$) and the internal capacity domain ($r = .46, p < .001$) had significant positive

correlations with overall wellbeing, with a moderate strength Pearson correlation coefficient. Overall wellbeing also had a significant positive correlation with the professionally provided support domain ($r = .28, p = .04$), despite a small strength Pearson correlation coefficient. Similarly, the prosocial connection domain ($r = .20, p = .14$) had a weak positive correlation that was not statistically significant, with a Pearson correlation coefficient of small strength. Finally, the stability domain had no correlation with overall wellbeing ($r = .07, p = .63$).

Discussion

The current study sought to build on recent empirical research on protective factor assessment by examining the construct validity of the recently developed SAPROF-SO in a sample of men in New Zealand with sexual offence convictions. The current study also sought to examine the internal consistency of the SAPROF-SO domains for the first time, an important prerequisite for validity analyses.

Hypothesis 1: The SAPROF-SO will demonstrate acceptable internal consistency in all domains except Stability.

Overall, the SAPROF-SO demonstrated acceptable to good internal consistency for domains and total scores, aside from the stability domain. The poor internal consistency for the stability domain may well be attributed to the small number of items within that domain, which was hypothesised. The original SAPROF has comparable levels of internal consistency for total scores (Abidin et al., 2013), from which all SAPROF-SO items were derived from. As such, the hypothesis relating to internal consistency is supported.

Hypothesis 2: SAPROF-SO scores will have a moderate to high correlation with measures that reflect current functioning and behaviour, and a small to moderate correlation with measures that reflect stable, long-term functioning

Findings from the current study were generally supportive of hypotheses related to construct validity. The SAPROF-SO domains had a moderate negative correlation with the STABLE-2007, ACUTE-2007 and the PERMA. The nature of correlations between the SAPROF-SO and measures of risk focusing on current functioning are consistent with earlier research examining the correlation between the SAPROF-SO and the VRS-SO (Willis et al., 2019b). The researchers found proposed SAPROF-SO protective factors had a stronger

correlation with measures of risk focusing on current functioning compared to measures of stable functioning. The Pearson correlation coefficient the SAPROF-SO had with both risk measures was the same, which was not specifically hypothesised. Acute dynamic risk factors are subject to imminent change, whereas stable dynamic risk factors are enduring tendencies (Bonta & Andrews, 2017). As such, it was hypothesised that the size of correlation between the SAPROF-SO total scores and ACUTE-2007 total scores would be greater than the correlation between SAPROF-SO total scores and STABLE-2007 total scores. One explanation for the nature of these correlations may be the lack of available data for STABLE-2007 assessments relative to ACUTE-2007 assessments. An alternative explanation may be the recency of STABLE-2007 assessments, and lower correlations may be found for older STABLE-2007 assessments. Regardless, the moderate strength correlations observed between the SAPROF-SO and both measures still supports the hypotheses relating to convergent validity.

Hypothesis 3: SAPROF-SO domain and total scores will correlate positively with PERMA-Profiler overall wellbeing scores.

Convergent validity was further supported by the moderate correlation observed between the SAPROF-SO and PERMA overall wellbeing scores, indicating that proposed protective factors and general wellbeing are positively related. In other words, as protection from future sexual recidivism increases, wellbeing appears to increase alongside it. To the researcher's knowledge, the current study is the first investigation of the relationship between protective factors and wellbeing. Protective factors are theorised to be important in attaining wellbeing (and in turn, promote desistance) upon release from prison (de Vries Robbé & Willis, 2017). Therefore, findings from the current study further support the construct validity of the SAPROF-SO

Hypothesis 4: SAPROF-SO total scores will have no relationship with Static-99R scores.

Divergent validity of the SAPROF-SO was supported, with no meaningful relationship observed between SAPROF-SO and Static-99R total scores. Additionally, there was no meaningful or significant relationship between proposed SAPROF-SO domains and Static-99R scores. The lack of relationship between the SAPROF-SO and the Static-99R is largely consistent with previous research. The original SAPROF was also found to have no meaningful relationship with the Static-99R (Yoon, Spehr & Briken, 2011). The hypothesis relating to divergent validity was therefore supported.

Implications for Future Research

The implications of the construct validity findings from the current study are promising, with hypotheses related to construct validity supported to varying degrees. One often cited criticism of protective factors relates to their conceptualising as a construct that acts as an opposite to a dynamic risk factor, and thus need not be defined as a unique construct (see Hefferman & Ward, 2017 for a discussion). If protective factors were simply the opposite of risk factors, one would expect a perfect or near-perfect correlation with existing measures of risk. The findings from the current study suggest that the proposed protective factors in the SAPROF-SO have a negative relationship with risk factors that is more complex than simply being their opposite. In conceptualising protective factors, de Vries Robbé et al. (2015) note the importance of understanding of social, environmental and personal factors, in which risk factors are intertwined, for individuals who have offended previously. Protective factors related to sexual offending are no different, with some existing on a continuum with risk factors and others perhaps being unique constructs. It is also possible that some proposed protective factors

(e.g., housing stability) exist on a continuum with risk factors, but a risk pole has not yet been integrated in risk assessment tools. In this instance, proposed protective factors that are valid constructs could themselves be integrated into risk-assessment practices to improve predictive validity. Additionally, the relationship between factors that might protect from recidivism and overall wellbeing seems to be a realistic one. Someone who feels valued, loved and worthy may seek to uphold these feelings and subsequently seek primary human goods (proposed by the GLM) implicated in the SAPROF-SO protective factors. For example, an individual who scores highly on the *Social network* and *Emotional connection to adults* items may feel they are loved and cared for, which may very well increase their overall sense of wellness. The door is open for future research to further examine the interaction between wellbeing and protective factors, which would lend strength to conceptualising protective factors as valid, strengths-based constructs.

The current study is the first examination of the internal consistency of the SAPROF-SO, lending support to items tapping a similar underlying construct. Four domains were found to have acceptable to good levels of internal consistency, suggesting that domains proposed by the SAPROF-SO authors do indeed function as subscales that measure a common construct. Protective factors are theorised to be underlying propensities, which may manifest in conjunction with other proposed protective factors (de Vries Robbé et al., 2015). Protective factors proposed by the SAPROF-SO that demonstrate internal consistency may therefore indicate a group of underlying propensities that measure a similar construct. Given that SAPROF-SO domains have not been examined for internal consistency before, the findings from the current study provide some insight into what protective mechanisms may be operating in each domain. The original SAPROF domains have not (to the authors knowledge) been examined for internal consistency, meaning a comparison between the two measures could be a feasible focal point for future validation studies. A next step for future research would be to

run a factor analysis to confirm factor structure of the SAPROF-SO to examine how proposed protective factors group together, allowing researchers to label the groupings. A larger sample size will help to validate factor structure and is an important consideration in future research.

The stability domain had a very poor level of internal consistency relative to the other SAPROF-SO domains. Housing stability had very low variance in scores and may go some way to explaining the poor level of internal consistency, as well as the domain being comprised of two items. Contextualising such findings from the current study is difficult given the lack of previous research on internal consistency for the SAPROF and SAPROF-SO, but the implications of the findings are necessary to discuss. Domains and/or subscales with few items are often insufficient for a measure to demonstrate internal consistency (Tavakol & Dennick, 2011). Stability is an important component of community reintegration upon release from prison, with Willis and Grace (2009) finding recidivism was more likely for individuals who lacked stable accommodation and employment (for example). A potential implication of the current internal consistency findings is to explore expanding the stability domain. One solution may be to run a factor analysis to help inform which items tap stability. Subsequently, if proposed protective factors currently in the stability domain (*Housing stability* and *Financial management*) do not group with other items, researchers may consider adding new items that tap stability. At present, the stability domain is specifically concerned with housing and financial aspects of an individual's life. Perhaps expanding the domain to include stability of interpersonal relationships could be considered. It is important to note that SAPROF-SO domains may influence one another, particularly where stability is concerned. For example, having good housing stability may have a protective effect on self-control, for an individual who previously demonstrated frustration in the context of poor housing situations. Consistent with Willis et al's. (2019b) acknowledgements, findings from the current study highlight that further research is needed to inform subscales.

An interesting finding from the current study relates to the nature of correlations between the SAPROF-SO and the STABLE-2007 and ACUTE-2007. Understanding the nature of correlations in the current study will be important in designing future research and will help to better conceptualise protective factors. Perhaps the SAPROF-SO is tapping social and environmental factors that have a risk opposite not measured by the risk measures used in the current study. For example, lack of stable employment (an item not measured by the STABLE-2007 or ACUTE-2007) might be a risk factor for an individual who offended in the context of unemployment, which would theoretically oppose the SAPROF-SO protective factor of work. Exploration of reintegration planning for individuals with sex offence convictions by Willis and Grace (2008) found that unstable accommodation plans and homelessness were strongly linked to sexual recidivism. The SAPROF-SO protective factor of housing stability would be an opposite to this. To further understand how protective factors and risk factors relate, future studies could do item-level correlations with a broad range of risk measures. If hypothesised relationships were found, perhaps risk assessment could be reframed entirely around strengths/protective factors to make it more engaging for both clients and clinicians.

The results from the current study indicate that proposed protective factors and static risk factors are two constructs that are unrelated, suggesting protective factors measure something different. Static risk factors in risk assessment are cited as problematic when assessing an individual's current circumstances, given their focus on historical aspects and their unchangeable nature (Bonta & Andrews, 2017). Once the predictive validity of the SAPROF-SO is assessed, integration of the tool in risk assessment practices may serve to balance current risk assessment processes. An individual's static risk is likely to remain the same over time, but like dynamic risk factors, most protective factors can change. As such, individuals who have previously offended will not be defined by the enduring vulnerabilities in their past. Additionally, desistance may be better recognised in risk assessment practices, with protective

factors acting as buffers for those who have offended previously and providing a strengths-based pathway to desistance. Understanding how proposed areas of protection relate to risk will add to the current study and provides a solid foundation to assess predictive validity of the SAPROF-SO in different contexts.

Future research may look to examine how proposed protective factors may be influenced by different cultures. Samples used in SAPROF validation research were from developed countries such as The Netherlands (de Vries Robbé et al., 2011), Japan (Kashiwagi et al., 2018) and Ireland (Abidin et al., 2013). Additionally, participants in SAPROF validation studies were predominantly white/European. The cultural diversity of New Zealand is partially reflected (given the small sample size) in the current study, with nearly one third of participants identifying with a non-New Zealand/European ethnic group (e.g., Māori or Pacific Peoples). The current study is an initial step in validating the SAPROF-SO, but the inclusion of indigenous cultures can and should be explored further. Researchers may look to compare item and domain scores for different ethnic groups, or perhaps conduct a qualitative study to gauge the importance of different areas of protection for different groups. The latter may be particularly interesting given the importance of context for scoring protective factors, particularly for men with sexual offence convictions. Sexual offence-specific assessment will be strengthened immensely with the use of a tool that is not only strengths-based, but culturally sensitive.

Limitations

The current study has several limitations that must be addressed. The sample was self-selected, meaning that men willingly agreed to participate in the current study. Men who chose to be a part of the current research may therefore have been looking to help others to understand their current situation, reflecting at least some insight into their offending. As such, it is

possible that participants with this mindset may have been further into their journey of maintaining their desistance than others and felt comfortable in their situation to engage with researchers openly. Additionally, participation may have been spurred not by the need to give back to society; rather, such men may have been motivated to participate to improve sexual offence-specific assessments and processes based on their own experiences. By contrast, other participants may also have been motivated by the reward incentive and are likely to have been at a different point on their desistance trajectory (e.g., the reward helps ease financial stress, indicating a possible lack of protection in areas such as financial management and work). On the other hand, other individuals may have had no interest in participation in sexual offence-specific research as they were uninterested in speaking about this topic and may just want to “get on” with life. Nevertheless, such a limitation is not a major hindrance when examining correlations between variables. Greater variance in items would be expected for individuals who are less into their desistance journeys. It will be important for future research to use representative samples with participants in different contexts (such as incarcerated men in treatment programmes) to truly explore the validity and generalisability of protective factor assessment for those with sexual offence convictions.

Missing data was another limitation of the current study, particularly the number of missing STABLE-2007 assessments relative to the number of ACUTE-2007 assessments and for all participants. All participants were on some form of parole or probation sentence, with dynamic risk almost always assessed at report in with their supervising agent (either weekly or fortnightly). STABLE-2007 assessments were far less frequent and were usually administered by a psychologist, be it during a treatment programme or a review of parole conditions (the latter being included in probation officer notes). The data were subsequently harder to obtain, particularly within the constraints of a masters thesis programme lasting a single year. Subsequently, limited conclusions can be drawn about the nature of the correlation between

STABLE-2007 and SAPROF-SO total scores. Future studies will be strengthened by having access to more risk assessment scores. As such, results related to STABLE-2007 scores should be interpreted with some level of caution.

The researchers in the current study had access to risk assessment scores and psychological reports that explored risk factors of note for each participant, which may have unintentionally influenced scoring of certain protective factors. Whilst implicit bias cannot be known for sure, being privy to certain information may have led to proposed protective factors being scored based on the hypothesised relationship with relevant risk factors. In the first study exploring interrater reliability, one rater had greater knowledge of risk scores (Willis et al., 2019b). However, ratings for all three raters were consistent and interrater reliability of the SAPROF-SO was generally good, indicating it is unlikely knowledge of risk scores significantly influenced ratings. Given that a sample of the participants from the current study were included in the first study, ratings of proposed protective factors are therefore unlikely to have been influenced in the current study.

Analysis of the descriptive statistics related to the SAPROF-SO raises some questions on the generalisability of certain proposed protective factors. Some items, such as medication, are likely to be protective in different contexts, particularly in forensic psychiatric samples. In the current study, medication was an item frequently scored an N/A, with no participants prescribed medication to reduce offence-related sexual impulses. Antidepressants and/or Antabuse (used to treat chronic alcoholism) were prescribed to a small number of participants based on the context of their offending and were subsequently the only participants rated between 0-4. Medication was found to have a protective effect in some SAPROF validations (de Vries Robbé et al., 2011), whilst also being excluded from other studies due to a lack of prescription from medical/correctional professionals (e.g., Yoon et al., 2018). Additionally, participants in the current study were all men who were not currently incarcerated. Earlier

research supported construct validity of the SAPROF-SO in a high-risk sample of men in a civil commitment centre (Willis et al., 2019b). Participants who do not have the liberties associated with community living are likely to have higher protection in some domains (e.g., professionally provided support) than others (e.g., prosocial connection). However, determining construct validity requires validation in multiple settings to determine the role of proposed protective factors in the community, which the current study supports.

Finally, the relatively small sample size in the current study may lead to concerns about generalisability of the sample. Participants for the current study were derived from an ongoing longitudinal study that is set to run for several years beyond the conclusion of the current study. Furthermore, the time restrictions of the masters thesis programme meant that all data had to be collected, coded and analysed within a single calendar year. As such, the researchers had a limited timeframe to recruit, schedule and interview participants for the current study. The SAPROF-SO is also a recently developed tool, with the current study one of the first examinations of its psychometric properties. Future research using data from the longitudinal study will benefit from a significantly larger sample size and recruitment period. Regardless, the results provide a suitable indication of construct validity for proposed SAPROF-SO protective factors, which will only be strengthened by future research.

Conclusion

Rehabilitation paradigms are changing, with an increasing recognition of desistance being a reality for most people who have offended (central to key models of desistance such as the GLM, wherein seeking primary human goods in prosocial ways may decrease the likelihood of recidivism). As such, the door has been opened for a strengths-based approach to risk assessment, a significant shift from the deficit-driven approach that is inherently associated with both static and dynamic risk factors. The aim of the current study was to assess whether

protective factors are valid constructs, and in doing so lend further strength to recent empirical research on the strengths-based SAPROF-SO assessment tool. The findings suggest that proposed protective factors are indeed valid constructs, which is an exciting step forward in utilising protective factor assessments more in correctional settings. Risk factors are an important component of assessment in correctional settings worldwide, and it will be important to further explore the role protective factors can have in risk assessment practices to improve risk prediction, particularly for men with sexual offence convictions. The next step in validation research will be examining predictive validity, as a tool cannot be used in risk assessment unless it adds something meaningful to risk prediction. The current study provides a framework for future research by acknowledging the intricacies of understanding, conceptualising and developing a strengths-based assessment tool.

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Appendix A

Participant Information Sheet



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Participant Information Sheet

Project title: Bringing balance to sexual reoffending risk assessments

Thank you for your interest in this research!

Research rationale and aims: Psychologists use a variety of risk assessment tools to assess someone's risk of reoffending. Commonly used tools focus on risk factors that make reoffending more likely. These tools do a good job of predicting who will re-offend but there's room for improvement. They don't pay much attention to what's going well in someone's life, what we call "*protective factors*" that might lessen the impact of risk factors and make reoffending less likely. We are interested in finding out about the things that are going well in your life, as well as the usual risk-related topics, to see if we can make improvements to the way that risk is predicted. We want to help psychologists to make more accurate, and more balanced, assessments of risk.

Introduction to the research team: We are a group of clinical psychologists and researchers from the University of Auckland (Gwenda Willis, Melissa Adam, Angela Carr & Shane Brown), University of Canterbury (Sarah Christofferson & Tamara Smolinski) and University of Waikato (Devon Polaschek). We are all experienced in assessing risk of reoffending and interested in developing new tools that will improve the overall accuracy of reoffending risk assessments. This research is funded by a Rutherford Discovery Fellowship awarded to the Principal Investigator, Gwenda Willis.

Participation criteria: Adult men (18 years +) released from prison following a sex offence conviction and in the medium-low risk category or higher for sexual reoffending based on ASRS¹ score are eligible to participate. It doesn't matter if you don't know your ASRS score – only people who meet the ASRS cut-off will be given information about the research. That means if you were given this information sheet and are a male 18-years old or above living in the community, you are eligible to participate in the study. We will aim to include everyone who is interested in participating.

What will participation involve? Participation will involve a telephone or Skype-based interview every six months followed by completion of a brief questionnaire (electronic or paper-based). It is anticipated that the first session will take around 1.5 – 2 hours, and that subsequent sessions will take around 1 hour. You will be paid for the time you commit to this research by your choice of either grocery or petrol vouchers (\$40 for the first session and

¹ Automated Sexual Recidivism Scale, an electronic calculation of risk for reoffending made by the Department of Corrections based on offence history information

\$20 for subsequent sessions). The overall research project is expected to take about four years, but you can choose to stop participating at any time without any consequences. Interviews will focus on understanding your current situation (e.g., we'll ask about your living circumstances, supports, leisure activities, work/study, and goals for the future).

With your permission, collateral information (psychological treatment reports and probation officer case notes), risk assessment scores, criminal history information and basic demographic information will be requested from the Department of Corrections. These data will help us to describe characteristics of the research sample (e.g., ethnic breakdown, average age, percentage of participants with convictions for offences against children versus adults, etc) and find out about the accuracy of the new tools we are developing, against existing tools. In addition, also with your permission, updated criminal history information will be obtained from the NZ Police for the purpose of analysing rearrest/reconviction outcomes. Interviews will be audio recorded so that the researchers can focus on talking to you during the interview, but can go back and check information on the recording later on. You are free to ask that the recorder be stopped at any time. Recordings will only be available to the researchers, and to research assistants who have signed confidentiality agreements.

After each interview we will ask you to complete a brief questionnaire that assesses experiences of general offending and sexual aggression perpetration, as well as general wellbeing. The questionnaire will take approximately 10 minutes to complete. Your answers to the questionnaire will be kept completely confidential, even from the research team. You will be given a unique participant code to use when completing the questionnaire. When we are ready to analyse our data, your questionnaire responses will be entered into our spreadsheet along with all other participants' responses. This means that we will not be looking at your individual responses to the questionnaire.

Interviews will take place at a time convenient to you. As noted above, you have the right to withdraw from this study without giving a reason at any time. This includes withdrawal of any information provided up to two weeks following each interview.

Confidentiality: All information collected from you will remain confidential to the researchers and research assistants who have signed confidentiality agreements. Confidentiality extends to any discussions about illegal behaviour when the behaviour does not pose a risk of harm to yourself or another person (e.g., theft, property damage, drug-related offending). The only limit to confidentiality is if you disclose information that you or another person is at risk of harm currently, in which case confidentiality may need to be broken to ensure everyone's safety. However, we will try to talk with you about any concerns first and make a plan together to keep you and others safe.

All information collected during this research will be de-identified (i.e., your name removed) and stored in a locked filing cabinet and in password-protected electronic files on a University of Auckland computer for six years following publication of research findings. It will only be accessible to the research team. After six years, all data will be destroyed (paper records will be shredded and electronic files will be permanently deleted).

Research findings will be published in academic journals and presented at international conferences; however, your identity will never be made public.

Risks and benefits: We hope that taking part in the research will be a positive experience for you and we do not think it will be harmful. The only difficult part might be talking about negative events in your life. However, on balance, we will be focusing on things that are going well for you and your

plans for the future. In addition, through participating in this research you will be improving our understanding of protective factors and our ability to make accurate predictions about risk.

Research findings: A summary of research findings will be posted on the Advancing Sexual Abuse Prevention (ASAP) Research Group website (www.asap.auckland.ac.nz).

If you have any questions about participating in this study please contact Melissa Adam (contact telephone number below) or send an email to protective_factors@auckland.ac.nz. If you agree to participate, we will review the attached consent form with you and ask for your verbal consent to participate.

Thank you for taking the time to consider participating in this research!

Contact details

Principal Investigator:
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Department of Psychology
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Head of School:
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School of Psychology
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Approved by The University of Auckland Human Participants Ethics Committee on 23 August 2017 for 3 years. Reference number: 019356

Appendix B

Consent to be Contacted Form



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The University of Auckland

Consent to be Contacted form Private Bag 92019
Auckland 1142 New Zealand

Project title: Bringing balance to sexual reoffending risk assessments

The research team would like your permission to contact you to provide further information about this study. At that time, the researchers will explain the study in more detail and see whether you would like to take part. We will then arrange a time to talk that suits you. If you agree to be contacted now, you can still say “No” when the researchers contact you.

If you agree to be contacted, please complete this form and leave it with the research team:

Name: _____ Date of Birth: _____

Phone number and/or email address:

Preferred method of contact (please circle): Phone call Text message Email

I consent to providing my contact details to the research team

Signature: _____ Date: _____

Approved by The University of Auckland Human Participants Ethics Committee on 23 August 2017 for 3 years. Reference number: 019356

Appendix C

Participant Consent Form



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CONSENT FORM**Bringing balance to sexual reoffending risk assessments**

The researchers will check that you understand the contents of this form and ask for your verbal consent to participate before the first interview. A recording of your consent to participate will be held for a period of 6 years following publication of research findings.

Researchers: Dr Gwenda Willis (Principal Investigator), Melissa Adam, Shane Brown, Tamara Smolinski, Dr Angela Carr, Dr Sarah Christofferson and Professor Devon Polaschek.

I have read the participant information sheet for the above-named project. I understand the nature of the research and why I have been selected. I have had the opportunity to ask questions and have them answered to my satisfaction.

- I agree to take part in this research.
- I understand that participation is voluntary.
- I consent to the researchers requesting collateral information, risk assessment scores and offence history information from the NZ Department of Corrections.
- I consent to the researchers accessing updated criminal history information from NZ Police for the purpose of analysing rearrest/reconviction outcomes.
- I understand that I am free to withdraw participation at any time without giving a reason, and to withdraw any information I have provided up to two weeks following each interview.
- I understand that all information collected from me will remain confidential and that no identifying information will be published.
- I understand that data will be kept for 6 years following publication of findings, after which they will be destroyed.

Approved by The University of Auckland Human Participants Ethics Committee on 23 August 2017 for 3 years. Reference number: 019356

Appendix D

SAPROF-SO Interview Guide and List of Proposed Protective Factors

Bringing Balance to sexual reoffending risk assessments:

A longitudinal investigation of protective factors against sexual reoffending

Interview guide

Opening and Introductions

Opening and mihi mihi (introductions), overview of research aims and procedures, elicit any questions from participant

Reiterate focus is on what’s going well for them, understanding what aspects of person and their environment and circumstances might buffer risk factors. Will look at Department of Correction reports to understand risk factors.

Remind participant of confidentiality and limits

Review consent form with participant and obtain verbal consent, ensure all questions are answered

- *I agree to take part in this research.*
- *I understand that participation is voluntary.*
- *I consent to the researchers requesting collateral information, risk assessment scores and offence history information from the NZ Department of Corrections.*
- *I consent to the researchers accessing updated criminal history information from NZ Police for the purpose of analysing rearrest/reconviction outcomes.*
- *I understand that I am free to withdraw participation at any time without giving a reason, and to withdraw any information I have provided up to two weeks following each interview.*
- *I understand that all information collected from me will remain confidential and that no identifying information will be published.*
- *I understand that data will be kept for 6 years following publication of findings, after which they will be destroyed.*

Interview Questions

INTERNAL CAPACITY ITEMS	
<p>1. COGNITIVE FUNCTIONING (6 Months)</p> <p>Completed high school or higher degree? Have you ever had any learning difficulties? Formal diagnosis? Have you suffered from any head injuries? Anyone noticed any changes in your memory?</p>	
<p>2. ATTACHMENT (0-18 years)</p> <p>Did you have a warm, loving relationship with pro-social role-model? Did you have adult caregiver you could rely on? Who was your main caregiver as a child and how would you describe your relationship with them? In general terms, how would you describe your childhood?</p> <ul style="list-style-type: none"> • <i>Any History of childhood abuse, frequent moves, loss of caregiver, exposure to criminal modelling, lack or rules, permissive parenting, excessive</i> 	

<p><i>spoiling, parental mental health/substance abuse</i></p>	
<p>3. ADAPTIVE SCHEMA (12 Months) Do you see others as trustworthy or liable to betrayal? How would people describe you? How do you feel within yourself?</p> <ul style="list-style-type: none"> • <i>View of self, others and world around them</i> • <i>Self as competent or deficient or unlovable</i> • <i>Grandiose & entitled</i> • <i>Grievance thinking</i> • <i>Depression & anxiety</i> • <i>Self-talk when experiencing negative emotions</i> • <i>Impact of maladaptive schema on general functioning</i> 	
<p>4. EMPATHY (6 Months) In the last 6 months have you needed to help someone out? In the last 6 months have you shown someone that you care about them? How? In the last 6 months has someone shown you that they care about you and how did you feel? In the last 6 months can you think of a moment where you shared an experience with someone that was joyous or sad?</p> <ul style="list-style-type: none"> • <i>Perspective of others emotions & their leading to helpful behaviour in relation to: fellow group members, family, friends, acquaintances or strangers</i> • <i>Examples of helping behaviour or callous behaviour? Examples beyond treatment group, shared joys?</i> • <i>Two different settings/context</i> • <i>e.g. acknowledging birthdays, sickness, asking for money</i> 	
<p>5. COPING (6 Months) Coping with daily life stressors, how do you deal with stressful events & negative emotions? Can you provide an example? Are you able to ask for help from others? Can you think of an example in the last 6 months? In the last 6 months can you think of a stressful situation that you have had to overcome and how did you deal with it?</p> <ul style="list-style-type: none"> • <i>Evidence of passive-avoidance, coping with daily life stressors in multiple settings, work, relationships, home</i> • <i>Frustration & anger</i> • <i>Externalizing behaviours</i> • <i>White knuckling</i> 	
<p>6. SELF-CONTROL (12 Months) How do you manage impulses to engage in rule-breaking, aggressive or risk behaviour? Or behaviour that could be harmful to yourself? How do you remain calm in stressful situation? How do you Manage negative emotion?</p> <ul style="list-style-type: none"> • <i>Delay gratification to obtain goals</i> • <i>Identifying triggers, implementing affect regulation strategies</i> 	

<p>7. SEXUAL SELF-REGULATION (12 Months)</p> <p>What strategies do you have for negotiating risky situations? Do you have offense-related sexual impulses and how do you deal with them? How often do you masturbate and/or have sex? Do you ever use sex as coping? What skills are you using to manage any deviant urges?</p> <ul style="list-style-type: none"> • <i>Avoids situations/triggers</i> • <i>Well worked out strategies</i> • <i>Offense related sex impulses rare</i> • <i>Healthy expression of sex drive</i> • <i>Lifestyle that avoids risky situations;</i> • <i>healthy expression of sex drive</i> 	
PROSOCIAL IDENTITY ITEMS	
<p>8. PRO-SOCIAL SEXUAL INTEREST (24 Months)</p> <p>How would you describe your current sexual interest or fantasy? Do you watch pornography and describe the type? How many peer aged sexual partners? Nature of sexual relationships?</p> <ul style="list-style-type: none"> • <i>Sexual behaviour including fantasy & masturbation focused on consensual activity with adults</i> • <i>Sexual interests, fantasies and behaviour</i> • <i>How long been in an uncontrolled environment</i> 	
<p>9. PRO-SOCIAL SEXUAL IDENTITY (12 Months)</p> <p>Are you open with others about your sexual preference? Have you experienced difficulties in relation to your sexual preferences? Do you belong to any support groups relating to sexual choices?</p> <ul style="list-style-type: none"> • <i>Requires a 2+ on previous item</i> • <i>Comfortable in own skin</i> • <i>Expressed interest & behaviour consistent</i> • <i>Dating? Disclosing? Support groups? Describe ideal partner?</i> • <i>PPG results</i> 	
<p>10. LIFE GOALS (6 months)</p> <p>What do you need in life to feel worthwhile? What are you goals/aspirations/hopes for future? What are they doing differently because of goal? What is important & what steps are you taking to achieve your goal? What stops you from achieving your goal?</p> <ul style="list-style-type: none"> • <i>Are goals realistic</i> • <i>Positive life goals – approach orientated, prosocial, personally meaningful & provide pleasure/purpose</i> • <i>They motivate behaviour consistently</i> 	
<p>11. MANAGING RISK (12 Months)</p>	

<p>What are your thoughts about re-offending? What do you do to keep yourself safe and mitigate any risk? In the last 12 months have you received any treatment/therapy? Do you have a plan for managing high risk situations, can you give me an example? Do you feel able to ask for help or report any high risk situations or behaviour?</p> <ul style="list-style-type: none"> • <i>Maintenance stage, action stage, preparation stage, contemplation stage, precontemplation stage</i> • <i>Engaging in treatment or dropped out</i> • <i>Skills employed to manage risk factors</i> • <i>Active or avoidance based skills</i> 	
<p>12. ATTITUDE TOWARDS RULES & REGULATIONS (6 Months)</p> <p>What do you think about the rules & regulations that you are expected to comply with? How do you tolerate those rules/regulations? Do you have any examples of grievances?</p> <ul style="list-style-type: none"> • <i>Compliant with rules vs defiance</i> • <i>How do the advocate for self</i> • <i>Assertive vs aggressive vs passive</i> • <i>Able to articulate how rules benefit self</i> • <i>Positive or frustrated</i> 	
PROSOCIAL CONNECTION ITEMS	
<p>13. WORK (6 Months)</p> <p>Are you currently working, where are you working? What does your work involve and what hours are you working? Do you feel your job matches your skills and interests? What are your future career goals?</p> <ul style="list-style-type: none"> • <i>Enjoys job, supportive environment, any risks, access to victims</i> 	
<p>14. LEISURE (6 months)</p> <p>How do you spend your free time? Any hobbies or leisure activities? How often to engage in this activity? Is it scheduled? What video game do you enjoy and is it online versus a console?</p> <ul style="list-style-type: none"> • <i>Activities to prevent boredom</i> • <i>Hobbies, involved in regular scheduled activities that involve contact with others</i> • <i>Solo activities – structured</i> • <i>Online gaming – online vs console, pro-violence</i> 	
<p>15. SOCIAL NETWORK (6 Months)</p> <p>Who is part of your pro-social network? Who visits you currently/in past? Family/friends, who is closest to you? What makes a close friend?</p> <ul style="list-style-type: none"> • <i>Two or more systems: intimate partner/spouse, family, friends, volunteers</i> 	

<p>16. EMOTIONAL CONNECTION (6 Months)</p> <p>Do you have a person/persons that you trust to share your thoughts and feelings with and feel they trust you?</p> <p>What makes the relationship you share a close one, and what are the sort of things you may talk about?</p> <p>Do you connect with this person online or in person?</p> <ul style="list-style-type: none"> • <i>Initiates interactions with prosocial others shares inner experiences (thoughts & feelings) evidence of reciprocity</i> • <i>Open & honestly with that person</i> • <i>Comfortable listening to that person</i> • <i>Online connections – email, private message</i> • <i>Trusted people</i> 	
<p>17. INTIMATE RELATIONSHIP (6 Months)</p> <p>Elicit if in relationship. If yes – can you tell me about your relationship/partner?</p> <p>Is your relationship romantic, sexual, platonic?</p> <p>How satisfied are you in this relationship?</p> <p>Do you feel your partner meets all you wants and needs sexually and emotionally?</p> <p>In the last 6 months have you experienced any difficulties within your relationship?</p> <ul style="list-style-type: none"> • <i>Consider length & stability of relationship age and life stage</i> • <i>Mutual support, emotional connection & partner support of non-offending lifestyle</i> • <i>Level of intimacy in relation to early phase of relationship</i> • <i>Reciprocal care & concern</i> • <i>Normal sexual intimacy</i> • <i>Physical element; holding hands, cuddling</i> • <i>Level of contact</i> 	
<p>STABILITY ITEMS</p>	
<p>18. HOUSING STABILITY(6 months)</p> <p>Where are you currently living and who are you living with?</p> <p>How long have you been there? How long intend to be there?</p> <p>How do you feel about your current living situation?</p> <p>What are your plans for the future regarding your living situation?</p> <ul style="list-style-type: none"> • <i>Temporal stability/permanency of living circumstances</i> • <i>Relocation plan and feasibility of that plan</i> • <i>Plan for next 6 – 12 Months</i> • <i>Tenancy agreement, group home, transitional housing, couch surfing</i> 	
<p>19. FINANCIAL MANAGEMENT (6 months)</p> <p>What is current source of income?</p> <p>Do you feel that it meets your current needs?</p>	

<p>How do you manage money? Are you able to deal with unexpected expenses like the doctors or car repairs? In the last 6 months have you made any large purchases? Do you currently have any debt, loans or credit cards?</p> <ul style="list-style-type: none"> • <i>In receipt of sufficient steady income, effective management of finances including budgeting, can cope with unexpected expenses</i> • <i>Living pay check to pay check, nil savings, debt,</i> • <i>Impulsive spending, credit card refusals, debt collectors</i> 	
<p>PROFESSIONALLY PROVIDED SUPPORT ITEMS</p>	
<p>20. SEXUAL OFFENCE-SPECIFIC TREATMENT (6 Months) Have you completed any offence specific treatment? If yes, what did you take away/learn, how did it make you feel?</p> <ul style="list-style-type: none"> • <i>High risk category participate in high intensity programme or sporadically attends a programme, no treatment available or treatment available does not conform to need & responsivity model</i> 	
<p>21. MEDICATION (6 Months) Are you currently taking any medication and what for? Are there any side effects of the medication? Do you find that the medication helps? In what way?</p> <ul style="list-style-type: none"> • <i>Provision of medication relevant to reducing risk</i> • <i>Do they see a need for meds</i> • <i>When do they decline meds</i> 	
<p>22. THERAPETIC ALLIANCE (6 Months) Is your therapist/supervisor supportive & helpful? Do you trust your supervisor? Are they Fair? What about the relationship is helpful/unhelpful?</p> <ul style="list-style-type: none"> • <i>Attitude towards staff</i> • <i>Only in therapy/supervision for at least 1 MONTH or it's an N/A</i> 	
<p>23. SUPERVISED LIVING (6 Months)</p> <ul style="list-style-type: none"> • <i>Consider living situation, incarcerated, secure facilities, residential treatment, group homes, 24-hour supervision</i> • <i>Pro-social family/other people aware of individual risk management plan/or not aware of plan</i> • <i>Live independently with regular home visits</i> • <i>Living with antisocial people or high risk situations</i> 	
<p>24. EXTERNAL CONTROL (6 Months)</p> <ul style="list-style-type: none"> • <i>Extent someone is monitored to reduce victim access (prison, hospital, community)</i> 	

- | | |
|---|--|
| <ul style="list-style-type: none">• <i>Probation, parole, supervision requirements (curfew, GPS, travel bans, electronic monitoring)</i>• <i>No longer on sentence or reporting less regularly</i>• <i>Sex offender registration not relevant for this item</i> | |
|---|--|

What else do I need to understand about your current experience?

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Closing

- Will provide link to brief questionnaire and give you a number (verify email address)
- Reflect on interview process
- Provide information about support services if needed
- Thank participant for their time
- Obtain address to send vouchers