

**Do Adolescent Risk Assessment Tools Capture Self-Reported Reasons for Desistance? An  
Examination of the Content Validity of Protective Factors**

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### **Abstract**

This study used a novel approach to assess the content validity of three adolescent risk assessment tools: the Structured Assessment of Violence Risk in Youth (SAVRY; Borum et al., 2006), the Structured Assessment of Protective Factors for Violence Risk – Youth Version (SAPROF-YV; de Vries Robbé et al., 2015), and the Short-Term Assessment of Risk and Treatability: Adolescent Version (START:AV; Viljoen et al., 2014). In-person interviews and online surveys were conducted with people with a history of adolescent offending ( $n = 103$ ), which included open-ended questions about their desistance from offending, followed by direct questions based on the tools' protective factors. Responses were coded using directed content analyses based on the tools' item definitions. In open-ended questions, across participants all items were mentioned, and all items were rated as important by at least some participants. Only a few additional themes emerged that were not captured by the tools. In addition, participants primarily discussed the presence of protective factors rather than the removal of risk factors, suggesting they represent distinct constructs. Overall the findings support the content validity of the SAVRY, SAPROF-YV, and START:AV protective factors, and highlight the value of perspectives from people with lived experience in risk assessment research.

*Keywords:* protective factors; desistance; risk assessment; content validity; content analysis

## **Do Adolescent Risk Assessment Tools Capture Self-Reported Reasons for Desistance? An Examination of the Content Validity of Protective Factors**

Since the early 2000s, researchers have developed hundreds of tools for assessing adolescents' and adults' risk of violence and reoffending (Singh et al., 2014). Although most of these risk assessment tools are deficit-focused, and contain mainly risk factors, some tools contain protective factors. Protective factors are defined as factors that predict a decreased likelihood of reoffending (e.g., de Vogel et al., 2012); that is, they “predict the welcome outcome of desistance from offending” (Monahan & Skeem, 2016, p. 498). Protective factors include both internal factors (i.e., individual assets) and external factors (i.e., resources or environmental factors that are accessible to the individual; Fergus & Zimmerman, 2005). For instance, internal protective factors such as positive coping skills and a strong commitment to school, and external protective factors such as strong social support, often relate to decreased offending in adolescents (Borum et al., 2006).

One of the first risk assessment tools to include protective factors was the Structured Assessment of Violence Risk in Youth (SAVRY; Borum et al., 2006). Unlike other risk assessment tools that existed at the time, the SAVRY was designed to include a separate section for protective factors. However, that section was relatively short compared to the risk factor section; the SAVRY includes 6 protective factors, which are rated present or absent, as compared to 24 risk factors, which are rated on a three-point scale (low, moderate, high). As such, more recently, researchers have developed a couple of additional tools to provide an even greater focus on protective factors.

The Structured Assessment of Protective Factors for Violence Risk – Youth Version (SAPROF-YV; de Vries Robbé et al., 2015) was recently developed to provide a more thorough

assessment of protective factors for violence risk assessments with adolescents. It includes 16 protective factor items within four domains: Resilience (e.g., Coping), Motivational (e.g., Future Orientation), Relational (e.g., Peers) and External (e.g., Professional Care). Items are rated on a 7-point scale from hardly present to clearly present. Although the SAPROF-YV does not include any risk factors, it is designed to be used alongside a risk assessment tool, such as the SAVRY.

Another tool with a focus on protective factors is the Short-Term Assessment of Risk and Treatability: Adolescent Version (START:AV; Viljoen et al., 2014). The START:AV consists of 26 items within three domains: Individual Adolescent (e.g., Conduct), Relationships and Environment (e.g., Community), and Response to Intervention (e.g., Insight). Each item is rated for both Strengths and Vulnerabilities, with ratings of low, moderate, or high.

Several studies have found that these measures of protective factors predict reoffending. For instance, SAVRY protective factors have predicted (no) reoffending over one to four year follow-up periods (Gammelgård et al., 2015; Rennie & Dolan, 2010; Shepherd et al., 2014; Viljoen et al., 2020; Vincent et al., 2012). Over short follow up periods of three months, START:AV Strength scores have predicted aggression (Sher et al., 2017), and have been associated with violent reoffending (Viljoen et al., 2012). However, several studies have yielded inconsistent findings regarding the predictive and incremental validity of SAVRY protective factors above risk factors (Dolan & Rennie, 2008; Hilterman et al., 2014; Lodewijks et al., 2010; Schmidt et al., 2011; Shepherd et al., 2014). In addition, studies have failed to show incremental predictive validity for the START:AV Strengths and the SAPROF-YV above and beyond risk factors (Christiansen et al., 2021; Viljoen et al., 2012). Some studies have also found that SAPROF-YV was not predictive of violence (Koh et al, 2020).

This suggests a need for additional research that aims to enhance the assessment of protective factors. One way to do so is to examine content validity of the protective factor items that are included on the risk assessment tools (Brod et al., 2009). Content validity is distinct from other types of validity as it focused “on the concepts being measured and their meaning – not in terms of correlation coefficients or factorial structure, but their authenticity for subjects” (Lasch et al., 2010, p. 1087). For instance, researchers could examine whether the protective items capture the factors that people report as having played a key role in their desistance from offending. Although authors of risk assessment tools often consult with experts, such as clinicians, about item content (e.g., de Vries Robbé et al., 2015; Viljoen et al., 2012), the perspectives of people who have desisted from offending, generally have not been considered during item development (Haynes et al., 1995).

Examining content validity may help researchers to identify item content that is missing (Brod et al., 2009). It might also help clarify debates about the relevance of items (Haynes & Richard, 1995), such as whether protective factors are unique and distinct from risk factors (see Viljoen et al., 2020). Studies have found, for instance, total scores on strengths tend to show high inverse correlations with total scores on risk factors (e.g., Spice et al., 2010; Viljoen et al., 2012). Specifically, with risk assessment tools, researchers could examine whether people describe their desistance in the context of the removal of risk factors (e.g., ceasing substance use), or the presence of protective factors (e.g., using family support).

In addition, content validity research may help to clarify the strengths and limitations of various measures of protective factors. Several items on the SAVRY, SAPROF-YV, and START:AV show at least partial overlap, but they vary in terms of the number of items. The START:AV also includes some narrower definitions, as well unique items (e.g., Substance Use).

As such, it is unclear whether the SAVRY items are comprehensive enough, or whether narrow item definitions used in the SAPROF-YV and START:AV are needed to capture individuals' experiences.

### **Content Validity of Risk Assessment Tools**

Even though research has not examined the content validity of risk assessment tools, there are some reasons to believe their items will map on to individuals' self-reports about their desistance. First, these tools appear to capture many items central to desistance theories. For example, items such as the SAPROF-YV's *Self-Control* and START:AV's *Parenting* correspond to increased self-control and strong parental supervision in Gottfredson and Hirschi's (1990) general theory of crime. Protective factors from all three tools are captured by Hirschi's (1969) social control theory, which focuses on strong social bonds (e.g., relationships, school and work). Relatedly, external sources of structure from informal social control theory (Laub & Sampson, 1993), such as positive relationships and employment, overlap with the SAPROF-YV's *Other Supportive Relationships* and the START:AV's *External Triggers*. Motivational items on the tools map on to the cost-benefit analysis of offending in identity theory (Paternoster & Bushway, 2009), in which individuals gain motivation to work toward a prosocial identity. Finally, many items across all three tools overlap with cognitive transformation theory (Giordano et al., 2002), which describes thoughts about change, prosocial identities, and negative thoughts toward delinquency.

Second, in qualitative studies, people with a history of offending have described factors that appear similar to some items included on the SAVRY, SAPROF-YV, and/or START:AV. For instance, social and environmental factors, including general social support, peer associations, and support and supervision from parents/guardians are common (e.g., Amemiya et

al., 2017; Barnett et al., 2015; Byrne & Trew, 2008; Simões et al., 2008; Toldis et al., 2001). In addition, adolescents have identified a number of factors related to desistance that overlap with internal protective factors, such as coping, determination, taking responsibility, agency, interest in a prosocial life, self-empowerment, and prosocial identities, as well as a number of motivational items, including persisting, future orientation, prosocial goals, and structured leisure activities (Amemiya et al., 2017; Byrne & Trew, 2008; McLean et al., 2013; Toldis et al., 2001).

However, some of the factors on these tools have variable or mixed support in qualitative studies. For instance, findings on romantic partners are less consistent (Byrne & Trew, 2008; Giordano et al., 2002, Giordano et al., 2003). Research on school interest and desistance is less common, and employment has shown mixed findings (Byrne & Trew, 2008; Giordani et al., 2002; Giordani et al., 2003; Herrschaft et al., 2009). Environmental factors (e.g., probation) are rarely found in qualitative desistance studies, although some adolescents have described negative consequences of delinquency and finding safe places from offending (Amemiya et al., 2017).

Previous qualitative studies on protective factors relevant to desistance have been limited because desistance has been operationalized in various ways. Some studies have provided more concrete definitions of desistance, such as no self-reported offending across one (Healy, 2010) or two years (Sommers et al., 2004), while others have used vague definitions (Christian et al., 2009; Presser & Kurth, 2009). In addition, some studies have included people with current justice system involvement rather than people who have desisted (e.g., Amemiya et al., 2017; Haigh, 2009; Simões et al., 2008). Finally, no studies have directly examined the protective factors included on risk assessment tools; thus, there is a need for desistance research with a practice-oriented focus.

### **The Current Study**



This research used a novel approach to investigate the content validity of protective factors on the SAVRY, SAPROF-YV, and START:AV. While previous studies have examined the tools' predictive validity, there is a lack of research on how individuals consider or view their own protective factors. The following research questions were investigated:

1. Do the SAVRY, SAPROF-YV, and START:AV capture self-reported reasons for desistance from people with a history of adolescent offending? It was hypothesized that internal items will be considered relevant (e.g., coping, future orientation), while environmental items will be less relevant (e.g., probation, treatment).
2. Are there additional factors relevant to desistance that are not included in risk assessment tools? As no studies have examined the content validity of these tools from the perspective of people with a history of offending, it was hypothesized that some additional factors not captured by items on the tools will emerge from qualitative data.
3. Given the debate surrounding the definition of a protective factor (Walker et al., 2013), is desistance discussed in terms of the absence of a risk factor, the presence of a protective factor, or as both? It was hypothesized that protective factors will be more common, but that some factors will be discussed in terms of both risk and protective factors (e.g., decreasing associations with delinquent peers, increasing associations with prosocial peers) or risk factors only (i.e., ceasing substance abuse).

## **Methods**

### **Participants**

This study includes two samples: an in-person sample, who completed in-depth interviews, and an online sample, who completed similar questions in an online survey format. The in-person sample included eight individuals residing in the Greater Vancouver Area,

Canada. Participants included 6 males and 2 females, and almost all participants ( $n = 7$ ) were White. Age ranged from 24 to 56 years old ( $Mdn = 41.5$ ). Age of first police contact ranged from 6 to 18 years old ( $Mdn = 12.0$ ), and age of first arrest ranged from 11 to 18 years old ( $Mdn = 14.5$ ). Participants stopped offending when they were 17 to 45 years of age ( $Mdn = 20.0$ ), and they had stopped offending for 5 to 36 years ( $Mdn = 15.0$ ). Five participants completed at least some post-secondary school/training (62.5%) and almost all (87.5%;  $n = 7$ ) participants were employed. Five participants (62.5%) reported a history of probation, and five participants (62.5%) reported a history of custody. Participants had convictions for violent offenses (50.0%,  $n = 4$ ) and property offenses (62.5%,  $n = 5$ ), but no participants were convicted of drug offenses (although two participants reported committing a drug offense).

The online sample included 95 participants who resided in the United States. Participants' age ranged from 21 to 55 years ( $M = 34.5$ ,  $SD = 7.6$ ). Age of first police contact ranged from 7 to 19 years ( $M = 14.8$ ,  $SD = 2.1$ ), and age of first arrest was from 8 to 19 years ( $M = 15.7$ ,  $SD = 2.1$ ). Participants stopped offending when they were 14 to 45 years of age ( $M = 20.0$ ,  $SD = 4.6$ ), and they had stopped offending for 3 to 35 years ( $M = 14.5$ ,  $SD = 8.0$ ). This sample was 71.6% male ( $n = 68$ ) and 28.4% female ( $n = 27$ ). Most participants were White (79.0%,  $n = 75$ ), 8.4% ( $n = 8$ ) were African American or Black, 5.6% ( $n = 5$ ) were Latinx, 3.2% ( $n = 3$ ) were Asian, and 4.2% ( $n = 4$ ) selected other ethnic backgrounds (e.g., mixed ethnic backgrounds). Almost half (40.0%;  $n = 38$ ) of participants reported having a Bachelor's degree and only a small proportion (14.7%,  $n = 14$ ) of participants had completed high school only. Most participants (91.6%,  $n = 87$ ) were employed. While convictions for property offenses were high (60.6%,  $n = 57$ ), convictions for violent offenses (21.2%,  $n = 19$ ) and drug offenses (30.9%,

$n = 29$ ) were less common. Almost all participants had been on probation (96.8%,  $n = 91$ ), and almost three-quarters had a history of custody (72.3%,  $n = 68$ ).

### **Procedures**

This study was approved by Simon Fraser University and adhered to ethical guidelines from the Canadian Psychological Association (2017).

**In-Person Interviews.** In-person participants were recruited through community posters and online resources (e.g., Craigslist). Interested individuals who contacted the researcher were screened to determine if they met the following inclusion criteria: (1) had a conviction for at least one criminal offense prior to the age of 19 years that resulted in probation or incarceration; (2) spoke English, (3) were at least 19 years old, (4) resided in the Greater Vancouver Area and (5) had stopped offending for at least two years (Sommers et al., 2004; Veysey et al., 2013). The first author (A. K. Christiansen) completed semi-structured interviews with eligible participants. Interviews occurred in public libraries or mall food courts and lasted 45 to 60 minutes. After completing demographic questions and a measure of offense history (i.e., Self-Report of Offending [SRO]; Huizinga et al., 1991; Knight et al., 2004), participants were asked to identify the time period when they stopped offending and the length of time since they had stopping offending (i.e., “Consider the time period when you stopped offending. When did it start? How long has this been?”). They were then asked a broad open-ended question about how they were able to stop offending (i.e., “Tell me about how you were able to stop offending/committing crimes? What do you think enabled you to stop offending or stay out of trouble?”), followed by three open-ended questions about individual, relational, and environmental changes that helped them stop offending (i.e., “Is there anything about yourself, or something that changed about yourself during that time, that helped you to stop offending?”). In general, participants appeared

to understand the questions adequately. However, if a participant appeared to have any difficulty understanding a question, this was rephrased.

Next, the interviewer directly asked participants about 34 strengths that were compiled from the SAVRY, SAPROF:YV, and START:AV. Although the tools include some of the same items, items were only included on this list once to avoid redundancy. We also added three additional items on religious/spiritual beliefs, having children, and maturity; even though these items are not included in the tools, they have been identified as important in the desistance literature (Giordano et al., 2008; Glueck & Glueck, 1974; Laub & Sampson, 1993). The interviewer read out each strength and asked participants to rate how important the item was to their desistance (not at all important, somewhat important, or very important). If participants rated an item as somewhat or very important, they were prompted to further explain how the item was important to desisting.

Because the items in these tools use academic language (e.g., resilient personality traits), we converted the items into simpler language (Flesch Kincaid Reading Level = Grade 7.1; see Table 4 for a list of the items). We also reviewed the list of items and carefully checked them for redundancies, missing items, and for the specific language used in each item. Finally, the compiled list of items was distributed to graduate student researchers for feedback about the content. Participants generally appeared to understand the items, and the interviewer was able to clarify any misunderstandings.

Participants were compensated \$25.00 CAD. Interviews were audio-recorded and transcribed by a trained research assistant.

**Online Sample.** To expand on this sample and provide additional data using a different format, we also launched an online survey through MTurk. MTurk has been successfully used to

recruit people who have desisted (Hanniball et al., 2018), and adults with a history of offending in adolescence (Vigil, 2017), using open-ended questions to gather qualitative data (Vigil, 2017).

The same inclusion criteria were used as for the in-person sample. As with sample of in-person participants, eligible online participants completed demographic questions, the SRO, and a question asking how many years it had been since they had stopped offending. Then they were asked the same open-ended questions about desistance (e.g., “Tell me the story of how you stopped offending”). To ensure that participants’ written responses to these questions were an adequate length, participants were required to write a minimum of 200 characters, and were given the following prompt: “don’t worry about spelling, grammar, or anything like that. We just want to hear about what helped you to stop offending.” Following this, participants were provided the list of 34 strengths that were compiled from the SAVRY, SAPROF:YV, and START:AV, and were asked to rate the importance of each factor to their desistance (not at all important, somewhat important, or very important). Finally, online participants were asked two repeat demographic questions (Oppenheimer et al., 2009) to help screen out participants who responded carelessly.

Only 4 participants provided responses that were considered invalid. Specifically, their responses included: multiple copied and pasted item instructions, random letters, such as “tttttt” to fill the space, copied and pasted information about desistance from a webpage, and an incoherent response. Based on this screening, all other responses indicated that the respondents had understood the questions and provided responses that were considered appropriate for inclusion. However, 10 additional participants were excluded – two participants indicated they did not have a history of probation or custody (despite meeting initial screening inclusion

criteria) and eight participants showed inconsistent responses on the reliability check items, resulting in a final sample size of 95 online participants.

Participants who completed the survey were paid \$4.50 USD, which is consistent with rates in other MTurk studies (e.g., Vigil, 2017).

## **Measures**

### ***Demographic Questions***

Demographic questions included age, gender, ethnicity, education level, and employment status. In addition, several questions queried about offense history, including the type of prior offenses, age of first police contact, arrest, and charge, and whether they had been on probation and/or in custody.

### ***Self Report of Offending***

The Self Report of Offending (SRO; Huizinga et al., 1991; Knight et al., 2004) is a self-report measure of violent and non-violent offenses that is commonly used in desistance research (e.g., Amemiya et al., 2017; Monahan et al., 2009; Mulvey et al., 2010). It comprises 24 items relating to different types of offenses. Total variety scores were calculated, which examine lifetime involvement in offense types. The SRO has shown high internal consistency (Mulvey et al., 2004) and has provided a good indicator of involvement in illegal behaviour (Knight et al., 2004).

## **Analyses**

**Factors on SAVRY, SAPROF-YV, and START:AV.** To examine if the SAVRY, SAPROF-YV, and START:AV capture self-reported reasons for desistance (Research Question 1), direct content analyses were conducted using NVivo version 12 software (QSR International, 2018). In particular, the first author read participants' responses to the open-ended interview questions and online survey questions and then coded which item(s) the response mapped onto.

For instance, if the participant stated that they desisted because of gaining stable housing, this was coded under the START:AV's *Material Resources*. In some cases, a response could reflect multiple items (e.g., the SAVRY's *Prosocial Involvement*, the SAPROF-YV's *Leisure Activities*, and the START:AV's *Recreation*), given that tools have overlapping item content. However, the coder only identified items that were clearly relevant. After all responses were coded, the coding was reviewed again for consistency.

We calculated the proportion of participants who discussed an item, as well the proportion of participants who rated items as somewhat important or very important (Schilling, 2006). These analyses were conducted using SPSS version 24 (IBM Corporation, 2016).

To determine if the coding was reliable, intercoder reliability (ICR) was assessed by having a second graduate student code 145 excerpts from the open-ended responses (O'Connor & Joffe, 2020). Approximately five excerpts per item (ranging from one sentence to a paragraph of several sentences) were randomly selected from the dataset for the ICR coding. ICR was analyzed using Cohen's kappa, which accounts for agreement due to chance ( $\kappa$ , Cohen, 1960; O'Connor & Joffe, 2020). Results indicated "substantial" agreement (defined as  $\kappa = .61$  to  $.81$ ; Landis & Kosch, 1977) between the two coders across all codes,  $\kappa = .78$  (95% CI =  $.74$  to  $.82$ ,  $p < .001$ ). Agreement was also substantial on the SAVRY ( $\kappa = .72$ , 95% CI =  $.62$  to  $.82$ ,  $p < .001$ ), SAPROF-YV ( $\kappa = .78$ , 95% CI =  $.74$  to  $.82$ ,  $p < .001$ ), and START:AV ( $\kappa = .78$ , 95% CI =  $.74$  to  $.82$ ,  $p < .001$ ).

**Additional Factors Not Included on Tools.** To determine if participants reported factors related to their desistance that were not captured by the tools (Research Question 2), any additional factors that participants mentioned were coded using an inductive approach. This approach draws from grounded theory, where the themes are rooted in the data (Strauss &

Corbin, 1997). Participants' responses were organized into categories. Each response was annotated to indicate categories that it might fit with. Then, these annotations were then reviewed and were examined for how they could be grouped together. For instance, annotations such as "growing up" and "maturity" were grouped together under "maturity" since it was a commonly used term and summarized similar responses.

**Presence of Protective Factors or Removal of Risk Factors.** In the final question, we examined if participants framed the factors that contributed to their desistance as the presence of a protective factor or the removal of a risk factor (Research Question 3). Responses to the open-ended interview and online survey questions were coded as protective factors if participants discussed the presence of a strength (e.g., having supportive friends). In contrast, responses were coded as a risk factor if they discussed the absence of a risk factor (e.g., no longer associating with antisocial friends). In some cases, both were coded; if a participant explained that they stopped hanging out with negative peers and started hanging out with positive peers, the response would be coded under both a protective factor and a risk factor. We used the START:AV item definitions for coding, as each item is assessed for both strengths and risk factors.

## Results

### **Research Question 1: Are Self-Reported Reasons for Desistance Captured by the SAVRY, SAPROF-YV, and START:AV?**

#### *In-Person Participants*

**Open-Ended Questions.** All items from all three tools were endorsed as having contributed to desistance by at least one participant (see Tables 1 to 3). Each participant reported approximately 8 items in the open-ended questions ( $Mdn = 7.9$ ). Across tools, some of the most



commonly endorsed items related to positive ways of spending time (i.e., SAVRY's *Prosocial Involvement*; START:AV *Conduct*), social support (i.e., SAVRY's *Strong Social Support*; SAPROF-YV's *Peers, Other Supportive Relationships*; START:AV's *Peers, Social Support from Adults*), and insight into their behaviour or circumstances (i.e., START:AV's *Insight*). *Insight*, which is unique to the START:AV, was the most prevalent item across tools during the open-ended questions. Participants also frequently acknowledged other START:AV items that do not overlap with SAVRY or SAPROF-YV items, including *Emotional State*, and *Material Resources* (i.e., the most common environmental item).

Certain items were less frequently endorsed as relevant to desistance. Participants rarely described that external sources of structure were relevant to their desistance (e.g., items in the External domain of the SAPROF-YV). In terms of relationships, social support from parents was rarely discussed, and Parental Functioning was also rare.

**Direct Questions.** When participants were directly asked about the 34 strength items on the tools, participants rated most items as important to their desistance (see Table 4). Consistent with the open-ended interview questions, in these direct questions, most participants endorsed items relating to relationships and support from peers and other adults. In addition, in the direct questions participants rarely considered external sources of structure (e.g., work, therapy, supervision) or parental relationships and support as important to their desistance.

In contrast to the open-ended interview questions, fewer participants endorsed *Insight* during the direct questions. In addition, internal items such as *Coping* and *Self-Control*, as well as *Substance Use*, were more common in the direct questions than the open-ended questions. Some items were only endorsed in the direct questions and not in the open-ended questions. This included two SAVRY items (i.e., 33.3% of items), 9 SAPROF-YV items (i.e., 56.3%), and

13 START:AV items (i.e., 50.0%), including the START:AV's non-overlapping items (i.e., *Conduct, Self-Care, Mental/Cognitive State, Parental Functioning, External Triggers*).

### ***Online Participants***

**Open-Ended Questions.** The results of the online participants were generally similar to the in-person participants. As shown in Tables 1 to 3, almost all items across the three tools were endorsed by participants. Participants described all six SAVRY items, and most SAPROF-YV (i.e., 93.8%; 15 items) and START:AV items (i.e., 96.2%; 25 items). Across all three tools, participants reported approximately seven items each ( $M = 7.2$ ,  $SD = 4.8$ ).

The most common items related to relationships and social support (i.e., SAVRY's *Prosocial Involvement* and *Strong Social Support*; all three SAPROF-YV Relational items; START:AV's *Parenting* and *Peers*), involvement and interest in school and/or work (i.e., SAPROF-YV's *School/Work*; START:AV's *School & Work*), as well as internal factors including *Insight* and *Attitudes* (on the START:AV). Again, *Insight* was the most prevalent item across all three tools.

In the open-ended questions, no participants described the SAPROF-YV's *Attitude Toward Agreements and Conditions* and the START:AV's *Parenting*, but these items were endorsed in the in-person sample. In addition, a number of items were uncommonly reported by participants, such as some items relating to motivation (i.e., SAVRY's *Attitudes Toward Agreements and Conditions*, the SAPROF-YV's *Motivation for Treatment and Medication*), and all items in the External domain items of the SAPROF-YV (i.e., *Pedagogical Climate, Professional Care, and Court Order*). Although support and supervision from parents were commonly mentioned, *Parental Functioning* did not correspond to any responses in the online sample (i.e., parental role modelling and responsibility). Some internal items such those related

to coping, impulse control, social skills, and mental/cognitive state were rare (e.g., SAPROF-YV items *Social Competence*, *Coping*, *Self-Control*, *Perseverance*). A few items unique to the START:AV were uncommon, including *Rule Adherence*, *Conduct*, *Self Care*, *Mental/Cognitive State*, and *Community*.

**Direct Questions.** When participants were directly asked about the 34 strength items on the tools, most items were rated as least somewhat important by the majority of online participants (see Table 4). Consistent with the results from the open-ended questions, most participants viewed relationships and social support from family, peers, and other adults as important. In the open-ended questions, no participants described *Parental Functioning*, however in the direct questions approximately 70% of online participants rated *Parental Functioning* as important.

Internal items were commonly endorsed in the direct questions. For instance, almost all online participants (99.0%,  $n = 94$ ) rated “thinking things through, making good decisions” as important, which corresponds to the SAVRY’s *Resilient Personality Traits* and START:AV’s *Mental/Cognitive State*. Notably, *Mental/Cognitive State* was only reported by one participant in the open-ended questions. Items relating to motivation were also more frequent in direct questions (i.e., 80-90% of participants), than in open-ended questions. In addition, consistent with the results of the open-ended questions, external items were less commonly rated as important than other items; however, approximately half of the online participants rated these items at least somewhat important.

**Research Question 2: Are There Additional Reasons for Desistance Not Captured by the Tools?**

Four additional themes emerged that were rooted in the data, and were not fully captured under criteria for items on the SAVRY, SAPROF-YV, and START:AV: experiencing disappointment from family members, maturity, having children, and religion (See Table 5 for frequencies and exemplars). Most themes were found in the online sample versus the in-person sample, which may be due to the small in-person sample size.

Disappointing Family was a relatively common additional theme. Participants described situations of their family members expressing disappointment toward their offending behaviour. Many participants specified disappointment from their mother, and described emotional and tangible difficulties their mothers experienced. For instance, participants' justice involvement affected their mothers' material resources, which resulted in worry about their parenting abilities. Participants expressed guilt for their mother financially supporting them through legal processes, as well as motivation to change after seeing their mother upset while trying to advocate for them in court. Other participants discussed how their mothers expressed sadness and pain, that resulted in an understanding of her hurt. Some participants also noted disappointment expressed by younger siblings and grandparents.

Maturity was another common theme. Participants discussed maturity broadly in terms of growing up and aging. Although most participants' responses relating to maturity were brief, some participants provided more detail: "There was no outside force or guidance that made me change my mind. It was just pure revelation through time, age, and maturity." Participants also described reflecting on the immaturity of their offense, and their need for maturity.

The themes of Having Children and Religion were relatively less common. Participants discussed children in terms of purpose, responsibility, motivation to be a good parent, motivation to avoid incarceration due to separation from children, and lifestyle changes that accompanied

parenthood. Religion was described in terms of offering a new perspective, “forgiveness, redemption”, positive environment, beliefs such as humility, and offered opportunity for prosocial activities.

### **Research Question 3: Do Participants Describe Factors Relevant to Desistance in Terms of Protective or Risk Factors?**

All in-person participants made reference to the presence of something positive, and most (75.0%;  $n = 6$ ) also described the absence or removal of something negative. Similarly, all online participants referenced the presence of protective factors, but only 32.6% ( $n = 31$ ) referenced the absence or removal of something negative that would traditionally be categorized as risk factors. This suggests that overall participants were more likely to discuss desistance in terms of protective factors rather than risk factors. As the rates of describing the presence of protective factors were similar between samples, results are presented with both samples amalgamated in Table 6.

Almost all START:AV items were discussed predominately in terms of the presence of protective factors. In fact, the majority of START:AV items (65.4%; 17 items) were coded exclusively as protective factors. *Peers* was most commonly discussed in terms of risk factors being removed (e.g., over half of the instances where it was discussed).

In terms of items relating directly to the individual, a couple of items were described in terms of the absence of something negative, albeit these responses were relatively rare. Participants expressed changes in their beliefs about themselves and their behaviours (i.e., *Attitudes*). More specific behaviours, such as *Substance Use*, also came up as risk factors (e.g., “I forced myself to stop drinking”). A few environmental items were described in terms of risk

factors, such as avoiding the “bad side” of town to avoid delinquency (i.e., *Community*), and experiences with poverty and homelessness (i.e., *Material Resources*).

### **Discussion**

This research explored the content validity of the SAVRY, SAPROF-YV, and START:AV, by examining whether the protective factor items on the tools captured information that people with a history of adolescent offending described as being important to their desistance. To our knowledge, this is the first study to examine the content validity of risk assessment tools from the perspective of people with lived experience.

### **Primary Findings**

#### ***Results Supported the Content Validity of the Tools***

Findings from both samples generally supported the content validity of the three tools, as the majority of items across tools were described by at least some participants as relevant to their desistance. While some items were endorsed by only a couple of participants, this appears sufficient to provide preliminary support for their content validity. SPJ measures do not represent an overall construct of risk or protection and the items are not combined into a total score; rather, the evaluator considers how the presence and relevance of items relate to an overall estimate of risk/protection to inform risk management strategies (e.g., Hart et al., 2016). In addition, the idiosyncratic nature of SPJ assessment (i.e., individualized assessment and treatment planning) suggests that not all items will be relevant across individuals, especially across heterogeneous groups of individuals with justice-involvement. This study highlights how individuals consider the relevance of protective factors to their desistance. Overall, at least 90% of the items on each of the tools were endorsed by participants.

Participants in both samples endorsed all of the SAVRY items, in both the open-ended and direct questions. In the in-person sample, only two participants considered *Strong Social Support* and *Positive Attitude Toward Intervention and Authority* important when they were directly asked about these items. However, these items were considered important to approximately 50% to 75% of the larger online sample. Overall, the results supported the content validity of the six SAVRY items. However, because the SAVRY is a brief measure, some of the factors that participants mentioned as relevant to their desistance were not captured by the SAVRY, such as *Insight* (which is on the START:AV). Also, although the SAVRY item *Resilient Personality Traits* overlapped with responses that corresponded to other SAPROF-YV and START:AV items (e.g., Coping), this item includes various internal strengths that are assessed within one item. As such, researchers have recently developed more comprehensive measures.

Participants endorsed almost all 16 SAPROF-YV items as relevant to their desistance. Two to three items were reported by only one participant; however, different items were not reported in the two samples. Participants also rated most items as important to their desistance, which provides additional support for the tool's content validity. Although it was rare for in-person participants to consider items relating to parental relationships, support, and supervision, as well as medication use and motivation for therapy as important to their desistance, at least one or two in-person participants considered these factors helpful. Moreover, online participants commonly considered these items important, excluding *Medication*, which was important to fewer participants, and may be more relevant to specific populations, such as in inpatient settings. Taken together, the findings supported the content validity of the SAPROF-YV items.

The START:AV is the most comprehensive tool with 26 items, which includes several unique items that are not on the other tools (e.g., Substance Use). Participants described most START:AV items during the open-ended questions. Three to four items were discussed by only one participant across samples. Also, although no participants in the online study described *Parental Functioning*, 70% of the online sample rated this item as important. As with the SAPROF-YV, during the direct questions in-person participants infrequently considered items relating to parents, medication, and motivation to attend therapy as important. However, nearly all START:AV items were considered important to at least half of the online sample (excluding *Medication Adherence*). Thus, while the relevance of all items across tools to desistance was supported at least to some extent, across both samples the most commonly discussed item was the START:AV's *Insight*. The content of this item is unique to the START:AV – similar content is not included in the SAVRY or SAPROF-YV. In general, the results across both samples supported the content validity of the START:AV items.

Although the results supported the content validity of the three tools, participants' self-reported reasons for desistance varied depending on the format in which the questions were asked. Responses to the both the open-ended and direct questions strongly supported the inclusion of items relating to relationships, prosocial uses of time, and some internal factors such as the START:AV's *Insight*. However, certain items, such as those relating to internal processes and skills, motivation to change, and substance use, were infrequently reported, but were rated as important by most participants. Individuals may have difficulty with spontaneously generating examples of specific strengths that represent internal characteristics or skills, such as using coping skills, gaining greater impulse control, and regulating emotions. It may be easier to



reflect on social support and attribute success to others. This suggests it is important to directly ask individuals about specific protective factors in risk assessments.

### *Additional Reasons for Desistance*

The majority of participants' reasons for desistance from offending were captured under protective factor items included on the three tools. Additional themes that emerged included Disappointing Family, Maturity, Having Children, and Religion. Responses that focused on the reaction from family members and the hurt they experienced were coded under Disappointing Family. However, this theme could relate to relationship items (SAVRY's *Strong Attachments and Bonds*, SAPROF-YV's *Parents/Guardians*, START:AV's *Relationships with Caregivers and Adults*) or *Insight*, as participants had close relationships with family members, and their disappointment prompted changes in the participants' behaviour or outlook.

Maturity is consistent with the aging theory of desistance (Glueck & Glueck, 1974; Matza, 1964). Almost all participants rated maturity as important to their desistance, so it appears particularly relevant to desistance. Although maturity is not included on the tools, other items may overlap with aspects of maturity, such as coping, self-control, insight into behaviour and consequences, making use of prosocial peer support and prosocial activities, as well as commitment and interest in school and work. Findings from qualitative interviews with justice-involved young males showed that they conceptualized maturity as considering consequences, learning from mistakes, making long term-term plans, improving associations with peers, and recognizing a motivating event that could prompt desistance (Mizel & Abrams, 2018), which maps onto to some existing items (e.g., *Insight, Future Orientation*). As such, it is unclear whether an additional item is needed, or whether maturity is captured indirectly in existing items.

The other themes of Having Children and Religion were less common but were still important for some participants. Although the frequencies of these items were similar or even higher than some items on the tools, the additional themes were not pervasive across participants which does not suggest a strong need to add additional items. Rather, case-specific protective factors may be an appropriate method to capture these themes. Each of these tools provide assessors with the option to add case-specific factors.

### ***Desistance was Commonly Described in Terms of the Presence of Protective Factors***

With the rise of protective factors in risk assessment, some researchers and clinicians have raised concerns that protective factors are merely the polar end of a corresponding risk factor and have questioned whether they add unique information (Walker et al., 2013). In the present work, participants reasons for desistance were primarily described in terms of the presence of protective factors, rather than the absence of risk factors. Broadly, these results provide support for the inclusion of protective factors within these tools, and suggests that protective factors are unique from risk factors and should be assessed separately. Excluding protective factors within risk assessment may result in missing important information, such as the role of prosocial peers or having good insight into behaviour and consequences. For instance, if an adolescent frequently associates with antisocial peers they would be rated high on the SAVRY Peer Delinquency risk factor, regardless of whether they have (a) no prosocial peers or (b) one or more prosocial friends who actively encourage them to stop offending. In other words, this item would not capture the presence of prosocial and positive peers. Similarly, an adolescent would be rated as low on this risk factor regardless of whether they have (a) many prosocial friends who actively discourage offending, or (b) no friends at all. The START:AV allows assessors to rate items as both risk and protective factors; the present finding that most

items were reported in terms of protective factors supports the content validity of the START:AV items in relation to desistance.

As hypothesized, *Peers* showed mixed findings; over half of the time it was referenced in terms of avoiding antisocial peers. In terms of highlighting risk factors, a few participants described ceasing substance use (*Substance Use*), removing themselves from abusive households or experiencing decreases in neglectful parenting (*Parenting*), and experiences of poverty/homelessness (*Material Resources*). However, these items were also referenced in terms of their presence of protective factors. These findings also provide support for the content validity of the START:AV items being coded both as protective and risk factors.

### **Strengths and Limitations**

The present research has two main strengths. First, this study used both qualitative and quantitative data; participants answered open-ended questions about their desistance and rated the importance of specific protective factor items. That way, protective factor items not initially considered could also be highlighted, which bolstered the ability to make claims about the tools' content validity. Second, this study included both an in-person sample that allowed for in-depth interviews, and an online sample which allowed for a larger sample and greater generalizability.

Limitations are present regarding sampling for both studies. Although the in-person sample provides preliminary evidence to support the content validity of the SAVRY, SAPROF-YV, and START:AV, the results should be interpreted with caution due to the small sample size. In addition, the online participants from MTurk may represent a non-random sample (Stritch et al., 2017) of individuals who are more educated and have less severe histories of offending (e.g., less violent offenses). Relatedly, is it unclear whether differences in data collection, namely in-person interviews versus online surveys, influenced the results (e.g., for the in-person sample, the

interviewer provided prompts and asked participants for elaboration). Overall, it is encouraging that findings were generally consistent across samples, but these limitations need to be considered.

Second, both samples consisted of adults, including some older adults, rather than individuals who have recently desisted from adolescent offending (e.g., only 13.5% were 25 years old or younger). Ideally, the samples would have only included young adults (e.g., 19 to 25 years) to mitigate potential difficulties with the retrospective nature of the study. As such, it is unknown whether the age of the participants influenced the findings. For instance, perhaps *Insight* was so prevalent due to participants gaining insight into their offending over time.

Third, the findings have limited generalizability with respect to ethnicity/culture, as most participants identified as White. In the in-person Canadian sample, no participants identified as Indigenous, and in the online United States sample, only a few participants identified as Latinx or Black. As such, the present findings cannot be generalized across these groups.

Finally, participants' beliefs about their relevant protective factors might not map onto to their previous behaviours, skills, or resources at that time (Yoshikawa et al., 2008). However, the perceived presence or level of a protective factor may be salient to desistance. Studies have shown that perceived social support may have a greater effect on desistance than tangible support (Martinez, 2009). Thus, research on perceptions of protective factors may still be beneficial.

### **Research Directions**

Although the present findings provide preliminary support for the content validity of these tools, future research should address three broad areas. First, future studies should examine predictors of desistance (Farrington, 2007) in relation to risk assessment. Researchers could investigate whether protective factors included on risk assessment tools have longstanding

effects; that is, how protective factors contribute to the initiation and maintenance of desistance. Second, future studies could aim to develop measures of desistance (Farrington, 2007). The tools under consideration were designed to predict risk over three to six month periods (Borum et al., 2006, de Vries Robbe et al., 2015; Viljoen et al., 2014), however the SAVRY has predicted the absence of offending over longer periods, such as a four-year period (Gammelgård et al., 2015). Similar data collection methods used in the present study could be used to develop and test adaptations to current tools, such as a revised version of the SAPROF-YV to include *Insight*.

Finally, it is important to promote client perspectives in risk assessment research. Limited research has involved asking individuals about their perceptions of their risk or protective factors (Barnert et al., 2015), but it can offer value within both research and practice. It is common for the developers of risk assessment tools to consult with professionals or experts in the field about the items, but not with people with a history of offending. This study's methodological framework could be used to examine the content validity of the SAVRY risk factors, the Vulnerabilities on the START:AV, or with adult risk assessment tools.

### **Implications for Practice**

Self-reported reasons for desistance were captured by all three risk assessment tools under consideration, and these tools offer different strengths for practice. On the SAVRY, each item was endorsed as important to desistance by at least ten participants across both studies. However, participants also commonly endorsed items from the SAPROF-YV and START:AV that were not captured on the SAVRY, including *Insight*, *Coping*, and *Self-Control*. This suggests that if the goal is to thoroughly examine different strengths, a more comprehensive approach may be needed (e.g., SAPROF-YV, START:AV). For instance, the SAVRY item *Resilient Personality Traits* includes several internal protective factors (e.g., self-esteem, coping,

above average cognitive skills, calm mood states; Borum et al., 2006) under a single item that is rated dichotomously. In contrast, the START:AV includes separate items for similar internal protective factors, such as *Coping*, *Impulse Control*, *Emotional State*, *Mental/Cognitive State*, and *Social Skills*, and these items are rated on a three-point scale.

Despite the findings showing support for the SAVRY and SAPROF-YV items, the most frequently reported item, *Insight*, is only included on the START:AV and is not captured by the SAVRY or SAPROF-YV items. Insight is also relevant to the cognitive transformation theory of desistance (Giordano et al., 2002). Poor insight is included as a risk factor on a common adult violence risk assessment tool, the HCR-20<sup>V3</sup> (Douglas et al., 2013), and an adolescent tool, the Violence Risk Scale – Youth Version (Lewis et al., 2004). As such, it may be useful for the SAVRY and SAPROF-YV to consider the potential protective effect of having good insight.

Although participants' responses were largely captured by the protective factors on the three tools, there were other factors identified, which underscored the importance of including case-specific factors within assessments. For instance, religion is not fully captured by the SAVRY, SAPROF-YV, or START:AV. Although religion could be included under some items (e.g., the SAVRY's *Prosocial Involvement*), it may be more appropriate to consider it a case-specific protective factor (e.g., follows religious and spiritual beliefs, positively influence their behaviour). It may be beneficial for risk assessments to include questions about an individual's perceptions of their protective factors and how these factors affect their behaviour and functioning in relation to avoiding offending.

Professionals might also use these tools to help guide intervention-planning or to develop prevention programs (Farrington, 2007; Laub & Sampson, 2001). The present findings highlighted protective factors that were commonly important to desistance, such as insight into

behaviour and consequences; insight-oriented approaches to therapy may be helpful to some adolescents. Results also underscore that people present with a variety of different strengths, which highlights the importance of individually-tailored interventions.

### **Conclusion**

This research is the first study of its kind and corroborates previous findings that support the validity of protective factors included on the SAVRY, SAPROF-YV, and START:AV, by showing support for their content validity. By increasing our knowledge on protective factor assessment using qualitative and quantitative data from people with lived experience, researchers may gain additional insight on how to enhance current risk assessment approaches, which in turn may increase the quality of assessments with adolescents involved in the justice system. A comprehensive assessment of protective factors and related strength-based interventions may have potential for promoting positive outcomes, resiliency, and success in young people with a history of offending.

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Table 1. Frequencies of SAVRY Factors

SAVRY Item	Person Frequency % (n)		Exemplars
	In-Person (n = 8)	Online (n = 95)	
Prosocial Involvement	100.0 (8)	24.2 (23)	“When I was there I didn't think about crime, I didn't think about when am I going to get my next money... All I thought about was, you know, let's play some music!”
Strong Social Support	75.0 (6)	28.4 (27)	“She saw someone that had a chance to change things and um, she took a chance on me [...] It felt like someone was actually trying to push me forward.”
Strong Attachments and Bonds	25.0 (2)	14.7 (14)	“My dad and I were tight, and then we kind of fell apart during my teen years and... getting to know him again... just kind of starting over. That was really important for me to be able to move on and stop doing what I was doing.”
Positive Attitude Towards Intervention and Authority	50.0 (4)	8.4 (8)	“I went into counseling with therapists and they helped me deal with my issues, drug and alcohol addiction and I credit them with helping me change my ways.”
Strong Commitment to School	25.0 (2)	13.7 (13)	“I was determined to get into a good school, and didn't want a stain on my record. And once I did get accepted to a college and move out of state, I found myself with fewer opportunities to offend.”
Resilient Personality Traits	75.0 (6)	13.7 (13)	Responses focused on learning forgiveness (“until I could forgive myself I couldn't stop doing crime”), management of anger and positive communication skills, development of emotion regulation skills, developing empathy and perspective taking, problem solving (e.g., evaluating pros and cons, be cognizant of responsibilities to others), coping with stress, and having a positive mindset

Table 2. Frequencies of SAPROF-YV Factors

SAPROF-YV Item	Person Frequency % (n)		Exemplars
	In-Person (n = 8)	Online (n = 95)	

Social Competence	12.5 (1)	3.2 (3)	“It's easier to get along with people. You don't have conflict. You know? It's not always avoidable, but you do your best.”
Coping	62.5 (5)	1.1 (1)	“To be able to cope with and control those underlying reasons probably helped it at the base.”
Self-Control	37.5 (3)	3.2 (3)	“Even that split second where you hesitate is enough to stop the cycle”
Perseverance	50.0 (4)	1.1 (1)	“Knowing that I had a value and that I could still turn my life around and make something of it.”
Future Orientation	50.0 (4)	10.5 (10)	“I found a goal. Once I found what I wanted to do for the rest of my life, everything else just sort of fell into place. I wanted to do well so I could get a job.”
Motivation for Treatment	25.0 (2)	5.3 (5)	“It gave me an outlet [...]. I felt calmer and my counselor [gave] me a purpose, somewhere to go twice a week, someone who was on my side.”
Attitudes Toward Agreements and Conditions	37.5 (3)	0.0 (0)	Described that they found it motivating to comply with probation conditions and saw benefits of how they could to build habits of avoiding offending
Medication	25.0 (2)	1.1 (1)	Solving difficulties encountered by attention deficit hyperactivity disorder and bipolar disorder
School/Work	50.0 (4)	23.2 (22)	See SAVRY's Strong Commitment to School
Leisure Activities	50.0 (4)	11.6 (11)	"So when I was there I didn't think about crime, I didn't think about when am I going to get my next money... All I thought about was, you know, let's play some music!"
Parents/Guardians	25.0 (2)	27.4 (26)	“But the importance of it was that my dad and I were tight, and then we kind of fell apart during my teen years and... getting to know him again... just kind of starting over. That was really important for me to be able to move on and stop doing what I was doing.”
Peers	87.5 (7)	20.0 (19)	“You want to hang out with people that find value in you and that you find value in. You do what you can to make that grow, you know.”
Other Supportive Relationships	87.5 (7)	24.2 (23)	“That's pretty much probably why it happened [...] I think it was more or less just the fact that I had a connection and stuff like that. 'Cause I had a really shitty, shitty childhood so... I never really had anybody.”
Pedagogical Climate	12.5 (1)	6.3 (6)	Described receiving supervision and support from parents/guardians, as well as probation



			officers: “She just kept telling me, 'you've got to do something with your life, you've got to get over it.”
Professional Care	37.5 (3)	5.3 (5)	“Inside of the prison they gave me alot of tools to help me when i got out, i obtained my ged, i learned how to respect people, I also learned how hard people actually had to work for things.”
Court Order	37.5 (3)	8.4 (8)	“I guess going to jail did something. It breaks you, and it shapes you if you'll let it. It's a really bad time, and you need to be optimistic or you'll go crazy.”

Table 3. Frequencies of START:AV Factors

START:AV Item	Person Frequency % (n)		Exemplars
	In-Person (n = 8)	Online (n = 95)	
School & Work	50.0 (4)	23.2 (22)	See SAVRY’s Strong Commitment to School
Recreation	50.0 (4)	11.6 (11)	See SAPROF-YV’s Leisure Activities
Substance Use	37.5 (3)	9.5 (9)	“I wanted to stop because I was addicted to crystal meth and it like owned me for a while. So I had to stay away from that stuff and in doing that I had to stay away from everybody who was involved in that kind of stuff.”
Rule Adherence	50.0 (4)	4.2 (4)	“I stopped doing anything illegal. I started paying my bills, driving legally, staying clean, working, keeping my house clean, and I just completely changed who I was.”
Conduct	75.0 (6)	2.1 (2)	Leaning to respect others, helping others and feeling positive effects of a positive perspective, increased positive emotion, and a sense of accomplishment.
Self-Care	50.0 (4)	2.1 (2)	“When I started staying in shelters more I started showering more regularly and... it felt better. When I felt better about myself, I kind of didn't really feel like I needed to do bad things to validate myself I guess.”
Coping	62.5 (5)	1.1 (1)	See SAPROF-YV’s Coping
Impulse Control	37.5 (3)	1.1 (1)	See SAPROF-YV’s Self Control
Mental/Cognitive State	37.5 (3)	1.1 (1)	Thinking things through and showing good judgement regarding engaging in certain behaviours.
Emotional State	62.5 (5)	8.4 (8)	It was helpful to deal with depression and accept “heavy feelings.”

Attitudes	50.0 (4)	29.5 (28)	“I wanted to belong in a group of people that weren't on the other side of the law. I wanted to belong and be a part of society in a positive way.”
Social Skills	12.5 (1)	2.1 (2)	See SAPROF-YV's Social Competence
Relationships with Caregivers & Adults	25.0 (2)	17.9 (17)	“She just kept telling me, 'you've got to do something with your life, you've got to get over it'. So my probation officer had a lot of influence on me.”
Relationships with Peers	50.0 (4)	2.1 (2)	“The value to that is I don't need to explain a goddamn thing to him. And ditto! He doesn't need to explain anything. We both lived through it together. He's heard it all, and I've heard it all. There's great value to that.”
Social Support from Adults	62.5 (5)	3.2 (3)	“She saw someone that had a chance to change things [...] it felt like someone actually wasn't trying to push me down. It felt like someone was actually trying to push me forward.”
Social Support from Peers	37.5 (3)	9.5 (9)	“I got some amazing peer support [...] If I hadn't had those things then I probably would still be somewhat involved in the system. And I think that's really what saved me.”
Parenting	12.5 (1)	25.3 (24)	“Knowing I have someone there.”
Parental Functioning	12.5 (1)	0.0 (0)	“I would live with my mom most of the time and she was – like I saw her progression to success in my lifetime. It was motivating.”
Peers	75.0 (6)	31.6 (30)	“Motivated friends that were doing good in school and planned to go to university and stuff and probably surrounding myself in that group was motivating.”
Material Resources	62.5 (5)	14.7 (14)	“The change in environment, like actually physically removing myself, was crucial to me actually getting away from the problem.”
Community	50.0 (4)	2.1 (2)	Role of how he “had better relationships with some of my neighbours than my family.”
External Triggers	37.5 (3)	9.5 (9)	“[Winning this award] kind of brought me back to right before I'd fallen down this and ... it was like look at this! Look at all your hard work [...] that definitely boosted my self-esteem and probably started... that's probably when I started to drift away from the criminal activities.”
Insight	87.5 (7)	66.3 (63)	“I just couldn't do it anymore. Couldn't do it anymore, do you know what I mean? Life was ticking on and I was going nowhere.”
Plans	50.0 (4)	6.3 (6)	See SAPROF-YV's Future Orientation

Medication Adherence	25.0 (2)	1.1 (1)	See SAPROF-YV’s Medication
Treatability	25.0 (2)	9.5 (9)	See SAPROF-YV’s Motivation for Treatment

Table 4. Direct Question Ratings

Strengths Item	Corresponding Item(s) on Tools	Important % (n)	
		In-Person (n = 8)	Online (n = 95)
Liking and caring about school or education	SAVRY Strong Commitment to School SAPROF-YV School/Work START:AV School & Work	50.0 (4)	74.7 (71)
Liking and caring about my job	SAPROF-YV School/Work START:AV School & Work	37.5 (3)	69.5 (66)
Being involved in hobbies, having things to do with my time (e.g., teams, clubs, organizations)	SAVRY Prosocial Activities SAPROF-YV Leisure Activities START:AV Recreation	37.5 (3)	73.7 (70)
Avoiding drugs and/or alcohol	START:AV Substance Use	75.0 (6)	73.7 (70)
Following rules (e.g., probation conditions)	SAVRY Attitude Toward Intervention and Authority SAPROF-YV Attitudes Towards Agreements and Conditions START:AV Rule Adherence	50.0 (4)	75.8 (72)
Helping others, being respectful and kind	START:AV Conduct	75.0 (6)	79.0 (75)
Taking care of my health (e.g., getting enough sleep)	START:AV Self-care	50.0 (4)	69.5 (66)
Being able to cope with my problems	SAVRY Resilient Personality Traits SAPROF-YV Coping START:AV Coping	87.5 (7)	86.3 (82)
Being able to control myself and keeping calm	SAVRY Resilient Personality Traits SAPROF-YV Self-Control START:AV Impulse Control	75.0 (6)	88.4 (88)

Thinking things through, making good decisions	SAVRY Resilient Personality Traits START:AV Mental/Cognitive State	75.0 (6)	99.0 (94)
Being happy or hopeful, or feeling like I can get through difficult times	SAVRY Resilient Personality Traits START:AV Emotional State	75.0 (6)	87.4 (83)
Realizing that following the law has benefits	START:AV Attitudes	62.5 (5)	77.9 (74)
Being able to manage social situations and avoid conflicts with people	SAVRY Resilient Personality Traits SAPROF-YV Social Competence START:AV Social Skills	50.0 (4)	80.0 (75)
Having good relationships with my parents	SAVRY Strong Attachments and Bonds SAPROF-YV Parents/Guardians START:AV Relationships with Caregivers and Adults	25.0 (2)	75.8 (72)
Having good relationships with friends	SAVRY Prosocial Activities SAPROF-YV Peers START:AV Relationships with Peers	75.0 (6)	77.9 (74)
Having a good relationship with a romantic partner	SAPROF-YV Other Supportive Relationships	25.0 (2)	59.0 (56)
Feeling supported by people like bosses, teachers, therapists, or probation officers	SAVRY Strong Social Support SAPROF-YV Other Supportive Relationships START:AV Social Support from Adults	75.0 (6)	70.5 (67)
Getting support from friends	SAVRY Prosocial Activities SAPROF-YV Peers START:AV Social Support from Peers	50.0 (4)	70.5 (67)
Having parents who provided support, and kept me on track	START:AV Parenting	20.0 (2)	72.6 (69)
Having enough supervision and support	SAPROF-YV Pedagogical Climate	20.0 (2)	76.8 (73)

Having parents who were good role models	START:AV Parental Functioning	20.0 (2)	70.5 (67)
Having friends who were a positive influence and helped me to stay out of trouble	SAVRY Prosocial Activities SAPROF-YV Peers START:AV Peers	75.0 (6)	70.5 (67)
Managing money well (e.g., saving)	START:AV Material Resources	62.5 (5)	72.6 (69)
Living in a good neighbourhood	START:AV Community	50.0 (4)	61.1 (58)
Having something positive happen to me in my life, like a turning point	START:AV External Triggers	37.5 (3)	82.1 (78)
Understanding the factors that cause me to commit crimes	START:AV Insight	37.5 (3)	83.2 (79)
Appreciating that I needed help	START:AV Insight	20.0 (2)	76.8 (73)
Having realistic plans and goals (e.g., career goals)	SAPROF-YV Future Orientation START:AV Plans	62.5 (5)	84.2 (80)
Following through with plans	SAPROF-YV Perseverance	75.0 (6)	81.1 (77)
Taking medication that I was prescribed	SAPROF-YV Medication START:AV Medication Adherence	12.5 (1)	33.7 (32)
Being motivated to change	SAVRY Attitude Toward Intervention and Authority SAPROF-YV Motivation for Treatment START:AV Treatability	75.0 (6)	91.6 (87)
Being motivated to attend therapy or services	SAVRY Positive Attitude Toward Intervention and Authority SAPROF-YV Motivation for Treatment START:AV Treatability	20.0 (2)	52.6 (50)
Receiving therapy or other	SAPROF-YV Professional Care SAPROF-YV Pedagogical Climate	37.5 (3)	

services that I needed				51.6 (49)
Getting the supervision that I needed (e.g., supervision by probation officers)	SAPROF-YV Court Order			37.5 (3) 59.0 (56)
Having a sense of pride or connection to your culture	START:AV Culture			20.0 (2) 55.8 (53)
Having and following religious/spiritual beliefs	N/A			20.0 (2) 44.2 (42)
Having kids	N/A			12.5 (1) 33.7 (32)
Growing up, getting more mature	N/A			75.0 (6) 95.8 (91)

Table 5. Frequencies of Additional Themes

Theme	Person Frequency % (n)			Exemplars
	Total Sample (n = 103)	In-Person (n = 8)	Online (n = 95)	
Disappointing Family	21.4 (22)	12.5 (1)	22.1 (21)	I was in jail and my mother visited me. She has always been there, and I saw her crying. She seemed very depressed, she lost everything she had to pay me a lawyer and when I saw 'er like that, it broke my heart. The day I got out, I decided that it was enough. I just didnt wanna make them go through that pain again.
Maturity	20.4 (21)	0.0 (0)	22.1 (21)	After my first offense, I came to my senses and realized that offense was immature and that I would need to become more mature. From that day on, I've turned my life around.
Having Children	13.6 (14)	12.5 (1)	13.7 (13)	Since then I have had 2 children (raising them both on my own) and would not want to be put in jail for any reason that would separate me from them. They depend on me.

Religion            8.7 (9)    12.5 (1)    8.4 (8)    This was crucial to really straightening my life out. At church I learned about morality and also associated with new friends who were a better influence. [...] Definitely the religious aspect. [...] Learning about the Bible gave all the answers I needed about humility and morality.

Table 6. START:AV Items Coded in Terms of the Presence of Protective Factors Vs. the Absence of Risk Factors in the Total Sample

START:AV Item	Frequency of Responses Coded	
	Presence of Protective Factor	Absence of Risk Factor
	% (n)	
School & Work	100.0 (36)	0.0 (0)
Recreation	100.0 (14)	0.0 (0)
Substance Use	81.8 (9)	18.2 (2)
Rule Adherence	100.0 (8)	0.0 (0)
Conduct	100.0 (4)	0.0 (0)
Self-Care	100.0 (5)	0.0 (0)
Coping	100.0 (3)	0.0 (0)
Impulse Control	100.0 (2)	0.0 (0)
Mental/Cognitive State	100.0 (3)	0.0 (0)
Emotional State	100.0 (11)	0.0 (0)
Attitudes	93.6 (29)	6.5 (2)
Social Skills	100.0 (3)	0.0 (0)
Relationships with Caregivers & Adults	87.0 (20)	13.0 (3)
Relationships with Peers	85.7 (6)	14.3 (1)
Social Support from Adults	100.0 (9)	0.0 (0)
Social Support from Peers	91.7 (11)	8.3 (1)
Parenting	88.2 (30)	11.8 (4)
Parental Functioning	0.0 (0)	0.0 (0)
Peers	43.6 (27)	57.5 (35)
Material Resources	83.3 (20)	16.7 (4)
Community	60.0 (3)	40.0 (2)
External Triggers	100.0 (10)	0.0 (0)
Insight	100.0 (11)	0.0 (0)
Plans	100.0 (10)	0.0 (0)
Medication Adherence	100.0 (1)	0.0 (0)
Treatability	100.0 (11)	0.0 (0)