



START:AV **Annotated** **Bibliography**

A Summary of Research on
the START:AV

January 15, 2016

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- 3. Cruise, K., Nicholls, T. L., Viljoen, J., Desmarais, S., & Peterson, K. (2010, May). Adapting the Short-Term Assessment of Risk and Treatability for adolescent populations. In T. L. Nicholls (Chair), the Short-Term Assessment of Risk and Treatability: An update on research, implementation evaluations, and future directions. Paper presented at the 10th Annual Meeting of the International Association of Forensic Mental Health Services, Vancouver, BC. 30
- 4. Viljoen, J. L., Cruise, K. R., Nicholls, T. L., Desmarais, S. L., & Webster, C. D. (2012). Taking stock and taking steps: The case for an adolescent version of the short-term assessment of risk and treatability. *The International Journal Of Forensic Mental Health*, 11(3), 135-149. doi:10.1080/14999013.2012.737406..... 30
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OVERVIEW OF THE START:AV

The Short-Term Assessment of Risk and Treatability: Adolescent Version (START:AV; Viljoen, Nicholls, Cruise, Desmarais, & Webster, with contributions by Beneteau-Douglas, 2014) is a risk assessment and intervention-planning guide for male and female adolescents in mental health, justice, and other related settings.

Key Features

The START:AV has several key features:

Comprehensive and Integrative Examination of Risks: Professionals have obligations to assess risks for multiple adverse outcomes, such as violence towards others and suicide. As such, rather than focusing on one type of risk, the START:AV facilitates the integrative assessment of risk of harm to others (e.g., violence) and harm to the adolescent (e.g., suicide attempts, victimization).

Strengths and Vulnerabilities: Whereas many assessment measures place a strong emphasis on risk factors, the START:AV aims to provide a balanced assessment by guiding assessors to simultaneously consider both strength and vulnerability.

Individualized Assessments taking into Account Context: The START:AV is grounded in the social-ecological model (Bronfenbrenner & Morris, 2006). As such, it assesses the individual adolescent (e.g., substance use, emotional state) as well as adolescents' relationships and environment (e.g., parenting, peers).

Focus on Change and Intervention-Planning: The ultimate aim of the START:AV to guide intervention-planning. As such, the START:AV focuses on factors that are potentially modifiable and relevant to intervention planning. Further, the START:AV is designed to help measure whether an adolescents' functioning may be improving or deteriorating.

Structured Yet Flexible: The START:AV guides professionals to consider a set of empirically-supported strengths and vulnerabilities. At the same time, it draws from professionals' expertise. Professionals may, for instance, add case-specific items that are unique to an individual adolescent and make their own structured professional judgment of risk.

Research Guiding the Development of the START:AV

Research and evaluation played a central role in the development of the START:AV.

Research Review: We reviewed over 1,000 research studies to identify empirically-supported items to include in the START:AV. This research review is compiled in the START:AV Knowledge Guide (Viljoen et al., 2016).

Pilot Version for Research: We developed a pilot version of the START:AV, called the START:AV abbreviated manual (i.e., START:AV Pilot Version; Nicholls, Viljoen, Cruise, Desmarais, & Webster, 2010). The purpose of this pilot version was to facilitate initial pilot research on the START:AV. The START:AV Pilot Version is a brief 10-page rating guide that contains item anchors or rating criteria.

Research Projects: Our team and an independent set of investigators conducted three research projects to examine the psychometric properties of the START:AV Pilot Version (Nicholls, Viljoen, Cruise, Desmarais, & Webster, 2010):

- Implementation in American Juvenile Correctional Centers (Primary Investigator: Dr. Sarah Desmarais)
- Implementation in UK Forensic and Psychiatric Hospital (Primary Investigator: Dr. Marilyn Sher)
- Prospective Validation Study with Canadian Adolescent Offenders (Primary Investigator: Dr. Jodi Viljoen)

These studies sampled different populations (i.e., adolescents on probation, adolescents in secure juvenile correctional centers, adolescents in mental health and forensic hospitals). In addition, they were conducted in different countries (i.e., Canada, the United States, and the United Kingdom), and utilized different types of research designs (i.e., controlled research design, field studies with professionals).

Development of the START:AV User Guide: After conducting these studies, we used the results to develop the START:AV User Guide (Viljoen et al., 2014). The START:AV differs from the START:AV Pilot Version in a couple of ways. It has different item anchors, and a different layout. For instance, the items are arranged in a social contextual framework, and the outcomes are organized into harm to others/rule violations, and harm to the adolescent. It includes sections on intervention-planning. Also, it includes several new items (e.g., Community, Parental Functioning) and one new outcome (i.e., Non-Violent Offending).

Purpose of this Annotated Bibliography

The purpose of this annotated bibliography is provide a summary of research, to date, on the START:AV. We include the initial development studies on the START:AV, as well as other, independent studies and scholarly work on the START:AV. This Annotated Bibliography will be updated periodically to add in new studies on the START:AV.

For more information on the literature review that guided the development of the START:AV see:

Viljoen, J. L., Nicholls, T. L., Cruise, K. R., Beneteau-Douglas, J., Desmarais, S. L., Barone, C. C., Petersen, K., Morin, S., & Webster, C. D. (2016). START:AV Knowledge Guide: A Research Compendium on the START:AV Strength and Vulnerability Items. Burnaby, BC: Simon Fraser University.

LIST OF SCHOLARLY WORKS ON THE START:AV

As of January 15, 2016, the START:AV was examined in **23** scholarly works, including 7 publications (peer – reviewed articles and chapters) and 16 presentations. These publications and presentations are listed below.

Peer-Reviewed Articles

1. Desmarais, S. L., Sellers, B. G., Viljoen, J. L., Cruise, K. R., Nicholls, T. L., & Dvoskin, J. A. (2012). Pilot implementation and preliminary evaluation of START:AV assessments in secure juvenile correctional facilities. *International Journal of Forensic Mental Health, 11*(3), 150-164. doi:10.1080/14999013.2012.737405
2. Sher, M. A., & Gralton, E. (2014). Implementation of the START:AV in a secure adolescent service. *Journal Of Forensic Practice, 16*(3), 184-193. doi:10.1108/JFP-04-2013-0021
3. Singh, J. P., Desmarais, S. L., Sellers, B. G., Hylton, T., Tirotti, M., & Van Dorn, R. A. (2014). From risk assessment to risk management: Matching interventions to adolescent offenders' strengths and vulnerabilities. *Children And Youth Services Review, 47*(Part 1), 1-9. doi:10.1016/j.childyouth.2013.09.015
4. Webster, C.D., & Bélisle, E. (2014). How literature can add value to structured professional judgments of violence risks: An illustrative rare risk example inspired by Alice Munro's *Child Play*. *Archives of Forensic Psychology, 1*(1), 14-26.
5. Viljoen, J. L., Beneteau, J. L., Gulbransen, E., Brodersen, E., Desmarais, S. L., Nicholls, T. L., & Cruise, K. R. (2012). Assessment of multiple risk outcomes, strengths, and change with the START:AV: A short-term prospective study with adolescent offenders. *International Journal of Forensic Mental Health, 11*(3), 165-180. doi:10.1080/14999013.2012.737407
6. Viljoen, J. L., Cruise, K. R., Nicholls, T. L., Desmarais, S. L., & Webster, C. D. (2012). Taking stock and taking steps: The case for an adolescent version of the short-term assessment of risk and treatability. *The International Journal Of Forensic Mental Health, 11*(3), 135-149. doi:10.1080/14999013.2012.737406

Chapters and Other Non-Peer Reviewed Articles

1. Viljoen, J. L., Gray, A. L., & Barone, C. (in press). *Assessing risk for violence and offending in adolescents*. In R. Jackson and R. Roesch, Learning Forensic Assessment. New York: Routledge.

Peer-Reviewed Conference Presentations

1. Affleck, K., & Cruise, K. (2013, June). *Developing effective risk and strength formulations with the Short-Term Assessment of Risk and Treatability: Adolescent Version (START: AV)*. Paper presented at the 13th Annual Meeting of the International Association of Forensic Mental Health Services, Maastricht, the Netherlands.

2. Beneteau, J., & Viljoen, J. (2014, June). *Linking START:AV ratings with adverse outcomes in justice-involved youths*. Poster presented at the Annual Convention of the Canadian Psychology Association, Vancouver, BC
3. Cruise, K.R. (2014, November). *Trauma-informed case planning for justice-involved youth with the Short Term Assessment of Risk and Treatability-Adolescent Version (START-AV)*. Paper presented at the annual meeting of the International Society of Traumatic Stress Studies, Miami, FL.
4. Cruise, K., Nicholls, T. L., Viljoen, J., Desmarais, S., & Peterson, K. (2010, May). *Adapting the Short-Term Assessment of Risk and Treatability (START) for adolescent populations*. In T. L. Nicholls (Chair), *START: An update on research, implementation evaluations, and future directions*. Paper presented at the 10th Annual Meeting of the International Association of Forensic Mental Health Services, Vancouver, BC.
5. Desmarais, S., Sellers, B. G., Dvoskin, J., Viljoen, J. L., Cruise, K., & Nicholls, R. (2012, March). *Descriptive and Psychometric Characteristics of START-AV Assessments: Findings from a Pilot Implementation Study*. Paper presented at the American Psychology-Law Society Conference, San Juan, Puerto Rico.
6. Johnson, K. L., Desmarais, S. L., Rajagopalan, R., Sellers, B. G., & Singh, J. P. (2014, March). *Validity of START: AV assessments in predicting adverse outcomes in incarcerated youth*. Poster presented at American Psychology-Law Conference Annual Conference, New Orleans, LA.
7. Schell, V. & Rowe, R. (2015, June). *Assessing adolescent protective factors in both criminal justice and forensic inpatient samples*. Paper presented at the 3rd North American Correctional and Criminal Justice Psychology Conference, Ottawa, Ontario, Canada.
8. Sellers, B., Desmarais, S., Dvoskin, J., Viljoen, J. L., Cruise, K., & Nicholls, T. (2012, March). *Change in Dynamic Items and Risk Estimates over Time: Findings from a Pilot Implementation of the START-AV*. Poster presented at the American Psychology-Law Society Conference, San Juan, Puerto Rico.
9. Sher, M. (2011). *Implementation of the START:AV in a medium secure adolescent service in the UK*. Paper presented at the Annual Conference of the International Association of Forensic Mental Health Services, Barcelona, Spain.
10. Sher, M., McLean, A., Rowe, K., Warner, L., Gralton, E., Nicholls, T., Viljoen, J., & Cruise, K. (2013, June). *The Short-Term Assessment of Risk and Treatability (START) for Adolescents: A Prospective Validation Study in a Forensic Psychiatric Adolescent Sample*. Paper presented at the International Association of Forensic Mental Health Services Conference, Maastricht, Netherlands.
11. Viljoen, J., Beneteau, J., Brodersen, E., Gulbransen, E., Cruise, K., Nicholls, T., Desmarais, S., & Douglas, K. (2012, April). *Assessing Protective Factors in Adolescent Offenders: A Comparison of the SAVRY, YLS/CMI, and START:AV*. Paper presented at the International Association of Forensic Mental Health Services Conference, Miami, FL.
12. Viljoen, J., Gray, A., Shaffer, C., & Douglas, K. (2015, March). *What is the shelf-life of adolescent risk assessment? Dynamic change on the Structured Assessment of Violence Risk in Youth and Short Term*

Assessment of Risk and Treatability: Adolescent Version. Paper presented at the Annual Meeting of the American Psychology - Law Society, San Diego, California, USA.

13. Viljoen, J. L., Nicholls, T. L., Cruise, K., Desmarais, S., & Beneteau, J. (2011, June). *The Psychometric Properties of the Short-Term Assessment of Risk and Treatability for Adolescents: A Prospective Study with Adolescent Offenders.* Paper presented at the Annual Conference of the International Association of Forensic Mental Health Services, Barcelona, Spain.
14. Viljoen, J. L., Nicholls, T., Cruise, K., Desmarais, S., Petersen, K., & Gulbransen, E. (2011, April). *Initial data on the Short-Term Assessment of Risk and Treatability - Adolescent Version (START-AV).* Paper presented at the 7th Annual Pacific Forensic Psychiatry Conference, Vancouver, BC.
15. Viljoen, J., Shaffer, C., Bhawner, A., Gray, A., Nicholls, T., Cruise, K., & Desmarais, S. (2015, September), *Are Risk Assessment Tools Created Equal? A Comparison of the SAVRY, YLS/CMI, and START:AV Among Adolescents on Probation.* Paper presented at the Young People and the Law Conference, Prato, Italy.

Non-Peer Reviewed Presentations

1. Viljoen, S. (2014, May). *Using strengths based measures to assess and manage risk of future negative outcomes.* Indian Health Service Clinical Rounds, New Mexico.

SUMMARY OF SCHOLARLY WORKS ON THE START:AV

Publications	Reliability		Validity		Clinical Utility		Implementation Outcomes		Conceptual Issues
	Interrater Reliability	Internal Consistency	Concurrent Validity	Predictive Validity	Sensitivity to Change	Intervention-Planning	User Satisfaction	Adherence	e.g., Review, Example
Desmarais, Sellers, et al. (2012)		✓						✓	
Sher & Galton (2014)							✓		
Singh et al. (2014)						✓			
Webster & Bélisle (2014)									✓ Case example
Viljoen, Beneateau, et al. (2012)	✓	✓	✓	✓	✓				
Viljoen, Cruise, et al. (2012)									✓ Review & rationale
Viljoen, Gray, & Barone (in press)									✓ Review
Presentations	Interrater Reliability	Internal Consistency	Concurrent Validity	Predictive Validity	Sensitivity to Change	Intervention-Planning	User Satisfaction	Adherence	e.g., Review, Example
Affleck & Cruise (2013)									✓ Case example
Beneteau & Viljoen (2014)				✓					
Cruise (2014)									✓ Case example
Cruise et al. (2010)									✓ Rationale
Desmarais et al. (2012)	✓							✓	
Johnson et al. (2014)				✓					
Schell & Rowe (2015)			✓						
Sellers et al. (2012)					✓				

Presentations	Reliability		Validity		Clinical Utility		Implementation Outcomes		Conceptual Issues
	Interrater Reliability	Internal Consistency	Concurrent Validity	Predictive Validity	Sensitivity to Change	Intervention-Planning	User Satisfaction	Adherence	e.g., Review, Example
Sher (2011)							✓		
Sher et al. (2013)				✓					
Viljoen, Beneteau et al. (2012)			✓	✓					
Viljoen, Gray et al. (2015)	✓			✓	✓				
Viljoen, Nicholls, et al. (2011, April)	✓	✓	✓	✓					
Viljoen, Nicholls, et al. (2011, June)	✓	✓	✓	✓					
Viljoen, Shaffer, et al. (2015)	✓			✓	✓				
Viljoen, S. (2014)		✓		✓	✓				✓ Culture

DESCRIPTION OF RESEARCH PROJECTS

Below, we review, in detail, each of the publications and presentations on the START:AV. Given that some START:AV publications and presentations arise from the same sample and database, we group these by project. We include research projects, as well as other scholarly works, such as conceptual and review papers related to the START:AV.

1. IMPLEMENTATION IN AMERICAN JUVENILE CORRECTIONAL CENTERS

Project Description

This study employed a prospective design to examine the implementation of the START:AV Pilot Version (Nicholls, Viljoen, Cruise, Desmarais, & Webster, 2010) in three residential juvenile correctional facilities in the United States. START:AV assessments were completed by case managers ($n = 28$) who received a full day of training. The projects in this study examined descriptive and psychometric properties of the START:AV, including concurrent validity and predictive validity. In addition, projects investigated sensitivity to change and the adherence to the risk-needs-responsivity model.

Scholarly Works

A. Desmarais, S. L., Sellers, B. G., Viljoen, J. L., Cruise, K. R., Nicholls, T. L., & Dvoskin, J. A. (2012). Pilot implementation and preliminary evaluation of START:AV assessments in secure juvenile correctional facilities. *International Journal of Forensic Mental Health, 11*, 150-164.

In this concurrent study, the authors examined the descriptive and psychometric properties of the START:AV Pilot Version (Nicholls, Viljoen, Cruise, Desmarais, & Webster, 2010) in a sample of male and female adolescent offenders in three youth correctional facilities in the United States. The authors described the implementation of the START:AV in these facilities, and stated reasons for its use, including a need for assessments that were (1) structured, consistent, and strength-based, (2) addressed a breadth of adverse outcomes, and (3) user-friendly for professional from diverse occupational backgrounds. Case managers ($n = 21$) completed START:AV assessments at admission for 291 adolescents on the basis of interview data and legal records. Age of the sample ranged between 13-20 years ($M = 16.16$, $SD = 1.25$). A majority of the sample was male (85.9%), had previously committed a violent offence (28.6%), and had a history of substance use problems (44.5%). Primary mental health diagnoses in the sample were anxiety disorder (9.6%), depression (23.1), ADHD (38.5%), conduct disorder (28.8%), ODD (21.2%), and substance abuse disorder (40.4%). Age, index offence, and mental health diagnosis did not significantly differ across gender.

First, the authors examined descriptive and psychometric properties of START:AV Total scores and Risk Estimates. Mean scores on START:AV Vulnerabilities and Strengths were 19.36 ($SD = 7.78$, range 0 to 36) and 18.53 ($SD = 8.77$, range 4 to 42), respectively. Of the sample, 84.3%, 91.7%, 79.3%, 95.4%, 55.7%, 49.1%, and 91.5%, were rated as low risk for self-harm, suicidal behaviour, unauthorized leave, self-neglect, violence, general offending, and victimization, respectively. 32.3% and 41.7% of the sample were

rated as moderate risk for violent and general offending, respectively. For substance abuse, 27.6% were rated as moderate and 36.0% were rated as high risk. Internal consistency, measured using Cronbach's alpha, was .89 and .93 for START:AV Vulnerabilities and Strengths, respectively. START:AV Vulnerability and Strength scores were significantly negatively correlated ($r = -.22, p < .001$). With respect to risk estimates, START:AV Vulnerability scores were significantly associated with violence ($r = .21, p < .01$), self-harm ($r = .23, p < .01$), suicidal behaviour ($r = .18, p < .05$), substance abuse ($r = .23, p < .01$), self-neglect ($r = .18, p < .01$), and general offending ($r = .24, p < .01$). Strength scores were significantly associated with violence ($r = -.25, p < .05$) and unauthorized leaves ($r = -.16, p < .01$) only. Interrater reliability (α) was .93 and .89 for Strength and Vulnerability scores, respectively.

Second, the authors examined descriptive characteristics of START:AV individual and critical/key items. Of the sample, 95.5% of the sample had at least one Vulnerability item rated as moderate or high, and 75.6% had at least one Vulnerability item rating of high, whereas 95.6% had at least one Strength rating of moderate or high, and 57.4% had at least one Strength rating of high. On average, three critical Vulnerability factors were identified ($M = 2.56, SD = 2.46$), whereas only one key Strength factor was identified ($M = 0.96, SD = 1.73$), a significant difference, ($t[290] = 9.87, p < .001$). The most commonly selected critical Vulnerability items were: Substance Use (43.1%), Impulse Control (25.9%), External Triggers (22.5%), School/Work (16.3%), and Rule Adherence (16.2%). The most commonly selected key Strength items were: School/Work (9.3%), Social Skills (9.0%), Plans (9.0%), Treatability (9.0%), and Recreation (6.6%).

Third, the authors examined gender differences on the START:AV Total scores, Risk Estimates, and individual and critical/key items. No gender differences in Strength Total scores were observed, however girls ($M = 22.85, SD = 7.10$) had significantly higher Vulnerability Total scores than boys ($M = 18.78, SD = 7.75$; $t(286) = 3.15, p = .002$). With respect to Risk Estimates, girls were significantly more likely to having ratings of moderate/high than boys for several items, including self-harm (8.1% vs. 1.0%), suicide, victimization, and unauthorized leave (29.4% vs. 3.3%), $X^2 = 25.05$ to $28.76, p < .05$, however no other differences were significant. With respect to critical/key items girls scored significantly higher on the critical Vulnerability ratings for seven items: Relationships with Adults, Recreation, Emotional State, Impulse Control, Social Support from Adults, Treatability, and Parenting/Home Environment, compared to boys ($t [275$ to $286] = 2.41, ps \leq .02$). Compared to girls, boys scored significantly higher on vulnerability ratings for the Coping item ($t[282] = 3.57, p < .001$).

The authors concluded that the START:AV may be a feasible tool to implement within youth correctional settings. This study also highlighted several important gender differences in START:AV Total scores, Risk Estimates, and individual and key/critical items.

See also: Desmarais, S., Sellers, B. G., Dvoskin, J., Viljoen, J. L., Cruise, K., & Nicholls, R. (2012, March). Descriptive and Psychometric Characteristics of Short-Term Assessment of Risk and Treatability: Adolescent Version Assessments: Findings from a Pilot Implementation Study. Paper presented at the American Psychology-Law Society Conference, San Juan, Puerto Rico.

This was an earlier conference presentation on the above study.

B. Johnson, K. L., Desmarais, S. L., Rajagopalan, R., Sellers, B. G., & Singh, J. P. (2014, March). *Validity of START: AV assessments in predicting adverse outcomes in incarcerated youth.* Poster presented at American Psychology-Law Conference Annual Conference, New Orleans, LA.

This prospective study examined the predictive validity of the START:AV Pilot Version (Nicholls, Viljoen, Cruise, Desmarais, & Webster, 2010) for multiple adverse outcomes (i.e., violence, self-harm, suicidal behavior, self-neglect, unauthorized leave, substance abuse, victimization, and institutional infractions) in a sample of 64 incarcerated adolescent offenders in the United States. A majority of the sample was male (80%). Mean age and racial characteristics of the sample were not reported. START:AV assessments were completed by trained case managers ($n = 13$) on the basis of interview and file data. Outcome data was coded over an average follow-up period of 143.56 days ($SD = 95.93$, range = 8 to 365) from institutional progress reports using an adapted version of the START Outcome Scale (SOS).

Mean START:AV Vulnerability and Strength scores were 19.18 ($SD = 7.94$, range = 0 – 36) and 19.19 ($SD = 8.88$, range 1 – 38), respectively. Inter-rater reliability of the START:AV was assessed by coding 10 randomly chosen participants. The IRR of the START:AV summary risk ratings indicated a 90.5% agreement rate. IRR and internal consistency for START:AV Vulnerabilities and Strengths was not reported. Scores on the SOS were dichotomized to represent the presence of any adverse outcomes over the follow-up period. Of the sample 76.6% of youth experienced at least one adverse outcome, including any violence (51.6%), physical violence (46.9%), non-sexual violence (50%), nonsexual physical violence (45.3%), self-harm, suicidal behaviour, and self-neglect (i.e., internalizing behaviors; 4.3%), unauthorized leave (7.8%), substance abuse (1.6%), victimization (3.1%), and institutional infractions (76.6%).

The authors conducted partial correlations controlling for the length of the follow-up period to examine the association between the START:AV and adverse outcomes. With respect to START:AV Vulnerability scores, there were no significant correlations with any of the adverse outcomes, although some trends were observed in the expected direction (e.g., physical violence [$r = .22$], unauthorized leave [$r = .23$], institutional infractions [$r = .24$]). With respect to START:AV Strength scores, partial correlations revealed negative associations with the occurrence of internalizing behaviours ($r = -.25$, $p < .05$) and victimization ($r = -.33$, $p < .01$). No other associations were significant. With respect to Risk Estimates, Risk estimates and their associated adverse outcomes displayed significant relationships for the following outcomes: any violence ($r = .33$, $p < .05$), physical violence ($r = .36$, $p < .05$), nonsexual violence ($r = .36$, $p < .05$), nonsexual physical violence ($r = .40$, $p < .05$), and victimization ($r = .33$, $p < .01$).

The authors also conducted Cox regression analyses, which control for time and uneven follow-up periods, to examine whether the START:AV predicted adverse outcomes. Results indicated that higher Vulnerability scores were significantly associated with unauthorized leaves (Hazard Ratio [HR] = 1.33, 95% CI = 1.01 – 1.74, $p < .05$). In addition, Risk of Violence was significantly associated with any violence (HR = 6.03, 95% CI = 1.20 – 30.17), physical violence (HR = 7.32, 95% CI = 1.14 – 27.97), nonsexual violence (HR = 7.27, 95% CI = 1.40 – 37.71), and nonsexual physical violence (HR = 9.16, 95% CI = 1.68 – 49.81; $ps < .05$) for high versus low risk groups, but not moderate versus low risk groups. No other associations were significant.

The authors concluded that Risk Estimates were stronger predictors of adverse outcomes than START:AV Vulnerability or Strength Total scores in adolescent offenders. However, the authors recommended

caution in interpreting these findings due to the small sample size and varying follow-up period which limit the external validity of the findings.

- C. Sellers, B., Desmarais, S., Dvoskin, J., Viljoen, J. L., Cruise, K., & Nicholls, T.** (2012, March). Change in Dynamic Items and Risk Estimates over Time: Findings from a Pilot Implementation of the START-AV. Poster presented at the American Psychology-Law Society Conference, San Juan, Puerto Rico.

Using a sample of 59 adolescent offenders who were followed up with for an average of 104 days (range 22 to 364 days) in the community, this prospective study investigated whether START:AV items on the START:AV Pilot Version (Nicholls, Viljoen, Cruise, Desmarais, & Webster, 2010) were truly dynamic and therefore sensitive to change over time. START:AV assessments were completed by trained case managers ($n = 28$) within 21 days of the youth's release into the community and 3 months thereafter. Due to missing data (i.e., 5 or more missing items), only 53 youth were included in the subsequent analyses. Of the sample, a majority (88%) were male. Average age of the sample was 16.13 years ($SD = 1.18$, range 14 to 19).

Inter-rater reliability of the START:AV were not reported. First, the authors conducted repeated measures ANOVAs to analyze changes in START:AV Total scores from the initial to follow-up assessment. Results indicated that mean Vulnerability scores significantly decreased from the initial ($M = 20.19$) to follow-up assessment ($M = 18.31$, $F[1, 52] = 5.78$, $p = .02$). In addition, mean Strength scores increased from the initial ($M = 18.72$) to follow-up assessment ($M = 20.13$), however this increase was not significant ($p = .07$).

Second, the authors conducted repeated measures analysis of variance (ANOVAs) to analyses changes in START:AV item ratings over time. Vulnerability ratings significantly decreased for five items: School/Work, Substance Use, Rule Adherence, Medication Adherence, and Plans, whereas Strength ratings significantly increased significantly for six items: School/Work, External Triggers, Peer Social Support, Medication Adherence, Rule Adherence, and Insight. No other changes were significant, although Strength ratings for Substance Use ($p < .07$) and Vulnerability ratings for Peer Social Support ($p < .07$) approached significance, respectively.

Third, the authors examined the proportion of youth that showed any changes in START:AV Total scores over time. START:AV Vulnerability Total scores decreased for 60.4% of the sample, increased for 32.1% of the sample, and showed no change for 7.5% of the sample. In addition, START:AV Strength Total scores increased for 54.4% of the sample, decreased for 27.3% of the sample, and showed no change for 18.3% of the sample. Overall, 46.3% of the sample decreased in START:AV Vulnerability Total scores and increased in START:AV Strength Total scores, whereas 10.3% increased in START:AV Vulnerability scores and decreased in START:AV Strength Total scores. Risk Estimates did not significantly increase or decrease over time. Given that changes were observed in both START:AV Total scores and individual item ratings, the authors conducted that many items of the START:AV were dynamic.

D. Singh, J. P., Desmarais, S. L., Sellers, B. G., Hylton, T., Tirotti, M., & Van Dorn, R. A. (2014). From risk assessment to risk management: Matching interventions to adolescent offenders' strengths and vulnerabilities. *Children and Youth Services Review*, 47, 1-9.

This prospective study examined the relationship between scores on the START:AV Pilot Version (Nicholls, Viljoen, Cruise, Desmarais, & Webster, 2010) and adherence to the Risk-Needs-Responsivity (RNR) model in a sample of 120 adolescent offenders aged 13 to 20 in residential correctional facilities in the United States. Mean age of the sample was 16.24 ($SD = 1.42$). Most of the sample were male (80%). The majority had been convicted of a violent index offence (68.3%), followed by non-violent (25%), and drug offences (6.7%). START:AV and case management (i.e., service) plans were completed by case managers at admission using interview and file information. For a subset of cases (50%), institutional outcomes using the START Outcome Scale (SOS) were also coded over an average follow-up period of 34 weeks. No significant differences were observed between this sample and the total sample with respect to gender, age, or race.

Over the follow-up period, a majority of the youth (78.6%) committed at least one institutional infraction, followed by non-sexual aggressive behavior (55.4%), sexual aggression (8.9%), self-harm (4%), victimization (3.6%), suicidal behaviour (1.8%), and substance abuse (1.8%).

First, the authors examined associations between START:AV scores and the number of interventions specified in the service plan (i.e., adherence to the risk principle). Strength scores were significantly positively associated with the number of strength-based interventions in the total sample ($r = .25, p < .05$) and in males ($r = .28, p < .05$), but this association was not significant for females ($r = .13$). Vulnerability scores were significantly positively associated with the number of vulnerability-based interventions in girls ($r = .44, p < .05$), but this association was not significant for males ($r = -.01$) nor the total sample ($r = .12$).

Second, the authors examined if critical vulnerabilities identified on the START:AV had been addressed in the service plans (i.e., adherence to the needs principle). The average match rate in the sample was 52.4%. There were no significant differences in match rates between males and females. Items with the highest match rates were as follows: Substance Use (94.6%), Mental Health (92.9%), Relationships (80.0%), Impulse Control (62.9%), School/Work (60.0%), and Social Support (50%).

Third, the authors examined the match between key strengths and service plans (i.e., adherence to the responsivity principle). The average match in the sample was 27.7%. Boys had a higher average match rate (30.8%) compared to females (4.5%), but this difference was not significant. Items with the highest match rates were as follows: Recreational Activities (66.7%), School/Work (50%), and Plans (50%).

Fourth, the authors examined the association between match rates and institutional outcomes on the SOS using Cox regression analyses. In the total sample externalizing outcomes (i.e., verbal aggression, property aggression, physical nonsexual aggression, physical sexual aggression, unauthorized leave, and institutional incidents) significantly decreased as the match for strength-based interventions increased for the total sample (Hazard Ratio [HR] = 0.58, 95% CI = 0.38–0.89, $p < .05$). for males (HR = 0.69, 95% CI = 0.49–0.98, $p < .05$), but this association was not significant for females (HR = 0.40, 95% CI = 0.15–1.03, $p = .06$). In addition, externalizing outcomes significantly decreased as the match between interventions and critical vulnerabilities increased (HR = 0.36, 95% CI = 0.13–0.99, $p < .05$), and this relationship was apparent in boys (HR = 0.29, 95% CI = 0.09–0.89, $p < .05$), but not in girls (HR = 0.67, 95% CI = 0.01–

38.11, $p = .84$). For key items and intervention matching, greater matching was related to increased externalized outcomes in boys only (HR = 8.02, 95% CI = 1.12–57.28, $p < .05$). For vulnerability-based interventions, this relationship was not evident in the total sample, or in boys or girls.

The study authors concluded that match between strengths and strength-based interventions are beneficial in reducing negative outcomes. However, in contrast to the RNR model, the match between vulnerabilities and vulnerability-based interventions was less strongly related to negative outcomes.

2. MEASURES OF PROTECTIVE FACTORS

Shell, V. & Rowe, R. (2015, June). *Assessing adolescent protective factors in both criminal justice and forensic inpatient samples*. Paper presented at the 3rd North American Correctional and Criminal Justice Psychology Conference, Ottawa, Ontario, Canada.

This retrospective study investigated the concurrent validity of the Structured Assessment of Protective Factors-Youth Version (SAPROF-YV) through comparison with START:AV Strength subscale (Viljoen, Nicholls, Cruise, Desmarais, & Webster, 2014), the Structured Assessment of Violence Risk in Youth (SAVRY) Protective Factors subscale, the Psychopathy Checklist: Youth Version (PCL:YV), and the Youth Level of Service Inventory (YLSI). In addition, the study authors examined whether scores on the SAPROF-YV, START:AV, and SAVRY varied as a function of gender and sample type.

The study sample consisted of 98 adolescent offenders and 30 forensic psychiatric patients in the United Kingdom. Sample ages ranged between 10-20 years old, with a mean age of 15.6 years (SD). The offender and psychiatric samples were predominately male (71% and 73%, respectively). Females were more likely to have experienced abuse, have a history of psychiatric hospitalization, and engaged in self-injury compared to males. Youth in the inpatient sample had significantly lower convictions, lower rates of substance use, and were more likely to be residing in the community at age 14 compared to youth in the offender sample. No other differences in demographic, background, or offence characteristics were significant across gender or sample type.

Convergent validity was reported for the total sample, separately for males and females, and separately for the offender sample and inpatient samples. SAPROF-YV scores demonstrated good convergent validity with START:AV Strength scores ($r = .68$ to $.74$, $p < .01$) and SAVRY Protective factors scores ($r = .49$ to $.71$) for all groups. In addition, SAPROF-YV score were significantly inversely related to START:AV Vulnerability scores ($r = -.64$ to $-.71$), SAVRY Risk Total scores (r s from $-.63$ to $-.72$), PCL:YV scores (r s from $-.51$ to $-.70$) and YLSI scores ($r = -.51$ to $-.82$;) for all groups. Overall, the weakest correlation was observed between SAPROF-YV scores and SAVRY protective scores in girls ($r = .49$).

SAPROF-YV, SAVRY, START:AV, PCL:YV, and YLS total risk and protective scores did not significantly differ across gender. Youth in the offender sample had significantly higher scores on the SAVRY Risk Total scale, the START:AV Vulnerabilities scale, the PCL:YV, and the YLS than youth in the inpatient sample. Conversely, youth in the inpatient sample had significantly higher START:AV Strength Total scores than youth in the

offender sample. No other differences in risk total and protective factors were significant. The authors concluded that both the SAPROF-YV and START:AV may be useful for assessing protective factors in youth; however, study findings should be interpreted with caution given the retrospective study design and small sample of females.

3. IMPLEMENTATION IN UK PSYCHIATRIC HOSPITAL

Project Description

This project investigated the Implementation and the predictive validity of the START:AV Pilot Version (Nicholls, Viljoen, Cruise, Desmarais, & Webster, 2010). Specifically, it assessed (1) the implementation of the START:AV in an adolescent forensic psychiatric hospital in the United Kingdom, and (2) the predictive validity of the START:AV Vulnerability scores and risk estimates in predicting adverse outcomes of physical aggression, property damage, verbal aggression, and self-harm.

Scholarly Work

A. Sher, M. & Gralton, E. (2014). Implementation of the START: AV in a secure adolescent service. *Journal of Forensic Science*, 16, 184 – 193.

This study evaluated the implementation of the START:AV Pilot Version (Nicholls, Viljoen, Cruise, Desmarais, & Webster, 2010) in a forensic psychiatric hospital setting in the United Kingdom. The authors surveyed a diverse team ($N = 91$) of health care professionals, including psychiatrists, psychologists, social workers, occupational therapists, nurses, teachers, physiotherapists, and speech and language therapists, who completed a 6-week training of the START:AV. Surveys regarding the administration of the START:AV were mailed to trained staff six months after implementation of the START:AV. Of those who were invited to participate, 31% completed the survey. A majority of the respondents were nurses (21%), psychologists (21%), or psychiatrists (18%). Work experience of respondents ranged from less than 1 year to 18 years ($M = 5.58$, $SD = 4.64$).

Over the 6-month period, staff had completed an average 2 to 24 START:AV assessments. On average, assessments took 27 minutes to complete ($SD = 11.10$, range 15 – 45 minutes). Overall, a number of positive themes were identified. The majority of the respondents reported that information needed to code the START:AV was readily available (82%), applicable to individual patients (79%), provided a comprehensive risk summary (75%), and Strength and Vulnerability ratings were straightforward (64%). In addition, respondents reported high agreement (86% - 96%) regarding the inclusion of relevant information (e.g., critical/ key items, risk estimates, strength and vulnerability ratings) and high confidence (75% - 89%) in ratings for the items and risk estimates. However some questions and concerns also emerged. Less than half of respondents (43.0%) agreed that there was sufficient time to complete the assessment and that distinctions were clear between the 0-2 rating system. In addition, 50% of respondents indicated they would prefer additional training on the risk formulation process, 30% on key/critical items and risk estimates, and 18% and 14% on Strength and Vulnerability ratings,

respectively. Taken together, findings suggest that the START:AV is easy to administer and useful in determining risk, however sufficient time is needed to code the START:AV and additional training on completing components of the tool may be necessary.

See also: Sher, M. (2011). *Implementation of the START:AV in a medium secure adolescent service in the UK*. Paper presented at the Annual Conference of the International Association of Forensic Mental Health Services, Barcelona, Spain.

This was an earlier conference presentation on the above study.

B. Sher, M., McLean, A., Rowe, K., Warner, L., Gralton, E., Nicholls, T., Viljoen, J., & Cruise, K. (2013, June). The Short-Term Assessment of Risk and Treatability (START) for Adolescents: A Prospective Validation Study in a Forensic Psychiatric Adolescent Sample. Paper presented at the International Association of Forensic Mental Health Services Conference, Maastricht, Netherlands.

This prospective study examined the predictive validity of START:AV Pilot Version (Nicholls, Viljoen, Cruise, Desmarais, & Webster, 2010) Vulnerability scores and Risk Estimates for multiple adverse outcomes (i.e., verbal aggression, physical aggression, property damage and self-harm) in a youth forensic psychiatric sample in the U.K. The study sample consisted of 100 adolescents aged 13 to 19 who were hospitalized under the Mental Health Act. Mean age of the sample was 15.94 years. Most of the sample were male (61.0 %) and self-identified as Caucasian (90.0%). Common mental health diagnoses in the sample were Conduct Disorder (18.9%), Affective Disorder (15.6%), and Psychosis (12.2%). In addition, 40% of the sample had a developmental disability. A majority of the sample had committed a violent offence, (53.3%), followed by sexual offending (14.4%), other offences (14.4%), and arson (8.9%). START:AV assessments were completed by multidisciplinary teams two weeks after admission on the basis of file information and interview data. The Overt Aggression Scale-Revised (OAS-R) was used to measure institutional outcomes over an average follow-up period of 3 months. For the total sample, START:AV Vulnerability scores ranged from 9 to 44 ($M = 29.77$, $SD = 7.51$) and Strength scores ranged from 3 to 32 ($M = 15.20$, $SD = 6.80$). OAS-R scores ranged from 0 to 48 for physical aggression ($M = 8.11$, $SD = 11.29$), 0 to 140 for verbal aggression ($M = 17.94$, $SD = 21.26$), 0 to 50 for property damage ($M = 6.91$, $SD = 9.22$), and 0 to 112 for self-harm ($M = 11.33$, $SD = 21.00$).

First, the authors examined correlations between START:AV Vulnerability scores and institutional outcomes for the total sample, separately for males and females, and separately for youth with and without developmental disabilities (coefficients and exact p values not reported). For the total sample and males, significant correlations were found between Vulnerability scores and verbal aggression, property damage, and physical assault. For both youth with and without developmental disabilities, significant correlations were found between Vulnerability scores and property damage and physical assault. No other associations were significant.

Second, the authors examined area under the curve (AUC) values of START:AV Vulnerability scores for the different subgroups described above (AUC values under .700 not reported). For the total sample and

males, Vulnerability scores were significantly predictive of verbal aggression (AUC = .736, $p < .01$ for total sample; AUC = .800, $p < .05$ for males) and physical aggression (AUC = .702, $p < .01$ for total sample; AUC = .745, $p < .05$ for males). Vulnerability scores were not predictive of institutional outcomes for females. For youth with developmental disabilities, Vulnerability scores were predictive of verbal aggression (AUC = .792, $p < .01$), whereas for youth without developmental disabilities, Vulnerability scores were predictive of physical aggression (AUC = .739, $p < .001$).

Third, the authors examined the association between Risk Estimates and institutional outcomes (coefficients, AUCs, and exact p values not reported). For the total sample, significant correlations were found between Risk for Violence Towards Others and verbal aggression, property damage, and physical aggression. For males, significant correlations were found between Risk for Violence Towards Others and verbal aggression. For females, significant correlations were found between Risk of Violence Towards Others and physical aggression and property damage. For youth with developmental disabilities, significant correlations were found between Risk of Violence Towards Others and verbal aggression. For the total sample, males, and youth without developmental disabilities significant correlations were found between Risk of Self-Harm and Risk of Suicide and self-harm. The authors concluded that the START:AV was more predictive of verbal aggression, physical aggression, and self-harm than property damage in the sample.

4. USE WITH AMERICAN INDIAN AND ALASKAN NATIVE YOUTH

Viljoen, S. (2014, May). Using strengths based measures to assess and manage risk of future negative outcomes. Indian Health Service Clinical Rounds, New Mexico.

This retrospective study examined the reliability and predictive validity of the START:AV ((Viljoen, Nicholls, Cruise, Desmarais, & Webster, 2014) over a 3-month period in a sample of 30 American Indian/Alaska Native (AI/AN) youth in a residential treatment center in the United States. Mean age of the sample was 16.0 years ($SD = 1.15$). Half ($n = 15$) of the youth were male. A majority of the youth had been court-ordered to attend treatment (60.0%), were attending school at the time of their admission (53.3%), and had previously received mental health services (89.7%). Of the sample, a majority had previous substance use (80.0%) or a dual mental health diagnosis (76.7%). Primary diagnoses included Cannabis dependence (50%), alcohol abuse (33.3%), oppositional defiant disorder (30%), alcohol dependence (30%), and conduct disorder (23.3%). At the time of the study the sample's mean duration of treatment was 85.6 days ($SD = 31.93$).

The START:AV was coded by one rater at admission and the end of treatment (i.e., 3 months post-admission) using referral and file information. Multiple adverse outcomes (i.e., violence, verbal aggression, bullying, property offences, non-suicidal self-injury [NSSI], unauthorized leaves, health neglect, substance use, and treatment non-completion) were coded using file information at the end of treatment. Base rates for the outcomes were as follows: violence (20.0%), verbal aggression (23.3%), bullying (10.0%), property offenses (3.3%), NSSI (6.7%), unauthorized leaves (23.3%), health neglect (10.0%), substance use (13.3%) and treatment non-completion (23.3%).

First, the author reported descriptive statistics, mean inter-item correlation (MIC), and internal consistency for the START:AV at each assessment. At the time of admission, mean START:AV Vulnerability and Strength scores were 56.23 ($SD = 9.18$, range = 38-73) and 40.75 ($SD = 6.69$, range 30 – 61), MICs were 0.27 and 0.28, and Cronbach's alpha .92 and .91, respectively. At the end of treatment, mean START:AV Vulnerability and Strength scores were 41.83 ($SD = 9.91$, range = 31-63) and 55.59 ($SD = 8.05$, range 31– 63), MICs were 0.27 and 0.23, and Cronbach's alpha .92 and .89, respectively. In addition, the author examined gender differences in START:AV scores at each assessment. No significant differences were found between boys and girls at admission or the end of the treatment.

Second, the author examined the predictive validity of the START:AV. Receiver operating characteristic (ROC) analyses indicated that START:AV Vulnerability scores were predictive of treatment incompleteness (AUC = .81), treatment effectiveness (AUC = .93), health neglect (AUC = .74), unauthorized leaves (AUC = .66), violence (AUC = .78), verbal aggression (AUC = .81), bullying (AUC = .80), and property damage (AUC = .83), but not substance use (AUC = .28) nor NSSI (AUC = .57). START:AV Strengths scores were predictive of treatment incompleteness (AUC = .80), treatment effectiveness (AUC = .69), health neglect (AUC = .64), unauthorized leaves (AUC = .67), violence (AUC = .67), verbal aggression (AUC = .72), bullying (AUC = .70), and property damage (AUC = .64), but not substance use (AUC = .32) nor NSSI (AUC = .53). With respect to Risk Estimates, Risk of Violence was predictive of violent offending (AUC = .72), verbal aggression (AUC = .73), and bullying (AUC = .78); Risk of NSSI was predictive of NSSI (AUC = .82); and the Risk of Non-Violent Offending was predictive of property damage (AUC = .91). The Risk Estimates for Substance Abuse (AUC = .52), Health Neglect (AUC = .59), and Unauthorized Leaves (AUC = .57) had associations with their respective outcomes that fell in the fair range.

Third, the author examined changes in START:AV Total scores, the START:AV case-specific item on Culture, and adverse outcomes pre-and post-treatment. Analyses indicated that START:AV Vulnerability scores significantly decreased from baseline to discharge ($p < .001$), whereas START:AV Strength scores significantly increased from baseline to discharge ($p < .001$). Vulnerability ratings on Culture slightly decreased from baseline ($M = 1.35$) to discharge ($M = 1.15$), but this difference was not significant. In contrast, Strength ratings on Culture significantly increased from baseline ($M = 1.85$) to discharge ($M = 2.27$), coefficient of test $p < .001$. In addition, rates of offending, non-violent offending, substance use, unauthorized leaves, suicidal behaviour, NSSI, victimization, and health neglect significantly decreased from admission (1.62 to 2.96) to the end of treatment (1.35 to 2.15, $p < .05$).

The author concluded that findings provide support for the use of the START:AV in a sample of AI/AN youth. However, findings should be interpreted with caution due to the small size of the sample, low base rate of adverse outcomes, and because interrater reliability of the START:AV was not examined.

5. PROSPECTIVE VALIDATION STUDY WITH CANADIAN ADOLESCENT OFFENDERS

Project Description

This study examined the prospective validity of the START:AV Pilot Version (Nicholls, Viljoen, Cruise, Desmarais, & Webster, 2010) in a sample of 163 youth on community probation in Canada. START:AV assessments were completed by trained research assistants using both interview and file information. Youth were followed over a one-year period, with reassessments occurring every three months.

Scholarly Works

- A. Beneteau, J., & Viljoen, J. (2014, June). *Linking START: AV ratings with adverse outcomes in justice-involved youths*. Poster presented at the Annual Convention of the Canadian Psychology Association, Vancouver, BC.

This study examined concurrent and prospective relationships between scores on the START:AV Pilot Version (Nicholls, Viljoen, Cruise, Desmarais, & Webster, 2010) and several adverse outcomes (i.e., homelessness, risky sexual behavior, absence from school, and absence from treatment) in a sample of 104 youth (66% male) aged 12 to 18 on community probation in British Columbia, Canada. The mean age of the sample was 15.9 years old. A majority of the youth were Caucasian (55.6%) and/or First Nations (27.8%). Trained undergraduate and graduate research assistants coded the START:AV on the basis of file and interview data. Outcome data were coded using interview, file, and self-report data at the baseline assessment and, with the exception of homelessness, three months thereafter. Specially, a history of homelessness and school absences (i.e., not attending or being enrolled) were assessed with interview questions developed for this study; treatment absences were coded from office justice file information; and risky sexual behaviour (i.e., having unprotective sex) was assessed using questions from the Youth Risk Behavior Survey. Rates of homeless, risky sexual behaviors, school absences and treatment absences were 32.9%, 34.1%, 31.7%, and 41.3% at the baseline assessment, respectively. Three-month follow-up data was available for 63.5% the youth. Outcome rates were similar to the baseline assessment (exact values not reported).

At baseline, Strength scores were related to school attendance ($F(102,1) = 8.24, p < .01$) and treatment attendance ($F(83,1) = 13.39, p < .001$), but were not significantly related to condom use, no condom use, or abstinence ($F(79,2) = 2.00, p = .14$). Vulnerability scores were related to non-enrollment ($F(102,1) = 6.51$), homelessness ($F(83,1) = 5.79, p = .02$), and poor treatment attendance ($F(83,1) = 25.95, p < .001$). Interestingly, lower Vulnerability scores were found for youth abstained from sexual activity ($F(79,2) = 4.54, p = .01$). Strength scores were not significantly related to no homelessness ($F(83,1) = 3.80, p = .055$); however, Vulnerability scores were related to homelessness.

At follow-up, Strength scores were significantly related to abstinence from sex ($F(71,2) = 4.96, p = .01$) and school attendance ($F(78,1) = 7.18, p < .01$). Lower Vulnerability scores were found for youth abstained from sexual activity ($F(69,2) = 5.31, p < .01$). Strength scores were not significantly related to treatment attendance ($F(72,1) = .44, p = .51$). Vulnerability scores were not significantly related to non-enrollment in

school ($F(78,1) = 1.62, p = .20$), or poor treatment attendance ($F(72,1) = 1.16, p = .28$). The authors concluded that in adverse outcomes were generally related higher START:AV Vulnerability scores and lower START:AV Strength scores.

B. Viljoen, J. L., Beneteau, J. L., Gulbransen, E., Brodersen, E., Desmarais, S. L., Nicholls, T. L., & Cruise, K. R. (2012). Assessment of multiple risk outcomes, strengths, and change with the START:AV: A short-term prospective study with adolescent offenders. *International Journal of Forensic Mental Health, 11*(3), 165-180.

This study was a preliminary prospective validation study of the START:AV Pilot Version (Nicholls, Viljoen, Cruise, Desmarais, & Webster, 2010) in a sample of 90 adolescent offenders aged 13 to 18 on community probation in British Columbia Canada. Mean age of the sample was 16.38 ($SD = 1.15$). Most of the sample were Caucasian (55.6%) or Aboriginal (27.8%) and no prior charges (74.4%) or convictions (88.2%). START:AV and SAVRY assessments were completed by trained undergraduate and graduate research assistants on the basis of file and interview data at the baseline assessment. In addition, youth completed the Developmental Assets Profile (DAP). Adverse outcomes were measured three months after the baseline assessment using the following: official records (i.e., charges and convictions) and the Self-Report of Offending (SRO) for offending; Problem Behavior Frequency Scale (PBF) Overt Victimization subscale for victimization, the MAYSI-2 Suicide Ideation subscale for suicide and self-harm; and the Alcohol and Drug Problems subscale of the MAYSI-2 for substance use. Of the sample, 10% of the youth had missing follow up data, but these individuals did not differ significantly from the total sample on various factors (e.g., START:AV scores, age, gender, and ethnicity), thus these cases were retained for analyses with the exception of analyses that included adverse outcomes as a dependent variable.

Mean START:AV Vulnerability and Strength scores were 22.12 ($SD = 8.24$, range not reported) and 19.27 ($SD = 8.10$, range 7-40), respectively. Internal consistency, measured using Cronbach's alpha, was good for START:AV Strength and Vulnerabilities ($\alpha = .89$). IRR was assessed with coding randomly chosen participants ($n = 12$ raters). IRR was excellent for START:AV Strength ($ICC = .86$) and Vulnerability Total scores ($ICC = .96$). IRR was good to excellent range for the Risk Estimates ($ICC = .52$ to $.94$). Over the 3-month follow-up, 68.2% and 54.5% self-reported any or violent reoffending, respectively, however, official records indicated bases rates of 28.8% and 19.2% for any reoffending and violent reoffending, respectively. Rates of other adverse outcomes at the 3-month follow-up were not reported.

First, the authors examined associations between new items on the START:AV (i.e., that were not on the START): Parenting and Home Environment, Relationships with Caretakers and Other Adults, Relationships with Peers, Social Support from Caretakers and Other Adults, and Social Support from Peers. These correlations had moderate effect sizes (r s from $.23$ to $.56, ps < .01$), which suggests that the news items are contributing new information. As expected, the total Vulnerability and Strength scores were negatively correlated ($r = -.74, p < .01$). 100% of the sample had moderate or high ratings for strengths on at least 5 items, 85.6% had this pattern for at least 10 items, and 55.3% had these ratings for at least 15 items.

Second, the authors examined convergent validity of the START:AV, the SAVRY, and the DAP. With regards to START:AV Vulnerability Total scores correlations were $.83, .67$, and $-.65$ with the SAVRY risk total scores, risk ratings, and protective scores, respectively ($ps < .01$). Vulnerability scores had

correlation coefficients of -.36, -.47, -.43, -.28, and -.34 with the DAP Personal, Social, Family, School, and Community Assets scores, respectively ($p < .01$). With regards to START:AV Strength scores were -.79, -.59, and .80 with SAVRY risk total scores, risk ratings, and protective scores ($ps < .01$). Strength total scores had correlation coefficients of .31, .45, .39, .31, and .38 with the DAP Personal, Social, Family, School, and Community Assets scores, respectively ($p < .01$).

Third, the authors examined associations between baseline START:AV scores and adverse outcomes at the 3-month follow-up (e.g., from the SRO, MAYSI-2, PBF). START:AV Vulnerability Total scores were significantly correlated with all outcome measures ($r = .25$ to $.54$, $p < .05$), whereas START:AV Strength Total scores were only significantly correlated with SRO Total Scores ($r = -.30$, $p < .05$) and SRO Violent subscale scores ($r = -.31$, $p < .05$). In addition, the authors examined whether risk level from the SAVRY moderated the relationship between START:AV total scores and adverse outcomes. Risk level did not moderate the predictive validity of the strength scores. The authors also examined the incremental validity of Strength scores. Results indicated that Strength scores did not add unique variance above and beyond Vulnerability scores.

Finally, the researchers tested the stability of the scores across time. Both the Strength and Vulnerability total scores had high and significant stability coefficients over 3 months ($r = .87$, $.77$, respectively). T-tests indicated that the mean vulnerability total score decreased significantly over time ($t(63) = 2.75$, $p < .01$, $d = 0.46$), while the mean strength total scores did not change significantly. In addition, almost all participants (92.1%) exhibited change in at least one risk rating, and half of the sample (50.8%) had changes in at least two items. Based on the calculated reliable change indices, 15.9% of the adolescents demonstrated reliable change in their strength or vulnerability total scores using a 95% CI.

See also: Viljoen, J. L., Nicholls, T., Cruise, K., Desmarais, S., Petersen, K., & Gulbransen, E. (2011, April). Initial data on the Short-Term Assessment of Risk and Treatability - Adolescent Version. Paper presented at the 7th Annual Pacific Forensic Psychiatry Conference, Vancouver, BC.

Viljoen, J. L., Nicholls, T. L., Cruise, K., Desmarais, S., & Beneteau, J. (2011, June). The Psychometric Properties of the Short-Term Assessment of Risk and Treatability for Adolescents: A Prospective Study with Adolescent Offenders. Paper presented at the Annual Conference of the International Association of Forensic Mental Health Services, Barcelona, Spain.

These were earlier conference presentations on the above study.

- C. Viljoen, J.L., Beneteau, J., Brodersen, E., Gulbransen, E., Nicholls, T., Cruise, K., Desmarais, S. & Douglas, K.** (2012). Assessment of protective factors in adolescent offenders: Comparison of the SAVRY, YLS/CMI, and START:AV. Paper presented at the Annual Conference of the International Association of Forensic Mental Health Services, Barcelona, Spain.

This prospective study examined the predictive validity of strength/protective factors on the SAVRY, YLS/CMI, and START:AV Pilot Version (Nicholls, Viljoen, Cruise, Desmarais, & Webster, 2010) over a 3-month period in sample of 90 adolescent offenders on probation in British Columbia, Canada. Mean age of the sample was 15.86 years ($SD = 1.13$). Most of the sample were male (68.9%) or Caucasian (50.7%). Risk assessment instruments were completed on the basis of interview and file information by trained

undergraduate and graduate research assistants. At 3-month follow-up, any and violent offending were measured using official charges and convictions dichotomously coded from youth justice files, and youth self-report using the Self-Report of Offending (SRO). Of the sample, 7.66% of the youth had missing data on the SRO. These cases were retained for the majority of analyses, with the exception of analyses that included SRO scores as an outcome variable.

Inter-rater reliability of the SAVRY, YLS/CMI, and START:AV was not reported. Over the 3-month follow-up, 68.2% of the sample self-reported any reoffending; however, official records indicated base rates of 28.8%. Rates of violent offending were not provided.

First, the authors examined concurrent validity between strength/protective factors on the SAVRY, YLS/CMI, and START:AV. SAVRY Protective Factors were significantly positively associated with YLS/CMI Strengths ($r = .44, p < .05$) and START:AV scores ($r = .80, p < .05$). YLS/CMI Strengths were significantly positively associated with START:AV scores ($r = .61, p < .05$).

Second, the authors examined the proportion of adolescents that were identified as having strengths/protective factors on the instruments. Overall, the START:AV identified more strengths than the other tools. Of the sample, 100% and 85.6% of youth were rated as moderate/high or high on at least one strength, respectively. In contrast, 56.7% and 21.1% of youth were identified as having at least one strength/protective factor on the SAVRY and YLS/CMI, respectively.

Third, the authors examined whether SAVRY, YLS/CMI and START:AV strength/protective factors were inversely associated with any and violent offending. SAVRY Protective Factors were significantly associated with any (AUC=.32, $p < .05$; $r = -.28, p < .05$) and violent charges and convictions (AUC=.25, $p < .05$; $r = -.30, p < .05$), but not self-reported any ($r = -.11, p > .05$) nor violent offending ($r = -.16, p > .05$). YLS/CMI strengths were not significantly associated with any (AUC=.43, $p > .05$; $r = -.17, p > .05$) nor violent charges and convictions (AUC=.47, $p > .05$; $r = -.07, p > .05$). In addition, the association between YLS/CMI Strengths and self-reported any ($r = -.17, p > .05$) nor violent offending ($r = -.07, p > .05$). START:AV scores were significantly associated with any (AUC=-.38, $p < .05$; $r = -.28, p < .05$) and violent charges and convictions (AUC=-.27, $p < .05$; $r = -.27, p < .05$), but not self-reported any ($r = -.30, p < .05$) nor violent offending ($r = -.27, p < .05$). AUCs for self-reported offending were not reported.

Last, the authors examined whether the START:AV added incrementally to the other tools, START:AV scores added incrementally to YLS/CMI Strengths for the prediction of violent charges and convictions ($\Delta X^2 = 6.69, p < .05$, but not any charges and convictions. In addition, START:AV scores added incrementally to SAVRY and YLS/CMI scores for self-reported any ($\Delta R^2 = .06, p < .05$) and violent offending ($\Delta R^2 = .08, p < .05$).

The authors concluded that strength/protective factors on the SAVRY and START:AV, but not YLS/CMI were predictive of any and violent offending. However, the authors noted caution in interpreting their findings due to the short follow-up period and small sample size of females used in the study.

D. Viljoen, J., Gray, A., Shaffer, C., & Douglas, K. (2015, March). What is the shelf-life of adolescent risk assessment? Dynamic change on the Structured Assessment of Violence Risk in

Youth and Short Term Assessment of Risk and Treatability: Adolescent Version. Paper presented at the Annual Meeting of the American Psychology - Law Society, San Diego, California, USA.

The overall focus of the present prospective study was to examine the shelf-life of the SAVRY and START:AV Pilot Version (Nicholls, Viljoen, Cruise, Desmarais, & Webster, 2010) in a sample of adolescent offenders who were followed up for an average of 3.13 years. The study sample was comprised of 89 youth on community probation in British Columbia, Canada. A majority of the sample were male (65%) and Caucasian (46.1%). Several trained undergraduate and graduate research assistants completed the SAVRY and START:AV on the basis of file and interview data at baseline and 3, 6, and 12 months thereafter. Of the sample, 10, 17, and 36 youth were missing data on the risk assessment tools at 3, 6, and 12 months, respectively. Youth with and without missing data did not differ with respect to age, gender, ethnicity, or baseline risk, thus these cases were retained for the majority of analyses, with the exception of analyses that included offending as an outcome variable. Charges and convictions were dichotomously coded from official youth justice records with raters blind to risk assessment scores. No offence data were missing over the follow-up period.

Inter-rater reliability (IRR) on the SAVRY and START:AV at the baseline assessment was assessed with 12 raters coding randomly chosen participants. IRR was excellent for SAVRY Risk Total scores (ICC = .91), START:AV Vulnerability scores (ICC = .87) and START:AV Strength (ICC = .92) scores. IRR was good for SAVRY Protective Total scores (ICC = .68).

First, the authors conducted correlations between baseline risk assessment scores and scores at 3, 6, and 12 months to examine the stability of the SAVRY and START:AV over time. SAVRY Risk Total scores demonstrated greater stability over time ($r = .89, .86, .85, ps < .01$, for correlations between baseline and 3, 6, and 12 month assessments, respectively) than the START:AV Vulnerability scores ($r = .75, .69, .63, p < .01$, respectively). However, no differences between SAVRY Protective factor scores ($r = .80, .52, .67$, respectively) and START:AV Strength scores ($r = .80, .52, .67$, respectively) were found.

Second, the authors examined the proportion of the sample that demonstrated change in summary risk ratings, and total risk and protective factors scores over the follow-up. With respect to SAVRY summary risk ratings, 34.6% ($p = .46$), 35.3% ($p = .10$), and 26.0% ($p = .04$) of the sample had a change in summary risk ratings scores from baseline to 3, 6 and 12 months, respectively. With respect to START:AV Risk Estimate, 42.3% ($p = .46$), 50.0% ($p = .10$), and 50.0% ($p = .04$) of the sample had a change in risk ratings from baseline to 3, 6, and 12 months, respectively. Overall, 20% of the sample increased in risk, whereas 30% decreased. Next, the researchers calculated reliable change indices (RCI) to test whether change in SAVRY and START:AV total scores was reliable or due to measurement error. RCI analysis indicated that 8.8% ($p = .73$), 11.6% ($p = .74$), and 9.5% ($p = .02$) of the sample showed reliable change in SAVRY Total risk scores at 3, 6, and 12 months, respectively, whereas 2.5% ($p = .02$), 9.7% ($p = .01$), and 7.2% ($p < .01$) showed reliable change in SAVRY Protective factor scores at 3, 6, and 12 months respectively. In addition, 11.1% ($p = .73$), 14.8% ($p = .74$), and 24.5% ($p = .02$) of the sample showed reliable change in START:AV Vulnerability Total scores at 3, 6, and 12 months, respectively, whereas 15.3% ($p = .02$), 35.0% ($p = .01$), and 37.8% ($p < .001$) of the sample showed reliable change in START:AV Strength Total scores at 3, 6, and 12 months, respectively.

Third, the predictive validity was assessed of the SAVRY and START:AV at baseline for predicting violence over the full follow up period. Results revealed significant moderate to large effect sizes for SAVRY risk

scores (AUC = .84, 95% CI = .76 - .92), SAVRY protective scores (AUC = .64, 95% CI = .52 - .72), SAVRY risk SPJ ratings (AUC = .77, 95% CI = .67 - .88), START:AV Vulnerability scores (AUC = .78, 95% CI = .69 - .88), START:AV Strength scores (AUC = .72, 95% CI = .60 - .83), and START:AV Risk Estimates (AUC = .69, 95% CI = .57 - .80). SAVRY risk scores had significantly greater predictive validity than SAVRY protective scores ($z = 2.19, p < .05$).

Fourth, the authors examined the predictive utility of baseline SAVRY and START:AV assessments for violence over short-term (i.e., 0-3 months, 3-6 months), medium-term (i.e., 6-12 months, 12-24 months), and long-term (i.e., 24-60 months, respectively) follow-up periods. Receiver operating characteristic (ROC) analyses indicated that SAVRY Risk Total scores had the greatest consistency across time (AUCs = .79, .75, .78, .79, .78, $p < .05$ for 3, 6, 12, 24, and 60 months, respectively). SAVRY protective scores were significant at 0-3 months (AUC = .69) and 6-12 months (AUC = .71) only, and were more predictive at short-term ($z = 1.89, p < .05$). START:AV Vulnerability scores were significant at each time point, excluding 3-6 months (AUCs = .78, .65, .70, .69, .72), and START:AV Strength were significant at every follow up, excluding 2-5 years (AUCs = .73, .68, .72, .68, .60). Strength scores had greater predictive validity at the short term ($z = 2.44, p < .05$).

The authors concluded that scores on the START:AV showed more reliable change compared to the SAVRY. In addition, they concluded that risk scores had consistent AUCs across the follow up periods, and that protective/strength scores were more predictive for short-term reoffending.

- E. Viljoen, J., Shaffer, C., Bhanwer, A., Gray, A., Nicholls, T., Cruise, K., & Desmarais, S.** (2015, September), Are Risk Assessment Tools Created Equal? A Comparison of the SAVRY, YLS/CMI, and START:AV Among Adolescents on Probation. Paper presented at the Young People and the Law Conference, Prato, Italy.

This prospective study examined the START:AV Pilot Version (Nicholls, Viljoen, Cruise, Desmarais, & Webster, 2010) in comparison to the SAVRY and YLS/CMI in sample of 89 adolescent offenders on probation in British Columbia, Canada. Mean age of the sample was 15.99 years ($SD = 1.10$). The majority of the sample were male (65.2%) and the most common ethnicities were Caucasian (46%) and Aboriginal (25%). Risk assessment instruments were completed based on interview and file information by trained undergraduate and graduate research assistants. Risk assessments were completed over a 1-year period at 3, 6, 9, and 12 months. Any and violent reoffending were measured using official charges and convictions coded from youth justice files over a mean follow up period of 3.13 years ($SD = 0.66$). Self-reported offending was measured using the Self-Report of Offending (SRO). Victimization was measured using the Problem-Behavior Frequency Scale (PBF; overt and relational), and self-injury was measured using the Adolescent Health Survey. Of the sample, 11.2%, 19.1%, and 40.4% of the youth had missing data at 3, 6, and 12 months, respectively. No significant differences were noted between youth with missing data on age, gender, ethnicity or baseline risk. SAVRY risk factors had excellent interrater reliability (ICC = .91), as did the YLS/CMI (ICC = .82), START:AV Vulnerabilities (ICC = .87) and START:AV Strengths (ICC = .92). SAVRY protective factors had good interrater reliability (ICC = .68).

First, the authors examined the predictive validity of the SAVRY, YLS/CMI, and START:AV for predicting violent and any offending over the full follow-up period. All tools had significant, large effect sizes and no significant differences were found between the measures for violence (base rate = 21.2%). Specific

AUC values were as follow: SAVRY Risk Total (AUC = .74, $p < .01$, SE = .06), SAVRY Risk Estimate (AUC = .74, $p < .01$, SE = .06), YLS/CMI Risk Total (AUC = .73, $p < .01$, SE = .06), START:AV Vulnerabilities Total (AUC = .67, $p < .05$, SE = .07), and START:AV Risk Estimates (AUC = .72, $p < .01$, SE = .07). START:AV Strengths Total was a significant predictor of violence (AUC = .70, $p < .01$), as was the SAVRY Protective Total (AUC = .67, $p < .05$). The YLS/CMI Strengths Total was not significant (AUC = .57, $p > .05$, SEs not reported). Similar results were found for any offending (base rate = 44.7%). Each tool produced significant, large effect sizes, and no significant differences were found between measures: SAVRY Risk Total (AUC = .80, $p < .001$, SE = .05), YLS/CMI Risk Total (AUC = .78, $p < .001$, SE = .05), YLS/CMI Risk Estimate (AUC = .73, $p < .001$, SE = .05), and START:AV Vulnerabilities Total (AUC = .71, $p < .01$, SE = .05). Again, the START:AV Strengths Total (AUC = .72, $p < .001$) and the SAVRY Protective Total (AUC = .67, $p < .05$) were predictive of any reoffending. The YLS/CMI Strengths Total was not significant (AUC = .60, $p > .05$). For short-term offending (i.e., at the 3-month follow-up), all measures had moderate effect sizes. For self-reported violence, the SAVRY Risk Total, YLS/CMI Risk Total, and START:AV Vulnerabilities Total were positively correlated with SRO violence ($r = .46, .49, .46$, respectively, $ps < .01$). In addition, SAVRY Risk Total ($r = .37$), YLS/CMI Risk Total ($r = .40$), and START:AV Vulnerabilities Total ($r = .38$) had moderate correlations with SRO any offending ($ps < .01$).

Second, the authors examined the predictive validity of the SAVRY, YLS/CMI, and START:AV in predicting harm to the youth at the 3-month follow-up. For victimization (as measured by the PBF), the SAVRY Risk Total ($r = .41$), YLS/CMI Risk Total ($r = .38$), START:AV Vulnerabilities Total ($r = .47$), and START:AV Risk Estimate ($r = .33$) predicted overt victimization ($ps < .01$). However, only the START:AV Vulnerabilities Total was significantly related to relational victimization ($r = .30$, $p < .05$). Only the START:AV Risk Estimate was predictive of self-injury (AUC = .71, $p < .05$, SE = .09).

Third, the authors examined whether the SAVRY, YLS/CMI and START:AV were sensitive to change over time. Examination of stability coefficients indicated that the START:AV Vulnerabilities Total captured the greatest change from baseline to 3-months ($r = .75$), and baseline to 12-months ($r = .63$, $ps < .01$). The SAVRY Risk Total ($r = .90, .87$) and the YLS/CMI Risk Total ($r = .87, .77$, $ps < .01$) demonstrated greater stability from baseline to 3-months and 12-months, and therefore less sensitivity to change over time. When examining changes in risk ratings, more youth demonstrated changes in the START:AV Violence Risk Estimate from baseline to 3-months and baseline to 12-months (43.2% and 50.0%, respectively), than in the SAVRY Risk Estimate (34.6%, 26.0%) and the YLS/CMI Risk Estimate (39.2%, 44.0%).

Finally, the authors examined the proportion of youth with at least one identified strength as well as the mean number of strengths for each tool. Results indicated that 59.6% (SAVRY Risk Total), 27.0% (YLS/CMI Risk Total), 100% (START:AV Vulnerabilities Total – moderate or high) and 87.6% (START:AV Vulnerabilities – high ratings) of the youth had at least 1 strength. The mean and SD for the number of strengths were as follows: 1.38(1.58) for SAVRY Risk Total, .43(0.96) for YLS/CMI Risk Total, 15.25(4.25) for START:AV Vulnerabilities Total – moderate or high, and 4.36(4.42) for START:AV Vulnerabilities – high ratings.

The authors concluded that SAVRY, YLS/CMI, and START:AV had similar predictive validity for violent reoffending, any reoffending, and overt victimization. However, the START:AV was a better predictor of self-harm. In addition, the START:AV demonstrated greater sensitivity to change over time, and identified a greater number of strengths in youth. The authors noted that the findings should be interpreted with caution due to the small sample size and attrition.

DESCRIPTION OF CONCEPTUAL PAPERS AND REVIEWS

1. **Affleck, K., & Cruise, K.** (2013, June). Developing effective risk and strength formulations with the Short-Term Assessment of Risk and Treatability: Adolescent Version. Paper presented at the 13th Annual Meeting of the International Association of Forensic Mental Health Services, Maastricht, the Netherlands.

In this presentation, the authors reviewed risk and strength-based formulation approaches for non-suicidal self-injury (NSSI) using the START:AV (Viljoen, Nicholls, Cruise, Desmarais, & Webster, 2014). First, the authors presented a case example to demonstrate the use of the START:AV with a youth on probation who had a history of depression, suicidal ideation, and NSSI. Second, the authors identified relevant Vulnerability and Strength items for the youth. After a discussion of important items, including critical/key Vulnerabilities and Strengths, the authors provided Risk Estimate ratings and made several suggestions for practice. First, treatment providers should consider the interrelationships between START:AV items and Risk Estimates. Second, treatment providers should consider how Risk Estimates relate to specific START:AV items. Third, treatment providers should identify relevant factors to previous success and stability. Fourth, treatment providers should use scenario planning to identify possible risk scenarios. The authors concluded with an illustration of scenario planning using the case example.

2. **Cruise, K. R.** (2014, November). Trauma-informed case planning for justice-involved youth with the Short Term Assessment of Risk and Treatability-Adolescent Version. Paper presented at the annual meeting of the International Society of Traumatic Stress Studies, Miami, Florida.

In this presentation, the author discussed how the START:AV (Viljoen, Nicholls, Cruise, Desmarais, & Webster, 2014) may allow for a trauma-informed approach to case management of justice-involved youth. Many adolescent risk assessments tools do not consider trauma when developing risk management and treatment plans; however, the START:AV includes a risk estimate for victimization, as well as several items that may capture exposure to trauma at home or in other environments (e.g., Self-Care, Coping, Mental/Cognitive State, Emotional State, Parenting, Peers, and External Triggers). The author presented a case study of a 15-year old female youth offender with a history of recurrent sexual assault. The START:AV ratings were presented for this case and several recommendations for case formulation were made. First, relevant Vulnerabilities and Strengths (including key and critical items) should be linked to the outcomes. Second, the co-occurrence of items and the outcomes should be examined to identify common sources of Vulnerabilities or Strengths. Third, the causal relationship between Vulnerabilities/Strengths and outcomes should be considered. Fourth, previous periods of stability and/or positive outcomes should be identified, along with factors that contributed to these successes. Fifth, scenario planning should be completed to identify future negative outcomes. A risk formulation for the case example was also presented.

The author concluded that trauma-informed risk formulation is a multi-step process and that it is critical to include a screening for trauma within risk assessments to guide risk formulation. In addition, the author highlighted that it may be useful to train individuals conducting risk assessments on the

relevance of trauma when evaluating risk. However, the author also noted that more research is needed on the utility of trauma in risk assessment and possible item clustering that may signal trauma.

- 3. Cruise, K., Nicholls, T. L., Viljoen, J., Desmarais, S., & Peterson, K.** (2010, May). Adapting the Short-Term Assessment of Risk and Treatability for adolescent populations. In T. L. Nicholls (Chair), the Short-Term Assessment of Risk and Treatability: An update on research, implementation evaluations, and future directions. Paper presented at the 10th Annual Meeting of the International Association of Forensic Mental Health Services, Vancouver, BC.

In this presentation, the authors provided an overview of the development procedure of the START:AV. First, the authors discussed the relevance of the START for adolescent populations. Next, the authors described the development of the START:AV, which included the organization of a work team, development of the pilot version, revisions to the pilot version, review by experts in the field, creation of a short manual, and the formation of three practice cases for training. The authors also discussed principles of item addition and revision. Compared to the START, the pilot version of the START:AV included 5 new items: the division of Relationships into Relationships with Caregivers/Other Adults and Relationships with Peers, and the division of Social Support into Social Support from Adults and Social Support from Peers, and the addition of Parenting and Home Environment. These items were discussed in further detail and information regarding the ongoing pilot testing of these items was provided.

- 4. Viljoen, J. L., Cruise, K. R., Nicholls, T. L., Desmarais, S. L., & Webster, C. D.** (2012). Taking stock and taking steps: The case for an adolescent version of the short-term assessment of risk and treatability. *The International Journal Of Forensic Mental Health*, 11(3), 135-149. doi:10.1080/14999013.2012.737406

In this paper, the authors discussed the development of the START:AV and its contributions to the advancement of adolescent risk assessment. Development of the START:AV proceeded in several steps. First, a team of researchers was formed, including clinicians with expertise in adolescent populations and developers of the START. Second, the team conducted a literature review on adolescent risk assessment to determine whether the START:AV would be a meaningful addition to existing measures. Third, developmental research was used to adapt the START for use with adolescent populations. Last, preliminary research was conducted and the results were used to refine the START:AV. The authors describe how the START:AV can supplement other risk tools in several ways. First, while most risk assessment tools solely focus on risk factors or have a limited number of protective factors, the START:AV has both vulnerability and strength ratings for each item. Second, while adolescent risk assessment tools predominately assess risk for violent and non-violent offending, the START:AV includes risk for multiple outcomes such as self-harm, suicide, victimization by others, substance abuse, unauthorized leaves, and self-neglect. Third, all items on the START:AV are dynamic factors. As such, items may be important for assessing change over time and can help inform risk management and treatment planning. Fourth, given its emphasis on mental health outcomes (e.g., suicide) and offending, the START:AV can be used with both psychiatric and offending populations. The authors conclude with suggestions for future validation studies of the START:AV.

5. **Viljoen, J. L., Gray, A. L., & Barone, C.** (in press). Assessing risk for violence and offending in adolescents. In R. Jackson and R. Roesch (Eds), *Learning Forensic Assessment*. New York: Routledge.

Youth justice professionals often utilize some form of risk assessment tool when evaluating the risk of future offending and associated management needs. In this chapter, the authors presented an overview of adolescent risk assessment tools. First, the authors discussed important developmental considerations in adolescent offending, such as developmental pathways toward and away from offending, dynamic factors relating to risk for offending, and caution surrounding assessment findings with adolescents. Second, the authors discussed the relationship between risk assessment and risk management. Third, the authors considered several models of risk assessment, and factors relating to how risk assessment tools are selected. Finally, the authors reviewed existing measures of adolescent risk, including the Structured Assessment of Violence Risk in Youth (SAVRY) and the Youth Level of Service/Case Management Inventory, Second Edition (YLS/CMI 2.0) for violent and general reoffending; the Juvenile Sex Offender Assessment Protocol-II (J-SOAP-II) and the Estimate of Risk of Adolescent Sex Offense Recidivism (ERASOR) for sexual offending; and the START:AV for multiple adverse outcomes (e.g., victimization, suicide, violence and general reoffending). For each measure, the authors provided a summary of research in numerous contexts, including interrater reliability, internal consistency, concurrent validity, predictive validity, gender, ethnicity, protective factors, changes on dynamic factors, implementation outcomes, and impact on intervention planning and services. With respect to the START:AV, although the authors note that few studies were able on the psychometric properties at the time of the publication, the existing literature suggests that the START:AV has good to excellent interrater reliability, high internal consistency, and concurrent validity with other risk and protective assessments. In addition, the START:AV has demonstrated predictive validity for a number of adverse outcomes (e.g., self-reported aggression and offending, substance use, official arrests), although findings with respect the Strengths scale of the START:AV have been mixed. The authors provide several recommendations for further research with the START:AV, including additional research to examine the utility this tool across gender and ethnicity, dynamic change, and incremental utility of START:AV factors over other risk instruments. The authors conclude with a case example that is assessed using the SAVRY, YLS/CMI 2.0, and START:AV. The results highlight that each tool provides similar conclusions regarding risk level, however each tool also contributes unique information. Specifically, the START:AV was able to provide the most information regarding protective factors for the youth and whether the youth was at risk for outcomes other than offending (e.g., victimization).

6. **Webster, C.D., & Bélisle, E.** (2014). How literature can add value to structured professional judgments of violence risks: An illustrative rare risk example inspired by Alice Munro's *Child Play*. *Archives of Forensic Psychology*, 1(1), 14-26.

In this article, the authors provided a fictional case example from Alice Munro's *Child's Play*, which was discussed on the context of the START:AV. In *Child's Play*, two girls (Marlene and Charlene) drown a disabled girl (Verna) at a summer camp. The authors mention that the story does not provide sufficient information to complete the START:AV. In addition, the authors argue that the majority of items on the START:AV (e.g., School and Work, Parental Functioning) may not be applicable to the girls' risk for future

violence. The authors also argue that although the START:AV has the option to include case-specific factor(s), the empirical foundation of the factor should be considered before inclusion. In this case example, the additional factor to consider is "Unhealthy Symbiotic Attachment" (i.e., the relationship between Marlene and Charlene). Notably, this case-specific factor would overlap with items on the START:AV such as Emotional State, Relationships, Peers, and Impulse Control. The authors concluded with a discussion of the limitations of having little background information on Marlene and Charlene. They argue that case-specific factor(s) should be considered when the standard items do not capture the individual's risk.

OTHER TOOLS INCLUDED IN THE ANNOTATED BIBLIOGRAPHY

Developmental Assets Profile (DAP; Search Institute, 2004): The DAP is a 58-item youth self-report measure that examines internal and external resilience assets in personal, social, family, school, and community domains. Each question on the DAP is responded to on a 4-point Likert scale from “not at all” to “almost always” and is answered in reference to the previous three month period.

Drug & Alcohol Use – Teen Conflict Survey (DAU; Bosworth & Espelage, 1995): The DAU is a 6-item youth self-report measure that examines the frequency of alcohol and drug use in the last 30 days.

Little’s Aggression Scales (LAS; Little, Jones, Henrich, & Hawley, 2003): The LAS is an 18-item youth self-report scale that measures overt reactive, instrumental overt, and relational aggression. Each question on the LAS is responded to on a 4-point Likert scale from “not at all true” to “completely true” in reference to the previous three month period.

Overt Aggression Scale-Revised (OAS-R; Silver & Yudofsky, 1991): The OAS-R is a 4-item expert rating scale that assesses incidents of verbal, physical, property, and auto-aggression. Each incident is rated on a 1-4 severity scale.

Massachusetts Youth Screening Instrument-Second Version (MAYSI-2; Grisso & Barnum, 2001): The MAYSI is a 52-item mental health screening tool designed for use with justice system-involved youth. It is comprised of seven clinical scales: Alcohol/Drug Use (8 items), Angry-Irritable (9 items), Depressed-Anxious (9 items), Somatic Complaints (6 items), Suicide Ideation (5 items), Thought Disturbance (5 items; boys only), and Traumatic Events (5 items; with separate scales for boys and girls). For each item, youth answer ‘yes’ or ‘no’ in response to the the past few months, except for items on the Traumatic Events scale which query the youth’s entire lifetime.

Psychopathy Checklist: Youth Version (PCL:YV; Forth, Kosson, & Hare, 2003): The PCL:YV is a 20-item expert symptom-rating scale that measures interpersonal, affective, lifestyle, and antisocial features of psychopathy in youth. Each item is scored as either 0 (the item does not apply), 1 (the item applies to the youth to some extent), or 2 (the item definitely applies to the youth).

Self-Report of Offending (SRO; Huizinga, Esbensen, & Weiher, 1991): The SRO is a 24-item tool that examines involvement in criminal activities and can be broken down into subscales related to violent (10 items) and non-violent offenses (14 items). For each item, youth answer ‘yes’ or ‘no’ as to whether they had engaged in the offending behavior over the previous 3-month period.

Short-Term Assessment of Risk and Treatability Outcomes Scale (START-SOS; Nicholls et al., 2007): The START-SOS is an 8-item expert rating scale that assesses incidents of self-neglect, substance use, unauthorized absence, victimization, and physical, verbal, property and self-aggression. Each incident is rated on a 1-4 severity scale.

Structured Assessment of Protective Factors for Violence Risk - Youth Version (SAPROF-YV; de Vries Robbé, Geers, Stapel, Hilterman & de Vogel, 2015): The SAPROF-YV is 16-item structured professional judgment instrument designed to assess protective factors for violence risk in youth. Each item is coded as

not present, possibly/partially present, and present. Total scores on the instrument can be used to classify youth as having low, moderate, or high levels of protection.

Structured Assessment of Violence Risk in Youth (SAVRY; Borum et al., 2006): The SAVRY is a 30-item structured professional judgment risk assessment tool designed to aid in the prediction of violence in youth. It is comprised of 24 risk factors in historical (10 items), social-contextual (6-items), and individual domains (8 items) and 6 domains of protective factors. Risk factors are rated as low, moderate, or high, whereas protective factors can be rated as absent or present. Total scores on the instrument are used to classify youth as low, moderate, or high risk.

Youth Level Service/Case Management Inventory (YLS/CMI; Hoge, Andrews & Leschied, 2002): The YLS/CMI is a risk assessment tool designed to aid in the prediction of general recidivism in adolescent offenders. It is comprised of 42 risk/need items in 8 domains: Prior and Current Offenses, Family Circumstances/Parenting, Education/Employment, Peer Associations, Substance Abuse, Leisure/Recreation, Personality/Behavior, and Attitudes/Organization. Each of the risk/need items are rated as present or absent. Total scores on the instrument are used to classify youth as low, moderate, or high risk.

Youth Risk Behavior Survey (YRBS; Centers for Disease Control, 2007): The YRBS is a 99-item self-report measure that examines causes of death, disability, and social problems in youth (e.g., violence, sexual risk taking, and substance use).

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