FACTOR ANALYSIS OF THE INTEGRATED DEVELOPMENTAL EVALUATION AND ASSESSMENT (IDEA)

Washington State Department of CHILDREN, YOUTH & FAMILIES

Original Date: March 6, 2025

OIAA | Prepared by Ian Edelstein and Alexandra Goins| Approved for distribution by Catherine Wilson, Evaluation & Research Administrator

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Introduction

Background

Overview of the IDEA Initiative

The Integrated Developmental Evaluation and Assessment (IDEA) was implemented by Juvenile Rehabilitation (JR) in 2022, replacing the Integrated Treatment Assessment (ITA). The IDEA is based upon the Positive Achievement Change Tool (PACT), which was validated by Hamilton and colleagues in 2020[1] and implemented by Washington state courts as the Juvenile Court Assessment Tool (JCAT). The initial or full IDEA contains 121 items, while follow-up assessments consist of 82 of those questions.

New Areas of Focus

A major update in the JCAT/IDEA was the introduction of 8 dynamic "need domains": School, Associations, Family, Drugs/Alcohol, Mental Health, Attitudes/Behaviors, Aggression and Social Skills. These need domains were tested and refined with help from panels of experts. According to the authors, the domains allow for reassessment and evaluation of changes in need levels and treatment response. This aligns with Risk-Need-Responsivity principles[2].

Previously, JR administered the ITA at intake and, when possible, prior to release. With the IDEA, initial assessment was conducted at intake and reassessment was set at every 90 days for all JR clients. This was later extended to every 120 days to better align with assessment team capacity.

Understanding Factor Analysis

To make sure the questions in the IDEA really measure what they're supposed to, researchers use a method called factor analysis. This process groups related questions together to see if, by combining several related questions, they can accurately measure an underlying idea or need. Using several questions to measure a complex concept is generally more reliable than using just one, because it helps reduce error and bias.[3]

There are two main types of factor analysis used in this report:

[1] Hamilton et al. (2020). PACT Validation and Weighting Results Technical Report Deliverable 1: Updated PACT Risk and Needs Assessment. Washington State University. Department of Criminal Justice and Criminology. Institute for Criminal Justice.

[2] Bonta, J., & Andrews, D. A. (2007). Risk-need-responsivity model for offender assessment and rehabilitation. *Rehabilitation*, *6*(1), 1-22.

[3] Diamantopoulos, A., Sarstedt, M., Fuchs, C. *et al.* Guidelines for choosing between multi-item and single-item scales for construct measurement: a predictive validity perspective. *J. of the Acad. Mark. Sci.* **40**, 434–449 (2012). https://doi.org/10.1007/s11747-011-0300-3

1. **Exploratory Factor Analysis (EFA):** EFA looks at each question to see how well it connects to an underlying idea or "latent construct." It provides statistics on how strongly each question relates to the construct and shows if any questions stand out as unique or unrelated.
2. **Confirmatory Factor Analysis (CFA):** After an initial structure is identified by EFA, CFA tests whether that structure fits well with a new set of data. It examines the strength of the connections, measures the amount of error, and gives overall fit statistics to test if the model works. If CFA confirms the structure, it supports combining those questions into a single score for further analysis.

If some questions don't fit well with the common factors, and if they don't offer unique value for other purposes, they might be dropped from future assessments.

Goals of the Report

This report aims to:

1) **Test Fit:** Check whether the eight need domains validated by Hamilton and colleagues [4] fit well with more than two years of JR IDEA data (covering 1,004 initial assessments from July 2022 to January 2025).
2) **Improve Models:** Determine if the process of exploratory followed by confirmatory factor analysis can lead to better models—ones that work well with fewer questions.
3) **Compare Scoring Methods:** See how the item scoring provided by the JR expert panel compares with the empirical data. In other words, assess whether expert scoring accurately reflects the underlying constructs.
4) **Examine Differences by Institution and Age:** Once a clear and simplified model is established, explore whether the results differ between the two JR institutions—Echo Glen Children's Center (EGCC) and Green Hill School (GHS). The differences in average ages (15.3 years at EGCC and 18.6 years at GHS, with overall youth ages ranging from 12 to 24 years) may affect how these need domains work.

[4] Hamilton et al. (2020) did not include path weights, constraints, item scoring, nor any correlated errors/covariances in their published factor models. Thus, our testing is based solely upon the items and factor structure proposed by Hamilton et al., not a full measurement model specification including item loading, regression weights, constraints, etc.

Key Findings

- **Overall Domain Performance:** The EFA revealed that most questions within each domain effectively measured the intended concept. For instance, nearly all the questions in the school domain pointed toward the same underlying construct: School Needs.
- **Associations Domain:** Out of the eight domains developed by Hamilton, only the Associations domain showed strong results in the CFA when applied to JR data. The analysis also revealed that some questions excluded from Hamilton's models actually worked well with the JR data, while simpler models sometimes proved to be more effective than more complex ones. This indicates a need to re-examine and possibly refine the questions in these domains.
- **Drugs & Alcohol and Mental Health:** These domains did not perform consistently in the models. Because they are important for clinical decisions, changes in these scores should be interpreted with caution. It is possible that questions in these domains might be capturing information not directly related to specific drug, alcohol, or mental health issues. Therefore, further clinical assessments are necessary to confirm if changes in these domain scores are valid.
- **School and Family Domains:** The CFA results for the School and Family domains were not sufficient to fully confirm these measures. In the case of School, even though it is important for juveniles in custody, the results (and changes over time) should be read cautiously. For the Family domain, it does not appear that assessment adds substantial insight into treatment needs or related issues.
- **Attitudes/Behaviors, Aggression, and Social Skills:** These dynamic domains showed acceptable and sometimes very good model fit. With more attention to the timing and measurement methods, the information gathered from these domains could become even more valuable.
- **Expert Scoring vs. Data Analysis:** The analysis found that using the JR experts' item scoring did not improve model fit. While their ratings may help classify needs (low, medium, high), they do not necessarily strengthen the measurement of the underlying constructs.
- **Differences Between Institutions:** Significant differences emerged between GHS and EGCC data for four domains—Associations, Mental Health, Behaviors/Attitudes, and

Social Skills—which hints that age differences might play a role in how these domain measures function. This finding suggests the need for further research to understand the cause(s) of these differences.[5]

Discussion & Limitations

The study confirmed that many of the assessment items did relate to their intended domains. For example, most questions in the School domain were linked to school needs. However, when conducting CFA, several domains did not achieve the desired model fit. This indicates that some questions may not be effectively measuring the underlying constructs.

There are two main strategies in using factor analysis:

- **Reducing Redundancy:** One approach is to remove similar or duplicate questions, thus shortening the assessment while still gathering essential information.
- **Ensuring Accuracy:** The other approach focuses on dropping questions that do not match the intended underlying traits, even if they are not redundant. This strategy aims for better accuracy in measuring the desired constructs, even if it means removing more items.

The analysis showed that removing items that do not match the intended concept leads to a reduction of questions—but this approach results in a clearer measurement of the need domains and makes the assessment process more efficient.

In the CFA stage various combinations and models were tested, including more complex factor structures with related pairs of items. The intent was to preserve as many questions as possible while still achieving acceptable model fit. The final best-fit models presented are the best efforts to adequately represent each need domain.

[5] These differences could also be due to assessor variations, institutional dynamics, or the fact that many GHS residents had their initial IDEAs completed well into their JR commitments.

Practical Implications

One practical suggestion could be to stop reassessing the need domains that did not show a clear, underlying measurement. In other words, if a domain does not reliably capture a consistent trait, there may be little value in assessing it repeatedly. Based on this analysis, only the Aggression, Attitudes/Behaviors, and Skills domains are valid for reassessment because they clearly measure the intended underlying concepts.

This report focused only on the initial IDEA assessments and did not track changes in scores over time. In future research, CFA could be run on reassessments to see if these best-fitting models still perform adequately. However, this procedure requires that only one reassessment per JR client be utilized. The same method could also be applied when analyzing changes in scores between initial IDEA and reassessment.

It is important to remember that interpreting factor analysis results involves some judgment. These findings should be considered alongside other information when deciding whether certain items should be dropped or only used during the initial assessment.

Limitations in the Current Analysis

A few issues limit the current analysis. One clear limitation is that many questions allowed a "Not Applicable" (N/A) response. In this analysis, responses were scored so that a higher score indicated a higher need, and lower scores indicated less need. Because it wasn't clear whether an "N/A" response indicated a higher or lower need, these answers were treated as missing. This missing data especially affected the School and Family domains, and to a lesser extent the Associations domain.

The School domain has limitations related to practice and implementation. For example, in the School domain, students at GHS who already earned a GED still must attend classes until they officially graduate.

Also, many clients had been in JR for months or even years before receiving their initial IDEA assessment. Their responses might reflect their long-term situation rather than their needs at the time of admission.

There are additional limitations in the overall implementation and monitoring of the assessment. Differences in training, quality assurance, continuous quality improvement, and inter-rater reliability (ensuring that different assessors score consistently) can all affect the accuracy of an initial assessment. For example, if a client has been in JR for years before the initial assessment, the results might not truly represent their needs when they first arrived.

Recommendations & Future Research Needs

The primary recommendation is to further examine whether it is worthwhile to continue reassessing the following domains: School, Associations, Family, Drugs and Alcohol, and Mental Health. These factors could not be confirmed and this could be due to the way questions and response options are written (including the use of "N/A" responses), or from gaps in quality control and assessment fidelity.

Future research could also explore:

- How responsive each domain is to change while a person is in JR custody.
- Which questions might help predict important outcomes, like the risk of recidivism.

These additional analyses are important because removing items without careful study could weaken the ability to predict risk and track genuine changes in needs over time.

The noticeable differences between the CFA results in this study and Hamilton et al.'s results point to a need to ensure best assessment practices and implementation fidelity. To improve quality and consistency, JR should consider:

- **Clear Assessor Training and Certification:** Implement standardized training programs.
- **Random Quality Assurance Reviews:** Randomly review and back-check at least 20% of all initial and reassessments.
- **Ongoing Quality Improvement:** Document continuous quality improvement practices that directly address issues found during quality assurance reviews.
- **Inter-Rater Reliability Checks:** Conduct a robust, randomized process to ensure that at least 10% of all assessments are consistently scored by different raters.

By implementing these improvements and conducting further research, JR can work toward a more focused and reliable assessment that not only reflects the true needs of its clients but may better predict future outcomes.

A commitment towards equity:

How does this work advance equity priorities for DCYF?

- Identifying disproportionalities in resource/service access, and disparities in outcomes
- Assessing policies, program implementation, and practices that may (1) contribute to disparities or (2) reduce disparities
- Disaggregates and controls for key demographic variables
- Leveraging community voice

Learn more at <weblink>

Technical Appendix

Methodology

General

All initial IDEA assessments were pulled from the JR Automated Client Tracking (ACT) system for the period July 2022 (the point of IDEA inception) through January 2025. After removing duplicates per client and per residential obligation (for clients who had multiple initial assessments during their residential obligation, or had multiple residential obligations in JR), there remained N=1,004 initial IDEA assessments. The majority (n=890) were EGCC or GHS residents; the rest were interviewed in JR community facilities. Males compose 91% (n=910) of the dataset. Due to the low number of females (n=94), their responses are analyzed together with the males.

A standard approach for factor analysis is to conduct Exploratory Factor Analysis (EFA) with a separate sample of data, form hypotheses around data structures (higher-order domains and sub-factors, or item pairs that have theorized correlated error), and use Confirmatory Factor Analysis (CFA) with a separate data sample to test the EFA hypotheses for acceptable fit. CFA employs more stringent methods of estimation of fit and error, allowing researchers to effectively confirm (or fail to confirm) the theorized factor structures. In this case, after coding all items, the dataset was randomly split into two equal halves, each including 502 cases. Factor analysis often follows an iterative process of testing model fit changes or improvements by creating sub-factors, correlating item error terms (covariances), and/or dropping items. This process can generate many models but only the best-fitting model is reported and used for subsequent testing with the other alternative datasets.

In the analytical dataset, responses were recoded to be continuous and to have the same valence, with higher numbered responses indicating greater need, or risk. For items where multiple responses were possible (i.e. History of Youth's Alcohol Use), each affirmative response was coded as 1 and added to create a combined score for that item. For example, a youth who indicated past use of alcohol (1 point), alcohol disrupted education (1 point), caused family conflict (1 point), and contributed to criminal behavior (1 point), the total score for that item would be 4. This coding was used for the EFA with the split (n=502) dataset, the subsequent CFA procedure with the second split half of the data (n=502, both as described above), and to test the Hamilton et al. models with the full (n=1,004) dataset.

Hamilton, et al. published "criminogenic need" item-level scoring for the 8 JCAT "need domains," breaking down risk by gender and crime type. At IDEA inception, the male "any recidivism need" scoring was applied in ACT to calculate low, medium and high need for each domain and to track changes in those need scores with each IDEA reassessment. After 12 months of IDEA implementation, a panel of JR and Office of Innovation, Alignment and

Accountability (OIAA) staff reviewed each domain and item and revised the item scoring to better reflect the JR population and needs, based on staff expertise (a non-statistical approach). To test if this ACT-scoring affects the fit or performance of each "need domain" factor, the best-fitting CFA model was compared in terms of fit to the ACT scoring model. A limitation of this approach is that Hamilton, et al. did not include the scoring of numerous items[6] in their models that were tested in their published factor analysis, so there are missing aspects to their factor patterns.

The EFA method described herein utilizes the maximum likelihood method of estimation with no factor rotation. All items within each Hamilton et al. domain are entered into EFA, yielding factor loadings, cumulative explained variance (communality) and uniqueness (unexplained variance, or error, within each item). All factor loadings above 0.3 are shown (below 0.3 denoted by *), as well as subsidiary factors which may potentially better fit the data (e.g., a Family factor that contains 2 sub-factors relating to Stability of Parents, separate from Family Dynamics experienced by the youth). Color coding has been applied to the EFA tables, with red denoting items that display poor *factor loading* (at or below 0.4) or high *uniqueness* (at or above 0.7), suggesting that these items do not well reflect whatever is being measured by the factor.

CFA models provide numerous fit statistics to evaluate the fit of the theorized model to the data. The three primary fit statistics we report are *chi-square to degrees of freedom ratio* (a measure of the unexplained variation divided by the number of free paths or parameters between measured items) where chi-sq./d.f. <4 is considered acceptable and <2, ideal; *Root Mean Square Error of Approximation* (RMSEA, a measure of model error that considers model complexity and sample size) where < .07 is acceptable and <.05, ideal; and *Comparative Fit Index* (CFI) where < .9 is unacceptable and >.95 is considered good model fit[7]. Additional statistics reported are the *Standardized Root Mean Squared Residual* (SRMR), a measure of the size of residuals where < .06 is ideal and *the Akaike Information Criterion* (AIC) which is used to compare two similar models from the same dataset, with the lower AIC number indicating better fit relative to parsimony. Again, color coding has been applied to the CFA tables, with red indicating unacceptable fit and green indicating good model fit (according to the above standards). It should be noted that there is no formal statistical test to compare fit differences between models, unless they are nested (through the chi-squared difference test) or utilize the same dataset and coding (then the model with the lower AIC is superior). It is critical to select a

[6] There is no evidence that Hamilton et al. applied scoring to data used for factor analysis, so we assume data was coded in a continuous manner. The extent of zero-coded items in Hamilton et al. made it impossible to test their scoring according to their factor structure.

[7] Hu, L. T., & Bentler, P. M. (1999). Cutoff criteria for fit indexes in covariance structure analysis: Conventional criteria versus new alternatives. *Structural equation modeling: a multidisciplinary journal*, *6*(1), 1-55.

model based not only on statistical testing (fit statistics), but also on theoretical and perhaps practical considerations.[8]

It is common practice to run iterative factor analysis models to test if dropping items with low factor loadings (and large error terms) and theoretically justifiable uniqueness result in a better fitting, more simplified model. A final step to model refinement is to review modification indices in the CFA output to explore if any item pairs theorized to have common variance (or error) separate from the main latent factor can yield improved fit through inclusion of covaried error paths[9]. The CFA tables present testing results between the Hamilton, et al. models, the EFA-informed and iteratively developed best-fitting alternative, the subsequent testing of the best-fitting model with ACT-scoring applied, and the final model with EGCC- and GHS-specific models (separately).

Results

School domain

EFA for the School domain items (Table 1A. below) yielded a single factor explaining 71% of the variation, with four items displaying loadings below 0.4 (including one item with loading below 0.3). A second factor contained only two items (age and history of expulsions) and the loadings were in the opposite direction to the main factor. Thus, the second factor is not retained.

In CFA testing (Table 1B. below), the Hamilton model displays poor fit and appears overly complex (over-specified).

In the finalized, EFA best-fitting model (Table 1b. and Figure 1. below), based on the recommended EFA single-factor structure and CFA iterations, the lowest loading items, S2BQ1A: *Youth is a special education student or has a formal diagnosis of a special education need (select all that apply)* and S2BQ6A: *Teachers, staff, or coaches the youth likes or feels comfortable talking with* were dropped. Covariances were created between school conduct/school expulsion and age first expulsion/past expulsions, due to their degree of relatedness in pairs and theoretical uniqueness from other school domain items. This model results in acceptable fit for chi-sq./d.f. (2.01), CFI (0.92), and borderline fit for the error/RMSEA (0.067) and residual/SRMR (0.062).

The ACT-scored model resulted in poorer fit and greater error than either the Hamilton or the EFA. There do not appear to be significant differences between GHS and EGCC only models, though it is acknowledged that GHS residents are older, and some are no longer in school. For

[8] Bonifay, W., & Cai, L. (2017). On the complexity of item response theory models. Multivariate behavioral research, 52(4), 465-484.

[9] This is done judiciously as adding paths (model constraints) also results in more complexity and can also negatively impact fit statistics, particularly chi-sq./d.f.

clients who have already obtained their GED or high school diploma prior to their initial assessment, several questions in this domain would result in a "N/A" response selection, based on guidance currently in the IDEA Assessment Manual. Not applicable response selection was unscored in the factor analysis, meaning that for clients where "N/A" was selected on one or more items, scoring for those items was missing and not included in analysis[10].

The 11 items in the finalized and confirmed model result in a Cronbach's alpha reliability of α=0.75 with the full (n=1,004) dataset, a marginally acceptable reliability.

Table 1A. EFA results: School Domain (note: * denotes loadings less than 0.3. Red highlight indicates poor factor loading or high uniqueness. Green highlight indicates good loading, 0.7 and above).

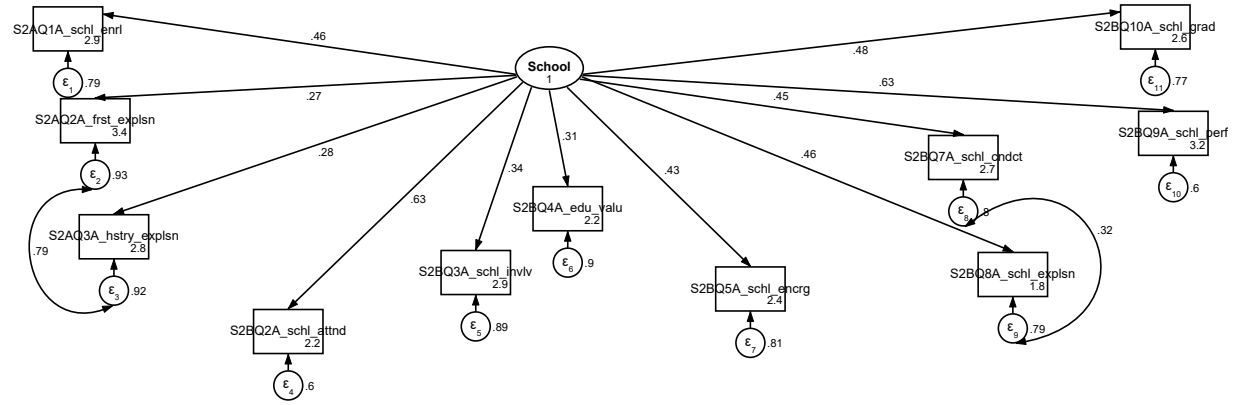
Question	Factor Loading 1	Factor Loading 2	Uniqueness
Youth's current school enrollment status, regardless of attendance	0.49	*	0.71
Age at first expulsion or suspension	0.54	-0.61	0.34
History of expulsions and suspensions	0.6	-0.54	0.35
Youth is a special education student or has a formal diagnosis of a special education need	*	*	0.93
Youth's attendance in the most recent term	0.56	*	0.66
Youth involvement in school activities during most recent term	0.36	*	0.84
Youth believes there is value in getting an education	0.38	*	0.77
Youth believes school provides an encouraging environment	0.44	*	0.78
Teachers, staff, or coaches the youth likes or feels comfortable talking with	0.34	*	0.84
Youth's conduct in the most recent term	0.59	*	0.65
Number of expulsions and suspensions in the most recent term	0.44	*	0.8
Youth academic performance in the most recent school term	0.55	*	0.67
Interviewer's assessment of likelihood the youth will stay in and graduate from high school or an equivalent vocational school	0.47	*	0.71
Eigenvalue	**2.9**	**1.03**	
Cumulative	**0.71**	**0.96**	

[10] For a complete list of questions with 'Not Applicable' response options and missing score counts, see Technical Appendix.

Table 1B. CFA results: School domain models/fit statistics (note: red highlight denotes poor fit range, green denotes good fit, non-highlighted are in the marginal range).

Description	Hamilton et al. model	EFA-best model (split half)	ACT risk-scored	GHS only	EGCC only
Model description	N=1004, 10 items, 4 sub-factors	N=502, 11 items, 2 covariances	N=1004, match EFA	N=429, match EFA	N=461, match EFA
Chi-sq./d.f.	5.71 (d.f.= 34)	2.01 (d.f.= 42)	10.04 (d.f.= 42)	2.27 (d.f.= 42)	2.94 (d.f.= 42)
RMSEA	0.105	0.067	0.095	0.103	0.083
CFI	0.761	0.923	0.883	0.808	0.877
SRMR	0.093	0.062	0.071	0.101	0.072
AIC	10,786.0	5,939.3	37,809.4	2,962.8	7,570.9

Figure 1. School domain factor model



Associations domain

EFA for the Association domain items (Table 2A. below) yielded a single factor explaining 63% of the variation, with two items displaying loadings below 0.4 (including one item with loading below 0.3). A second factor contained only two items (history and current non-parent adult relationships) with acceptable loadings (on the first factor). Thus, the second factor is not retained.

The four-factor Hamilton model (see Table 2B. and Figure 2. below) displays excellent fit statistics overall, although it utilizes only 9 of the 16 items in the Associations section. This

formulation incorporates sub-factors examining employment, use of free time, pro-social attachments, and anti-social associates. In this instance, the Hamilton model was a substantial improvement over the single-factor model and variations identified in EFA and tested in CFA.

In the EFA best-fit model, the employment-related items S3Q3A: *History of successful employment*; S3Q4A: *History of positive personal relationship(s) with past employer(s) or adult coworker(s)*; S3Q5A: *Current positive personal relationship(s) with employer(s) or adult coworker(s)*; S3Q8A: *Current employment status* were dropped. As employability is a critical skill for JR clients to develop, this may be an area where new items or scales could be explored[11]. Also, S3Q9A: *History of positive adult non-family relationships not connected to school or employment*; S3Q12A: *History of friends/companions*; and, S3Q14A: *Currently in a romantic, intimate, or sexual relationship* were not included in Hamilton and do not appear to add substantially to the latent factor.

The ACT-scored version reduced model fit substantially from the continuous scoring employed in the Hamilton test. Notably, GHS-model fit statistics are all substantially better than those of the EGCC model. This may reflect differences by age in relation to employment, use of free time and peer choices[12].

The 8 items in the finalized, overall best-fitting model (Figure 2. below, the Hamilton model) result in a Cronbach's alpha reliability of α=0.80 with the full (n=1004) dataset, an acceptable reliability.

[11] The 6 employment items were tested on their own but did not yield acceptable model fit. It was noteworthy that fit did improve in the Greenhill only data, with older youth.

[12] Analysis of group differences (by age, gender, race, etc.) between individual items or combined need domains is beyond the scope of this report, but is an area for further research, once constructs are validated.

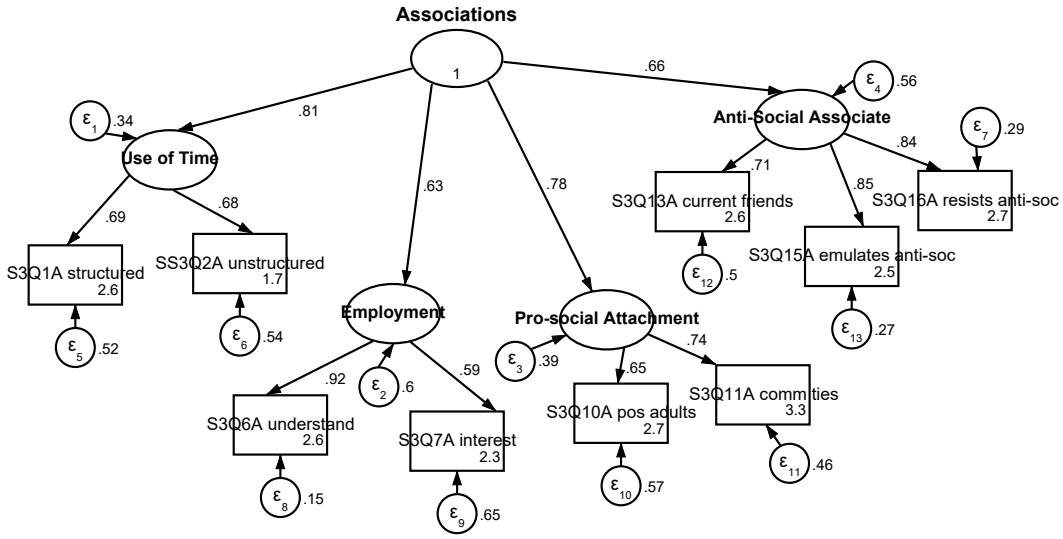
Table 2A. EFA results: Associations Domain (note * denotes loadings less than 0.3. Red highlight indicates poor factor loading or high uniqueness Green highlight indicates good loading, 0.7 and above).

Question	Factor Loading 1	Factor Loading 2	Factor Loading 3	Uniqueness
Current interest and involvement in structured recreational activities	0.44	*	*	0.7
Current interest in and involvement in unstructured recreational activities	0.5	*	*	0.71
History of successful employment	0.52	*	0.37	0.6
History of positive personal relationship(s) with past employer(s) or adult coworker(s)	0.59	*	*	0.57
Current positive personal relationship(s) with employer(s) or adult coworker(s)	0.67	-0.5	*	0.29
Understanding what is required to maintain a job	0.71	*	0.32	0.38
Current interest in employment	0.64	-0.38	*	0.43
Current employment status	0.67	-0.53	*	0.24
History of positive adult non-family relationships not connected to school or employment	0.35	0.54	*	0.57
Current positive adult non-family relationships not connected to school or employment	0.5	0.51	*	0.49
Current pro-social community ties	0.57	0.37	*	0.54
History of friends/companions	0.43	*	-0.39	0.66
Current friends/companions youth actually spends time with	0.56	*	-0.54	0.39
Currently in a romantic, intimate, or sexual relationship	*	*	*	0.98
Currently admires/emulates anti-social peers	0.67	*	-0.43	0.37
Current resistance to anti-social peer influence	0.7	*	-0.34	0.39
Eigenvalue	**5.02**	**1.48**	**1.16**	
Cumulative	**0.63**	**0.82**	**0.96**	

Table 2B. CFA results: Associations domain models/fit statistics (note: red highlight denotes poor fit range, green denotes good fit, non-highlighted are in the marginal range).

Description	Hamilton et al. model	EFA best-fit model (split half)	ACT risk-scored	GHS only	EGCC only
Model description	N=1004, 9 items, 4 sub-factors	N=502, 8 items, 2 covariances	N=1004, match Hamilton	N=429, match Hamilton	N=461, match Hamilton
Chi-sq./d.f.	2.67 (d.f.= 23)	10.25 (d.f.= 18)	5.80 (d.f.= 23)	1.65 (d.f.= 23)	3.30 (d.f.= 23)
RMSEA	0.041	0.136	0.069	0.039	0.071
CFI	0.986	0.889	0.949	0.990	0.912
SRMR	0.028	0.0111	0.070	0.032	0.086
AIC	22108.0	10094.7	32942.5	9020.4	10108.2

Figure 2. Associations domain factor model



Family domain

EFA results for the family domain items (Table 3A. below) yield a first factor with 11 items loading at 0.4 or higher (10 items loading below 0.4 and 6 of those below 0.3), explaining 55% of the overall variation. A second factor contained only two correlated items with acceptable loadings (jail history of household members, history and current). Thus, the second factor was not retained in CFA analysis.

Following EFA and CFA iterations to improve fit (see Table 3B. and Figure 3. below), 5 items with the lowest loadings were dropped: *S4AQ5A: Youth has been living under adult supervision*, S4BQ2A:*Annual combined income of youth and family*, S4BQ5A: *Problem history of sibling(s) who are currently involved in the household (select all that apply)*, S4BQ13A: *Parental characterization of youth's anti-social behavior*, S4BQ14A: *Family members youth feels close to (select all that apply)*. Fit statistics for all Family models are poor and, as such, we cannot conclude that there is a measurable family needs latent construct.

The ACT-scoring did not improve model fit (over the EFA best-fit model using the continuous dataset) and GHS/EGCC differences were not pronounced. The 16 items in the finalized EFA best-fit model (Figure 3. below) result in a Cronbach's alpha reliability of α=0.81 with the full (n=1004) dataset, an acceptable reliability. However, it should be noted that a greater number of items will yield a higher reliability without considering uniqueness or unexplained variance.

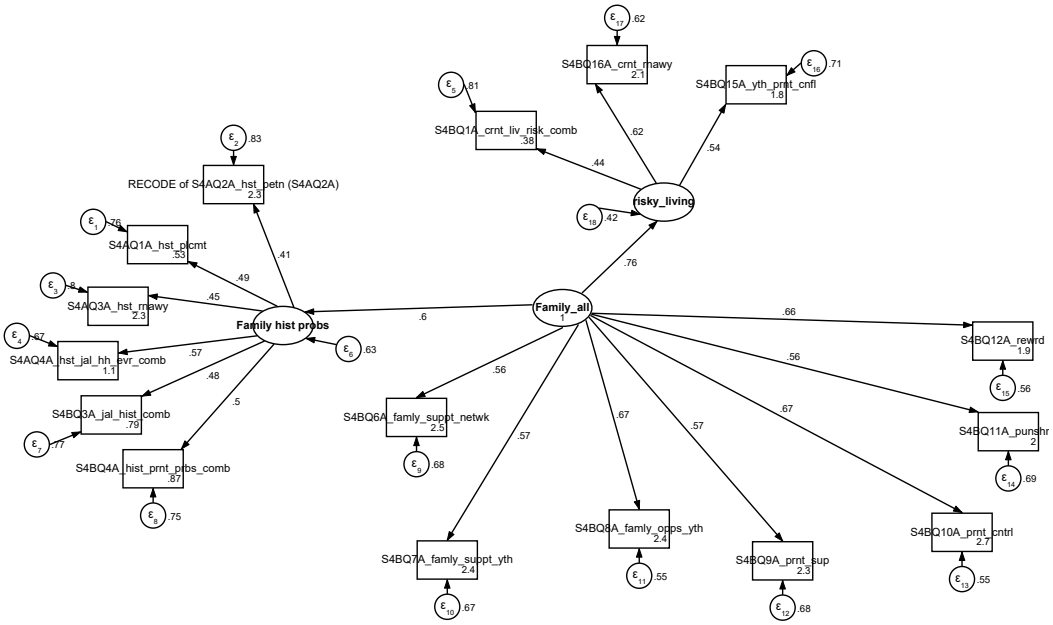
Table 3A. EFA results: Family Domain (note * denotes loadings less than 0.3. Red highlight indicates poor factor loading or high uniqueness. Green highlight indicates good loading, 0.7 and above).

Question	Factor Loading 1	Factor Loading 2	Factor Loading 3	Uniqueness
History of court-ordered or DCYF voluntary out-of-home and shelter care placements exceeding 30 days	0.33	*	*	0.82
History of petitions filed	0.39	*	*	0.8
History of running away or getting kicked out of the home	0.49	*	*	0.67
History of jail/prison of persons who were ever involved in the household for at least 3 months	*	0.6	*	0.58
Youth has been living under adult supervision	0.34	*	-0.35	0.75
Youth is currently living with	0.43	*	-0.49	0.56
Annual combined income of youth and family	*	*	*	0.96
Jail/prison history of persons who are currently involved with the household	*	0.64	*	0.49
Problem history of parent(s) who are currently involved with the household	0.35	0.32	*	0.75
Problem history of sibling(s) who are currently involved in the household	*	0.32	*	0.86
Support network for family	0.48	*	*	0.72
Family willingness to help support youth	0.55	*	*	0.68
Family provides opportunities for youth to participate in family activities and decisions	0.64	*	*	0.54
Parental supervision	0.51	*	*	0.71
Parental authority and control	0.52	*	*	0.7
Consistent appropriate punishment for bad behavior	0.48	*	0.34	0.65
Consistent appropriate rewards for good behavior	0.49	*	0.36	0.59
Parental characterization of youth's anti-social behavior	*	*	*	0.93
Family members youth feels close to	*	-0.34	*	0.8
Level of conflict between parents, between youth and parents, among siblings	0.53	*	*	0.71
Current runaway or been kicked out of the home	0.6	*	-0.38	0.49
Eigenvalue	**3.8**	**1.31**	**1.14**	
Cumulative	**0.55**	**0.74**	**0.9**	

Table 3B. CFA results: Family domain models/fit statistics (note: red highlight denotes poor fit range, green denotes good fit, non-highlighted are in the marginal range).

Description	Hamilton et al. model	EFA-best model (split half)	ACT risk-scored	GHS only	EGCC only
Model description	N=1004, 16 items, 4 2nd order factors, 2 3rd order factors	N=502, 16 items, 2 2nd order factors	N=1004, match EFA	N=429, match EFA	N=461, match EFA
Chi-sq./d.f.	11.05 (d.f.= 113)	6.02 (d.f.= 102)	13.49 (d.f.= 102)	4.36 (d.f.= 102)	6.16 (d.f.= 102)
RMSEA	0.118	0.117	0.112	0.120	0.111
CFI	0.477	0.675	0.674	0.701	0.637
SRMR	0.162	0.092	0.091	0.121	0.094
AIC	25566.7	12924.6	65523.4	7625.6	15367.0

Figure 3. Family domain factor model



Drugs and Alcohol domain

EFA for the Drugs and Alcohol domain items (Table 4A. below) yielded a first factor with 9 items loading at 0.4 or higher (2 items loading below 0.3), explaining 74% of the overall variation. A second factor contained higher loadings for only those two items that failed to load adequately on the first factor (history of referrals for assessment and attending alcohol/drug education classes). Thus, the second factor was not retained for CFA analysis.

The Hamilton model (Table 4B. below) does not converge, meaning the Stata software cannot derive a solution from the data. This can be due to the inclusion of many yes/no variables with low reports (e.g. ever used heroin yes/no). Across all other model, data and scoring variations, fit was poor and a latent factor for Drug and Alcohol needs cannot be confirmed in the data.

Following CFA iterations to improve fit, one item was dropped: S5AQ5A: *History of participating in alcohol/drug treatment program*. A covariance was also applied between history of referral for alcohol/drug assessment and history of attending alcohol/drug classes, which tend to co-occur. The 10 items in the finalized best-fit EFA-based model (Table 4B. and Figure 4. below) result in a Cronbach's alpha reliability of α=0.82 with the full (n=1004) dataset, an acceptable reliability, with the caveat that CFA performance is below acceptable fit levels. Extreme caution should be applied when considering changes in this Drugs/Alcohol domain to be reflective of substantive treatment response or decline. Clinically validated measures should be considered to more accurately diagnose substance use disorders, treatment needs and response.

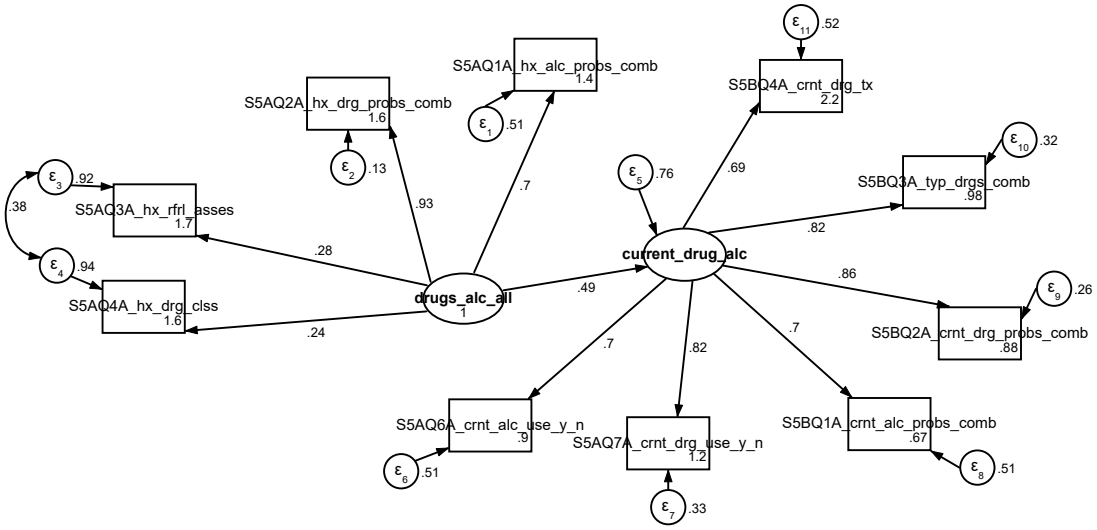
Table 4A. EFA results: Alcohol & Drug Domain (note * denotes loadings less than 0.3. Red highlight indicates poor factor loading or high uniqueness).

Question	Factor Loading 1	Factor Loading 2	Uniqueness
History of youth's alcohol use	0.65	0.41	0.4
History of youth's drug use	0.58	0.49	0.42
History of referrals for alcohol/drug assessment	*	0.5	0.7
History of attending alcohol/drug education classes for an alcohol/drug problem	*	0.52	0.71
History of participating in alcohol/drug treatment program	0.43	*	0.78
Current alcohol use	0.76	*	0.37
Current drug use	0.77	-0.34	0.29
Youth's current use of alcohol	0.78	*	0.39
Youth's current use of drugs	0.85	*	0.28
Types of drugs currently using	0.77	*	0.39
Current drug/alcohol treatment program participation	0.71	*	0.47
Eigenvalue	**4.64**	**1.18**	
Cumulative	**0.74**	**0.93**	

Table 4B. CFA results: Drugs/Alcohol domain models/fit statistics (note: red highlight denotes poor fit range, green denotes good fit, non-highlighted are in the marginal range).

Description	Hamilton et al. model	Hamilton et al. model simplified	ACT risk-scored	EFA-best model (split half)	GHS only	EGCC only
Model description	N=1004, 20 items, 3 2nd order factors	N=1004, 20 items, no 2nd order factors	N=1004, 10 items, various attempts	N=502, 10 items, 1 2nd order factor, 1 covaried pair	N=429, match EFA	N=461, match EFA
Chi-sq./d.f.	Model will not converge	21.2 (d.f.= 170)	Models will not converge	17.6 (d.f.= 33)	15.5 (d.f.= 33)	19.0 (d.f.= 33)
RMSEA		0.142		0.182	0.184	0.198
CFI		0.630		0.795	0.798	0.765
SRMR		0.099		0.079	0.078	0.072
AIC		9220.4		14458.2	11919.2	13396.9

Figure 4. Drugs & Alcohol domain factor model



Mental Health domain

EFA results for the Mental Health domain items (Table 5A. below) yield a first factor with 9 items loading at 0.4 or higher (10 items loading at or below 0.4 and 3 of those below 0.3), explaining 66% of the overall variation. A second factor did not improve loadings for any of the items and was not retained.

The Hamilton Mental Health model (Table 5B. below), containing only 5 items, does not demonstrate adequate fit statistics.

Following the EFA and CFA iterations to improve model fit, 5 items were dropped: S6AQ8A: *Youth is a special education student or has a formal diagnosis of a special education need due to ADHD*, S6AQ12A: *History of somatic complaints*, S6AQ13A: *Currently has health insurance*, S6BQ3A: *Mental health treatment currently prescribed, excluding ADD/ADHD treatment*, S6BQ5A: *Mental health problems currently interfere working with the youth*. Covariances were applied to historical and current ADHD, historical suicidal ideation and historical self-harm, and historical and current suicidal ideation, due to their respective similarities.

CFA fit statistics (based on EFA above) in the split-half data are a substantial improvement from the Hamilton model (which only utilized 5 items) but are still not at acceptable levels. The ACT-scored model would not converge on a solution, potentially due to its scoring variations. Between GHS and EGCC models, there is substantial difference with GHS results displaying some viability (chi-sq./d.f.=3.3, SRMR=.06), suggesting there may be age-related differences in the Mental Health construct. The 14 items in the EFA best-fit model (Table 5B. and Figure 5. below) result in a Cronbach's alpha reliability of α=0.79 with the full (n=1004) dataset, a marginally acceptable reliability.

As with the Drugs and Alcohol domain, the Mental Health items do not comprise a clinical assessment or screener and may only hint at potential treatment needs. Changes in the domain score or level should be treated with caution and should not replace detailed (and ongoing) psychiatric evaluation.

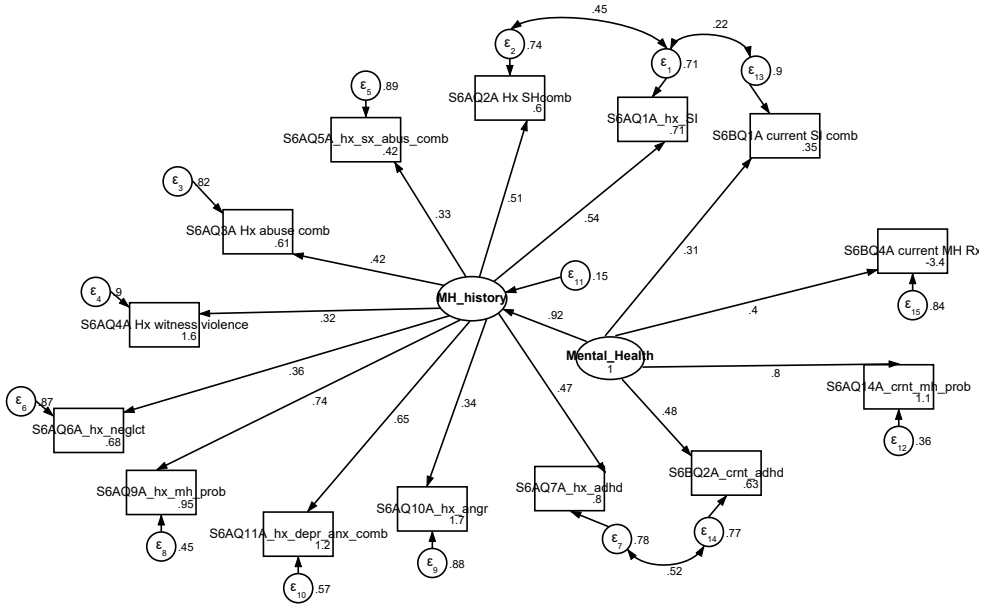
Table 5A. EFA results: Mental Health Domain (note * denotes loadings less than 0.3. Red highlight indicates poor factor loading or high uniqueness. Green highlight indicates good loading, 0.7 and above).

Question	Factor Loading 1	Factor Loading 2	Uniqueness
History of suicidal behavior	0.63	0.45	0.4
History of self-harm behavior	0.56	0.36	0.56
History of physical abuse	0.44	*	0.77
History of witnessing violence	0.38	*	0.82
History of sexual abuse	0.4	*	0.8
History of being a victim of neglect	0.38	*	0.83
History of ADD/ADHD	0.56	-0.48	0.46
Youth is a special education student or has a formal diagnosis of a special education need due to ADHD	0.37	-0.35	0.74
History of mental health problems	0.69	*	0.47
History of anger/irritability	0.38	*	0.86
History of depression	0.59	*	0.64
History of somatic complaints	*	*	0.94
Currently has health insurance	*	*	0.99
Current mental health problem	0.67	*	0.53
Current suicide ideation	0.42	*	0.74
Currently diagnosed with ADD/ADHD	0.55	-0.37	0.56
Mental health treatment currently prescribed, excluding ADD/ADHD treatment	*	*	0.97
Mental health medication prescribed, excluding ADHD medication	0.32	*	0.84
Mental health problems currently interfere with working with the youth	0.31	*	0.9
Eigenvalue	**3.96**	**1.21**	
Cumulative	**0.66**	**0.86**	

Table 5B. CFA results: Mental Health domain models/fit statistics (note: red highlight denotes poor fit range, green denotes good fit, non-highlighted are in the marginal range).

Description	Hamilton et al. model	ACT risk-scored	EFA-best model (split half)	GHS only	EGCC only
Model description	N=1004, 5 items, no 2nd order factors	Model will not converge	N=502, 14 items, 1 2nd order factor, 3 covaried pairs	N=429, match EFA	N=461, match EFA
Chi-sq./d.f.	10.7 (d.f.= 5)		4.55 (d.f.= 73)	3.29 (d.f.= 73)	6.23 (d.f.= 73)
RMSEA	0.099		0.084	0.073	0.107
CFI	0.758		0.854	0.882	0.791
SRMR	0.053		0.068	0.062	0.089
AIC	6716.3		12772.2	10259.3	12271.9

Figure 5. Mental Health domain factor model



Behaviors/Attitudes domain

EFA results for the Behaviors/Attitudes domain items (Table 6A. below) yield a single factor with 8 items loading at 0.4 or higher, explaining 99% of the overall variation (with 1 item loading below 0.4 and 2 items that could not be analyzed). The two items omitted from this analysis (primary emotions and purposes for committing crimes) have a non-continuous response structure (with the guidance to *list all that apply*) and lack clarity regarding how to weigh the different responses. This does not indicate that the questions may not be useful for treatment planning, where it is possible that understanding a client's motivation and feelings towards their crime could be useful.

The Hamilton model (Table 6B. below) appears overly complex and would not converge on a solution. A simplified version of the Hamilton model, using the same 10 items but removing the sub-factors, yielded a solution, albeit with only moderate model fit.

Based on EFA (detailed above and in Table 6A.), S7AQ1A: *Primary emotion when committing last crime(s) (select all that apply)* and S7AQ2A: *Primary purpose for committing crime(s) (select all that apply)* were dropped from CFA analysis. Covariances were applied between accepting responsibility for antisocial behavior and feeling empathy for victims (semantically highly related concepts) and between impulsivity and belief on control over anti-social behavior (again, very closely related concepts).

Figure 6. below (based on the EFA best-fit model) shows good fit overall. The ACT-scored model displays some similar fit statistics to the EFA/continuous data model but the chi-sq./d.f. declines. Notably, the EGCC data displays better fit than GHS, all in the very good model fit range. Given that this domain is dynamic and susceptible to change, it seems well formulated (and tailored to a younger demographic) for the purposes of reassessment and gauging treatment, or programming response. The 9 items in the finalized EFA best-fit model (Figure 6. below) result in a Cronbach's alpha reliability of α=0.79 with the full (n=1004) dataset, a marginally acceptable reliability.

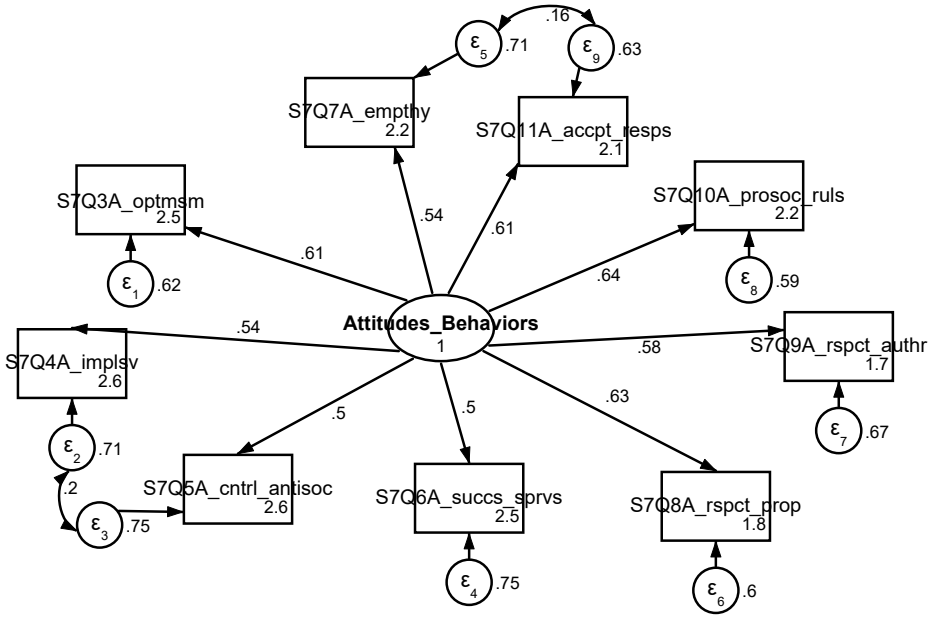
Table 6A. EFA results: Attitudes & Beliefs Domain (note * denotes loadings less than 0.3. Red highlight indicates poor factor loading or high uniqueness. Green highlight indicates good loading, 0.7 and above).

Question	Factor Loading 1	Uniqueness
Primary emotion when committing last crime(s)	N/A	N/A
Primary purpose for committing crime(s)	N/A	N/A
Optimism	0.54	0.71
Impulsive: acts before thinking	0.62	0.61
Belief in control over anti-social behavior	0.39	0.84
Youth's belief in successfully meeting conditions of court supervision	0.51	0.74
Empathy, remorse, sympathy, or feelings for the victim(s) of criminal behavior	0.47	0.78
Respect for property of others	0.63	0.6
Respect for authority figures	0.49	0.76
Attitudes toward pro-social rules and responsible law- abiding behavior	0.62	0.61
Accepts responsibility for anti-social behavior	0.5	0.75
Eigenvalue	**2.74**	
Cumulative	**0.99**	

Table 6B. CFA results: Behaviors/Attitudes domain models/fit statistics (note: red highlight denotes poor fit range, green denotes good fit, non-highlighted are in the marginal range).

Description	Hamilton et al. model	Hamilton et al. model simplified	ACT risk-scored	EFA-best model (split half)	GHS only	EGCC only
Model description	N=1004, 10 items, 2 2nd order factors	N=1004, 10 items, no 2nd order factors	N=1004, 9 items, 2 covaried pairs, match EFA	N=502, 9 items, 2 covaried pairs	N=429, match EFA	N=461, match EFA
Chi-sq./d.f.	Model will not converge	5.99 (d.f.= 35)	3.26 (d.f.= 25)	2.24 (d.f.= 25)	2.40 (d.f.= 25)	1.76 (d.f.= 25)
RMSEA		0.071	0.047	0.050	0.057	0.041
CFI		0.917	0.967	0.970	0.944	0.976
SRMR		0.045	0.030	0.036	0.041	0.032
AIC		20072.8	30485.2	9228.1	7289.5	9037.6

Figure 6. Behaviors/Attitudes domain factor model



Aggression domain

EFA results for the Aggression domain items (Table 7A. below) yield a single factor with 6 items loading at 0.4 or higher, explaining 97% of the overall variation (3 items loaded below 0.4 and 2 of those below 0.3). The two items related to sexual aggression did not share communality with the others. This could be the result of infrequent selection of responses for those two items.

The Hamilton model (Table 7B. below) included only 5 of the 9 possible items in the section, presumably due to poor model fit in their earlier testing.

Following the EFA (described above), the items S8Q7A: *History of reports/evidence of sexual aggression not included in criminal history (select all that apply)* and S8Q9A: *Current reports/evidence of sexual aggression not included in criminal history (select all that apply)* were removed. In subsequent CFA iterative testing, S8Q2A: *Hostile interpretation of actions and intentions of others in a common non-confrontational setting* was dropped due to low factor loading and the possible lack of interpretability by interviewees. A covariance was established between historical and current reports of violence due to their unique similarities (from the other attitude-related items).

The finalized EFA best-fit Aggression domain model (Table 7B. and Figure 7. below) shows marginal fit, with the ACT-scoring displaying somewhat reduced error measures. This could be a domain where more tailored item scoring (attuned to the severity of the aggression) improves the measurement of the underlying construct. Fit statistics among GHS cases are slightly better than EGCC. The 7 items in the finalized best-fitting model result in a Cronbach's alpha reliability of α=0.77 with the full (n=1004) dataset, a marginally acceptable reliability.

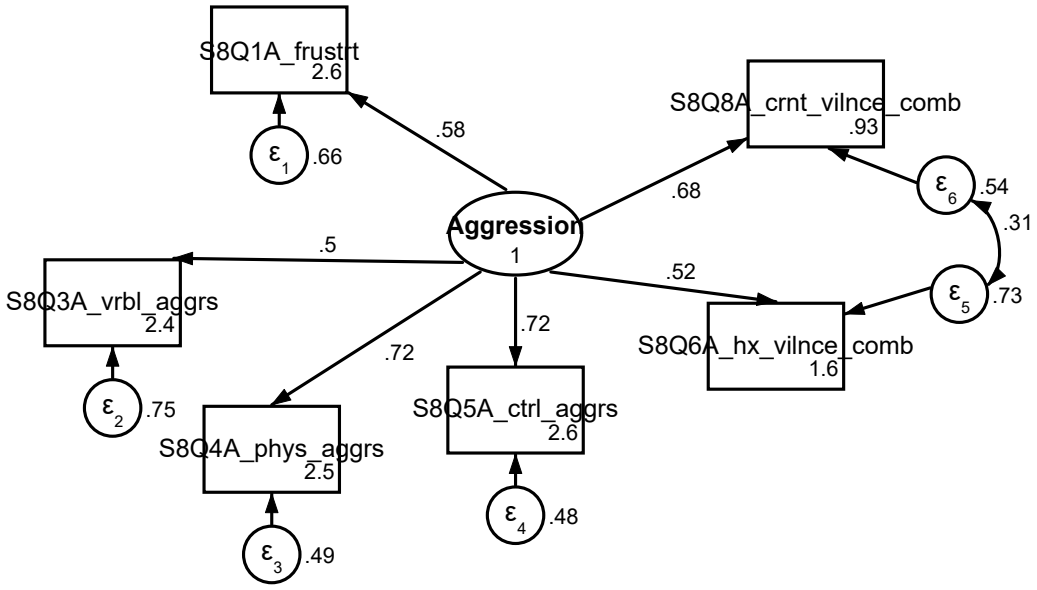
Table 7A. EFA results: Aggression Domain (note * denotes loadings less than 0.3. Red highlight indicates poor factor loading or high uniqueness. Green highlight indicates good loading, 0.7 and above).

Question	Factor Loading 1	Uniqueness
Tolerance for frustration	0.59	0.66
Hostile interpretation of actions and intentions of others in a common non-confrontational setting	0.37	0.86
Belief in yelling and verbal aggression to resolve a disagreement or conflict	0.47	0.78
Belief in fighting and physical aggression to resolve a disagreement or conflict	0.68	0.54
Control of aggression	0.72	0.48
History of reports/evidence of violence not included in criminal history	0.63	0.61
History of reports/evidence of sexual aggression not included in criminal	*	1
Current reports/evidence of violence not included in criminal history	0.68	0.53
Current reports/evidence of sexual aggression not included in criminal	*	1
Eigenvalue	**2.54**	
Cumulative	**0.97**	

Table 7B. CFA results: Aggression domain models/fit statistics (note: red highlight denotes poor fit range, green denotes good fit, non-highlighted are in the marginal range).

Description	Hamilton et al. model	ACT risk-scored	EFA-best model (split half)	GHS only	EGCC only
Model description	N=1004, 5 items, no 2nd order factors	N=1004, 6 items, 1 covaried pair, match EFA	N=502, 6 items, 1 covaried pair	N=429, match EFA	N=461, match EFA
Chi-sq./d.f.	11.7 (d.f.= 5)	7.39 (d.f.= 8)	6.35 (d.f.= 8)	3.84 (d.f.= 8)	4.36 (d.f.= 8)
RMSEA	0.103	0.080	0.103	0.081	0.085
CFI	0.957	0.967	0.949	0.960	0.956
SRMR	0.039	0.034	0.044	0.042	0.047
AIC	12371.3	25402.6	7915.3	6599.3	7146.4

Figure 7. Aggression domain factor model



Social Skills domain

EFA results for the Social Skills domain items (Table 8A. below) yielded a single factor with all 10 items loading at 0.4 or higher, explaining 95% of the overall variation (only 1 item, *goal setting*, displays a uniqueness above 0.7).

The Hamilton model (Table 8B. below), utilizing all 10 items in the section, demonstrated poor model fit, suggesting that this 3-factor model is overly complex. In the course of successive model iterations, item S9Q2A: *Goal Setting* was removed due to poor loading and its lack of skill-related specificity. The single-factor, best-fitting Social Skills model based on EFA (Figure 8.) shows some adequate fit. Notably, fit stats for GHS cases, as with the Associations and Mental Health domains, are substantially better than EGCC cases. As with the Attitudes/Behaviors domain, Social Skills is composed of dynamic items that can reflect changes in client skillset, self-awareness and problem-solving.

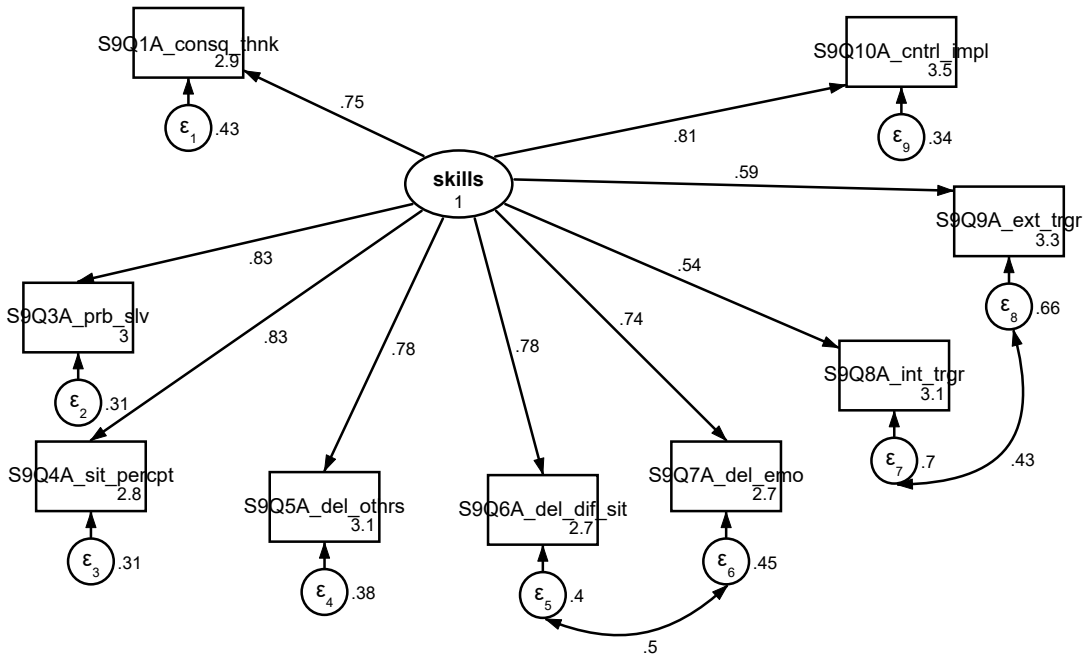
Table 8A. EFA results: Skills Domain (note * denotes loadings less than 0.3. Red highlight indicates poor factor loading or high uniqueness).

Question	Factor Loading 1	Uniqueness
Consequential thinking	0.74	0.45
Goal setting	0.43	0.82
Problem-solving	0.81	0.34
Situational perception	0.85	0.27
Dealing with others	0.77	0.4
Dealing with difficult situations	0.83	0.31
Dealing with feelings/emotions	0.77	0.4
Monitoring and controlling of internal triggers, distorted thoughts that can lead to trouble	0.59	0.65
Monitoring of external triggers, events or situations that can lead to trouble	0.64	0.59
Control of impulsive behaviors that get youth into trouble	0.8	0.37
Eigenvalue	**5.39**	
Cumulative	**0.95**	

Table 8B. CFA results: Social Skills domain models/fit statistics (note: red highlight denotes poor fit range, green denotes good fit, non-highlighted are in the marginal range).

Description	Hamilton et al. model	Hamilton et al. model simplified	ACT risk-scored	EFA-best model (split half)	GHS only	EGCC only
Model description	N=1004, 10 items, 3 2nd order factors	N=1004, 10 items, no 2nd order factors	N=1004, 9 items, 2 covaried pairs, match EFA	N=502, 9 items, 2 covaried pairs	N=429, match EFA	N=461, match EFA
Chi-sq./d.f.	15.08 (d.f.= 34)	18.5 (d.f.= 35)	8.11 (d.f.= 25)	4.24 (d.f.= 25)	1.79 (d.f.= 25)	4.52 (d.f.= 25)
RMSEA	0.118	0.132	0.084	0.080	0.043	0.087
CFI	0.921	0.899	0.960	0.972	0.992	0.947
SRMR	0.089	0.055	0.037	0.033	0.021	0.046
AIC	18726.2	18857.5	29807.3	8243.9	6527.5	7122.6

Figure 8. Social Skills domain factor model



Hamilton et al. model specifications

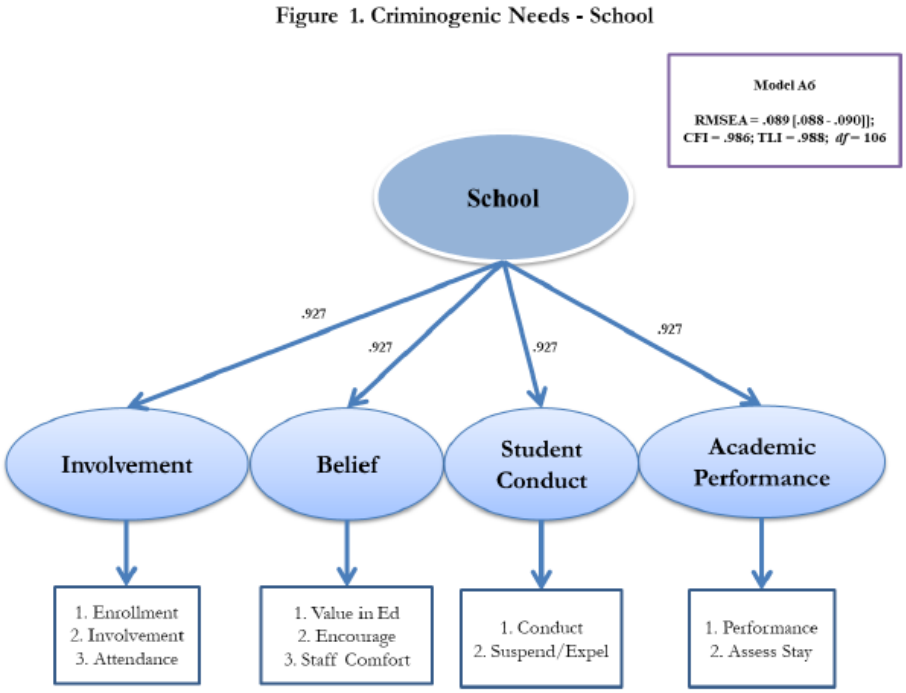


Figure 2. Criminogenic Needs - Association

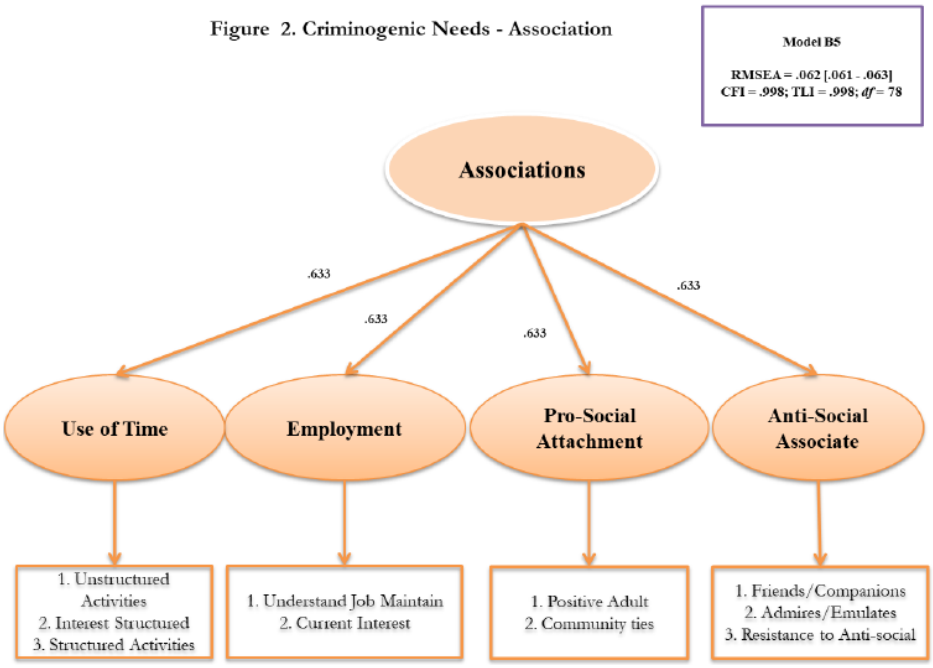
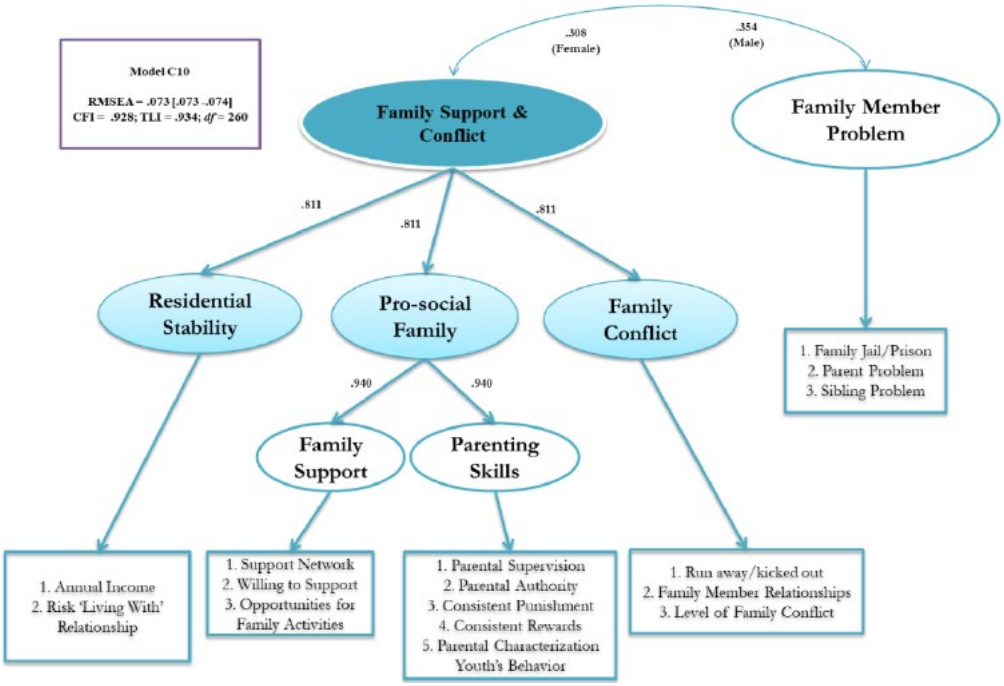
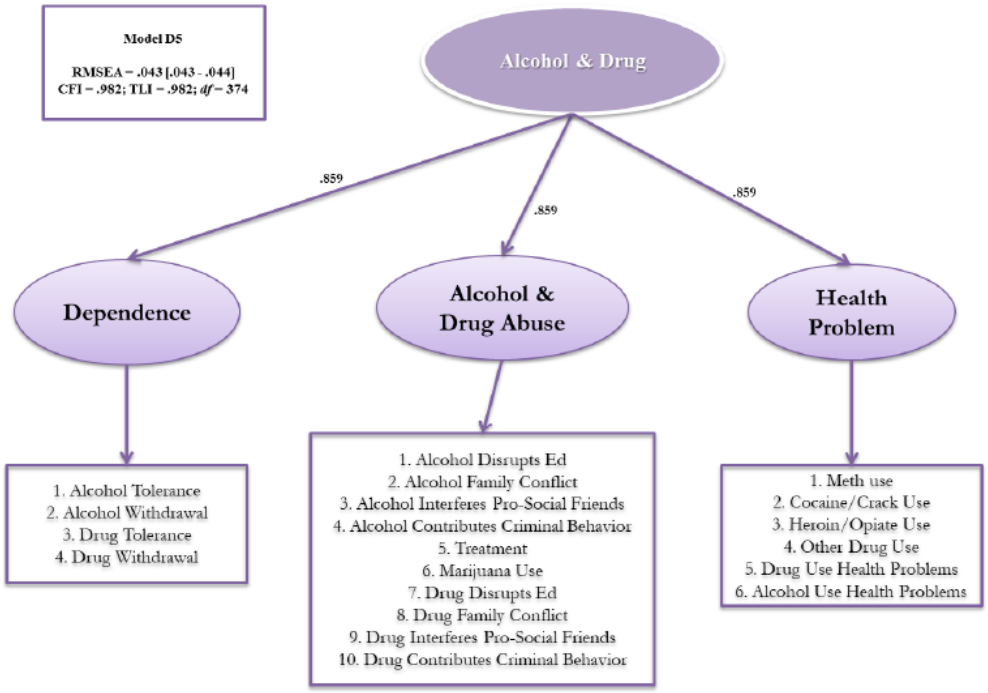
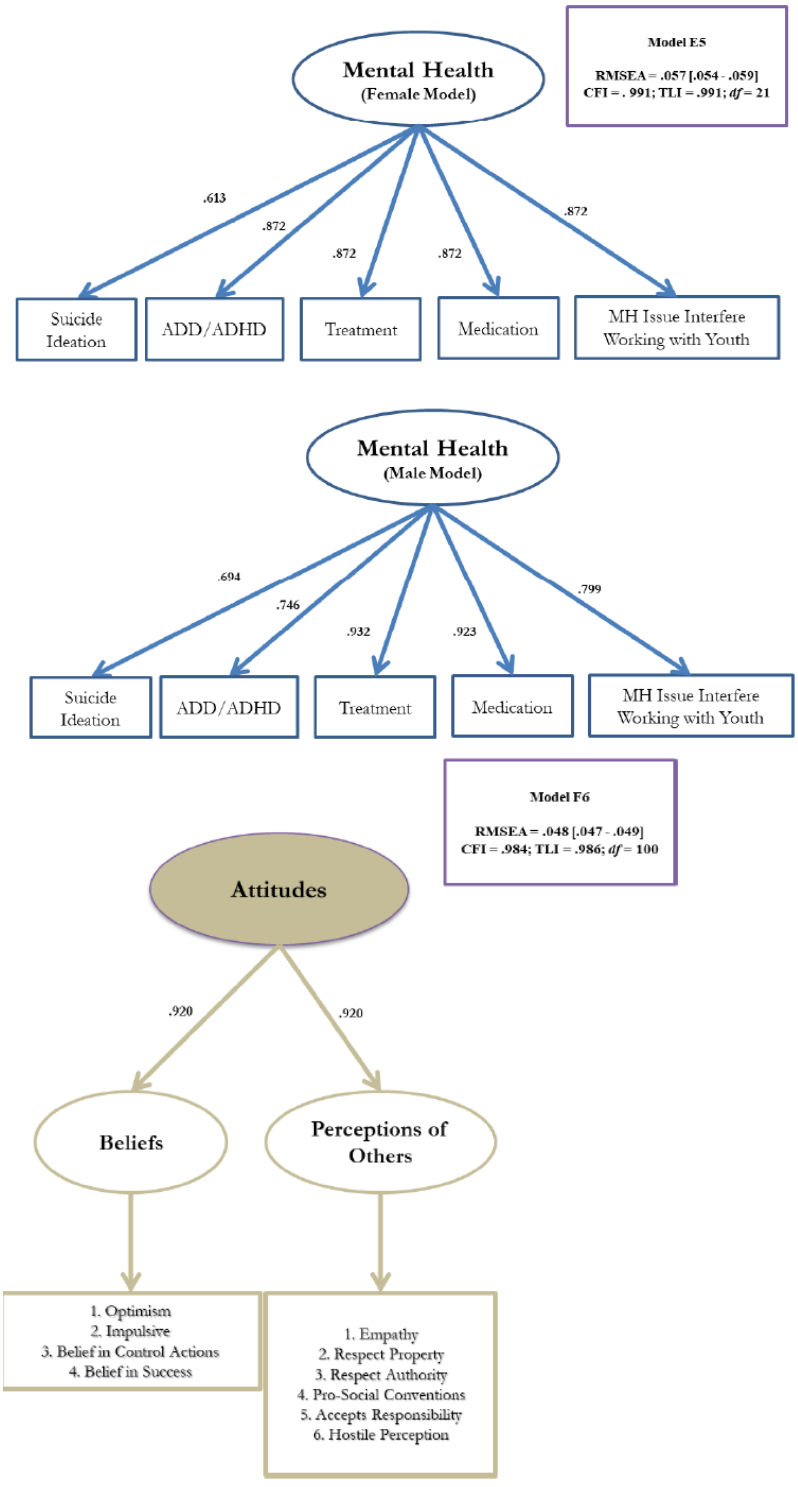
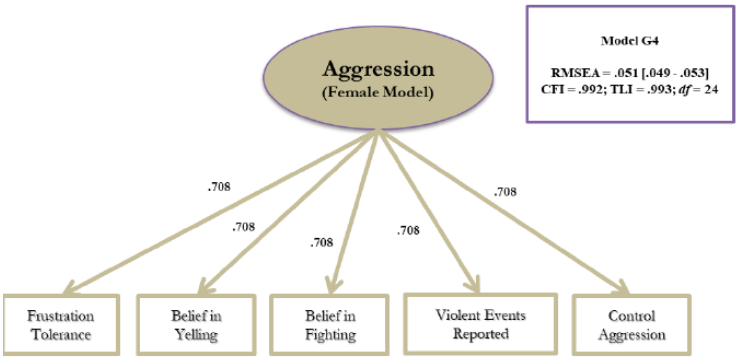


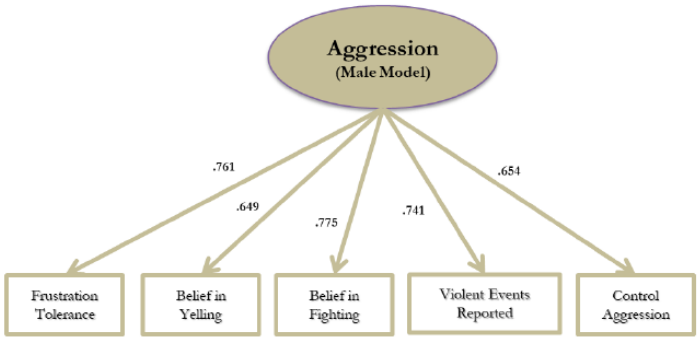
Figure 3. Criminogenic Needs - Family Support & Conflict

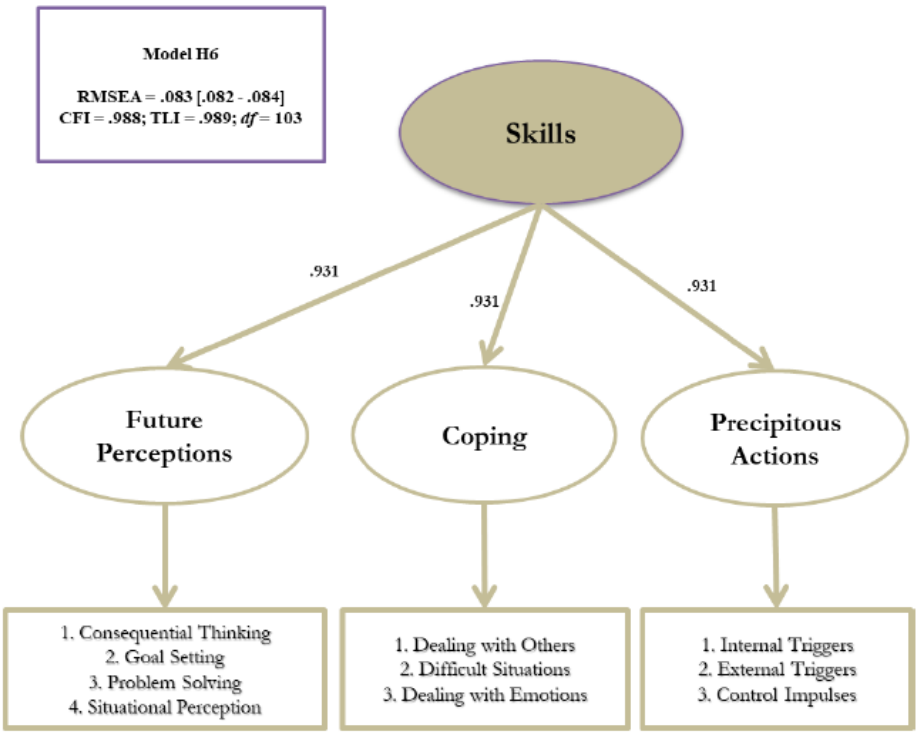



Model D5
RMSEA = .043 [.043 - .044]
CFI = .982; TLI = .982; df = 374
Alcohol & Drug
.859
.859
.859
Dependence
Alcohol & Drug Abuse
Health Problem
1. Alcohol Tolerance
2. Alcohol Withdrawal
3. Drug Tolerance
4. Drug Withdrawal
1. Alcohol Disrupts Ed
2. Alcohol Family Conflict
3. Alcohol Interferes Pro-Social Friends
4. Alcohol Contributes Criminal Behavior
5. Treatment
6. Marijuana Use
7. Drug Disrupts Ed
8. Drug Family Conflict
9. Drug Interferes Pro-Social Friends
10. Drug Contributes Criminal Behavior
1. Meth use
2. Cocaine/Crack Use
3. Heroin/Opiate Use
4. Other Drug Use
5. Drug Use Health Problems
6. Alcohol Use Health Problems


Model E5
RMSEA = .057 [.054 - .059]
CFI = . 991; TLI = .991; df = 21
Mental Health
(Female Model)
.613
.872
.872
.872
.872
Suicide Ideation
ADD/ADHD
Treatment
Medication
MH Issue Interfere Working with Youth
Mental Health
(Male Model)
.694
.746
.932
.923
.799
Suicide Ideation
ADD/ADHD
Treatment
Medication
MH Issue Interfere Working with Youth
Model F6
RMSEA = .048 [.047 - .049]
CFI = .984; TLI = .986; df = 100
Attitudes
.920
.920
Beliefs
Perceptions of Others
1. Optimism
2. Impulsive
3. Belief in Control Actions
4. Belief in Success
1. Empathy
2. Respect Property
3. Respect Authority
4. Pro-Social Conventions
5. Accepts Responsibility
6. Hostile Perception


Model G4
RMSEA = .051 [.049 - .053]
CFI = .992; TLI = .993; df = 24
Aggression
(Female Model)
.708
.708
.708
.708
.708
Frustration Tolerance
Belief in Yelling
Belief in Fighting
Violent Events Reported
Control Aggression


Aggression
(Male Model)
.761
.649
.775
.741
.654
Frustration Tolerance
Belief in Yelling
Belief in Fighting
Violent Events Reported
Control Aggression


Model H6
RMSEA = .083 [.082 - .084]
CFI = .988; TLI = .989; df = 103
Skills
.931
.931
.931
Future Perceptions
Coping
Precipitous Actions
1. Consequential Thinking
2. Goal Setting
3. Problem Solving
4. Situational Perception
1. Dealing with Others
2. Difficult Situations
3. Dealing with Emotions
1. Internal Triggers
2. External Triggers
3. Control Impulses

Tables of missing/Not Applicable responses by domain and question

School Domain - Counts of Missing Response Scoring for IDEA Questions with 'Not Applicable' Response Options

Question	Overall (*N* = 1,004) **Missing Responses**	Overall (*N* = 1,004) **Non-Missing Responses**	EG (N = 461) **Missing Responses**	EG (N = 461) **Non-Missing Responses**	GHS (N = 429) **Missing Responses**	GHS (N = 429) **Non-Missing Responses**
Youth's attendance in the most recent term	311	693	34	427	233	196
Youth involvement in school activities during most recent term	441	563	100	361	270	159
Youth's conduct in the most recent term	389	615	106	355	240	189
Number of expulsions and suspensions in the most recent term	393	611	108	353	240	189
Youth academic performance in the most recent term	446	558	133	328	270	159
Interviewer's assessment of likelihood the youth will stay in and graduate	170	834	6	455	118	311

Associations Domain - Counts of Missing Response Scoring for IDEA Questions with 'Not Applicable' Response Options

Question	Overall (*N* = 1,004) **Missing Responses**	Overall (*N* = 1,004) **Non-Missing Responses**	EG (N = 461) **Missing Responses**	EG (N = 461) **Non-Missing Responses**	GHS (N = 429) **Missing Responses**	GHS (N = 429) **Non-Missing Responses**
Current interest and involvement in structured activities	6	998	3	458	3	426
Current interest and involvement in unstructured activities	4	1000	2	459	2	427
History of positive personal relationship(s) with past employer(s) or adult coworkers(s)	543	461	350	111	169	260

Family Domain - Counts of Missing Response Scoring for IDEA Questions with 'Not Applicable' Response Options

Question	Overall (*N* = 1,004) **Missing Responses**	Overall (*N* = 1,004) **Non-Missing Responses**	EG (N = 461) **Missing Responses**	EG (N = 461) **Non-Missing Responses**	GHS (N = 429) **Missing Responses**	GHS (N = 429) **Non-Missing Responses**
Jail/Prison history of persons who are currently involved in the household	87	917	9	452	71	358
Problem history of parent(s) who are currently involved in the household	100	904	10	451	84	345
Problem history of sibling(s) who are currently in the household	106	898	16	445	84	345
Support network for family	30	974	5	456	21	408
Family willingness to help support youth	13	991	6	455	6	423
Family provides opportunities for youth to participate in family activities and decisions	25	979	2	459	21	408
Parental supervision	124	880	12	449	99	330
Parental authority and control	149	855	16	445	118	311
Consistent appropriate punishment for bad behavior	132	872	16	445	104	325
Consistent appropriate rewards for good behavior	135	869	15	446	109	320
Parental characterization of youth's anti-social behavior	58	946	11	450	41	388
Family members youth feels close to	6	998	1	460	4	425
Level of conflict between parents, between youth and parents, among siblings	97	907	7	454	80	349
Current runaway or been kicked out of the home	134	870	9	452	88	341