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IST Screener and Recidivism Rates



Center for School-Based Youth
Development

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The UCSB Research Team prepared this report for the Santa Barbara County Probation Department in order to re-evaluate the performance of the Santa Barbara Assets and Risks Assessment IST for predictive quality as part of the 2013 Strategic Plan, Juvenile Division.

Introduction

The Santa Barbara Assets and Risks Assessment-2 (SBARA-2; Sharkey, Jimerson, Furlong, & O'Brien, 2010) is a semi-structured interview conducted with youths and their family members with 53 items in 12 domains that assess assets and risks for use in the juvenile justice system. The SBARA has been found to be reliable and valid instrument to predict likelihood of reoffending for males and females (Jimerson, Sharkey, O'Brien, & Furlong, 2004).

Of the items on the SBARA-2, there are five that are placed in a short screener (IST). These items ask about prior referrals, gang membership, attendance, grades, and expulsions. These items were selected for the screener based on three criteria. First, items were pulled from the SBARA-2 based on the strength of their prediction of recidivism for both males and females when used as part of the entire risk assessment. Second, items were winnowed down based on if answers to the items could be obtained without requiring a face-to-face interview with the client. Finally, items with the most theoretical and practical association with recidivism were selected. For example, gang membership is theoretically associated with repeated criminal behavior. As another example, students who are not doing well and attending school are likely to be excluded from the supports the school system could provide.

The IST screener is administered to juveniles after their first referral to probation. If the juvenile scores low on the screener, he or she is most likely to be given informal probation or Teen Court. If the score on the screener is high, he or she is most likely to be given the full SBARA and subsequently placed on probation. See figure 1 for the actual flow of clients through this process.

The intent of this report is to establish whether the IST screener is accurate in predicting recidivism (as measured by recidivism defined in three ways: an indicator combining felonies and misdemeanors, felonies only, misdemeanors only). More specifically, the predicting power of the IST will be compared with the accuracy of the full instrument (SBARA). Moreover, the current report evaluates whether, once controlling for risk level (IST level), youth attending Teen Courts have a lower likelihood of recidivating.

Methods

Participants

This study (n=1267) included 63.5% male and 36.5% female youth whose first IST was between April 1, 2011 and June 30, 2013. Most of participants were part of an ethnic minority (71.3%; mostly Hispanic: 64.9%), while 28.7% were White. The average age of the youth was 15.64 years old (SD= 1.66).

Measures

Detailed descriptions of the SBARA-2 and the IST can be found at mina.education.ucsb.edu/sharkey/SBARA.htm. Recidivism was defined as a misdemeanor and/or felony that occurred within six months of the IST date.

Study Aims

The following questions were addressed:

Aim One: Does IST level predict recidivism rate?

Aim Two: Is the IST accurate in predicting recidivism when compared to the SBARA-2?

Aim Three: Do youth attending Teen Court have lower rates of recidivism?

Figure 1. Flow of participants through the screener process

High IST 431 (34%)	SBARA yes 310 (71.9%)	SBARA high 199 (64.2%)	Teen Court YES 12 (6%)	Recidivism rate 5 (41.7%)
			Teen Court NO 187 (94%)	77 (41.1%)
		SBARA low 111 (35.8%)	Teen Court YES 9 (8.1%)	5 (55.6%)
	SBARA no 121 (28.1%)		Teen Court NO 102 (91.9%)	18 (17.6%)
			Teen Court 23 (19%)	3 (13%)
			Teen Court NO 98 (81%)	12 (12.2%)
Low IST 836 (66%)	SBARA yes 190 (22.7%)	SBARA high 83(43.7%)	Teen Court YES 19 (22.9%)	10 (52.6%)
			Teen Court NO 64 (77.1%)	31 (48.4%)
		SBARA low 107 (56.3%)	Teen Court YES 14 (13.1%)	4 (28.6%)
	SBARA no 646 (77.3%)		Teen Court NO 93 (86.9%)	15 (16.1%)
			Teen Court YES 146 (22.6%)	18 (12.3%)
			Teen Court NO 500 (77.4%)	31 (6.2%)

Results

Descriptive Statistics

	Recidivism (% felonies or misdemeanor)	χ^2	Recidivism (% felonies)	χ^2	Recidivism (% misd.)	χ^2
Total sample	18.1% (229)		6.9% (88)		13.1% (166)	
Gender						
Boys	20.6% (166)		9.2% (74)		13.9% (112)	
Girls	13.6% (63)	9.834**	3.0% (14)	17.363***	11.7% (54)	1.327
Age						
8-13.9	16.2% (35)		6.9% (15)		10.6% (23)	
14-15.9	22.2% (104)		9.0% (42)		15.4% (72)	
16-19	15.5% (90)	8.428*	5.4% (31)	5.233	12.3 (71%)	3.631
Minority Status						
White	15.6% (56)		4.7% (17)		12.2% (44)	
Minority	19.2% (172)	2.291	7.9% (71)	4.041*	13.5% (121)	.370

* p < .05; ** p < .01; ***p < .001

Table 1. Recidivism rates by gender, age, and minority status (n= 1267)

As shown in Table 1, males were significantly more likely to recidivate when considering felonies and misdemeanors together (20.6% for males compared to 13.6% for females). There was also a significant association between gender and felony recidivism, with males recidivating at 9.2% and females at 3%. However, there was not a significant relationship between gender and misdemeanor recidivism.

A significant association between age and recidivism rates was found only for the combined indicator, with middle adolescents recidivating more than younger and older youth.

When considering recidivism and race (defined as either white or minority), there was not a significant association for combined recidivism or misdemeanors. However, there was an association between race and felonies, with minorities having higher rates of recidivism.

Aim 1: Does IST level predict recidivism rates?

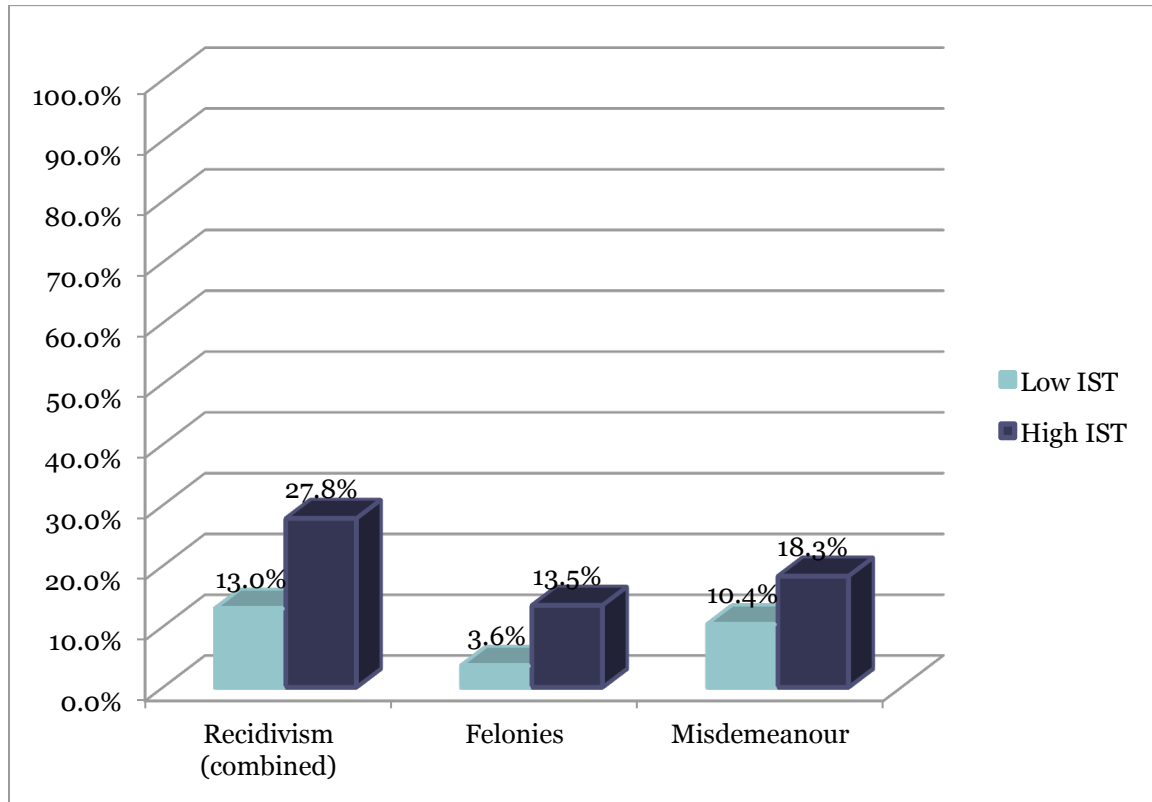


Figure 2. Recidivism rates by level of risk (as predicted by the IST).

In order to evaluate the accuracy of the IST level in predicting recidivism, recidivism rates were compared based on youth IST level. As shown in Figure 1, youth who have scored high on the IST screener have also higher rates of recidivism as measured by all the three indicators. More specifically, when using the combined indicator, about 28% of the youths who scored high on the IST recidivated, as compared with 13% of youths who scored low on the measure recidivated. A similar association was found for felonies and misdemeanors.

In a more sophisticated analysis, gender, age and minority status were included in a logistic regression model to isolate the association between IST and recidivism.

	Recidivism (combined)	Felonies	Misdemeanors
Female	.75 (.54-1.04)	.41 (.23-.75)**	.97 (.67-1.39)
Age	.94 (.86-1.02)	.91 (.80-1.03)	.98 (.88-1.08)
Minority	1.21 (.86-1.69)	1.60 (.92-2.79)	1.07 (.74-1.55)
High IST level	2.44 (1.80-3.30)***	3.57 (2.23-5.72)***	1.92 (1.36-2.70)***

* p < .05; ** p < .01; ***p < .001

Table 2. Adjusted OR for recidivism for youth with high IST.

Table 2 shows that, after controlling for demographics, youth with a high IST score were 2.44 times more likely to recidivate than youth with a low IST score. The association was stronger for felonies, with youth scoring high on IST being 3.57 times more likely to recidivate, than misdemeanors, with youth scoring high on the IST being 1.92 times more likely to reoffend.

Regarding demographic factors, a significant negative association was found only for gender and felonies, with girls having a lower likelihood of recidivism.

Aim 2: Is the IST accurate in predicting recidivism when compared to the SBARA?

The predictive power of the IST on recidivism was then compared with the association between SBARA score and recidivism rates (Table 3).

	Recidivism (combined)	Felonies	Misdemeanors
Female	.83 (.54-1.27)	.39 (.20-.75)**	1.26 (.79-2.00)
Age	.95 (.83-1.08)	.95 (.81-1.12)	1.00 (.86-1.15)
Minority	.95 (.60-1.50)	1.36 (.73-2.55)	.83 (.51-1.37)
High SBARA level	3.22 (2.12-4.87)***	2.82 (1.59-5.01)***	2.69 (1.68-4.32)***

* $p < .05$; ** $p < .01$; *** $p < .001$

Table 3. Adjusted OR for recidivism for youth with high SBARA.

When using logistic regression to look at the relationship between high scores on the SBARA-2 and recidivism, it seems that the SBARA-2 is an accurate predictor of recidivism for the combined measure of both felony and misdemeanor crimes (OR=3.22). As expected, the SBARA-2 was a stronger predictor of recidivism rates than the IST (OR= 2.44), as it consists of many more items that make it more accurate.

For felony level recidivism, the SBARA-2 is also an accurate predictor (OR= 2.82). Comparing the association between the SBARA-2 and felonies with the association between the IST score and felonies, the IST is a stronger predictor (OR= 3.57). It is possible that, by including the items most predictive of recidivism according to the literature, the IST screener is more accurate in predicting serious crimes. When looking at misdemeanor recidivism: youth scoring high on SBARA-2 were 2.69 times more likely to recidivate; the SBARA-2 was a stronger predictor of misdemeanor recidivism rates than the IST (OR= 1.92).

Overall, considering that the IST is composed by only 5 items, this analysis shows that the instrument is an accurate indicator of future recidivism when compared with the full SBARA-2.

The SBARA-2 is administered only to a restricted range of participants (i.e., the lowest risk clients do not get the SBARA-2) so its full prediction power is unknown. Moreover, it is important to note that recidivism is also affected by an array of factors not controlled for in these analyses, including treatment decisions.

Aim 3: Do youth attending the Teen Courts have a lower risk of recidivism?

When examining Teen Court and felony or combined recidivism rates, no significant association was found (Table 4). When examining the association between Teen Court and misdemeanor offenses, there is a positive association, with youth who attended the Teen Courts having a higher risk of recidivism—even after controlling for risk level. It is possible that youth referred to drug court programs have some risk factors not captured within the IST that are not fully addressed by the programs, explaining why they have a higher likelihood of committing misdemeanors. It is also possible that Teen Court is iatrogenic for low risk offenders meaning that this treatment exacerbates risk for misdemeanor offenses.

	Recidivism (combined)	Felonies	Misdemeanours
Female	.75 (.54-1.05)	.41 (.23-75)**	.97 (.68-1.39)
Age	.95 (.87-1.03)	.90 (.79-1.03)	.99 (.89-1.09)
Minority	1.18 (.84-1.66)	1.61 (.92-2.80)	1.04 (.72-1.52)
High IST level	2.54 (1.87-3.46)***	3.51 (2.18-5.65)	2.03 (1.43-2.88)***
Teen Courts	1.39 (.95-2.03)	.87 (.45-1.66)***	1.55 (1.02-2.35)*

* p < .05; ** p < .01; ***p < .001

Table 4. Adjusted OR for recidivism for youth attending Drug Courts.

Conclusions

What is clear from descriptive data, and verified in analyses, is that the IST screens out a large percentage of youth from the full assessment process. Of 1,267 youth who received the IST, 836 were classified as low risk and 727 of these did not reoffend within the first six months after being screened. By these rates, the screener is doing the intended job of saving time and resources for Probation to serve the juveniles who are likely to need additional services.

There are a few factors that are likely to limit a clear understanding of how well the IST and SBARA-2 are predicting recidivism. We were not able to capture every experience of youths that would predict recidivism but are not captured by the assessments. The most significant of these is treatment once screened. If youths who are screened low receive intervention that promotes recidivism or youths who screen high receive intervention that reduces recidivism, this intervention will mask the predictive ability of the measures. Controlling for intervention, therefore, is important.

One treatment frequently assigned to youths given the IST, and which we were able to control for, is Teen Court. As can be seen in Figure 1, low risk youths who participated in Teen Court were much more likely to reoffend than low risk youths who did not participate in Teen court. For example, of youth who screened low on the IST and also scored low on the SBARA-2, those who were sent to Teen Court had a much higher recidivism rate (28.6%) than youths who were not sent to Teen Court (16.1%). On the other hand, youths who scored high on the IST and high on the SBARA were equally likely to recidivate if they were sent to Teen Court (41.7%) or not (41.1%). Further investigation is needed to determine if iatrogenic results can be attributed to (1) Teen Court, (2) the referral criteria biasing the groups, or (3) a more successful alternative intervention received by youths who did not attend Teen Court. However, given that demographic factors and risk level were controlled for in the association between participation in Teen Court and recidivism, and no positive effects were found, the practice of referring juvenile offenders to Teen Court needs to be reconsidered.

Reference

Jimerson, S. R., Sharkey, J. D., O'Brien, K. M., & Furlong, M. J. (2004). The Santa Barbara Assets and Risks Assessment to Predict Recidivism Among Male and Female Juveniles: An Investigation of Inter-rater Reliability and Predictive Validity. *Education & Treatment of Children (ETC)*, 27(4).