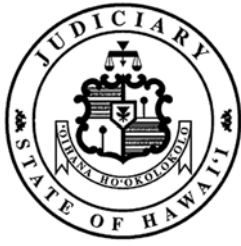


# Interagency Council on Intermediate Sanctions



HAWAII STATE  
DEPARTMENT  
OF HEALTH

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Timothy Wong, Project Researcher;  
Department of the Attorney General

## Spousal Assault Risk Assessment (SARA) Validation Study, State of Hawaii, 2004-2007

This is a validation study of the Spousal Assault Risk Assessment (SARA). The SARA is a domestic violence (DV) risk instrument used by the State of Hawaii to assess the likelihood of intimate partner violence or the threat of recurring domestic violence. The State of Hawaii uses the SARA as a supplement to the Domestic Violence Screening Inventory (DVSI), a validated instrument used to screen offenders who are at risk for domestic violence. From 2004 through 2007, there were a total of 196 SARAs collected from probation units on Kauai, Maui, and Oahu. Presently, all offenders who score greater than five points on the DVSI are recommended for a SARA assessment. The major objective of this study is to validate the SARA by determining whether its current risk classification levels accurately predict recidivism for DV-related and general offenses. This research is important to probation services since it provides the data needed to evaluate the SARA as a predictive risk instrument. By validating the SARA, probation units can provide effective case management services by specifying the level of supervision needed according to each offender's risk level.

The following summary statements are based on a compilation of SARA responses from 2004 through 2007.

### A. Demographic Analysis

- 92% of the offenders are male (*Figure 1*)
- 67% are between the ages of 30 through 49 (*Figure 2*)
- 57% are either Hawaiian/part-Hawaiian or Caucasian (*Figure 3*)
- 46% are single (*Figure 4*)
- 54% are employed (*Figure 5*)

### B. Descriptive Analysis

- 38.8% of the offenders had been re-arrested for the Abuse of a Household Member by April 2007 (*Figure 7*)
- Offenders initially arrested for Terroristic Threatening had the highest average SARA score (15.2) (*Figure 8*)
- 52.6% of the offenders who were administered the SARA reported *Recent Relationship Problems*, the highest-ranked item on the SARA (*Figure 9*)
- 63.6% of the offenders in the 50-59 years age group, the most common age group who were administered the SARA, were in the high risk category (*Figure 11*)
- 62.9% of Hawaiian/part-Hawaiian offenders, the most common race/ethnic group who were administered the SARA, were in the high risk category, (*Figure 12*)
- The average SARA score is 10.4, which is near the low end of the high risk level (*Figure 14*)
- 6% of the sample had a SARA score greater than 20 (normed as high risk at the national level) (*Table 1*)

### C. Normalizing the SARA by Risk Levels

- Low-medium (SARA scores <9) and high (SARA scores >8) risk levels were validated ( $p < .05$  level) for both DV Recidivism and General Recidivism.

## **METHODOLOGY:**

This study includes variable fields on the SARA (individual question items and total score), and offender identification numbers (SIDs). The database is also linked to pre-identified variable fields from the Criminal Justice Information System (CJIS). The CJIS data contain arrest records of 196 offenders found in the SARA database matched to the offender SID. The CJIS download contained 25,011 data records, which included arrest and disposition dates, limited victim information, and final/last charges. Although victim identification data (including the victim's relationship to the perpetrator) were collected in the CJIS download, information on the victim was not always available. It was difficult to determine whether the victim was a spouse or intimate partner, unless the "potentially DV-related offense" was adjudicated in Family Court. Consequently, there is no full-proof means to determine whether the victim was a spouse or intimate partner, as less than 10% of the arrests in CJIS contain victim information. Therefore, while these offenses may not always be DV-related, they are typically the most indicative of domestic violence.

**Data Set:** The SARA database contains information on offender demographics, offenses committed, SARA total score, SARA risk classification groups, dates of offender arrests, and dispositions. Each record also includes re-arrest counts and re-arrest dates. The database is a flat file of unduplicated records, with a complete compilation of coded and calculated variables needed to validate the SARA.

**Design:** Defined below are the research parameters critical to the SARA validation study. They include: 1) classifying offenders by nationally-normed risk levels; 2) classifying offenders to the local (Hawaii population) level; and 3) determining the accuracy of the SARA cut-off scores in defining DV-offender risk levels. The cut-off values are partially evaluated by examining the frequency responses of the sample population (SARA-administered offenders), and to test for statistical normality in the SARA score distribution (bell-shaped normal curve for DV-offenders). Additionally, the accuracy of SARA cut-off values are evaluated against DV-related and general re-arrest rates. Tests of significance using chi-square analysis provide the statistical rigor needed to differentiate DV-risk levels based on offender re-arrest rates.

This study measures re-arrests based on **DV Recidivism** and **General Recidivism**. The re-arrest period is defined as the elapsed time between the offender's initial arrest date and the re-arrest date. For the purpose of this study, **DV Recidivism** includes arrest categories specific only to DV-related offenses. **General Recidivism** represents all offenses, including DV-related offenses.

DV-related offenses are identified below:

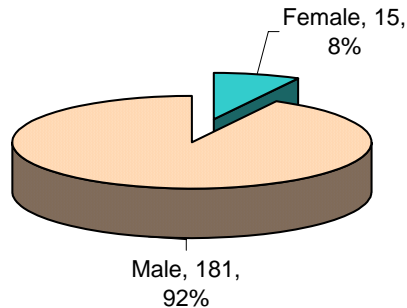
1. Abuse or Assault of a Household or Family Member (HRS §709-906)
2. Terroristic Threatening (HRS §707-700)
3. Harassment (HRS §711-1106)
4. Temporary Restraining Order or a violation of the TRO (HRS §586-04)
5. Violation of a Protective Order (HRS §586-11)

General offenses are identified below:

1. DV-related Offenses
2. Probation Revocation and Parole Violations
3. General Non-household/non-family member Assaults
4. Property Crimes
5. Drug Convictions

## I. Demographic Profile

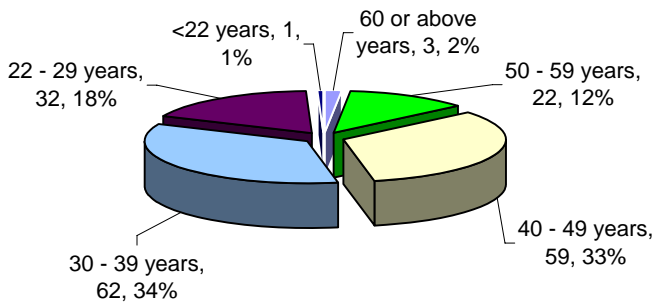
**Figure 1: Gender of Offenders with SARAs**



**Figure 1** shows that 92% of offenders to whom the SARA was administered are Male (181 cases); 8% are Female (15 cases).

Total Number of Cases: 196

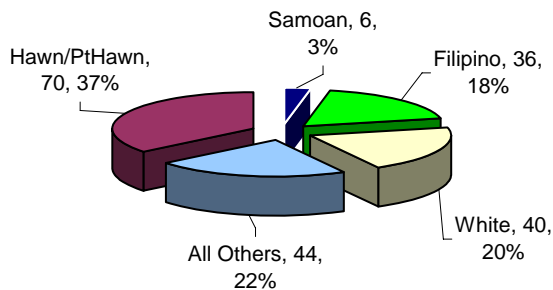
**Figure 2: Age Range of Offenders with SARAs**



**Figure 2** shows that 33% of offenders to whom the SARA was administered were 40-49 years old (59 cases); 34% were in the 30-39 years old age group (62 cases); 12% were in the 50-59 years old age group (22 cases); and 2% were in the 60 or above age group (3 cases). Only one offender was in the <22 years old age group.

Total Number of Cases: 179

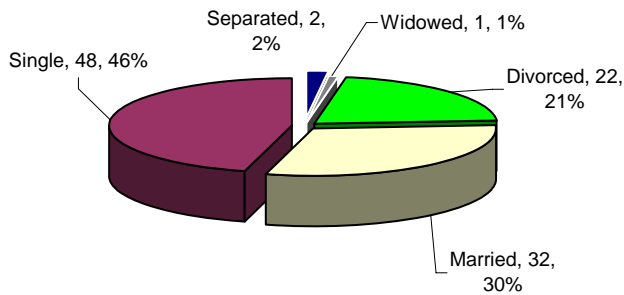
**Figure 3: Race/Ethnicity of Offenders with SARAs**



**Figure 3** shows that 37% of offenders with SARAs are Hawaiian/part-Hawaiian (70 cases); 22% are All Others (44 cases); 20% are White (40 cases); 18% are Filipino (36 cases); and 3% are Samoan (6 cases).

Total number of cases: 196

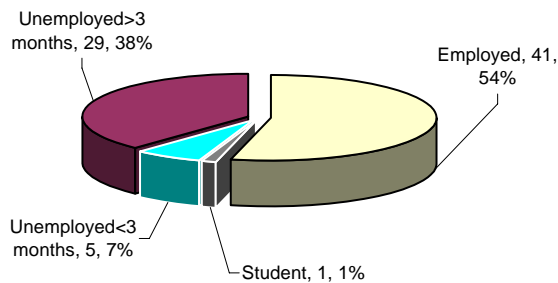
**Figure 4: Marital Status of Offenders with SARAs**



**Figure 4** shows that 46% of offenders with SARAs were single (48 cases); 30% were married (32 cases); 21% were divorced (22 cases), 2% are Separated, and 1% was Widowed (2 cases).

Total Number of Cases: 105

**Figure 5: Offender Employment of Offenders with SARAs**

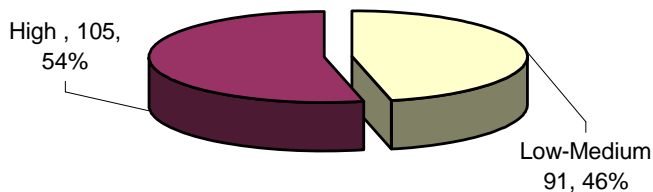


**Figure 5** shows that 54% of offenders with SARAs were employed (41 cases); while 38% were unemployed for 3 or more months (29 cases), and 7% were unemployed for less than 3 months (5 cases). Only one offender was a student.

Total Number of Cases: 76

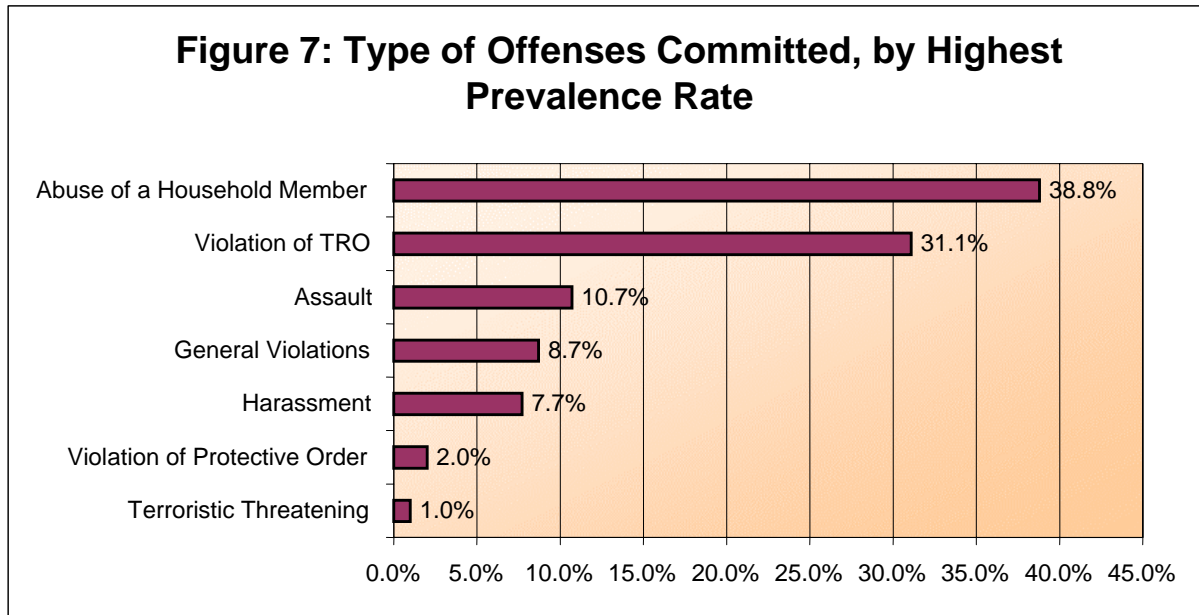
## II. Descriptive Analysis of the SARA

**Figure 6: SARA Risk Level Distribution - Locally Classified and Normed**

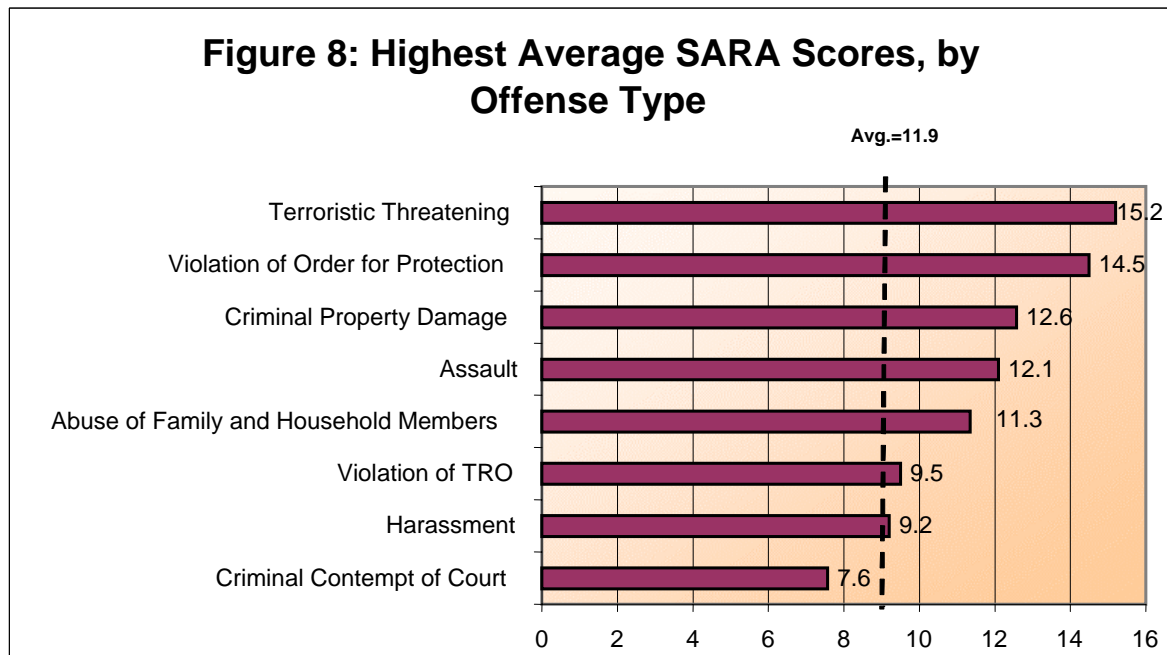


**Figure 6** shows that 54% of offenders were at the high risk level (105 cases), while 46% of offenders were at the low-medium risk level (91 cases). The high risk offenders had SARA cut-off scores of above 8, while the cut-off scores for low-medium risk offenders were less than 9.

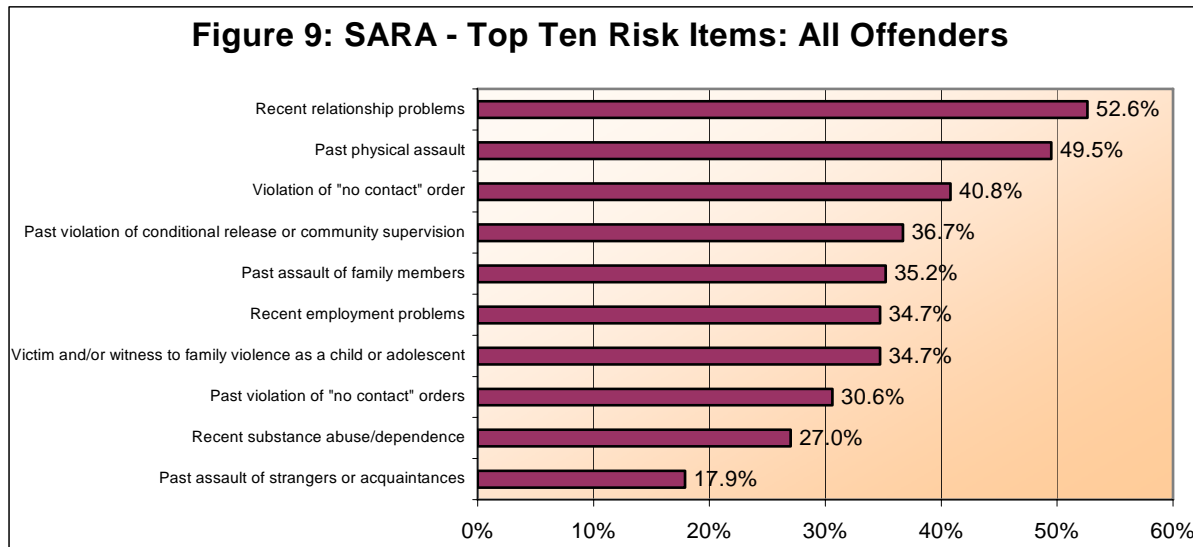
Total Number of Cases: 196



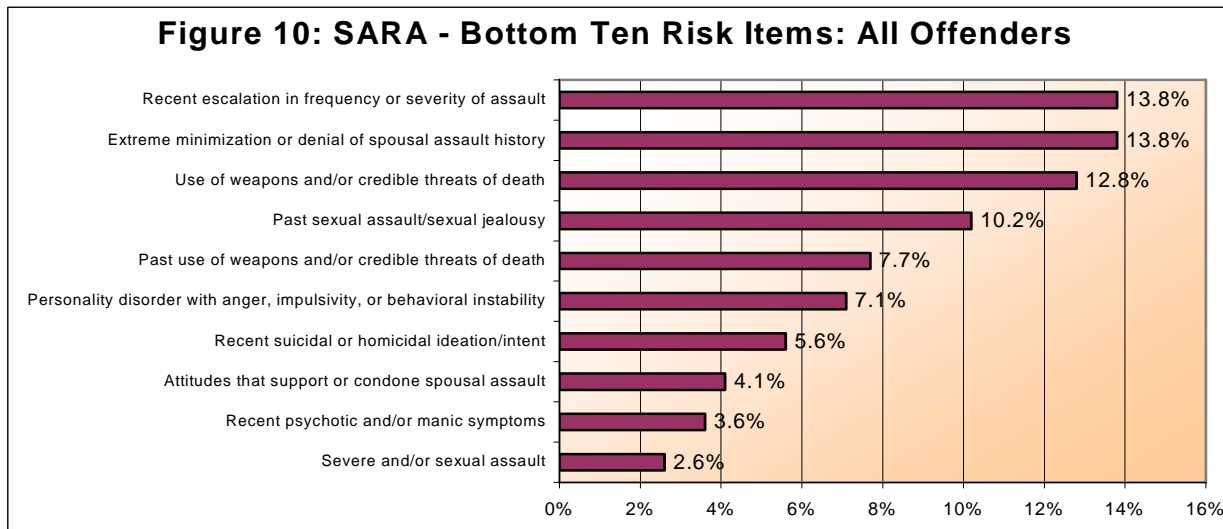
**Figure 7** shows the distribution of initial offenses committed by offenders who were administered the SARA. Abuse of a Household Member offenses represent the largest proportion of offenses committed (38.8%, n=71). This offense is followed by a Violation of TRO (31.1%, n=61); Assault (10.7%, n=21); General Violations (8.7%, n=17); Harassment (7.7%, n=15); Violation of Protective Orders (2.0%, n=4); and Terroristic Threatening (1.0%, n=2).



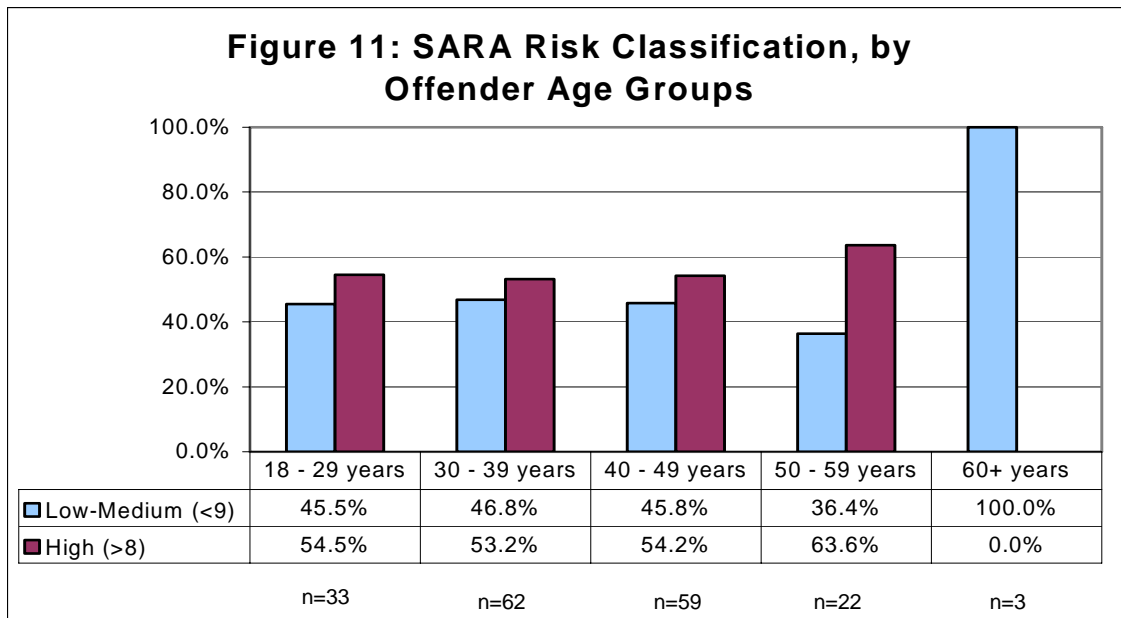
**Figure 8** shows the highest average SARA score of offenders with DV-related offenses. The top five DV-related offenses that have the highest average SARA score include Terroristic Threatening (15.2, n=9); Violation of Order for Protection (14.5, n=8); Criminal Property Damage (12.6, n=7); and Assault (12.1, n=18). Offenders in the bottom three of the DV-related risk levels include Abuse of a Family and Household Member (11.3, n=23), Violation of TRO (9.5, n=4), Harassment (9.2, n=5), and Criminal Contempt of Court (7.6, n=7).



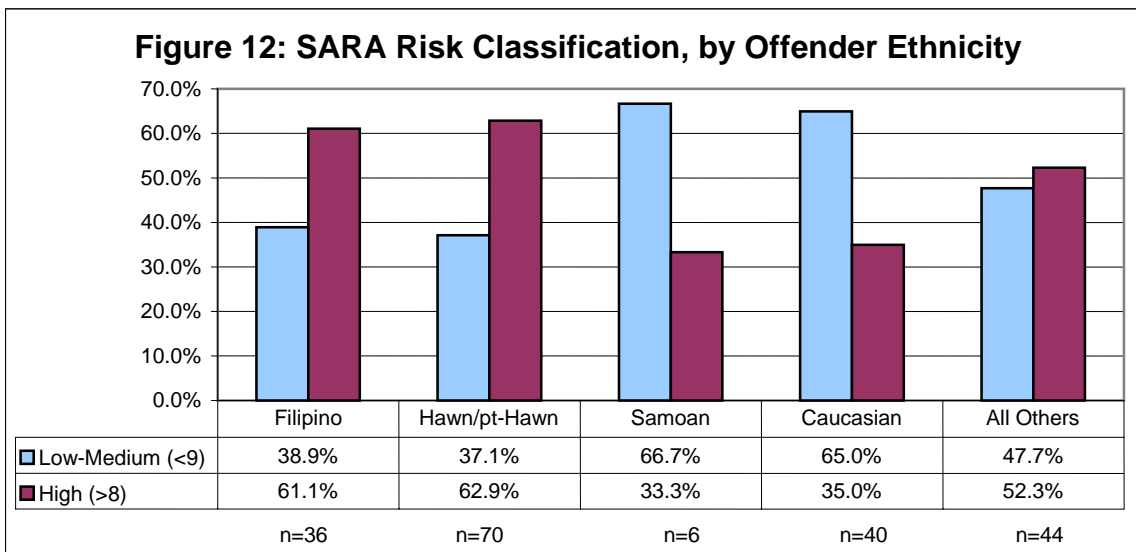
**Figure 9** reveals the top ten risk items on the SARA, based on the percentage of offenders who reported “yes” to each risk item. Two of the most commonly reported SARA items include Recent Relationship Problems (52.6%, n=103) and Past Physical Assault (49.5%, n=97). Five other risk items that were reported over one-third of the time (34.7%-40.8%) include Violation of “No Contact” Orders (40.8%, n=80), Past Violation of Conditional Release (36.7%, n=72), Past Assault of Family Members (35.2%, n=69), Recent Employment Problems (34.7%, n=68), and Victim and/or Witness to Family Violence (34.7%, n=68). The bottom three risk items include Past Violations of “no contact” Orders (30.6%, n=60), Recent Substance Abuse/Dependence (27.0%, n=53), and Recent Past Assault of Strangers or Acquaintances (17.9%, n=35).



**Figure 10** reveals the bottom ten risk items reported by offenders who were administered the SARA. The bottom four risk items include Severe and/or Sexual Assault (2.6%, n=5), Attitudes That Support or Condone Spousal Assault (3.6%, n=7), Recent Psychotic and/or Manic Symptoms (4.1%, n=8), and Recent Suicidal or Homicidal Ideations (5.6%, n=11). Three additional risk items were reported by offenders over a range of 7.1% to 10.2% of the time. These items include Personality Disorder with Anger and Impulsivity (7.1%, n=14), Use of Weapons and Threats of Death (7.7%, n=15), and Past Sexual Assault (10.2%, n=20). Finally, offenders reported three risk items over a range of 12.8% to 13.8% of the time. These items include the Use of Weapons and/or Credible Threats of Death (12.8%, n=25), Denial and Recent Escalation (13.8%, n=27), and Severity of Assault (13.8%, n=27).

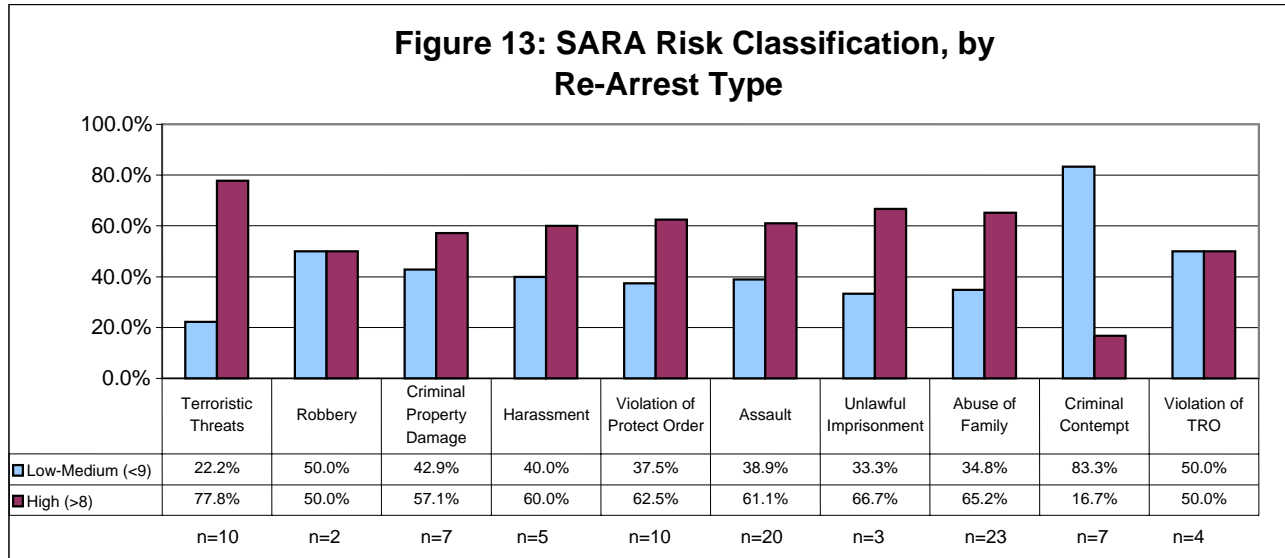


**Figure 11** shows differences between SARA risk classification levels and offender age ranges. In the high risk level, the 50-59 years age group has the highest percentage (63.6%) of offenders classified at this risk level, compared to the 30-39 years age group, which has the lowest percentage (53.2%) of offenders classified at this risk level. In the low-medium risk level, the 30-39 years age group has the highest percentage (46.8%) of the offenders classified at this risk level, compared to the 50-59 years age group, which has the lowest percentage (36.4%) of offenders classified at this risk level. It should be noted that the 60+ year age group is not included in this analysis due the small number of records.



**Figure 12** shows the differences between SARA risk classification levels and offender ethnicities. In the high risk level, the Hawaiian/pt-Hawaiian group has the highest percentage (62.9%) of offenders at this risk level, compared to the Samoan group, which has the lowest percentage (33.3%) of offenders classified at this risk level. In the low-medium risk level, the Samoan group has the highest percentage (66.7%) of offenders classified at this risk level, compared to the Hawaiian/pt-Hawaiian group, which has the lowest percentage (37.1%) of offenders classified at this risk level.





**Figure 13** shows the differences between SARA risk classification levels and the type of re-arrests. The table reveals a high proportion of high risk offenders with respect to Terroristic Threatening (77.8%) and Unlawful Imprisonment (66.7%), whereas, low-medium risk offenders were previously re-arrested for Criminal Contempt (83.3%), Robbery (50.0%), and Violation of TRO (50.0%). Caution should be used in this analysis due to the low number of high risk offenders (n=97) and low-medium risk (n=82). Furthermore, the recidivism timeframe, which is approximately six months or longer, limits the window of opportunity for re-offense. The short follow-up time period is due to the small number of SARAs administered, most of which were entered into the database over the past six to eighteen months.

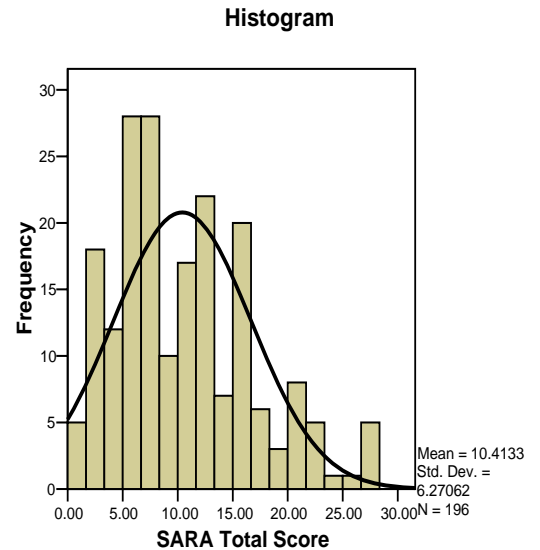


## II. Frequency Distribution

**Table 1: SARA Total Score - Frequency Distribution**

Risk Level	SARA Score	Frequency	Percent	Cumulative Percent
Low-Medium Risk (<9)	0	2	1.0	1.0
	1	3	1.5	2.6
	2	12	6.1	8.7
	3	6	3.1	11.7
	4	12	6.1	17.9
	5	7	3.6	21.4
	6	21	10.7	32.1
	7	6	3.1	35.2
	8	22	11.2	46.4
High Risk (>8)	9	10	5.1	51.5
	10	12	6.1	57.7
	11	5	2.6	60.2
	12	16	8.2	68.4
	13	6	3.1	71.4
	14	7	3.6	75.0
	15	11	5.6	80.6
	16	9	4.6	85.2
	17	3	1.5	86.7
	18	3	1.5	88.3
	19	3	1.5	89.8
	20	4	2.0	91.8
	21	4	2.0	93.9
	22	2	1.0	94.9
	23	3	1.5	96.4
	24	1	0.5	96.9
	25	1	0.5	97.4
27	1	0.5	98.0	
28	4	2.0	100.0	
	Total	196	100.0	

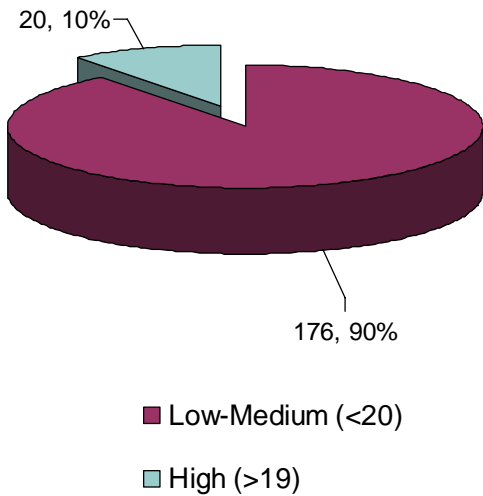
**Figure 14: SARA Distribution Curve**



**Figure 14** represents a positively skewed distribution, i.e., the outliers mostly fall in the extreme right side of the curve. The average score of 10.4 places approximately 58% of the total number of offenders to the left of the distribution and 42% of the total number of offenders to the right of the distribution. Offenders classified at low-medium risk (SARA scores <9) comprise 91 out of the 196 offenders, or 46% of the total offenders in the distribution. Offenders classified at high risk (SARA scores >8) account for 105 out of 196 offenders or 54% of the total offenders in the distribution (Table 1). According to nationally published statistics on the SARA, offenders with a SARA cut-off score of 20 or more are at high risk for recidivism. This cut-off score represents the top 8% of the Hawaii SARA distribution.

## IV. Normalizing the SARA Scores by Risk

**Figure 15: Risk Level Distribution Nationally Classified and Normed<sup>(1)</sup>**

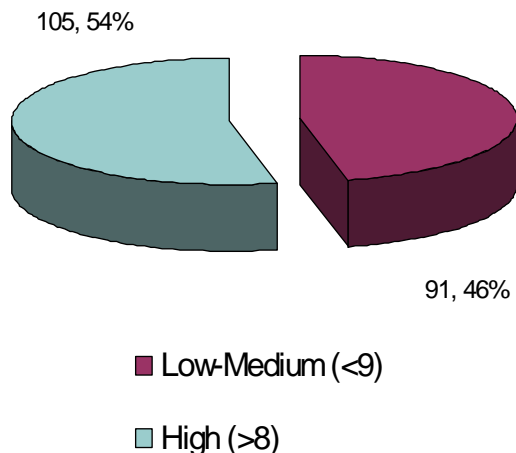


(1) National Norms used for this study's risk classification had no predictive validity.

**Figure 15** shows the distribution of offenders by nationally normed domestic violence risk levels, which define risk levels by low-medium (<20 on SARA) and high risk scores (>19 on SARA). The low-medium risk level represents 10% (n=20), while the high risk level represents 90% (n=176) of the offenders in the Hawaii sample. In analyzing for DV-related re-arrest rates, the national risk level distribution has no predictive validity; chi-square analysis reveals no statistical difference in re-arrest rates between SARA risk groups in the Hawaii sample.

**Technical Notes:** The precision of the SARA to identify a high risk group at the extreme end of the distribution (20 or greater) could not be statistically verified. Consequently, the SARA has not demonstrated the rigor needed to identify those DV-offenders who are at the most extreme end, and are more likely to commit a DV-related offense.

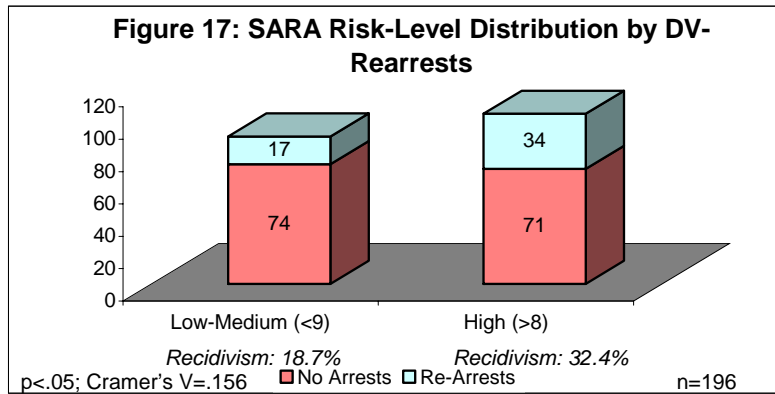
**Figure 16: Risk Level Distribution Locally Classified and Normed<sup>(2)</sup>**



(2) Local Norms used for this study's risk classification had predictive validity,  $p < .05$ .

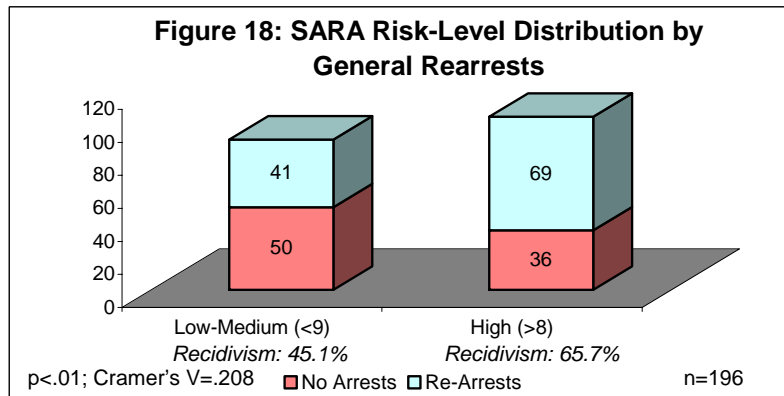
**Figure 16** shows a localized analysis of SARA distribution scores. The low-medium risk level (<9) represents 46% (n=91), while the high risk level (>8) represents 54% (n=105) of the offenders in Hawaii's sample. In analyzing for DV-related re-arrest rates, the Hawaii risk level distribution has predictive validity for **DV** and **General Recidivism** (explained on page 2). The data reveal statistical significance ( $p < .05$ ) when applying locally-classified risk levels to differentiate between risk class and re-arrest rates.

**Technical Notes:** Hawaii's risk level distribution using localized cut-off scores (depicted in Figure 16) reveals statistically significant predictive validity, after classifying DV-offenders by the low-medium and high risk levels. This predictive validity is statistically significant for both **DV** and **General Recidivism**.



**Figure 17** shows the difference in offenders with DV re-arrests and offenders with no DV re-arrests, for low-medium and high risk groups. Just over 32% of the high risk group (SARA score >8) were re-arrested for DV re-offenses, as compared to 18.7% of the low-medium risk group (SARA score <9).

**Technical Notes:** The difference in recidivism rates depicted in Figure 17 is statistically significant at the *p*<.05 level. The Cramer's V of .156 indicates a level of statistical strength that validates offenders at the high risk level compared to low risk offenders. As a result, the risk levels for **DV Recidivism** are validated.



**Figure 18** shows the difference in offenders with General re-arrests and offenders with no General re-arrests, for low-medium and high risk groups. Nearly 66% of the high risk group (SARA score >8) were re-arrested, as compared to 45.1% of the low-medium risk group (SARA score <15).

**Technical Notes:** The difference in recidivism rates depicted in Figure 18 is statistically significant at the *p*<.01 level. The Cramer's V of .208 indicates a level of statistical strength that validates offenders at the high risk level compared to low risk offenders. As a result, the risk levels for **General Recidivism**, which includes DV-related and general offenses are validated.

## **V. Conclusions:**

The SARA has shown some rigor in distinguishing DV risk groups by low-moderate and high risk levels. Hawaii's sample of SARA assessments, which are relatively few in number (n=196), does illustrate good predictive validity, for both high risk offenders (SARA score >8) and low-moderate risk offenders (SARA score <9). The validation study shows that high risk offenders had significantly higher recidivism rates as compared to low-moderate risk offenders. This was true not only for DV Recidivism, but also for General Recidivism. The analysis depicted in Figures 17 and 18 reveals that General Recidivism (65.7%) occurred at twice the rate of DV Recidivism (32.4%) for high risk offenders. This is also true for low-medium risk offenders, where the General Recidivism rate (45.1%) is more than twice the DV Recidivism rate (18.7%).

In conclusion, this study revealed, to some degree, the SARA's predictive ability as a DV risk instrument. However, further studies are needed to obtain greater statistical confidence in the SARA as a valid DV risk instrument used in the State of Hawaii. The limited subject size of this study is the greatest concern, followed by problems related to the systematic and regular use of the SARA by probation staff. The number of Probation Officers using a DV assessment has not been a concern, as the officers handling DV-related cases regularly complete the DVSI screening instrument. However, there is a concern that the number of administered SARAs may not represent a valid sample of offenders, as not all Probation Officers utilize the SARA according to recommended policy. There are a number of offenders who, despite having a DVSI score that recommends the use of the SARA, may not actually receive this additional assessment. A quality check conducted in the beginning of the year revealed that only 38% of offenders who met the criteria for receiving a SARA (DVSI score >5) were actually administered the instrument.

### For further information contact:

Timothy Wong, Research and Statistics Branch  
Crime Prevention and Justice Assistance Division  
Department of the Attorney General  
Ph. #: 587-6399  
Email: [timothy.i.wong@hawaii.gov](mailto:timothy.i.wong@hawaii.gov)  
ICIS Web Site: [hawaii.gov/icis](http://hawaii.gov/icis)