


# Developing a Measure to Evaluate a Positive Youth Development Program for Native Hawaiians: The Hui Mālama o ke Kai Rubrics of Hawaiian Values

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## Abstract

*Objective.* This study introduces the rubrics of Native Hawaiian values developed to measure youth knowledge and understanding of indigenous values along with 8 other tools to evaluate Hui Mālama o ke Kai (HMK), a culturally relevant, positive youth development, after-school program in a Native Hawaiian community. Findings from our efforts to validate the rubrics tool, as an evaluation measure, using triangulation are presented. *Methods.* Evaluation tools were modified through community input and measured youth risk and protective factors, including knowledge and practice of Hawaiian values. Validity and reliability of the tools were tested by analyzing internal consistency, intraclass correlations, and triangulating data sources. *Results.* Corroboration of results from the different data sources indicated convergent validity of measures to evaluate youth understanding and practice of Hawaiian values. *Conclusions.* This community-focused approach to evaluation demonstrates how multiple evaluation instruments may reliably evaluate a program.

## Keywords

after school, community-based participatory research, culture, Native Hawaiian, program evaluation, youth development

Native and part Native Hawaiians constitute 23.3% of Hawaii's ethnically diverse population, where no one ethnic group is a majority.<sup>1</sup> Despite being in their native land, Native Hawaiians experience health and social disparities compared with other ethnic groups in the state, for example, Filipino, Japanese, Chinese, and Caucasian. In Hawaii, more than 2 out of 3 Native Hawaiian

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children younger than 5 years live in families with incomes 185% below the poverty level.<sup>2</sup> Native Hawaiian adolescents have high rates of at-risk behaviors, including teen pregnancies, and are overrepresented in the incarcerated population.<sup>2,3</sup>

Students in a rural Native Hawaiian community we worked in have a high prevalence of risk factors associated with alcohol and other drugs as compared with other school districts in the county.<sup>4</sup> The two grade schools that serve youth in this community have been ranked in the fourth lowest tier of public schools on student performance.<sup>5</sup> Although these two schools have a predominantly high Native Hawaiian students, curricula used at the schools are delivered in traditional Western pedagogy that do not take into account the students' Native Hawaiian cultural background.<sup>6</sup>

In 2003, 10 Native Hawaiian families participated in a focus group. They expressed a desire for their children to learn more about their Hawaiian language and culture, the community they live in, and the importance of honoring the *'āina* (land) and spirituality in Hawaiian culture.<sup>7</sup> The group decided to develop and seek funding for an after-school program that was culturally relevant, educational, and prevention oriented, and that capitalized on community strengths.

The community's program was called Hui Mālama o ke Kai (HMK), which in the Hawaiian language, means "group to care for the ocean." This after-school, outdoor-based program for fifth and sixth graders promotes wellness through positive youth development and youth risk behaviors prevention by strengthening understanding of, identification with, and practice of Native Hawaiian cultural values. HMK is community led and uses local wisdom with a community advisory board, program staff from the community, and working with partners within the community.<sup>8</sup> Students participate in culturally based recreational activities and health education sessions provided by those familiar with the community. A total of 50 students are recruited primarily by the school counselors, who identify students who would benefit from the program at the two grade schools in the community each year to participate in the program, which is conducted daily after school hours.

## **Hui Mālama o ke Kai After-school Program and Conceptual Framework**

Acculturation stress has been cited as a factor in substance abuse among Native Americans.<sup>9</sup> Increased cultural identity is associated with lower use of tobacco, drugs, and alcohol among Native Americans and other ethnic groups.<sup>10</sup> The affirmation of cultural expression by communicating and delivering culturally relevant programming can be legitimizing and empowering relative to health promotion.<sup>11</sup>

The after-school setting may be an ideal place to promote positive youth development.<sup>12,13</sup> After-School programs that have been found to engage students' attention and motivation are those that involve structured recreational and, for minority youth, cultural activities and community-based learning opportunities.<sup>14</sup> The goal of after-school, culturally based education is to increase children's resilience by creating individual identity and cultural pride, which can lead to positive self-esteem and confidence.<sup>6</sup> The goal of HMK is to improve protective factors for youth by strengthening their Native Hawaiian cultural identity. An evaluation of HMK found positive gains on youths' self-reported protective factors measured by self-esteem, antidrug use, violence prevention strategies, and healthy lifestyles.<sup>15</sup>

Thus, by fostering identification with Native Hawaiian cultural values among youth in the HMK program, we aim to improve the protective factors of health knowledge, positive attitudes and behaviors, and academic achievement. Understanding and identification with cultural values mediates the influence of knowledge, attitudes, and behaviors that result in positive changes related to health and development. At the same time, strengthening identification with cultural values may decrease youth risk-related attitudes and behaviors that hinder health, academic achievement, and positive youth development (Figure 1).

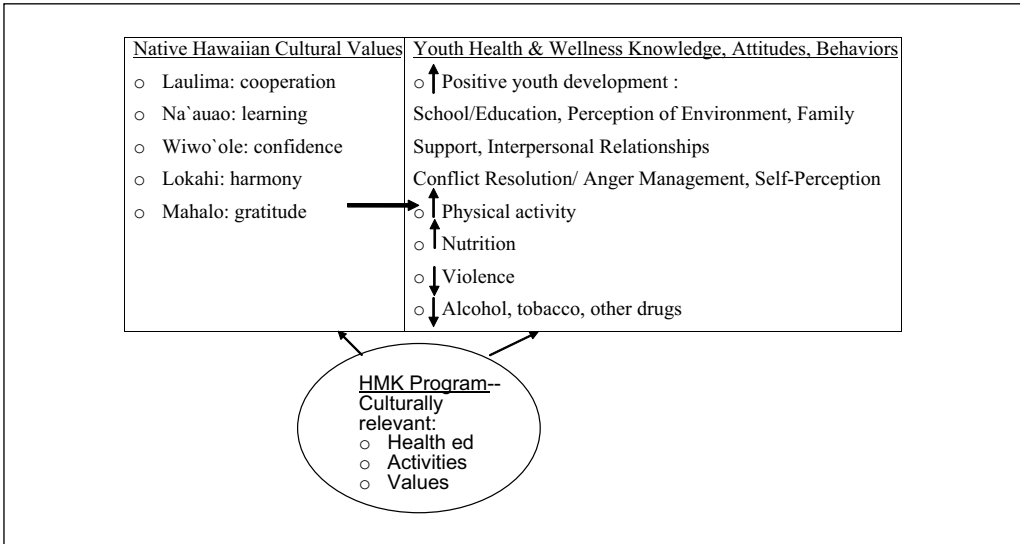


Figure 1. Conceptual framework of Hui Mālama o ke Kai (HMK) program.

## Rationale and Purpose of Article

Studies on after-school programs promoting positive youth development have only recently been explored,<sup>12,13</sup> and the scientific literature evaluating such programs have not been widely published.<sup>16</sup> There are few empirical studies on adolescent resilience that include youth development characteristics, and they rarely include cultural factors.<sup>17</sup> A few instruments and scales are available to measure outcomes related to positive youth development and risk and protective factors among ethnic minority youth,<sup>18,19</sup> including the Hawaiian Culture Scale—Adolescent tool. This scale specifically measures practice of Native Hawaiian lifestyles, customs, activities, folklore, causes, and language proficiency.<sup>20</sup>

The HMK program focuses on strengthening the Native Hawaiian cultural *values* of lokahi (harmony, unity, family), wiwo'ole (no fear, courageous, brave), laulima (cooperation, working together), and mahalo (thanks, gratitude), which are not measured by the Hawaiian Culture Scale—Adolescent. Thus, program evaluation instruments to assess these key outcomes of identification with Native Hawaiian values were developed. This article describes the tailored tools to evaluate the HMK program outcomes of understanding and practice of Hawaiian values and reports on the reliability and validity of the tools to evaluate this culturally relevant after-school program for Native Hawaiian youth in a rural community on Oahu.

## Methods

### Evaluation Framework

The framework for the HMK evaluation involved a community participatory, local wisdom approach and the use of multiple quantitative and qualitative data sources. We depended on the community by including program staff and school administrators and teachers to provide their expert knowledge and feedback on the program and community context to the evaluation system and procedures.<sup>21</sup> The community participatory approach also involved the principle of cultural humility, which is inherent in co-learning, as the evaluators acknowledge that the community

holds the expertise in identifying and addressing the issues.<sup>22</sup> Placing community in the center of the HMK program evaluation framework is critical when addressing key issues of underserved communities.<sup>23</sup>

Applying a community participatory approach also increased adherence to several core evaluation standards.<sup>24</sup> The standard of *utility* was maximized by involving stakeholders, that is, community representatives, so that community evaluation needs were addressed and were central to the process. The standard of *feasibility* was also applied when program staff made decisions on implementing the evaluation based on the practicality of procedures and methods. The evaluation employed a quasi-experimental design and a small sample (N = 120, fifth and sixth graders), to accommodate the feasibility and practicality of evaluating a community-based program took priority.

Nine qualitative and quantitative data sources were used to evaluate HMK to triangulate results (Table 1). Multiple data sources were used because of the quasi-experimental design and small sample size and to respect the spirit and intent of evaluating a unique community-appropriate program.<sup>25</sup> Using multiple methods to triangulate or corroborate results strengthens validity and reliability.<sup>26</sup>

### **Evaluation Planning Procedures**

An evaluation instrument specifically measuring knowledge and practice of Native Hawaiian cultural values, the HMK rubrics of Hawaiian values, was developed jointly by the principal investigator, evaluators, and community representatives for the 2004-2005 school year (Table 1). The evaluators proposed a set of outcomes criteria used in the educational evaluation field to assess student behaviors and performance. After studying these sample rubrics, the HMK program director and specialists adapted these criteria to the core Hawaiian values being taught in the program. The group brainstormed and refined the characteristics of the ideal HMK student demonstrating mastery of each of the core Hawaiian values, resulting in the rubrics of Hawaiian values. A 5-point rating scale on each value observed by the prevention specialists was developed to rate student's practice of cultural values. The average of prevention specialists' observation ratings would serve as the final ratings on each student's knowledge and practice of Hawaiian values. These procedures to develop this evaluation instrument enhanced its utility and accuracy.<sup>27</sup>

### **Evaluation Tools and Measures**

Table 1 outlines the data collection methods to evaluate the primary HMK program outcome, knowledge of Hawaiian cultural values and description of the evaluation tools, measures, and procedures. (Evaluation tools are available from the corresponding author on request.) The evaluation and tracking began in the 2004-2005 school year. In 2006-2007, an additional evaluation data set was available from parents because 2 instead of 1 family-based retreats were offered that year. The 2006-2007 school year was also the only time that data were able to be obtained from the 2 grade schools that HMK youth attended because staff from both schools were available to gather school data on students that year.

### **Analytical Methods**

Procedures were employed to examine the reliability and validity of the quantitative and qualitative evaluation instruments. Psychometric properties of the quantitative tools and measures were determined by calculating Cronbach's  $\alpha$  for student surveys, parent surveys, and rubrics of Hawaiian values. Intraclass correlations were computed for measures being evaluated over numerous quantitative data sources to determine the extent of the same outcomes

**Table 1.** Triangulation: Intraclass Correlations (ICC) of Hui Mālama o ke Kai (HMK) Rubrics From Prevention Specialists With Other Raters.

Instrument/ Sample Size <sup>a</sup>	Collected From	When Collected	Measures	Psychometrics (Cronbach's $\alpha$ )
1. Student survey, N = 51	Students	Pre-post program	1. Understanding/practice of Hawaiian culture/values	.675, 3 items
			2. Cultural/ethnic identity	.683, 3 items
			3. Conflict resolution	.822, 3 items
			4. Interpersonal relationships	.785, 4 items
			5. Self-perception	.768, 8 items
			6. School/education	.768, 9 items
			7. Parent support/family	.696, 4 items
			8. Safe and healthy choices	.602, 6 items
2. Parent survey, N = 51	Parents	Pre-post program	1. Child's Hawaiian values	.898, 2 items
			2. Child's ability to deal with varying situations	.948, 12 items
			3. Child's attitude	.930, 12 items
3. HMK Rubrics of Hawaiian values, N = 51	Program specialists	Post-fall/spring semesters	Laulima: cooperation Na'auao: learned Wiwo'ole: confidence Lokahi: harmony Mahalo: gratitude	.939 Face validity— HMK staff
4. Parent interview, N = 30	Parents	Beginning-end of year parent-child event	Values, parents' perceptions of child, family support and communication, HMK programming, safe and drug free	Face validity— HMK staff
5. Student journal, N = 51	Students	Throughout program year	Understanding/practice of Hawaiian culture/values, conflict resolution/ anger management, interpersonal relationships, self-perception, school/ education, parent support/family, safe and healthy choices, cultural/ethnic identity	Face validity— HMK staff
6. Parent journal, N = 30	Parents	End of year family retreat	Values, cultural identification, family time, communication, exercise, nutrition	Face validity— HMK staff
7. Family-based retreat evaluations, N = 20	Parents	Beginning and end of year family retreat	Understanding/practice of Hawaiian culture/values, parent-child relationship	Face validity— HMK staff
8. General Learner Objectives, N = 51	School teachers	End of first semester/ end of second semester	Self-directed learner, community contributor, complex thinker, effective and ethical use of technology, quality producer, effective communicator	Scale from Hawaii Department of Education

<sup>a</sup>Sample size is based on the number of students and parents in 2006-2007.

being measured by the instruments corroborated. The validity of the qualitative tools were determined through face validity, where program staff who are experts in the culture and needs of youth and families, but not evaluation research outcomes per se, were consulted.<sup>28</sup>

Methods triangulation was then employed to determine the extent to which data obtained from the quantitative and qualitative sources corroborated. Each data source was analyzed separately. Quantitative data were analyzed through univariate and bivariate procedures. Qualitative data analysis involved content analysis by identifying common themes of responses, and descriptive matrices were created to summarize results. Results obtained from the analyses of the quantitative and qualitative data sets were then compared to identify whether outcomes from the different data sources corroborated or not. For example, parents' rating on the pre- and post-parent surveys on the extent they felt that their child identified or practiced Hawaiian values and culture were compared with the parent interview responses asking parents what they thought that their child learned from the program.

## Results

Information on students in the 2006-2007 school year HMK program and their parents are outlined in Tables 2 and 3. The information is categorized by students and parents responding to the pre and post surveys.

Table 1 describes the validity and reliability of each of the evaluation instruments that included a measure of youth knowledge and practice of Hawaiian values. The rubrics of Hawaiian values showed Cronbach's  $\alpha$  of .939 and also included face validity with HMK program staff. Cronbach's  $\alpha$  for understanding of Hawaiian cultural values measured by the student survey was .675. The internal consistency of items measuring child's Hawaiian values on the parent survey was .898.

**Table 2.** Student Information From 2006-2007 School Year.

Survey	School	Number of Respondents		
		Total	Grade	
			Fifth	Sixth
Pre	A	28	15	13
	B	20	13	7
Post	A	18	7	11
	B	9	6	1

**Table 3.** Parent Information From 2006-2007 School Year.

Parent Characteristic	Pre	Post
<b>Respondent</b>		
1. Mother	36	17
2. Father	6	5
3. Grandmother	7	1
4. Other	1	1
<b>Education</b>		
1. Less than high school	4	No data
2. High school graduate	20	No data
3. Some college/no degree	18	No data
4. 2- to 4-year associate/master's degree	5	No data
<b>Child year in HMK</b>		
1. First	38	15
2. Second	13	9

**Table 4.** Triangulation: ICCs of Hui Mālama o ke Kai (HMK) Rubrics From Prevention Specialists With Other Raters.

Measure	Data Source	ICC	P	df
Interpersonal relationships	Student survey	.53	.005***	47
Self-perception	Student survey	.55	.005***	44
School/education	Student survey	.34	.076	47
Conflict resolution/anger management	Student survey	.69	.000***	47
Child's ability to deal with varying situations	Parent survey	.54	.005***	45
Dealing with child's attitudes	Parent survey	.63	.001***	42
Child's Hawaiian values	Parent survey	.47	.019*	44
General Learner Objectives	Schoolteachers	.47	.006**	27

Abbreviation: ICC, intraclass correlation; HMK, Hui Mālama o ke Kai; df, degrees of freedom.

Intraclass correlations were computed to determine the extent the quantitative evaluation instruments, which had different respondents, corroborated (Table 4). HMK prevention specialists' ratings on rubrics of Hawaiian values were significantly correlated ( $R = .47$  to  $.69$ ;  $P = .000$  to  $.019$ ) with students' responses on all the positive youth development outcomes, that is, interpersonal relationships, self-perception, and conflict resolution/anger management, except for the school/education measure. Prevention specialists' ratings on the rubrics of Hawaiian values were also correlated ( $P = .000$  to  $.010$ ) with parents survey responses on their attitudes on their child, that is, child's ability to deal with varying situations, dealing with child's attitudes, and child's Hawaiian values. Finally, prevention specialists' ratings on rubrics of Hawaiian values of students were found to be highly correlated ( $P = .006$ ) with schoolteachers' ratings of students on general learner objectives (GLOs).

Two outcomes were analyzed as dichotomous variables. The mean ratings on the student survey for Understanding/Practice of Hawaiian Culture/Values—3.5 and Ethnic/Cultural Identity—3.8, both on a 4-point scale, were skewed toward the upper values. These measures were dichotomized to the response categories: (1) never/strongly disagree—almost always/agree and (2) always/strongly agree and were compared with the continuous measures “Child's Hawaiian Values” from the parent survey and the HMK rubric ratings from the prevention specialists. These continuous measures were dichotomized so that they could be compared with the similar dichotomized measures from the student survey. The  $\kappa$  statistic was calculated to assess interrater agreement for these dichotomous measures (Table 5). Measures between the student and parent surveys and between the student survey and HMK rubric ratings did not corroborate.

Finally, quantitative and qualitative results were triangulated to determine the extent of validity. Pre and post results on students' understanding and practice of Hawaiian values from the beginning and end of school years were compared, and significant increases ( $P = .022$  and  $.000$ ) were found for measures of this outcome from 3 evaluation tools (Table 6). Results obtained from the qualitative evaluation tools also revealed themes related to increasing knowledge and practice of Hawaiian values in youth.

## Discussion

Procedures to verify the reliability and validity of quantitative evaluation tools to measure understanding and practice of Native Hawaiian cultural values showed convergent validity. Cronbach's  $\alpha$ s ranged from  $.675$  on the student survey to  $.939$  on the HMK rubrics of Hawaiian

**Table 5.** Interrater Agreement on Dichotomous Measures.

Student (Child) Attitudes	Parent Attitudes on Child: Child's Identifying/Practicing Hawaiian Culture/Values						κ Statistics	
	Almost Never—Occasionally		Frequently—Almost Always		Total		κ	P
	Percentage	n	Percentage	n	Percentage	n		
Understanding/practice of Hawaiian culture/values							.64	.634
Never/strongly disagree—almost always/agree	28.9	13	13.3	6	42.2	19		
Always/strongly agree	35.6	16	22.2	10	57.8	26		
Total	64.4	29	35.6	16	100.0	45		
Ethnic/cultural identity							-.112	.194
Never/strongly disagree—almost always/agree	6.7	3	8.9	4	15.6	7		
Always/strongly agree	57.8	26	26.7	12	84.4	38		
Total	64.4	29	35.6	16	100.0	45		

**Table 6.** Triangulation: Quantitative and Qualitative Data.

Data Source	Results and Mean Ratings
<b>Quantitative</b>	
1. Student survey	Significant increase ( $P = .000$ ) understanding/practice of Hawaiian cultural values: 3.5-3.8, 4-point scale
2. Parent survey	Significant increase ( $P = .022$ ) child's Hawaiian values: 3.8-4.6, 5-point Scale
3. Hui Mālama o ke Kai (HMK) rubrics of Hawaiian values	Significant increase ( $P = .000$ ) in ratings over school year: 3.2-4.6, 5 point scale
<b>Qualitative</b>	
1. Retreat evaluations	Parents also wanted to learn about Hawaiian culture and values
2. Parent interview	Child learned Hawaiian values at HMK
3. Student journal	Wrote, defined, and explained Hawaiian values and how they have been applied

values. Intraclass correlations indicated that prevention specialists' ratings of students on their rubrics of Hawaiian values were reliable with positive youth development measures on the student survey and parents' attitudes on their child on parent surveys.

Quantitative and qualitative data sources were triangulated to examine the extent results were valid and reliable. Results from both data sources indicated significant increases in students' understanding and practice of Hawaiian cultural values over the school year. This corroboration between different data types indicates that the measures to evaluate this program's primary outcomes—students' understanding of, identification with, and practice of Hawaiian values—were valid and reliable. Results from the 3 quantitative evaluation instruments each indicated that students increased their attitudes and behavior on one particular measure from the beginning



and end of the program: identification and practice of Hawaiian cultural values. These results were further corroborated by the qualitative data sources that revealed similar results.

The outcome on students' rating on their understanding and practice of Hawaiian cultural values and ethnic and cultural identity did not corroborate with both parents' responses on their child's Hawaiian values and prevention specialists' ratings on students' understanding and practice of Hawaiian values. However, parents' and prevention specialists' responses regarding youth's understanding, identification, and practice of Native Hawaiian cultural values corroborated. Program staff and evaluators have suggested that having students *self-rate* their identification with cultural values *using the HMK rubrics* may better capture such attitudes. Students have been using the *self-administered survey questions* on the student survey and are *asked about the extent* they understand, identify with, and practice Hawaiian cultural values rather than having them rate on particular values themselves as they would with a self-rating rubrics.

Interestingly, other youth development outcomes on the student survey, but not outcomes specifically addressing identification with Hawaiian values, that students responded to show concurrent validity with HMK prevention specialists' ratings on students' rubrics of Hawaiian values. Students' responses on "interpersonal relationships" (intraclass correlations or ICC = .53,  $P = .005$ ), "self-perception" (ICC = .55,  $P = .005$ ), and "conflict resolution/anger management" (ICC = .69,  $P = .000$ ) were correlated with specialists' ratings of students on the HMK rubrics of Hawaiian values. These findings suggest that the measures on the student survey that specifically ask on their understanding of, identification with, and practice of Native Hawaiian cultural values may not converge with measures from parents and prevention specialists on the same outcomes. However, youth development measures on the student survey, namely, interpersonal relationships, self-perception, conflict resolution/anger management, may better capture students' knowledge and identification with Hawaiian values as rated by the HMK prevention specialists.

Finally, prevention specialists' ratings of students on the rubrics of Hawaiian values also highly corroborated with school teachers' grading of students on GLOs. The GLOs graded the extent to which students were self-directed learners, community contributors, complex thinkers, effective and ethical users of technology, quality producers, and effective communicators. This concurrent validity between prevention specialists and school teachers further suggest that the rubric of Hawaiian values is a valid and reliable instrument of measure for positive youth development.

### Limitations

Evaluating students' risk and protective factors over a school year is a short period of time to detect change, although results indicated increase on the program's primary outcome—students' understanding of and identification with Hawaiian values. Developing evaluation tools to track the extent students retain changes in behavior, and risk and protective factors over time, that is, years after students leave HMK, is challenging. Gomby and Larson<sup>29</sup> emphasize the importance of evaluation of school-related programs but recommend avoiding measuring outcomes in the first few years while a program is being established. Evaluation tools were progressively developed each year as HMK was being established, and the extent the evaluation instruments were feasible were discovered. Combining or comparing results over the years to triangulate was not possible since tools were refined each year. Only data collected from one program year were used to describe and report on the HMK evaluation procedure in this article because this was the year when the maximum evaluation data were available. Finally, evaluation tools, especially quantitative, assume linearity of improvement.

The evaluation could ideally include a control group. Alternate evaluation approaches, in this case, multiple evaluation tools, were more appropriate than the standard experimental design. Evaluation procedures better aligned with both the spirit of a community-advised program while using appropriate evaluation procedures. Feedback from stakeholders, for example, program staff, and observations resulted in constant refinement on the relevance and feasibility of data collection tools.

### **Implications**

The HMK evaluation system using numerous tools to measure knowledge and practice of Hawaiian values has provided a means to strengthen the validity and reliability of results in lieu of a control group. The sum of the numerous evaluation components complement each other to provide valid, reliable, and rich results on the extent HMK is serving Native Hawaiian youth and strengthening a protective factor—understanding and practice of Hawaiian cultural values—toward health promotion, positive youth development, and prevention of risk behaviors. Findings indicated that students strengthened their identification with Hawaiian cultural values. Results collected from various quantitative and qualitative instruments or data sources indicated corroboration, that is, data, observer, and source triangulation, convergent validity, while also highlighting findings of each unique data source.

Using multiple data sources, including qualitative data, served 2 goals of the HMK evaluation. Multiple instruments helped test how an outcome, where existing tools and measures were not yet available, may be validly and reliably evaluated. Using multiple data sources is also an approach to evaluating a program from a unique community to capture robustness and nuances not detected from a single evaluation instrument or conventional evaluation methods. This community-focused approach to evaluation using multiple methods adds to the literature on how after-school community-based and culturally compatible youth development, prevention, and wellness programs may be evaluated.

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### **References**

1. US Census Bureau. Profile of general demographic characteristics: Hawaii. [http://factfinder.census.gov/servlet/QTTable?\\_bm=n&\\_lang=en&q\\_r\\_name=DEC\\_2000\\_SF1\\_U\\_DP1&ds\\_name=DEC\\_2000\\_SF1\\_U&geo\\_id=04000US15](http://factfinder.census.gov/servlet/QTTable?_bm=n&_lang=en&q_r_name=DEC_2000_SF1_U_DP1&ds_name=DEC_2000_SF1_U&geo_id=04000US15). Accessed October 16, 2010.

2. Hawaii State Department of Health. *Hawaii State Department of Business, Economic Development, and Tourism, The State of Hawaii Data Book, A Statistical Abstract*. Honolulu: Hawaii Health Surveillance Program; 2005.
3. MacDonald JM. The effect of ethnicity on juvenile court decision making in Hawaii. *Youth Soc.* 2003;35:243-263.
4. Pearson RS. *The 2003 Hawaii Student Alcohol, Tobacco, and Other Drug Use Study* (1987-2003). Honolulu: Hawaii Department of Health; 2003.
5. Keany M. Grading the public schools: The 2010 grades. *Honolulu Mag.* 2010; 44(11):38-50.
6. Kana'iaupuni SM, Malone N, Ishebashi K. *Ka Huaka'i: 2005 Native Hawaiian Educational Assessment*. Honolulu, HI: Pauahi Publications, Kamehameha Schools; 2005.
7. Akeo NP, Bunyan ES, Burgess KN, et al. Hui Malama o ke Kai: mobilizing to prevent youth violence and substance use with passion, common goals, and culture. *Am J Prev Med.* 2008; 34(3 suppl):S67-S71.
8. Demaio A. Local wisdom and health promotion: barrier or catalyst? *Asia Pac J Public Health.* 2011;23:127-132.
9. Strada MJ, Donohue B. Substance use in ethnic minority youth. *J Ethn Subst Abuse.* 2006;5:67-89.
10. Johnston LD, O'Malley PM, Bachman JG, Schulenberg JE. *Monitoring the Future: National Survey Results on Drug Use, 1975-2004*. Rockville, MD: National Institute on Drug Abuse; 2005.
11. Finau S. Communicating health risks in the Pacific: scientific construct and cultural reality. *Asia Pac J Public Health.* 2000;12:90-97.
12. Durlak JA, Weissberg RP. *The Impact of After-School Programs That Promote Personal and Social Skills*. Chicago, IL: Collaborative for Academic, Social, and Emotional Learning; 2007.
13. Metz RA, Goldsmith J, Arbreton AJA. *Putting It All Together: Guiding Principles for Quality After School Programs Serving Preteens*. New York, NY: Public/Private Ventures; 2008.
14. Larson R. Positive youth development, willful adolescents, and mentoring. *J Community Psychol.* 2006;34:677-689.
15. Hishinuma E, Chang J, Sy A, et al. Hui Malama o ke Kai: a positive prevention-based youth development program based on Native Hawaiian values and activities. *J Community Psychol.* 2009;37:987-1007.
16. Flay BR, Graumlich S, Segawa E, Burns JL, Holliday MY; Aban Aya Investigators. Effects of 2 prevention programs on high-risk behaviors among African American youth. *Arch Pediatr Adolesc Med.* 2004;158:377-384.
17. Carlton BS, Goebert DA, Miyamoto RH, et al. Resilience, family adversity, and well-being among Hawaiian and non-Hawaiian adolescents. *Int J Soc Psychiatry.* 2006;52:291-308.
18. Klein JD, Sabaratnam P, Auerbach MM, et al. Development and factor structure of a brief instrument to assess the impact of community programs on positive youth development: The Rochester Evaluation of Asset Development for Youth (READY) Tool. *J Adolesc Health.* 2006;39:252-260.
19. Glaser RR, Horn MLV, Arthur MW, Hawkins JD, Catalano RF. Measurement properties of the communities that care youth survey across demographic groups. *J Quant Criminol.* 2005;21: 73-102.
20. Rezentes WC. Na Mea Hawai'i: a Hawaiian acculturation scale. *Psychol Rep.* 1993;73:383-393.
21. Israel BA. Commentary: model of community health governance: applicability to community-based participatory research partnerships. *J Urban Health.* 2003;80:50-53.
22. Tervalon M, Murray-Garcia J. Cultural humility versus cultural competence: a critical distinction in defining physician training outcomes in multicultural education. *J Health Care Poor Underserved.* 1998;9:117-125.
23. Minkler M, Wallerstein N. Introduction to community based participatory research. In: Minkler M, Wallerstein N, eds. *Community Based Participatory Research for Health*. San Francisco, CA: Jossey-Bass; 2003.

24. Centers for Disease Control and Prevention (CDC). Framework for program evaluation in public health. *MMWR Morb Mortal Wkly Rep.* 48;1999:1-40.
25. Chatterji M. Evidence on “What works”: an argument for Extended-Term Mixed Methods (ETMM) evaluation designs. *Educ Researcher.* 2004;33(9):3-13.
26. Creswell JW. *Research Design: Qualitative, Quantitative, and Mixed Methods Approaches*: Thousand Oaks, CA: Sage; 2009.
27. Ramlow ME. Program evaluation standards. <http://www.fra.dot.gov/Downloads/Research/prg-eval-stds-msw.doc>. Accessed October 16, 2010.
28. Anastasi A. Explorations in human intelligence: some uncharted routes. *Appl Meas Educ.* 1988;1:207-214.
29. Gomby DS, Larson CS. Evaluation of school-linked services. *Future Child.* 1992;2:68-84.