

Brief Analysis: Bay Area Surveys

Collecting Data from Children Ages 9-13

Prepared For

Lucile Packard Foundation for Children's Health

Prepared by

Karin K. Coyle, Ph.D.

Lisa A. Russell, Ph.D.

John P. Shields, Ph.D., M.S.W.

Brandi A. Tanaka, M.A.



October 2007

Excerpted From: *Summary Report: Collecting Data from Children Ages 9-13.*

<http://www.lpfch.org/informed/facts/etr.html>

INTRODUCTION

This document provides information on three major surveying efforts in the Bay Area and California related to children aged 9-13: the California Health Information Survey, the California Healthy Kids Survey, and the Cornerstone Youth Asset Survey. These three survey efforts provide significant insight into the health status, development, and behaviors of children 9 to 13. Prior to describing each survey effort, we highlight the benefits and limitations of survey methods more generally.

Survey methods are based on the “self-report” of respondents. Surveys conducted with children ages 9-13 generate data by asking proxies (parents, teachers, etc.) to answer questions about particular children or, more commonly, by asking the children directly. Asking individuals to report on their beliefs or behaviors may or may not produce accurate data. People who take surveys, especially young children, (1) may report what they believe the researcher expects to observe, and (2) may report what reflects positively on their own knowledge, attitudes, and behaviors.¹ Cognitive psychologists have also warned about the fallibility of memory and the resulting negative impact on the reliability of self-report data.²

Despite these overall concerns about the reliability of self-report data, there are characteristics of “good” survey systems – that is, survey methodologies that address the limitations of self-report data. First, age-appropriate language is vital to basic comprehension of survey items, particularly with younger respondents. Second, surveys must be developed in recognition of the cognitive ability of children 9-13 years old – younger children in this age range may require visual cues and clear formatting to comprehend a survey. Third, sample size is important. Larger samples address some of the concern about the reliability of children’s self-report data by reducing the “weight” of each individual answer. Large samples also can provide sufficient data to conduct reliable descriptive statistics about key subgroups delineated by gender, economic status, race/ethnicity, and other variables of interest. Large samples also support the calculation of “weighted” data, where the results for a subgroup within a sample are adjusted to reflect the characteristics of the population being surveyed. Fourth, repeated cross-sectional surveying over time can help confirm reliability of results and establish trends for longitudinal analysis. Finally, the setting and method of administration is very important. The use of anonymous surveys, private settings, and independent administrators may mitigate some of the potential for error in self-report data.

In sum, what is left to the researchers and consumers of population-based survey data and reports is the acknowledgement that there may be problems associated with self-report data; that young children may feel pressure to answer in a certain way; that their memories may be imperfect; and that children, in general, are likely to comply with external expectations. Research consumers should acknowledge the influence of social desirability and cognitive development of young children’s responses to self-report surveys.

Within this context, however, consumers should also acknowledge the value of the methods and results of the well-designed and implemented survey systems. The data

¹ Cook, T. D., & Campbell, D. T. (1979). *Quasi-experimentation: Design and analysis issues*. Boston, MA: Houghton Mifflin Company.

² Schacter, D. L. (1999). The seven sins of memory: Insights from psychology and cognitive neuroscience. *American Psychology*, 54, 182-203.

generated by the following survey systems do provide significant insight into the lives of youth aged 9 to 13. The results of the following surveys can support general conclusions about this age group, and, depending on the scope of the sampling procedures described herein, may support conclusions about the age group's sub-populations.

CALIFORNIA HEALTH INTERVIEW SURVEY

The California Health Interview Survey (CHIS) is a collaborative project of the [Center for Health Policy Research](#) at the University of California, Los Angeles (UCLA), the [California Department of Health Services](#), and the [Public Health Institute](#). Conducted every other year beginning in 2001, the CHIS is a computer-assisted telephone interview of randomly-dialed households from each county in California, generating a sample that is representative of the state's "non-institutionalized population living in households" (UCLA Center for Health Policy Research, 2007). The two main goals of the CHIS are to (1) provide estimates of population-based key indicators for large and medium-sized counties in the state, and for groups of smaller counties; and (2) provide statewide indicator estimates for California's overall population, its major racial and ethnic groups and subgroups.

In households with children under age 12, the CHIS interviewer seeks to obtain information on one of the children by interviewing an adult who is most knowledgeable about the child. Although respondent households are selected at random, the CHIS has more recently adjusted its sampling approach within the family to make it more likely that younger children are represented in the sample (through an adult proxy).

The CHIS is used extensively by government agencies, public health organizations, community-based organizations, and researchers for analysis and reporting related to public health service accessibility and health care needs. The CHIS website includes an extensive and user-friendly collection of tools and resources to access data and generate reports.³ For example, the website tool allows for the selection of results by age (i.e., one can get results confined to the 9-13 population).

In 2005, the CHIS involved interviews with over 45,000 households across the state, gathering data on nearly 10,000 children (birth to age 11) on 32 variables related to health status, health conditions, mental health, health-related behaviors, health insurance coverage, socioeconomic status, and access to and use of health care services. Also in 2005, CHIS implemented modified sampling procedures to capture more data on children in general (i.e., birth to age 11) and younger children specifically (i.e., birth to age 5). The 2007 cycle of the survey is currently underway.

Since its inception, the CHIS has achieved higher response rates each administration cycle within its samples of children, leading to more rigorous population and sub-population estimates for all Bay Area counties (i.e., Alameda, Contra Costa, San Francisco, Marin, San Mateo, and Santa Clara). However, due to some persistent response rate challenges, data are not reliable at the county level for each of the 32 child variables or for each cycle of the survey (i.e., 2001, 2003, and 2005). For example, seven out of eight "health status" indicator categories were not reportable for San Francisco according to the CHIS website. That is, one can view the data, but users are warned not to report the results due to low cell sample size

³ <http://www.chis.ucla.edu/main/default.asp>

and unacceptable levels of variance (e.g., within African-American youth populations). Therefore, useful longitudinal indicator data are not available for children living in several counties, including Bay Area counties. Nevertheless, the CHIS remains a quality source for population estimates of several key health and health care access indicators among children in the Bay Area. As one of the largest survey efforts in the Bay Area and the only survey system among the three described herein to include economic status data, the CHIS provides significant insight into the 9-13 population's health status and healthcare access and utilization.

CALIFORNIA HEALTHY KIDS SURVEY

The California Healthy Kids Survey (CHKS), coordinated by WestEd, is a population-based survey of children and youth across the state. Under federal No Child Left Behind (NCLB) legislation, school districts and individual schools that receive California Department of Education funding are required to conduct the CHKS. This survey is administered every other year to a sample of randomly selected students in grades 5, 7, 9, and 11 in *comprehensive* schools, and to all students in *continuation* schools.⁴ The CHKS is administered in all of the greater Bay Area counties (Alameda, Contra Costa, San Francisco, San Mateo, Santa Clara, and Marin), and includes items that measure risk behavior and developmental assets. The CHKS includes two main components – a *Core* module that generates valid indicators of drug use, violence, crime, and physical and mental health, and a *Resilience & Youth Development Module* that measures internal and external developmental assets. It is important to note that the CHKS at the fifth-grade level focuses less on risk behavior than the versions for older students, but does include items related to basic health and developmental assets (e.g., resilience).

In addition to the Core and Resiliency modules, the CHKS also includes five optional sections for use of with students in grades 7, 9 and 11, including; *Alcohol and Other Drug Use and Safety*, *Tobacco*, *Physical Health*, *Sex*, and *Custom Questions Modules*. School districts can add the set modules as desired and add their own items to the *Custom Module* to assess topics of local interest. The topic-specific modules provide in-depth questions about each topic area – providing more detailed data on the topics than what is provided in the core module alone.

When districts meet established consent and survey completion rate benchmarks (i.e., at least 70% active consent form return rate for students in grades below seven, and at least a 60% survey completion rate for all student, regardless of grade) their CHKS data are weighted relative to the district's overall population, which result in valid estimates of key health indicators in the overall population. Depending on the proportion of individual race/ethnic groups within the overall population and the number of children and youth from these groups who participate in the survey, weighted indicators can be generated at the sub-population level.

Overall weighted population indicators are often used in grant applications to describe community need and to set performance targets for particular school-based health initiatives. Many school districts also use the CHKS results longitudinally to examine trends in health behaviors and to assess the impact of school-based programming. Although the examination of trends in weighted data from year to year is a valid method of assessing current and past

⁴ Information available at http://www.wested.org/cs/chks/print/docs/chks_home.html.

health risk behavior and youth development assets in children and youth, the use of the CHKS for outcome evaluation is less appropriate, despite the emerging popularity of the approach.

Because the CHKS was designed for population-based behavioral surveillance (i.e., monitoring descriptive health indicators in the community), there are limitations to using the CHKS for nuanced program evaluation in which behavioral determinants and program exposure variables are in play. For example, one might look at decreasing trends in tobacco use within a district's CHKS results and conclude that the trend is a result of effective tobacco-use prevention program operating in the district. The major problem with this conclusion is that population-based surveys are limited in their ability to accurately account for the frequency, intensity, and length of the intervention within each respondent or to account for the intervention saturation within a population (i.e., the extent to which an intervention reaches all members of a population). Intervention saturation is a particular challenge as many health-promotion programs likely do not reach enough youth with enough intensity and frequency to support a reasonable conclusion that the intervention caused *population-level* effects. Even with a good handle on individual respondent exposure and population saturation, the use of a one-group population-based survey design can not account for the multitude of factors that might affect tobacco use rates *other* than the intervention. Intervention effects can only be confidently measured using comparison- or control-group designs. Despite these limitations, districts are looking for methods of strengthening the utility of CHKS as a program evaluation tool (e.g., by administering the survey to students receiving a particular intervention and comparing their results to children who did not receive the intervention, or by adding program "dosage" items on the survey itself). Until these new approaches are better researched and validated, the best use of the CHKS data remains the assessment of current trends among children and youth.

Statewide CHKS data are used by WestEd to research the link between youth development assets and academic performance.⁵ CHKS analyses have shown that students scoring high in assets (e.g., internal assets of *cooperation, empathy, problem-solving, self-efficacy, self-awareness, and goals and aspirations* and external assets relative to *home, peers, school, and the community*), engage in fewer risk behaviors and perform better academically. The research has clearly demonstrated the link between these concepts – as youth development assets increase so does performance on standardized academic tests. The WestEd CHKS website includes tools and resources for the public that allow for the free download of county-level results summaries, research reports, and guidelines for administration.

CORNERSTONE YOUTH ASSET SURVEY

Project Cornerstone was initiated in 1998 by a collaborative of community-based organizations in Santa Clara County to promote developmental assets in children and youth. Project Cornerstone is a local advocacy organization that promotes a developmental assets model developed by the Search Institute as a framework to guide and support the healthy development of children and youth in Santa Clara County.

Search Institute's *Development Assets*TM model was first conceptualized in 1989. Since then, Search Institute has surveyed over two million children and youth in the United States and Canada to develop the model and provide a solid evidence base for the links between the

⁵ Report available at <http://www.wested.org/cs/chks/view/rs/712>.

assets and positive youth development.⁶ Search Institute developed a refined assets model focusing specifically on the needs of children in “middle childhood” (i.e., 4th, 5th, & 6th graders), which identifies 40 *internal* and *external* assets.⁷ Within the internal domain, the model focuses on four asset categories including: *support*; *empowerment*; *boundaries and expectations*; and *constructive use of time*. The model also includes four categories of external assets, which include: *commitment to learning*; *positive values*; *social competencies*; and *positive identity*.⁸

In 2000 and again in 2005, Project Cornerstone commissioned Search Institute to conduct a survey of Santa Clara County children and youth to determine the current status of youth development in the county. In 2005, Search Institute used the *Me and My World* (MMW) survey to collect asset data within more than 75 elementary, middle, and high schools in Santa Clara County. The resulting sample yielded responses from 4,300 4th, 5th and 6th grade students and over 9,400 students in grades 7, 9, and 11. According to the 2005 results, Santa Clara County youth “have” (e.g., experience, possess) an average of 18.8 assets, falling far short of the 31-asset benchmark established by Search Institute.

There are similar limitations to the data associated with this approach as with all population-based surveys – it’s challenging to survey enough youth to generate confidence in health indicators at the sub-population level. The Cornerstone reports provide guidance on the limitations of the survey when looking at sub-populations (e.g., grade and gender groups), and clearly warn against making conclusions about the general population of grades that were not the primary focus of the survey design (e.g., 4, 6, 8, 10, 12). Although limited information about the sampling strategy and overall survey return and completion rates is included in the reports, the sample sizes within grades 5, 7, 9, and 11, which were the focus of the design, are relatively large and are likely to provide reliable indicators for the general population.

The framework manifested in Search Institute’s MMW survey can be a powerful planning tool to assess the current status of developmental assets of youth in middle childhood. If implemented appropriately and rigorously, the survey will yield reliable and valid data that can help guide the development and implementation of community-based health promotion interventions. For programs that focus on youth development in general and student health and academic performance specifically, the use of the MMW can provide solid insight into the progress of students. For example, a program that focuses on achieving outcomes relative to youth empowerment could use those indicators within the MMW to assess their program’s progress toward meeting their impact goals (e.g., an increase in the number of surveyed students who report feeling safe in their home, school, and community).

As the Search Institute has developed benchmarks around developmental assets (e.g., youth “need” 31 assets to “thrive”), high quality data collected at the local level could be compared to the benchmarks, providing an opportunity to derive concrete improvement objectives. Also, if high quality data were gathered across several Bay Area counties, the results could be comparable across local communities. To support the collection of high quality data, Search Institute offers a wide range of documentation and fee-based technical-assistance services to communities wishing to implement the survey. Those interested in

⁶ Information available at <http://www.search-institute.org/research/assets/background.html>

⁷ Information available at <http://www.search-institute.org/assets/MiddleChildhood.html>.

⁸ Search Institute. *Me and My World Survey Report: Developmental Assets (A Profile of Santa Clara Students)*. Available on the internet at http://www.projectcornerstone.org/pdfs/final_combo_report.pdf.

implementing the MMW process should understand that it requires significant financial and human resources to administer successfully (i.e., produce useable and meaningful data).

Finally, the MMW is limited as a program evaluation tool. Because the survey response set is dichotomous (e.g., yes/no), a pretest-posttest application of the survey may not generate sufficient variance, thus limiting the survey's sensitivity to detecting change over time at the item level, and likely reducing the sensitivity of the total assets indicator. Further, the survey is administered anonymously – the samples taken at baseline and follow-up could be significantly different. Finally, the items on the MMW may not be sufficiently specific for the particular outcomes of individual programs.