

ECSPANSE



ENUMERATION OF CHILD STATE-LEVEL PHYSICAL ACTIVITY & NUTRITION SURVEILLANCE EFFORTS

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Effort supported by the Centers for Disease Control (PERT #01-009ccd)

EXECUTIVE SUMMARY

Public health practitioners seeking to control the epidemic of obesity, physical inactivity, and unhealthful eating and dieting behavior among U.S. children often lack complete and systematic data on behaviors and attitudes among youth. The research project described in this report was conducted in response to CDC PERT #01-009ccd. The project had four main goals: 1) To enumerate and evaluate all current survey activities and surveillance systems gathering data on individual behaviors and attitudes related to nutrition, physical activity, sedentary behavior, and weight status among school-age children being conducted by state departments of health and education; 2) To enumerate and evaluate all relevant instruments and methodologies from the published literature that pertain to surveys of behaviors and attitudes related to nutrition, physical activity, sedentary behavior, and weight status among school-age children ; 3) To summarize and integrate the information from goals 1 and 2 and to provide the CDC with a set of recommendations that could be used to evaluate and improve surveillance at the state and national levels; and 4) To disseminate a summary of the information to state health and education departments and other stakeholders. The overarching objective was to provide information that would be useful in assessing gaps in data collection that could inform expand and strengthen state-based surveillance systems. In addition to providing a detailed description of methods used and results of state surveys, state interviews, and published literature findings, the report includes several detailed compendiums. For the state surveys these compendiums make it possible to look up: what specific states are doing in this area, which surveys cover which specific sub-topics, and how surveys are administered. For the published literature, the compendium include a bibliography of abstracted articles, details on administration and pre-testing by abstracted article, an index by survey with information on reported reliability/validity, and an index of surveys used in the published literature by topic area/domain and by specific sub-topics of interest. The full report including compendiums will be available at <http://go.tufts.edu/ecpanse>.

Key personnel at the state departments of health and education were contacted. Ninety-five percent of relevant surveys of school age youth, other than the YRBS, were obtained. Telephone interviews were conducted to collect detailed information on the surveys identified. Relevant surveys reported in the published literature between 1997-2002 (inclusive) were identified using a search strategy of the major health-related databases; this strategy was developed in conjunction with a library specialist. An author on each relevant article was asked to provide copies of relevant surveys. Additional information on the surveys reported in the published literature was obtained from the articles themselves. All surveys were abstracted by 2 members of the research team using a survey abstraction form developed for this project. The project's scope was such that information regarding knowledge in the topic areas of interest was not collected unless it was coincident with other information; dietary assessment instruments were also not included.

State interviews were conducted with at least one person in all 50 states; in 47 states at least one respondent from each the Department of Health and Education was

interviewed. Of the 165 surveys identified by state respondents, 46 (28%) were surveys other than the Youth Risk Behavior Surveillance System (YRBS) that were related to the topics of interest (i.e., attitudes and behaviors related to nutrition, weight status, physical activity or sedentary behavior). Of the 45 main surveys abstracted (1 was not sent to us), 37 surveys covered nutrition, 37 surveys covered physical activity, 28 surveys covered sedentary behavior, and 18 surveys covered weight status. Of the relevant surveys identified, surveys were most frequently administered in grades 6, 8, and 11. The least frequently surveyed grades were the early elementary grades of K-3, which were covered by only 7-19% of surveys. Most (87% of surveys) were self-administered paper surveys, and were administered statewide (82% of surveys), although only 35% were administered annually or every other year; 33% had only been used once. Based on our telephone interviews with key informants in state departments of public health and education, many benefits of surveillance in these topic areas were noted. In particular, the ability to obtain baseline data and to design programs or interventions was reported by 60% and 45% of respondents, respectively. Other frequently reported benefits were using data to track trends, to compare regional and national data, to monitor and evaluate programs, and to advocate for change. A number of important barriers to surveillance were also identified: competing demands in schools (45% of respondents) and gaining access to schools (33% of respondents). Other barriers frequently noted were state agency resource constraints (30%), survey content and length (27%), student-specific barriers to obtaining accurate data (23%), and other constraints affecting accuracy of the data (23%).

Excluding the YRBS, thirty-three states covered at least one of the four topic areas. Nine covered at least one domain from every area. An assessment of state coverage of these topic areas indicated that nutrition topics were queried most frequently by states followed by physical activity, and sedentary behavior. With the exception of weight status for which attitudes/perceptions was the most frequently queried domain (45% of states), behavior was the most frequently queried domain for nutrition (85% of states) physical activity (85% of states), and sedentary behavior (67% of states). A modest number of states also assessed nutrition knowledge (39% of states), nutrition attitudes/perceptions (42% of states) and weight status attitudes/perceptions (45% of states).

In the domain of nutrition behavior, the most frequently queried sub-topics were consumption of specific foods (67% of abstracted surveys) and breakfast (46% of abstracted surveys). In the domain of nutrition attitudes/perceptions, children's food preference was the most commonly queried sub-topic; 16% of abstracted surveys included at least one question on this sub-topic. The most commonly surveyed sub-topic in the physical activity topic area was participation in sports and physically active hobbies. Other frequently queried topics were participation in school physical education (40% of surveys) and participation in physical activity that caused sweating and hard breathing (51% of surveys). In the topic area of sedentary behavior, the most frequently queried category was TV watching, specifically duration of TV watching (60% of surveys). The second and third most frequently queried categories were computer duration and video game duration; 23% and 21%, respectively. In the area of weight status attitudes/perceptions the most frequently queried topics were self-perception of

body weight status (28% of surveys) and weight satisfaction (38% of surveys). In the domain of weight status behavior there was an almost exclusive focus on weight control and disordered eating behaviors, 24% and 26% of surveys, respectively.

With respect to the published literature, we abstracted 130 articles that described the administration of a survey which contained the relevant topic areas and domains of behavior and attitudes/perceptions. From the 130 identified articles, we obtained 123 survey instruments, including multiple instruments reported in a single study, as well as several instruments that were identified in multiple articles. Among those articles that reported racial make-up, 68.5% were predominantly Caucasian samples and 12.6% were samples of a single non-Caucasian racial/ethnic group; 60% were targeted to a population in a specific region, 11% were statewide, 5% were multi-state, 13% were national in scope, and for 11% the locale was not reported. Elementary/middle school and middle/high school were the most commonly covered grade categories, accounting for 70% of the surveys reported in the published literature.

Overall, 41 surveys included items on nutrition, 61 surveys included items on physical activity, 14 surveys included items on sedentary behavior, and 39 surveys included items on weight status. Of the four topic areas and two domains systematically evaluated, physical activity behavior was the most frequently covered while sedentary behavior was the least frequently studied and reported upon. Furthermore, there were no surveys identified that covered attitudes and perceptions toward sedentary behavior. Overall, the domain of behavior was more frequently studied than the domain of attitudes and perceptions. Weight status was most frequently queried in the domain of attitudes/perceptions, whereas physical activity was the most commonly assessed area in the domain of behavior. Most surveys covered more than one topic area. The body of the report includes detailed information regarding the specific sub-topics covered in each topic area.

Our evaluation of validity and reliability of surveys reported in the literature was hampered by difficulties in establishing individual survey instruments and variability in how this information was reported. Overall, validity and reliability was often not reported, or reported superficially. Similar constraints existed for state surveys. This area needs to be strengthened in order to improve our confidence that survey instruments measure what they purport to measure.

In conclusion, despite a fair amount of activity at the state level in nutrition, physical activity, sedentary behavior and weight status, important gaps were identified. Early elementary school children, grades 1-3 are under-studied. Given that the extent of surveillance activities were quite variable from state to state, states with more comprehensive activities could serve as models nationally. The published literature was also identified as an extremely useful knowledge base from which to draw survey instruments as well as sampling strategies. Sedentary behavior, in particular, represents an important area of expansion for state surveys and the published literature is a rich source of survey items and methodologies. The apparent limited validation and reliability testing of surveys represents an area in need of improvement. CDC might serve as a

clearinghouse for researchers and state governments; making parts of this report available may provide a starting point in state personnel and researchers' access to information on surveys that have been validated.

State-level personnel are well aware of the tremendous benefits of surveillance in these areas. They also raised a number of realistic cautions: access to schools, issues of confidentiality, resource constraints, and the like. Since the contract to support this effort was awarded there has been an explosion of interest in obesity, with a particular focus on children, as a vulnerable and particularly impressionable group. National leadership, and the essential support of the CDC, could substantially expand state surveillance in the areas of nutrition, physical activity, sedentary behavior and weight status.