

**RESPONSE  
BY  
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*Wado* ("Thank you," in Cherokee) to the colleagues who critiqued our manuscript. We are delighted that the *Journal* chose to publish our description of the American Indian Research (AIR) Project and to solicit responses from experts in the area. Each of the reviewers are members of a small pool of researchers who devote a significant proportion of their professional careers to Indian health issues.

It is important to reiterate that the aim of our manuscript was to introduce readers to AIR goals, methods, and activities. We hoped to provide researchers who want to replicate or better understand our work with methodological details of the study and discussed important issues in conducting longitudinal research with urban Indians. As Sack, Dinges, and Thompson noted, this kind of "how to" paper, though invaluable, is seldom published. Demographic and prevalence data were included in the paper to provide readers with a preview of some of the work underway. Subsequent manuscripts will be far more data-intensive.

Many of the reviewers emphasized the importance of longitudinal research with American Indian populations, particularly with groups that are important but often neglected in other studies (Mail; Mitchell). Thompson, Dinges, and Mail noted that selection of risk factors and measures was guided by a comprehensive review of the literature. Westermeyer and Thompson observed that the project is methodologically rigorous and comprehensive, including longitudinal and cross-sectional cohorts (Sack; Mitchell) and comprehensive assessment (Thompson; Dinges).

Thompson accurately noted that longitudinal research will be more difficult in the current funding environment; thus, this project will serve an increasingly important role in understanding alcohol use and dependence among American Indians. Because participants are community members evidencing a diversity of drinking patterns this project may help dispel the stereotype that no Indians drink moderately (Mail) and may contribute to more effective prevention and intervention efforts (Mail; Westermeyer; Cohen). Our follow-up rate supports the conclusion that we have established positive relationships with our subjects (Beauvais), that they support the mission of our work (Sack), and continue to participate because they are making a contribution to the common good (Mail). Because the project is comprehensive in its assessment, methodologically rigorous and attentive to its subjects, the resulting data set is rich (Mail; Westermeyer; Mitchell; Dinges; Cohen; Sack).

Several reviewers (Westermeyer; Thompson; Mitchell; Cohen) recognized the quandaries that data accumulation creates and offered suggestions for getting the most out of the data set as quickly as possible (Westermeyer). Discussions of analytic issues, including missing data points (Mitchell), data reduction (Thompson), and theory driven analyses (Dinges) enriched the reader's understanding of the intricacy of longitudinal data management and analysis.

AIR has a primarily exploratory focus (Thompson), given that the etiology of adolescent drug and alcohol abuse is not well established in American Indian or any other population. Exploratory research generates and tests hypotheses rather than testing hypotheses derived from rigorous theoretical models. Within the context of exploratory work, multiple regression serves useful roles in data reduction and answering preliminary questions about risks associated with outcome. Further, data analyses in longitudinal research attend to and utilizes evolving statistical approaches rather than relying on a single strategy.

We selected and assessed risk factors predictive of problem outcomes in at least three previous studies and decided to err on the side of inclusiveness in risk factor selection. We want to assure Beauvais and Thompson that we are attentive to issues of instrument reliability and validity for American Indian's samples. To date, we have found that the scales have good-to-excellent internal consistency reliability.

Beauvais' concern that a risk factor orientation may skew results to development of pathology is astute. We, too, find the concept of protection inherently more satisfying than that of risk. However, the question of what constitutes protection is itself debated in the public and mental health fields. Protection is *not* merely the absence of risk. Individual vulnerability and resilience are included in the absence of problem or disease outcome. A focus on protection is worthy of another manuscript, including such questions as: "How does one operationalize protection?"; and once conceptualized, "How does one measure protection?". Further, how does one analyze the data to support the conclusion that protection occurs?

Clearly, colleagues are eager to see AIR results. Several also commented that they would have liked this manuscript to include more discussion of data analysis plans. Westermeyer, Dinges, Mitchell, and Cohen suggested that researchers have an obligation to disseminate study findings as quickly as possible in order to improve the quality of prevention and intervention. We are eager to move to publication though we worry about premature publication of "preliminary findings". Cohen and Mitchell recognized that struggle and addressed it briefly. When and how does one distribute results without biasing the sample or compromising the project? Unlike cross-sectional surveys that obtain data in a short time frame and publish results soon after data collection is complete, prospective longitudinal projects must wait years for outcomes.

Further, we are concerned with “labeling” and stereotyping youth with premature publication of data. Use of alcohol and some legal and illegal drugs is prevalent in this and other Indian and non-Indian youth samples. Not all of those who initiate use will continue to escalate their use. Timing of data analysis is also a critical element of longitudinal research. Half of our longitudinal cohort crossed the threshold of 12th grade in 1994–95 and the other half is there this (1995–96) school year. Therefore, it is only at the completion of this interview year that we will be able to compare our youth to the larger national and regional cross-sectional surveys on prevalence of use. Finally, our group is measuring problem outcomes, and the youth in this project are now entering young adulthood. It is in this and coming years that sufficient numbers of subjects will develop problems in ways that can be scientifically investigated.

Onset, prevalence, incidence, and recency of alcohol and substance use will be observed over time. That kind of data is not available for Indian populations and is only obtained through longitudinal work. Unlike most cross-sectional surveys, this project investigates drinking beyond initiation and simple use to the development of alcohol problems. We assure Beauvais that our outcomes are not limited to simple categories of drinkers. We selected both continuous variable measures of problems and dichotomous alcohol abuse/dependence diagnosis as outcome.

At the time we initiated this project, Oetting and Beauvais had not developed their “cultural identity” questionnaire. Although we subsequently incorporated their items, our manuscript stated that we will test whether cultural identity or participation mediate or moderate problem alcohol use. There is nothing in the scientific literature that says culture predicts alcohol abuse or dependence. Mitchell’s point that community participation is important in the development of instruments to measure culture specific concepts is an important one. Our “culture participation” items were developed in the late 1970’s using input from community members, including elders and spiritual leaders. The items were translated into a Native language and back translated to English by two separate readers and speakers of that language. The resulting “scale” has very good internal consistency and cross-informant reliability. “Spirituality” is conceptually distinct from both Indian identity and the extent of participation in one’s culture, although the three may be related in practice. The concept of “spirituality” and its measurement is currently being explored at the University of Washington by Dr. Walt Hollow with input from community leaders, elders, and spiritual leaders. Dr. Hollow is also exploring the relationship between the three concepts (e.g., identity, cultural participation, and spirituality).

The question of culture brings us to our final comment regarding this manuscript and the commentaries. At its heart, this project is guided by a mission: to address issues related to American Indians in a sensitive, positive manner without compromising scientific rigor in the selection and

evaluation of instruments, in data analytic strategies or in our interactions with participants. We (faculty, staff, and participants) believe in the benefits of such an approach and Thompson, Sack, and Mail recognized the significance of that mission and the high follow up rate that results.

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