Increasing Diversity in Cognitive Developmental Research: Issues and Solutions

Stephanie J. Rowley & Tissyana C. Camacho

TOOLS OF THE TRADE

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University of Michigan

The current article discusses the importance of increasing racial-ethnic and socioeconomic diversity in cognitive developmental research. It begins with discussion of the implications of the underrepresentation of ethnic minority children in cognitive developmental research. It goes on to suggest reasons underlying these omissions, such as the cost of effective recruitment methods, fear of committing cultural faux pas, and lack of expertise interacting with such populations. Finally, recommendations for addressing such limitations are provided via examples of successful and innovative methodological techniques used in prior research with ethnic minority children.

With a few exceptions, much of what we know about cognitive development in the United States is based on samples of White, middle-class, suburban children. The dearth of research on cognitive development in ethnic-minority children is somewhat surprising given decades of increasing attention to issues of culture, ethnicity, and context in social developmental research (Quintana et al., 2006). For example, a recent special issue of *Child Development* on race, ethnicity, and culture (Quintana et al., 2006) did not include a single study on cognition. Likewise, the special issue of *Child Development Perspectives* on positive development in ethnic-minority children included only one study on cognitive development (Gardner-Neblett, Pungello, & Iruka, 2012). Inclusive research is important for a number of reasons. Chief among them is that such studies often challenge views about cultural universality of even the most basic of cognitive processes. Equity in scientific inquiry is another consideration. Researchers limit the scientific engagement of and understanding of certain populations by including a narrow set of partners in research. Continued overinclusion of White middle-class populations also reifies perceptions of this group as ''normal'' in comparison to others. For example, although Asian–White test score gaps are as large as White–Black or White–Latino gaps (Hsin & Xie,

2014), they are rarely studied. When they are studied, results are often framed in terms of maladaptive cultural practices among Asian Americans rather than the academic shortcomings of White students.

This lack of consideration of diversity in cognitive development likely has many origins including the dearth of cognitive theories that reference race and ethnicity, small numbers of ethnic-minority scholars studying these issues, challenges in recruiting and retaining significant numbers of ethnic-minority participants in cognitive studies, and the expense of effectively recruiting and retaining hard-to-reach populations. Ethnocentrism and fear of moving beyond one's comfort zone are also likely contributors. Given the discussion of the problems associated with having fairly homogenous samples in this research (see Henrich, Heine, & Norenzayan, 2010) and the number of article discussion sections that note the limitations associated with narrowly selected samples, we assume that scholars of cognitive development are aware of the value of employing diverse samples and considering racial, ethnic, and cultural variation in developmental patterns. Therefore, the current article focuses on recommendations for increasing the representation of children of color in research on cognitive development.

THE PROBLEM

Some of the challenges in recruiting and retaining samples of low-income or ethnic-minority participants are with the researcher. Chief among these challenges is lack of experience or expertise in working with different groups. Some colleagues have noted that they are wary of delving into work with low-income or minority groups for fear of misrepresenting their experiences. This wariness may reflect a fear of appearing to be racist or classist in their interpretations of results. Others have noted that they are not excluding participants of color or those from low-income groups in their recruitment methods. Rather, members of these communities are simply not found in the institutions where they tend to recruit and they do not have the tools to recruit in areas where they might find more diverse samples. The additional effort and cost associated with recruiting in other areas can be prohibitive.

Recruitment of some groups is also stymied by lack of cultural competence on the part of researchers. The field is rife with accounts of cultural faux pas on the part of well-meaning scholars. Examples may include not recognizing literacy limitations, failure to understand beliefs about social interactions (e.g., proscriptions for interacting with people in authority), and lack of recognition of language barriers. It is easy see how potential participants may be quickly turned off by descriptions of research projects, recruitment methods, and recruitment materials.

Sometimes the challenge lies within the particular community of interest. People of color may be less willing than Whites to participate in cognitive developmental research because of mistrust of the university or of research. African Americans, for instance, are aware of the unethical treatment of participants in the Tuskegee Study. One study showed that 52% of the African American participants had heard of the experiment and 22% reported that they would be less likely to participate in research because of that knowledge (Green et al., 1997). Thankfully, the years since that experiment have brought increased regulation of research, but reports of ethical violations in research on populations of color continue to arise (e.g., Guatemala syphilis experiments and the Bowery study). And, more recent research has demonstrated that ethnic-minority participants continue to be concerned about being deceived through the research process (Freimuth et al., 2001).

Vulnerable populations may also fear the ways in which researchers may portray them (Freimuth et al., 2001). For example, in the Barrow Alcohol Study (Manson, 1989), researchers released misleading findings related to alcohol consumption within the Inupiat community in Alaska, which led the press to release an article titled, ''Alcohol Plagues Eskimos'' (Sobel, 1982). The director of public health in Barrow stated, ''The release of questionable results of the study to a nationwide news source prior to informing the studied community is a classic example of researchers utilizing indigenous people as so many laboratory specimens. If we within the North Slope Borough are to work at solving our major health problem, alcohol abuse, we cannot sit by and let researchers publish erroneous sensational statistics . . . '' (Foulks, 1989, p. 15). For these reasons and others, people of color may be wary of research that is perceived as invasive (e.g., neuroimaging) or research that is likely to put their community in a negative light.

Concern about how their communities will be portrayed in research may stem from views that universities are elite spaces where low-income or minority communities are taken on as charity cases rather than partners (Freimuth et al., 2001). In our own research, we have found that people are wary of ''helicopter'' research where researchers land, collect their data, and leave without offering something to the community in return. Middle-class participants may be more apt to participate in research to further scientific knowledge without regard for benefit to their community.

Finally, some issues with including hard-to-reach populations are more practical. Including low-income participants in standard laboratory experiments may be especially challenging. Low-income families may not have adequate transportation, may need childcare assistance, and may not have flexible work schedules that would allow them to participate during regular business hours (Gross, Julion, & Fogg, 2001). Including low-income families in longitudinal research can be difficult because of high rates of residential mobility, frequently changing phone numbers, and lack of regular e-mail usage (Knight, Roosa, & Umaña-Taylor, 2009).

This section underscores the significant challenges associated with recruiting low-income and ethnic-minority participants. Although these challenges are substantial, they are not insurmountable. In the following sections, we discuss strategies for recruiting diverse samples in cognitive developmental research. We include strategies gleaned from relevant literature and discuss lessons learned from our own research with diverse samples over the years. We begin with suggestions for how those interested in including underrepresented groups in their research can gain the expertise to do high-quality research on diverse samples. Next, we provide strategies for locating and recruiting participants from diverse backgrounds. Finally, we give suggestions for how to overcome mistrust in hard-to-reach groups. We end with some theoretical and methodological considerations for research.

LEARNING THE COMMUNITY THROUGH COLLABORATIVE PARTNERSHIP

A lack of knowledge about communities of color is a frequent barrier to their inclusion in research. Collaboration with scholars who have knowledge of the community under study is a great way to improve understanding. For example, we have consulted with colleagues who are struggling with data collection in communities of color. Sometimes the problems are obvious to us given our prior experience as in the case where someone was trying to recruit African American children for participation in a neuroimaging study. Although the group made it clear

that the method was noninvasive, we knew that African American families would be reluctant to have their children's brains scanned. Including a colleague with relevant experience in the design of the study can save precious time down the line.

Collaborators from diverse backgrounds also help shape the research questions that we ask. Banks (1998) noted that our background and experiences shape the way that we construct knowledge through the research questions that we ask, the frameworks that we use to inform those questions, and our interpretation of results. If we extend Banks's point, we will see that our scientific understanding is hampered by a lack of diversity in experiences of researchers and in our partnerships with communities of color.

Another way of learning about the community under study is to include members of that community on the research team. In our work at the Center for the Study of Black Youth in Context (CSBYC), we begin major research endeavors with interviews of community constituents who share their experiences and help us to understand the most important dynamics of the setting. For example, community informants helped us to understand diversity within populations of color. Our discussions with community members in two different school districts made clear the importance of recognizing socioeconomic variation in populations of color. District 1 was nearly all Black. Parents and students were very interested in the study and quite willing to sign up to participate. As this district was primarily low-income, our modest financial incentives were quite attractive. The challenge in this district was the school board. The school board was concerned about our portrayal of these low-income African American youth and their families and any negative comparisons that would be made between their district and the other school districts. They were also concerned that we would conduct our study and not give something back to their cash-strapped school district. In response, we offered to do an afterschool program for high-risk youth at the school and to share results directly with teachers.

District 2 was predominantly White but fairly diverse, with 22% of the students being African American, and quite affluent. Administrators with the district were thrilled at the idea that we would come in and help them to tackle Black–White achievement and discipline gaps. Families were mostly willing to participate, but retention seemed to be tied to their sense of the ''returns'' on their investment. These affluent African American families wanted connections to the university, preparation for the ACT, information on academic summer camps, and campus visits. They also wanted concrete results from the study. Some parents conveyed to us that they would not continue if these things did not happen. We also found that children in these families were less excited about our $20 incentive. In response, we began visiting meetings of the Black Parent Network in the district and presented research results and fielded questions. We provided the group with information about opportunities on the campus and we connected with the school's Black Student Union. This idea that a monetary incentive may not be the most effective way to recruit African American families was echoed in a study by Gross and colleagues (2001), who found that monetary incentive was listed less often as a reason for the participation of low-income African American parents in a family intervention than was the opportunity to learn more effective child-rearing skills.

In addition to these strategies, we have a community advisory board associated with each of our projects. The advisory board is made up of parents, teachers, school administrators, and clergy from the communities we are studying. We invite the board to campus annually and consult with individuals throughout the year on key questions. During formal meetings, we present results and ask for the committee's thoughts. We have also used the committee to inform

recruitment and retention. Community collaborators are invaluable in developing an understanding of the community under study.

Lastly, researchers are often surrounded by undergraduate students who are members of the local communities. Given that many of the techniques discussed in the current article can be costly, we want to highlight the importance of involving students in the research process. Students who are stakeholders of a given community help researchers to learn about the community, locate and retain participants, and establish trust between the community and research institution. In return, students also learn the research process, which is beneficial for them, the researchers, and the community.

LOCATING AND RETAINING PARTICIPANTS

A great deal of psychological research conducted with children uses recruitment either through a subject pool or schools. With subject pool recruitment, potential participants are often identified in hospital records for births occurring in a particular time period. This is an ideal tool as it allows researchers to recruit children in specific age ranges. Post cards are mailed to parents and interested parents return the cards indicating their interest in participation. Strategies in schools tend to be similar with researchers sending invitation letters home and asking interested parents to complete a form with contact information. These strategies are effective with White middle-class parents but are significantly less effective for parents of color or low-income parents. Parents may be wary of such ''cold call'' strategies given community views of the university. Residential mobility in low-income families may also render mailings ineffective. Thus, researchers have acknowledged a need to apply different methodological practices when working with ethnic-minority and/or economically disadvantaged populations (Fisher et al. 2002; Knight et al., 2009; Yancey, Ortega, & Kumanyika, 2006).

One strategy for locating participants of color and negotiating community mistrust is snowballing. Referrals from current or previous participants from the same community can help researchers yield a desirable sample for their studies. This method is effective when researchers seek groups defined by multiple characteristics (e.g., Filipino mothers with children with autism). It is efficient and often less expensive than other methods. Snowballing may yield larger samples of hard-to-reach participants because they trust the friend who referred them (Sadler, Lee, Lim, & Fullerton, 2010). The downside is that individuals tend to recommend others with similar characteristics, thereby limiting sample variability. Even probability sampling, though, may include bias.

In addition to obtaining referrals from study participants, we have used community informants in key positions for recruitment. In one study, we employed an African American guidance counselor who had been in the community for decades and also attended a large African American church in the city. She shared recruitment material with African American families in the school and could vouch for our legitimacy. Like the snowballing method, this strategy is limited in that participants with a strong connection to this counselor may have been more likely to participate. Just as she could draw reluctant families into the study, she may have also turned some families off. She may also have connections to a limited segment of the community. We also did a broader recruitment that did not include the counselor as a way of minimizing this effect.

Community informants may also be helpful in more rigorous sampling strategies such as venue-based, time-space recruitment with hard-to-reach populations. Traditional sampling

methods frequently consist of recruitment via community institutions, such as hospitals, health clinics, or schools. Members of hard-to-reach groups are less likely to engage with mainstream institutions, and their discomfort in those institutions may make them less likely to agree to participate when recruited there (Semaan, 2010).

Venue-based recruitment has been used to recruit hard-to-reach populations such as African American fathers and low-income families (Semaan, 2010). With this method, community informants suggest venues and times where the target population is expected to gather. The research team then spends time at the venue to confirm patterns of attendance. Finally, the team screens potential participants, invites those who are eligible, conducts the survey on site, and collects relevant data on those who refuse to participate (Semaan, 2010). A related strategy is to use reverse phone directories and census data to identify people living in neighborhoods with desired characteristics.

In a variation on venue-based sampling, a colleague aiming to recruit a sample of African American fathers utilized African American barber shops as recruitment sites. She reasoned that barber shops frequently attract men from a range of economic backgrounds and that they had plenty of time to sit and be recruited. She also included the barbers in the process by giving them incentives for successful recruiting. Participants completed a screening tool while waiting and some even participated in the survey in the venue. A potential pitfall of this strategy is that samples may be skewed on a number of variables (e.g., socioeconomic status, political beliefs, religious affiliation) by recruitment in certain venues (e.g., churches, community centers), and care must be taken to monitor representativeness. It is common for researchers to recruit African American and Latino participants from ethnic enclaves with little representation of middle-class individuals and then compare those participants with middle-class White participants from suburban neighborhoods adjoining the university. This strategy, although convenient, conflates race/ethnicity and socioeconomic status in ways that perpetuate negative stereotypes about groups of color.

Sometimes recruitment of hard-to-reach populations requires more than simply locating them. Given the increased likelihood that families of color are also low-income and highly mobile, it is important to obtain personal information that allows the research team to contact the participants in the future. Researchers might gather full names, birth dates, addresses, and contact information for family members who can help to locate the family in the future. We have also found that Facebook and e-mail addresses tend to be more stable than phone numbers and home addresses. In our three-district study, we used interim contacts, such as birthday cards, postcard reminders, and a newsletter, to keep in touch with participants. When these items are returned, it is a signal that we need to track families down before it is time for the next interview.

Collection of personal information can be sensitive with ethnic-minority populations, and it is important to establish trust by ensuring privacy of personal information. Freimuth and colleagues (2001) found that many participants were wary of how researchers would use their personal data. For example, families on welfare may be fearful of letting scholars know that their partners live in the home because it violates regulations. Undocumented immigrants may fear sharing personal information in fear of deportation. Communication regarding the use and storage of the participants' personal information should be clear and concise. Reassurance must be given that the researchers will follow the discussed protocols regarding personal information.

OVERCOMING COMMUNITY MISTRUST

Researchers often operate on the erroneous assumption that research institutions are deserving of the population's support and should be universally trusted by individuals (Knight et al., 2009). Given the historical context in which ethnic minorities and economically disadvantaged groups have been involved in research, wariness on behalf of participants is warranted. Thus, the establishment of rapport is imperative to the inclusion of ethnic-minority participants in research.

Trust can be cultivated or undermined from the very beginning. Recruitment materials (e.g., fliers, e-mails, letters) give researchers an opportunity to assuage participant concerns. For example, using accessible language that is readable by less-educated parents is important. Materials written in heritage languages may be inviting, even if interviews will take place in English. These materials can also note special accommodations such as free transportation, childcare, bilingual/bicultural interviewers, or the opportunity to participate in a familiar location. Gross and colleagues (2001) note that parents list many of these as important incentives for their participation. Seeing that these accommodations are available up front may put potential participants at ease. Gross and colleagues (2001) also suggest that helping participants understand the benefit to them (e.g., opportunity to learn something, contribution to science, help for others) is important.

Another way to establish rapport is to employ community members as research assistants. We have used community informants in a number of ways in our own research. This is especially effective in pilot studies or qualitative research. In one study, we employed a member of the community as a community liaison. This person lived in the community, had sent her children to school in one of the participating districts, and was active with the school parent teacher student organization. Her responsibilities included: a) identifying venues for recruitment of local families; b) talking with community members about the project, their interests in participating, and what might keep them from getting involved; c) presenting results from our study in local settings; and d) developing programming to increase the visibility of the CSBYC.

Relationship building is also important in overcoming community mistrust. The Pitt Mother and Child Project (PMCP) is a good example of how neuroimaging can be incorporated into developmental research with diverse samples. The PMCP has followed children from low-income families from early childhood to adolescence, introducing neuroimaging when participants became young adults. Throughout their study, the PMCP maintained retention rates greater than 80%, which they attribute to factors such as providing monetary incentives, maintaining contact through birthday cards and newsletters, obtaining alternative contact information, and having the same research assistant available to contact and schedule participants for the majority of the project duration (Trentacosta, Hyde, Goodlett, & Shaw, 2013).

Transparency in the research process is key to building rapport with hard-to-reach communities. Although deception may be an important aspect of study design at times, researchers must be aware that ethnic-minority communities are concerned that information presented might be misleading or deceptive (Freimuth et al., 2001). Keeping community informants involved throughout the research process helps to limit errors when researchers interpret the data and also provides the community with the opportunity to learn developmental science, thereby creating trust and transparency in the research process. Community partnerships may reduce the fear of deception and are one of the most important factors in recruiting a sample of ethnic-minority members (Yancey et al., 2006).

A FEW ADDITIONAL METHODOLOGICAL CONSIDERATIONS

Once one commits to recruiting a more diverse sample, it is important to attend to the quality of the research. First, one must define the sample beyond its ethnic makeup (Knight et al., 2009; Yancey et al., 2006). If a study is meant to examine a developmental process in an ethnic-minority group but the researchers are only able to recruit participants of low socioeconomic status, it should be noted that the findings may not generalize to the ethnic-minority population as a whole. Second, researchers should examine within-group variation beyond between-group comparisons. Too often, finding that an ethnic-minority group performs less well than White children is the end of the story and little is done to identify the contextual factors that might lead to such an outcome. Prior research has highlighted the fact that White–minority comparative work can lead to erroneous interpretations and deficit framing of minority experiences (McLoyd, 1991, 1998; Wong & Rowley, 2001). Finally, researchers must avoid the trap of atheoretical research that simply replicates results with another group (Wong & Rowley, 2001).

CONCLUSION

The aim of this article was to help provide greater understanding of how researchers can increase representation of children of color and low-income children in cognitive research. Race, ethnicity, culture, and economic context constitute powerful influences on children's thoughts and behavior. Thus, we believe that it is important that cognitive research include diverse samples. The suggestions offered stem primarily from our own research experiences with low-income and minority populations and are guided by three principles: First, diversifying samples improves the quality of our scientific knowledge by expanding our understanding of the effects of social context on development. Second, inclusion of hard-to-reach populations is achieved through methods that improve opportunities for partnership and that develop trust. Third, research with hard-to-reach populations must be undertaken with great care and respect for cultural differences, circumstances, and values. We acknowledge that there are many other solutions that we are not able to discuss at great length in this article and have provided further reading materials on how researchers can go about increasing the diversity in their samples (see the Appendix). We also acknowledge that this is difficult work that may slow the progress of research and that may be fraught with mistakes. Still, the goal of a more representative and comprehensive body of cognitive developmental research is well worth the effort.

REFERENCES

Banks, J. A. (1998). The lives and values of researchers: Implications for educating citizens in a multicultural society. *Educational Researcher*, 27, 4–17.

Fisher, C. B., Hoagwood, K., Boyce, C., Duster, T., Frank, D. A., Grisso, T., . . . Zayas, L. H. (2002). Research ethics for mental health science involving ethnic minority children and youths. *American Psychologist*, 57, 1024–1040.

Foulks, E. F. (1989). Misalliances in the Barrow Alcohol Study. *American Indian and Alaska Native Mental Health Research*, 2, 7–17.

Freimuth, V. S., Quinn, S. C., Thomas, S. B., Cole, G., Zook, E., & Duncan, T. (2001). African Americans' views on research and the Tuskegee Syphilis Study. *Social Science & Medicine*, 52(5), 797–808.

Gardner-Neblett, N., Pungello, E. P., & Iruka, I. U. (2012). Oral narrative skills: Implications for the reading development of African American children. *Child Development Perspectives*, *6*, 218–224.

Green, B. L., Maisiak, R., Wang, M. Q., Britt, M. F., & Ebeling, N. (1997). Participation in health education, health promotion, and health research by African Americans: Effects of the Tuskegee Syphilis Experiment. *Journal of Health Education*, *28*(4), 196–201.

Gross, D., Julion, W., & Fogg, L. (2001). What motivates participation and dropout among low-income urban families of color in a prevention intervention? *Family Relations*, *50*, 246–254.

Henrich, J., Heine, S. J., & Norenzayan, A. (2010). The weirdest people in the world. *Behavioral and Brain Sciences*, *33*, 61–83.

Hsin, A., & Xie, Y. (2014). Explaining Asian Americans' academic advantage over Whites. *Proceedings of the National Academy of Sciences*, *111*, 8416–8421.

Knight, G. P., Roosa, M. W., & Umaña-Taylor, A. J. (2009). *Studying ethnic minority and economically disadvantaged populations: Methodological challenges and best practices*. Washington, DC: American Psychological Association.

Manson, S. M. (1989). Editorial. *American Indian and Alaska Native Mental Health Research*, *2*, 5–6.

McLoyd, V. C. (1991). What is the study of African American children the study of? The conduct, publication, and changing nature of research on African American children. In R. Jones (Ed.), *Black psychology* (pp. 419–440). Berkeley, CA: Cobb & Henry.

McLoyd, V. C. (1998). Changing demographics in the American population: Implications for research on minority children and adolescents. In V. C. McLoyd & L. Steinberg (Eds.), *Studying minority adolescents: Conceptual, methodological, and theoretical issues* (pp. 3–28). Mahwah, NJ: Lawrence Erlbaum.

Quintana, S. M., Aboud, F. E., Chao, R. K., Contreras-Grau, J., Cross, W. E., Hudley, C., . . . Vietze, D. L. (2006). Race, ethnicity, and culture in child development: Contemporary research and future directions. *Child Development*, *77*, 1129–1141.

Sadler, G. R., Lee, H. C., Lim, R. S. H., & Fullerton, J. (2010). Recruitment of hard-to-reach population subgroups via adaptations of the snowball sampling strategy. *Nursing & Health Sciences*, *12*, 369–374.

Semaan, S. (2010). Time-space sampling and respondent-driven sampling with hard-to-reach populations. *Methodological Innovations Online*, *5*, 60–75.

Sobel, D. (1980, January 22). Alcohol plagues Eskimos. *The New York Times*, pp. C1, C2.

Trentacosta, C. J., Hyde, L. W., Goodlett, B. D., & Shaw, D. S. (2013). Longitudinal prediction of disruptive behavior disorders in adolescent males from multiple risk domains. *Child Psychiatry and Human Development*, *44*, 561–572.

Wong, C., & Rowley, S. J. (2001). The schooling of ethnic minority children: Commentary. *Educational Psychologist*, *36*, 57–66.

Yancey, A. K., Ortega, A. N., & Kumanyika, S. K. (2006). Effective recruitment and retention of minority research participants. *Annual Review of Public Health*, *27*, 1–28. doi:10.1146/annurev.publhealth.27.021405.102113

APPENDIX

Further reading on recruitment and retention of diverse samples:

Cauce, A. M., Ryan, K. D., & Grove, K. (1998). Children and adolescents of color, where are you? Participation, selection, recruitment, and retention in developmental research. In V. C. McLoyd & L. Steinberg (Eds.), *Studying minority adolescents: Conceptual, methodological, and theoretical issues* (pp. 147–166). Mahwah, NJ: Lawrence Erlbaum.

Council of National Psychological Associations for the Advancement of Ethnic Minority Interests. (2000). *Guidelines for research in ethnic minority communities*. Washington, DC: American Psychological Association.

Horowitz, C. R., Brenner, B. L., Lachapelle, S., Amara, D. A., & Arniella, G. (2009). Effective recruitment of minority populations through community-led strategies. *American Journal of Preventive Medicine, 37*(6 Suppl 1), S195–S200.

Knight, G. P., Roosa, M. W., & Umaña-Taylor, A. J. (2009). *Studying ethnic minority and economically disadvantaged populations: Methodological challenges and best practices.* Washington, DC: American Psychological Association.

National Institutes of Health. (2014). *Inclusion of women and minorities as participants in research involving human subjects: Policy implementation page*. Retrieved from http://grants.nih.gov/grants/funding/women_min/women_min.htm

Sasao, T., & Sue, S. (1993). Toward a culturally anchored ecological framework of research in ethnic-cultural communities. *American Journal of Community Psychology, 21,* 705–728.

Scheurich, J. J., & Young, M. D. (1997). Coloring epistemologies: Are our research epistemologies racially biased? *Educational Researcher, 26*, 4–16.

Stewart, Q. T. (2008). Swimming upstream: Theory and methodology in race research. In Zuberi, T. & Bonilla-Silva, E. (Eds.), *White logic, White methods: Racism and methodology* (pp. 111–126). Lanham, MD: Rowman & Littlefield.

Yancey, A. K., Ortega, A. N., & Kumanyika, S. K. (2006). Effective recruitment and retention of minority research participants. *Annual Review of Public Health, 27*, 1–28.