Ethical Principles and Standards for Developmental Scientists

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INTRODUCTION

Developmental scientists are committed to increasing scientific and professional knowledge of human development and to the use of this knowledge to improve the condition of children,[1] families,[2] and communities[3] across diverse[4] individual, cultural, and geographic contexts. As researchers, we have the responsibility to protect our study participants' rights and welfare and to ensure the responsible conduct of research. The Society's ethical values are historically rooted in and draw upon the fundamental human rights of persons laid out in the UN Declaration of Human Rights and the ethical principles of scientific research presented in such foundational documents as the Nuremberg Code, the Helsinki Declaration, the European Commission on Ethics for Researchers, and the Belmont Report, among other resources listed at the end of these guidelines. These guidelines describe the general ethical principles reflecting the highest ideals of developmental science and the more specific behavioral standards that guide developmental scientists to achieve these ideals. The SRCD Ethics Code principles and standards provide guidance for ethical decision making. The Code is not intended to define developmental science nor to dictate specific research designs, populations, or contexts. Rather, it aims to provide a set of values and broad general rules that developmental scientists can interpret and apply to the protection of research populations as a function of their own unique roles and the contexts in which they are embedded.

ETHICAL PRINCIPLES

A. Maximizing Benefits and Minimizing Harm

The advancement of scientific knowledge about the development of the world's children is essential for improving the health and well-being of humanity. Designing, implementing, and disseminating studies that maximizes scientific, societal, and individual research benefits and that avoids, minimizes, and removes research harms is essential for the responsible conduct of developmental science research and its application to practice and policy. This principle also calls for investigators to carefully consider the sociopolitical context in which research is conducted. This may require additional steps to ensure the safety of persons with vulnerable legal status (e.g., children living in families who are undocumented, victims of interpersonal violence, or those who are or may be involved in the criminal justice system). This principle applies to children and families who are research participants in laboratory, field, clinical, educational, and other settings and when research findings are used to develop scientific knowledge, practice guidelines, or policy. Maximizing benefits and minimizing harms may also extend to creating a compassionate and safe research or work environment for participants, community collaborators, students, and colleagues and building community capacity and other benefits for communities.

B. Respect for the Dignity of Persons and Peoples

Respect for the dignity of persons and peoples recognizes the inherent worth of all human beings regardless of differences in: age; socioeconomic status; race, ethnicity and nationality; religion; linguistic background; sex and gender identity and expression; sexual orientation;

mental health; physical, cognitive, and learning abilities; and other aspects of human diversity. Respect as a fundamental moral principle also recognizes that human beings are not simply individuals but are also interdependent social beings with cultures, religions, and histories that connect them across generations, and which are integral to the identity of its members and give meaning to their lives. As such, respect for the dignity of persons includes moral consideration of, and respect for, the dignity of peoples and communities. Further, regardless of developmental status, all persons are entitled to appropriate protection of their privacy, confidentiality, and right to self-determination. This includes taking steps to ensure their study does not exploit individuals who may be vulnerable to interpersonal and institutional authority. Finally, this principle calls for respectful consideration of communities and institutions (e.g., schools, clinics, community centers) as well as individuals who work within the contexts in which research is conducted (e.g., teachers, healthcare providers, community members, and others).

C. Equity

Developmental scientists conduct research designed to promote fairness and justice for individuals' developmental outcomes and equity in access to experiences and resources for children and families regardless of group characteristics—including, but not limited to: age; socioeconomic status; race, ethnicity and nationality; religion; linguistic background; sex and gender identity and expression; sexual orientation; mental health; physical, cognitive, and learning abilities; mental health; and other aspects of human diversity. Developmental research does not exploit or exacerbate existing inequities between groups of differing social status or power based upon group characteristics, or lead to further injustices or inequities in social, economic, educational, environmental, and health outcomes.

Promoting equity also extends to the experience of participating in research. Both the benefits and burdens of research should be equitably distributed across individuals, families, and communities. Children and families across diverse populations should have equal access to

participate in research designed to prevent developmental vulnerability and promote positive development. This principle does not preclude researchers from working with narrowly defined populations when there is sufficient scientific justification to do so. However, as a Society, we strive to create a body of research that is inclusive of the world-wide human diversity of children, families, and peoples.

D. Scientific Integrity

The advancement of scientific knowledge about the development of the world's children is essential for improving the current and future health and well-being of humanity. The Society regards scientific integrity as essential for the conduct of research and its application to practice and policy. Integrity is a core value of the Society and applies to the responsible conduct of research, to the teaching of scientific methods, and to the translation of science into practice and policy.

The advancement of scientific knowledge regarding the development of the world's children rests on the formation of relationships of trust. The success of the scientific enterprise is dependent upon research participants' and other stakeholders' firm belief in the reliability, honesty, competence, and trustworthiness of the investigator(s). In recognizing implicit or explicit power relationships among students, junior colleagues, and peers, integrity also requires professional standards of collaboration in the conduct of research, administration, mentorship, authorship, and funding.

Scientific integrity includes the core values of openness, objectivity, fairness, honesty, accountability, and responsible stewardship at every step in the research enterprise including consideration of its current and future implications for the welfare of children and families. In upholding these values, developmental science will yield more robust and reliable findings that others can trust and readily build upon in ways that will better serve children, parents, the public, and policymakers who support and depend upon our work.

ETHICAL STANDARDS

1. Competence

1.a. Scientific competence. Research benefits are maximized, and research harms minimized when investigators have acquired the training, experience, knowledge, and continued involvement in life-long learning to ensure they are designing and conducting studies consistent with the highest standards of scientific and ethical competence. Cultural and linguistic competence and the competencies necessary to understand the developmental needs of persons, families, and peoples with distinct characteristics and within different contexts is required to ensure population-valid and appropriate recruitment procedures, measure selection, implementation, data collection and interpretation, and dissemination procedures across and within diverse populations.

1.b. Population competence. Investigators recognize the diversities of populations they seek to serve and investigate, and develop essential competencies to minimize harm and best serve them. Members must develop and maintain competence through involvement and consultation with members of the group under investigation, continued review of the literature, and by continual updating of designs and procedures.

1.c. Inter-personal and inter-professional competence. Developmental scientists recognize that to enhance benefits and reduce potential harm, competent caring is critical to implement effective study and ethical practices and requires the ability to establish interpersonal relationships and rapport with participants, families, communities, and professionals with whom they work. This requires adequate self-knowledge of how one's identity, values, experiences, culture, and social context may influence the selection of a research topic, research design, and interpretation of a study. Developmental scientists work to eliminate the harmful effect that personal and professional biases can have on participants and their communities, and they do not knowingly participate in or condone the activities of others based upon such

prejudices. As interdisciplinary and international research with children continues to become more common, investigators will need to obtain the competencies necessary for productive professional collaborations that protect children's rights, and that enhance research benefits and minimize research harms.

1.d. Ensuring staff competence. Developmental scientists ensure the competent performance of research staff through appropriate selection criteria and training tailored to the population of children under study and the staff member's current skill level. Supervision includes training staff in appropriate anticipated and unanticipated ethical procedures and practices and overseeing that all research activities are performed competently and according to approved protocols.

2. Informed Consent

2.a. Developmentally appropriate child assent procedures. Investigators respect the developing autonomy of children through the design and conduct of informed consent and assent procedures tailored to their cognitive, emotional, and social maturity. In longitudinal studies, investigators consider developmentally appropriate modifications in consent information and reconsent procedures. While a child's assent is not legally binding, a minor's objection to participation in research should be ethically binding unless the intervention holds out a prospect of direct benefit that is important to the health or well-being of the child and is available only in the context of research.

2.b. Requirements for parent/guardian[5] permission. Developmental scientists conducting research with minor children make adequate provisions for soliciting the permission of each child's parent/guardian. Researchers familiarize themselves with relevant cultural and legal definitions of guardianship and recognize cultural contexts in which community or tribal permission may be a required component of the consent process. Written documentation of assent and parent/guardian permission is not required when it is developmentally inappropriate

or when identification would risk a participant's, parent's/guardian's, family member's, or other's safety. Child welfare concerns should always be a first priority. For example, those children who are wards of the state and their parents and guardians may require additional consideration and advocates.

2.c. Requirements for waiver of parent/guardian permission. Investigators conducting adolescent health research may waive parent/guardian permission for studies in jurisdictions that grant adolescents independent access to related health services. Under special circumstances, parent/guardian permission may be waived when it does not provide reasonable protections for a prospective child participant (e.g., informing the parent/guardian would potentially risk the child's safety) or if children are wards of the state, are unaccompanied refugees, or are homeless. If parent/guardian permission is waived, investigators create alternative procedures and conditions that provide children and adolescents with appropriate protection of their rights and welfare.

2.d. Voluntariness. Developmental scientists respect the self-determination rights of participants of all ages to voluntarily choose whether or not to participate in research. Informed consent procedures clearly communicate protections against adverse consequences of declining or withdrawing from participation. Participants are also informed about policies for whether data collected from participants who withdraw will (or will not) be included in data analyses.

2.e. Participants with informed consent vulnerabilities. All persons, including those with cognitive, emotional, or legal vulnerabilities (for example, undocumented youth) resulting in diminished autonomy are entitled to procedures that promote their autonomy. As such, developmental scientists create special safeguards necessary to protect the rights and welfare of vulnerable persons. These can involve the participation and support of legal or informal guardians/caretakers, family members, and others who are trusted and involved in the lives of participants as well as taking additional precautions around safeguarding the confidentiality of data and protecting the identities of socially and/or politically marginalized participants.

3. Equity

3.a. Consideration of individual, cultural, and contextual differences. Developmental scientists are both aware of and respectful of individual, cultural, and contextual differences and consider these factors when working with members of diverse groups and communities. Members make every effort to acknowledge, mitigate, and eliminate the effect of biases based on group and individual characteristics and they do not knowingly participate in or condone activities of others based upon such prejudices.

3.b. Reducing developmental inequities. Developmental scientists have a responsibility to understand current inequities in developmental outcomes and/or inequities in access to resources and services that promote positive development. In doing so, their research aims to counteract or dismantle the structures and systems that cause inequity and ensure that their work does not exacerbate these inequities in research, practice, or policy.

3.c. Equitable recruitment. Developmental scientists conduct research recruitment equitably, neither privileging nor disadvantaging certain individuals or communities. Within the target population of a study, no individuals should be categorically excluded or included for demographic, personal, social, or other characteristics without sufficient scientific justification. Special efforts should be made to recruit hard to reach populations who may not respond to more traditional recruitment procedures.

3.d. Fair compensation. To ensure equitable participation in research, developmental scientists avoid inadequate or excessive financial and other inducements or compensation for research recruitment that would either inequitably discourage or coerce participation of economically insecure or other populations. When recruitment involves subordinates such as students doing course work with the researcher, patients recruited in health care settings, or persons otherwise vulnerable to exploitation or coercion, developmental scientists take steps to avoid the influence of multiple relationships and to protect individuals from adverse consequences (real or perceived) of declining participation.

4. Scientific Integrity

4.a. Scientific standards. Developmental scientists ensure their work meets the highest scientific standards for the responsible conduct of research design, analysis, interpretation, and dissemination and that all methods and procedures are reported fully and honestly. Investigators also recognize the potential social impact of their findings on communities and make every effort to obtain community input on the aims, design, and interpretation of data and to ensure that the results of their research is disseminated to participants and the communities they represent.

4.b. Independent Ethics Review. Protecting the rights and welfare of research participants requires ongoing efforts by investigators to eliminate the effect of biases on the design and implementation of ethical procedures. This requires obtaining independent review by submitting accurate information regarding ethical protocols to institutional review boards or other ethics review panels. Investigators conduct the research in accordance with the approved research protocol.

4.c. Data security. Developmental scientists are aware of and institute special confidentiality protections required as new technologies for data collection and storage continue to emerge. Particular attention should be paid to research involving geospatial profiling, automated decision-making, data mining, big-data analytics, and genomics as data breaches that may pose higher social, financial, health, legal, and political risks to participants.

4.d. Debriefing. As soon as feasible, investigators provide an opportunity for participants to obtain additional information about the purpose, nature, results, and dissemination of the research. This may occur immediately following an individual's participation or at study completion. Debriefing procedures are described during informed consent. When they become aware, investigators take steps to correct or minimize any post-study misconceptions or harms. Investigators are also sensitive to the personal and social impact of their findings and ensure as appropriate that debriefing includes information on the implications both risk and resilience of persons and communities.

4.e. Use of deception. Deception is the intentional provision of false, misleading, or withheld information to purposely mislead research participants. Developmental scientists may consider

including deception in the design of a study if disclosing its real purpose would lead participants to modify their behavior, thereby distorting the research objective and if no non-deceptive alternative procedures are feasible. Investigators do not implement deceptive methods if the conditions can be reasonably expected to cause physical pain or emotional distress. Deception is explained to the participant at the end of the study, except in situations in which there is reason to believe that the research participants will be negatively affected by the disclosure.

4.f. Transparency. Developmental scientists ensure the transparency of their work through clear, accurate, and complete reporting of all components of research. Transparency includes, but is not limited to: reporting the aims of and related study hypotheses; participant characteristics, how participants were identified, recruited, and screened, and inclusion and exclusion criteria; research design and procedures; measures, apparatus, equipment, or instruments employed; analytic plans and procedures, including what transformations in measures or observations occurred; and material and financial resources supporting the research, and when appropriate, conflicts of interest.

4.g. Data sharing. Developmental scientists openly share scientific resources, such as methods, measures, and data in order to further scientific advances. Scientific openness ranges from provision of materials to other scientists to the depositing of scientific data in data sharing repositories. Minimizing harm to participants through the protection of their privacy and confidentiality takes precedence over sharing of data. Embracing transparency and openness, does not require that researchers must share all of their information without restrictions. Data sharing obligations need to be based on considerations of reasonable time periods for data analysis and dissemination, investigator financial or other burdens. This standard does not preclude the need to protect researchers from professional harm that can occur when requests for scientific transparency and openness veer into attacks on the integrity of researchers themselves or result in significant, new, or unfunded burdens that limit progress in scholarship.

5. Balancing Risks and Benefits

5.a. Ensuring appropriate balance of risks and benefits. In designing their studies, developmental scientists identify and minimize potential risks and maximize potential benefits to participants and communities with whom they work. When research does not provide the possibility of direct benefits, the degree of risk to which participants are exposed should never exceed that determined by the prospective scientific, educational, or humanitarian value of the problem to be addressed by the research. Special protections against research risks are required for vulnerable participants, including infants and young children and others who may not have the consent capacity required to understand the risk or make a reasoned decision regarding participation.

5.b. Confidentiality and disclosure. Developmental scientists protect the confidentiality of all participants and ensure that the extent and limits of such protections are clear during assent, informed consent, and guardian permission procedures. There are instances in which disclosure of confidential information is necessary to protect the participant or others from harm. Developmental scientists develop appropriate disclosure procedures in advance, tailored to the research topic and content of data they will collect, and ensure that the specific nature of situations in which confidential information will be disclosed is clearly communicated during informed consent and at the time a disclosure may need to be made.

5.c. Dynamic assessment. During the course of the research, researchers in charge must be prepared to terminate the research at any stage they have probable cause to believe, that a continuation of the research is likely to result in physical, psychological, or social injury or disability to participants.

NOTE: *Although these principles are primarily intended for SRCD members, they can be utilized by others to provide a framework for communicating ethical principles and standards utilized by developmental scientists to students, other colleagues and collaborators, and external audiences such as sponsors, funders, and Institutional Review Boards or other committees.*

[1] Throughout these guidelines the term “children” is inclusive of infants, children, and adolescents.

[2] In these guidelines, “families” are broadly defined and inclusive of legal, formal, and informal arrangements, biologically and non-biologically related individuals, extended families, and other family forms.

[3] In these guidelines, “communities” can reflect geographic region, culture, health condition, socially shared characteristics, and other characteristics, contexts, or affinity groups.

[4] No single document can list the totality of participant characteristics that comprise the field’s continuously evolving recognition of and sensitivity to human diversity. In these guidelines, the terms “diverse” and “diversity” recognize this limitation and refers, but is not limited, to variation across: age; socioeconomic status; race, ethnicity, and nationality; religion; linguistic background; sex and gender identity and expression; sexual orientation; mental health; physical, cognitive, and learning abilities; and other aspects of human diversity.

[5] In these guidelines, the term “parent/guardian” includes parents, legal guardians, extended family members, foster parents, and others who may have responsibility for the welfare of child participants, legal or otherwise. In the case of refugee and homeless children, this may be a government agency.

Resources:

American Anthropological Association. *Statement on Ethics*.
https://www.americananthro.org/LearnAndTeach/Content.aspx?ItemNumber=22869&navItemNumber=652

American Public Health Association. *Public Health Code of Ethics*.
https://www.apha.org/-/media/files/pdf/membergroups/ethics/code_of_ethics.ashx

American Psychological Association. *Ethical Principles of Psychologists and Code of Conduct*.
https://www.apa.org/ethics/code

American Sociological Association. *Code of Ethics*.
https://www.asanet.org/about/governance-and-leadership/code-ethics

The National Commission for the Protection of Human Subjects of Biomedical and Behavioral Research. *Belmont Report: Ethical Principles and Guidelines for the Protection of Human Subjects of Research.* https://www.hhs.gov/ohrp/regulations-and-policy/belmont-report/read-the-belmont-report/index.html

Council for International Organizations of Medical Sciences (CIOMS) and the World Health Organization (WHO). *International Ethical Guidelines for Health-related Research Involving Humans.* https://cioms.ch/wp-content/uploads/2017/01/WEB-CIOMS-EthicalGuidelines.pdf

U.S. Department of Health and Human Services. *Code of Federal Regulations 45CFR46 Protection of Human Subjects (see relevant Subparts B, C, and D).* https://www.hhs.gov/ohrp/regulations-and-policy/regulations/regulatory-text/index.html

U.S. Department of Health and Human Services. *Code of Federal Regulations 45CFR46 Revised Common Rule (Subpart A).* https://www.hhs.gov/ohrp/sites/default/files/revised-common-rule-reg-text-unofficial-2018-requirements.pdf

The Nuremberg Code. https://www.ushmm.org/information/exhibitions/online-exhibitions/special-focus/doctors-trial/nuremberg-code

Society for Research in Child Development. *Policy on Scientific Integrity, Transparency, and Openness.* https://www.srcd.org/policy-scientific-integrity-transparency-and-openness

United Nations. *Universal Declaration of Human Rights.* https://www.un.org/en/udhrbook/pdf/udhr_booklet_en_web.pdf

The World Medication Association. *Declaration of Helsinki – Ethical Principles for Medical Research Involving Human Subjects.* https://www.wma.net/policies-post/wma-declaration-of-helsinki-ethical-principles-for-medical-research-involving-human-subjects/

The European Commission. *Ethics for Researchers.* https://ec.europa.eu/research/participants/data/ref/fp7/89888/ethics-for-researchers_en.pdf