*Table 1. Ethical principles applied in participant selection, data collection, and analysis (Department of Health, 2015)*

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| **Principle** | **Application to study** |
| ***Respect and dignity:*** *Respect for the dignity, safety and well-being of participants should be a primary concern in health research involving human participants. Language, beliefs, perceptions, culture and customs must be considered.* | The researchers treated each participant and their caregivers with respect and dignity. There were no medical risks associated with the procedures of this study. All participants were informed of their rights before informed consent was obtained and data collection commenced. |
| ***Relevance:*** *It is an ethical responsibility of researchers in South Africa to ensure that research is relevant to the individual needs of those who suffer from the diseases and developmental concerns under study as well as the broad health and development needs of the country. The findings of the research must contribute to improving the health status of South Africans.* | The researcher aimed to describe the performance of a smartphone based developmental screening application, so that such an application can contribute to valid developmental screening practices in the PHC context in South Africa. |
| ***Scientific integrity:*** *In addition to being valuable, research must demonstrate a sound methodology and a high probability of providing answers to the research questions posed. Knowledge of relevant literature must be reflected. Research methods and results must be open to peer review and scrutiny.* | The scientific integrity was scrutinized by the ethics committees of the University of Pretoria and the Gauteng Department of Health. A comprehensive literature review was conducted, and the researcher consulted with peers familiar with research in similar health care contexts. The studies were presented as articles, which were reviewed by local and international scholars before being accepted for publication. |
| ***Investigator competence:*** *The investigator should be suitably qualified to conduct the study, in terms of education, knowledge, certification and experience.* | The researcher is a South African qualified professional SLP and Audiologist, registered at the HPCSA, who has completed a master’s degree in the ECI field of interest. SLP students (registered with HPCSA) in their final year of study received training in the specific procedures of the research studies before assisting with data collection. |
| ***Principal investigator responsibilities:*** *The principal investigator must submit an application to the appropriate ethics committee/s.*  ***Ethical review:*** *All health-related research conducted in South Africa must be reviewed by a research ethics committee and should not commence until the ethics committee has granted approval.* | The researcher submitted this proposal to the Research Ethics Committees of the Faculty of Humanities of the University of Pretoria. Research only commenced after approval had been granted by the ethics committees. |
| ***Informed consent:*** *Written and verbal informed consent must be obtained from research participants. Participants must be informed about the risks and benefits of the research, understand such risks and benefits and be able to give consent to participation, without coercion, undue influence or inappropriate incentives.* | Written informed consent (Appendix B) was obtained from every parent/caregiver through the use of an informed consent form prior to data collection. All caregivers with infants 0-42 months visiting the clinic were approached, but prospective participants who did not understand Afrikaans or English were not included in the study. |
| ***Privacy and confidentiality:*** *A participant’s right to privacy and confidentiality must be protected at all times.* | Data was numerically coded, ensuring participant confidentiality. No identifying information was obtained from participants. The data will be safely stored for 15 years at the University of Pretoria. |
| ***Inclusion and exclusion criteria:*** *The recruitment, selection, inclusion and exclusion of participants must be based on sound scientific and ethical principles. No person may be unjustly excluded on the basis of race, age, gender, disability, sexual orientation, education, religious beliefs, pregnancy, marital status, ethnic or social origin, language****.*** | All potential participants at the clinic were asked to participate on the day of the visit.  Informed consent was obtained from the parents/caregivers of the infants and toddlers  Parents/ Caregivers needed to be proficient in Afrikaans or English.  There was no form of discrimination, and no possible participant was unjustly excluded from the research. |
| ***Risk and benefits:*** *All risks/benefits of the study, even beyond the duration of the research, should be noted.* | There were no risks involved in participating in the research, and the only benefit was that appropriate referrals for early intervention were made where necessary. |
| ***Publication of results:*** *Investigator is obliged to publicize research results in a timely and competent manner.* | The research results were submitted in 3 articles for publication in peer-reviewed accredited journals. |