

Trust in Cancer Researchers and Willingness to Engage in Cancer Research

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1. Background

Public trust plays a pivotal role in shaping people's willingness to engage in medical research. Trust is not only a cognitive judgment but also a relational and emotional construct that influences perceptions of risk, credibility, and ethical integrity. Despite its importance, no prior studies have systematically evaluated the relationship between public trust in cancer researchers and willingness to engage in cancer research.

2. Goal

We surveyed a large sample of adults from Hollings Cancer Center's catchment area (i.e., the entire South Carolina state) to examine levels of trust in cancer researchers and examined whether trust in researchers is correlated with willingness to engage in cancer-related studies.

3. Solutions and Methods

Data from a large community-based survey of participants aged 18 years and over from South Carolina collected from January 2023 to December 2023 were analyzed. Survey participants were recruited by Dynata, an independent research company, which administered the survey on behalf of the research team, using the random digit-dial method.

A Computer-Assisted Telephone Interview survey collected self-reported sociodemographic information and administered a pre-validated 12-item instrument with 5-point Likert-scale responses (1: Strongly Disagree, to 5: Strongly Agree) to measure trust in researchers. The Trust in Medical Researcher scale (TMRS) captured overall trust in cancer researchers (scored between 0 to 48; with lower scores indicating lower trust) and the subscales quantified participants' perception of deception and researchers' honesty. The survey also collected information on willingness to participate in cancer research studies (including clinical trials, community-based research, cancer screening, and genetic testing), and willingness for biobanking (collection or use of leftover saliva, blood, tissue, fluid, stool, and urine), and sharing medical or laboratory records.

The study was deemed exempt by the Medical University of South Carolina Institutional Review Board due to the deidentified nature of the data. Descriptive statistics were used to summarize socio-demographic characteristics. Mean scores were used to summarize the overall trust scale and the subscales (Deception and Honesty). Association between the overall trust scale and willingness to participate in the research study, provide biospecimen, or share medical or laboratory records were examined using logistic regression model adjusted for age, sex, race, ethnicity, education level, and area of residence. Statistical significance was tested at $P < 0.05$. All analyses were conducted using SAS, Cary, NC.

4. Outcomes

The final analytic sample included 1,780 respondents with complete data. Participants were primarily adults aged ≥ 65 years (24.5 percent), white (62.7 percent), female (50.7 percent), had a high school level education (22.8 percent), and resided in metropolitan areas (87.3 percent). The mean overall trust in cancer researchers was 26.7 (± 17.4). Subscale scores averaged 23.8 (± 25.5) for perceived deception and 29.5 (± 16.0) for perceived honesty of cancer researchers. Willingness to participate in cancer research

varied substantially by study type, ranging from the lowest participation interest in clinical trials (29.7 percent) to the highest for biobanking a saliva sample (58.7 percent). Across all research types, those expressing willingness to participate were predominantly individuals with high trust in medical researchers (TMRS score ≥ 24).

In multivariable models, participants with low trust (vs. high trust) demonstrated significantly lower willingness to engage in cancer research (see Figure). This included a 20 percent lower likelihood of participating in clinical trials, 25 percent lower likelihood for community-based studies, 33 percent lower likelihood for cancer screening studies, and 29 percent lower likelihood for genetic testing research. Similar patterns were observed for biobanking activities: participants with low trust had substantially lower willingness to provide a saliva sample (51 percent lower), leftover tissue or blood (31 percent lower), urine sample (21 percent lower), or a new blood draw (31 percent lower). Additionally, the willingness to share medical or laboratory records was 29 percent lower among those with low trust compared with participants who reported high trust in cancer researchers.

5. Lessons Learned and Future Directions

Low trust in cancer researchers is strongly associated with reduced willingness to participate across nearly all types of cancer research, from clinical trials to biospecimen donation and data sharing. These findings highlight the critical need for targeted trust-building strategies to enhance research participation and ensure equitable representation in cancer studies.

Figure: Odds Ratios for Willingness to Participate (Low Trust vs. High Trust)

