General attitudes toward research: a pilot survey of HIV-positive surgical patients

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Background: The general attitude of HIV-positive surgical patients toward research has not been described, and it is uncertain whether interventions aimed at improving general attitudes toward research are required in this group. The aim of this pilot survey was to address the aforementioned paucity in the literature.

Methods: This was a prospective survey of 39 HIV-positive surgical patients. The 7-item Research Attitudes Questionnaire (RAQ) and a demographic characteristics questionnaire were administered to each study participant. Likert responses for the RAQ were converted into numeric values, and cumulative research attitude scores were computed for each study participant. A descriptive analysis of study participant responses to the RAQ was performed. Statistical associations between demographic characteristics and cumulative research attitude scores were also assessed.

Results: Depending on the RAQ item, between 74.3% and 95.9% of study participants responded positively toward research. Negative responses ranged between 0.0% and 10.3%, while neutral responses to RAQ items ranged between 2.6% and 23.1%. Female study participants had lower median research attitudes scores when compared with their male counterparts (p = 0.014).

Conclusion: In general, study participants expressed a positive attitude toward research. The proportion of neutral responses for some RAQ items suggests there are certain aspects of research which require clarification to prospective research participants. Efforts should be made to improve female HIV-positive surgical patients’ overall attitude toward research.

Keywords: HIV, Surgery, Research attitudes.
Data collection and data management:
Study participant age, gender, demographic group, education, and prior involvement in clinical research studies was collected using a self-administered, paper-based demographic questionnaire. In addition, study participants were required to complete the Research Attitudes Questionnaire (RAQ). This instrument was developed to measure attitudes toward medical research and initially consisted of 11 items, with a 5-point Likert response (“strongly disagree” to “strongly agree”) for each item. This was later shortened to a 7-item scale by Rubright et al., which showed improved internal consistency and dimensionality over the original scale. The 7-item RAQ was used in this research. The questionnaires used in this study were available in English and isiZulu. A bi-lingual interpreter, who was trained on the study protocol, was also present at the time a study participant completed the questionnaire to address any questions which might have been raised by the study participant. The data recorded on the aforementioned questionnaires was transferred to a password-protected electronic database in preparation for the statistical analysis.

Statistical analysis:
Descriptive statistics were used to summarise responses for the demographic questionnaire and the RAQ. Likert responses for each of the items comprising the RAQ were allocated incremental point scores ranging between 1 and 5 points, with “strongly disagree” = 1 point and “strongly agree” = 5 points. Cumulative research attitude scores were then computed for each study participant. Bivariate statistical associations between various demographic variables and cumulative research attitude score were assessed using the Mann-Whitney test. Results for this aspect of the statistical analysis are presented as median research attitude scores, interquartile ranges (IQR), and corresponding p-values. A result with a p-value < 0.050 was considered statistically significant. All statistical analyses were performed using the Statistical Package for the Social Sciences version 24.0 (IBM Corp, USA).

Ethical approval:
This study was approved by the Biomedical Research Ethics Committee of the University of KwaZulu-Natal, South Africa (Protocol BE499/16).

Results
Description of the study sample:
The median age of the study sample was 36.0 (IQR: 33.0–47.0) years old, with 25/39 (64.1%) study participants being ≤ 40 years old. A total of 27/39 (69.2%) study participants were female. Thirty-three study participants (84.6%) had completed high school. Only 9/39 (23.1%) of study participants reported prior involvement in research. Twenty-one study participants (53.8%) had prior knowledge of medical research which was gained through interactions with friends, relatives or healthcare workers.

Distribution of Research Attitudes Questionnaire responses:
The distribution of responses to the items comprising RAQ in this study is shown in Table 1. A preponderance of positive responses (ie. “Agree” or “Strongly agree”) was noted for all questionnaire items, ranging between 74.3% for item 5 and 95.9% for item 1. Negative responses (ie. “Disagree” or “Strongly disagree”) ranged between 0.0% for item 1 and 4, and 10.3% for item 6. Neutral responses ranged between 2.6% (item 7) and 23.1% (item 5).

Characteristics associated with research attitudes score:
The median research attitudes score for the study sample was 28.0 (IQR: 26.0-30.0) points. Table 2 shows the results of the statistical analysis performed to identify characteristics associated with research attitudes score in the study sample. Of the various characteristics investigated in this study, only gender was found to be statistically associated with research attitudes score. Specifically, the median research attitudes score was higher in males when compared with females (30.0,
Discussion

Informed consent is a requirement for research which involves human participants, and one of the most important determinants of whether an individual consents to participation in a research study is their personal attitude towards research. We provide a preliminary report of HIV-positive surgical patients’ general attitudes toward research, as measured by the RAQ. While it might be argued that the RAQ has not been validated in South African settings or in HIV-positive populations, our decision to use this questionnaire was based on its simplicity and the general rule of thumb in survey research which discourages the development of new questionnaires where there are already relevant questionnaires in existence.

The bulk of the responses to items comprising the RAQ suggest a generally positive attitude toward research in our study sample. While negative responses to items comprising the RAQ were minimal, the proportion of neutral responses for some items suggests that there are areas of research which require clarification when research study staff approach prospective research participants. This includes assuring prospective research participants that bona fide researchers are tasked with ensuring that the interests of research participants are protected and are held accountable by institutional review boards. In addition, the risks associated with the specific research being conducted should also be clearly explained to prospective research participants. For instance, the risks of injury associated with a non-interventional observational study would be lower than that which should be anticipated for an interventional phase I clinical trial, wherein side effects and the overall safety of a drug are being established. This should eliminate most of the uncertainty related to whether “participating in medical research is generally safe”.

Female HIV-positive surgical patients were found to have lower median research attitudes scores when compared with their male counterparts. This is an important finding as the HIV epidemic in sub-Saharan Africa disproportionately affects more women than men. It is therefore likely that a considerable proportion of the HIV-positive surgical population is female, which the results of our descriptive statistical analysis appears to confirm. Patient attitudes are often shaped by their level of awareness of health- or medical-related subjects. Therefore, the lower research attitudes scores of the female group in our study are a potential reflection of lower levels of research awareness in this group. This explanation does not appear unrealistic, as low awareness of medical research amongst African women has been previously reported. Efforts should be made to improve female HIV-positive surgical patients’ overall attitude toward research. This could include targeted interventions which seek to improve awareness levels of medical research in this group.

Conclusion

We provide a preliminary report of HIV-positive surgical patients’ overall attitude towards research. Study participants expressed an overall positive attitude toward research. We identified areas of study safety and study participant protection which require appropriate clarification to prospective research participants. Efforts should be made to improve female HIV-positive surgical patients’ overall attitude toward research. As this was a pilot survey, additional research is required to confirm our findings and explore interventions for improving female HIV-positive surgical patients’ overall attitude toward

| Table 2. Characteristics associated with/not associated with research attitudes score |
|-----------------------------------------------|-----------------|-----------------|--------|
| Characteristic                                | Level           | Median research attitudes score (IQR) | p-value |
| Age                                           | > 40 years old  | 29.0 (26.8–30.5) | 0.141  |
|                                               | ≤ 40 years old  | 27.0 (26.0–28.5) |        |
| Gender                                        | Male            | 30.0 (27.3–31.8) | 0.014  |
|                                               | Female          | 27.0 (26.0–28.0) |        |
| At least high school education                 | Yes             | 28.0 (26.0–30.0) | 0.608  |
|                                               | No              | 27.5 (26.8–31.5) |        |
| Prior participant in research study           | Yes             | 28.0 (27.5–29.0) | 0.299  |
|                                               | No              | 27.0 (26.0–30.0) |        |
| Prior exposure to research through friends or media | Yes             | 28.0 (26.5–30.0) | 0.165  |
|                                               | No              | 27.0 (25.8–28.3) |        |

IQR: 27.3–31.8 versus 27.0, IQR: 26.0–28.0; p = 0.014).
research. This might include interventions which seek to improve awareness of medical research in this group.

REFERENCES


