Need for a central survey-based registry for effective conduct of survey-based medical research

Sir,

A research survey is the process of conducting research using a survey and is considered as the easiest way of collecting considerable information from which the researchers can analyse and draw a meaningful conclusion in a relatively short period. Survey-based research is of extreme priority; for example, in the coronavirus disease (COVID)-19 pandemic itself, there has been a tremendous increase in survey-based studies, and some of them are repetitions of each other.\(^1,2\) Hence, it is necessary that research-based surveys and those prepared by different researchers on the same topic of interest should be standardised. We feel that there is an urgent need to build a survey-based repository of sources or a survey-based registry, which can act as a key contributor to monitoring survey-based research done every year in India. The registry can provide a fixed template of questions and help researchers define their survey objective, hypothesis, types of questionnaire, validity, and reliability. The survey registry web network can provide a platform to help collaborate amongst researchers from different regions, who can share their ideas. This can provide a new horizon of interaction amongst researchers working on similar survey-based research across the country. We also propose a checklist for review of survey design protocol, which can help future researchers compile their survey [Table 1]. This checklist should be available on the Survey Registry website, and every researcher conducting a survey may be asked to fill this checklist before applying for registration in the Central Survey Registry.

Survey hubs/registries can also provide expert-designed survey templates, making it easier for researchers to choose and conduct their study. The survey will have no meaning if the survey methodology and plan are not defined before it is deployed. There should be a standard length of questionnaire dictated by core data metrics that need to be collected, and it is essential to avoid redundant questions in every way possible. It is imperative to use easily understandable language text in the survey.\(^3\) The validity of the survey must be ensured, as an invalid survey may yield faulty results.\(^4,5\) Survey data analysis should also be clearly defined while submitting a proposal of survey-based studies. There are multiple analysis methods, including the excel method of analysis, cross-tabulation, trend analysis, Max-Diff analysis, conjoint analysis, total unduplicated reach and frequency (TURF) Analysis, etc. The central regulated Survey Registry body can work as a regulatory body to monitor and supervise...
various medical research–based medical surveys, identify similar topics at the time of registration, control various issues like validity and reliability, justification of claims, formatting, and piloting of questionnaires, and defining of adequate sample size. The Survey Registry will ascertain, whether the response rates are reported accurately, including details of participants who were unsuitable for the research or refused to take part, whether any potential response or biases are discussed, regulate what sort of analysis will be carried out, and also regulate and control the repetition of similar surveys that are already conducted in the past to avoid duplication. This Survey Registry can function as a free and online public record system just like The Clinical Trials Registry – India (CTRI). Currently, all randomised controlled trials (RCT) are registered in the CTRI. Similarly, the registration of all surveys in the CTRI should be made mandatory. The CTRI can be renamed ‘Central Research Registry of

### Table 1: Checklist for review of survey design protocol

| Section & Topic                                   | Item                                                                 | Yes/No/Not Applicable | Remarks                                      |
|--------------------------------------------------|----------------------------------------------------------------------|------------------------|----------------------------------------------|
| Title                                            | Identification as a survey-based study, identify construct of interest |                        |                                              |
| Study objectives and hypotheses                  | Stated specific objectives                                           |                        |                                              |
|                                                  | “SMART*: acronym followed                                            |                        |                                              |
| Methods                                          | Ethical exempt/clearance taken from Hospital Research Board          |                        |                                              |
| Study design                                     | Longitudinal/cross sectional-based survey                            |                        |                                              |
|                                                  | Prospective or retrospective survey                                  |                        |                                              |
|                                                  | Survey time duration                                                 |                        |                                              |
|                                                  | One time survey or repeatable survey                                  |                        |                                              |
|                                                  | Specified objectives, starting and end time points to be defined.     |                        |                                              |
|                                                  | Whether it will be E survey, Title of survey, data collection methods (e.g.- Google form) | |                                              |
| Participants                                     | Sampling approach, sample frame                                      |                        |                                              |
|                                                  | Eligibility Criteria                                                 |                        |                                              |
|                                                  | Number of subjects                                                   |                        |                                              |
|                                                  | Basis of identification of potentially eligible participants          |                        |                                              |
|                                                  | Where and when potentially eligible participants identified (setting, location, and dates) | |                                              |
|                                                  | Whether participants formed a consecutive, random, or convenience series |                        |                                              |
|                                                  | Contact rate with participants or reminder frequency                  |                        |                                              |
|                                                  | Co-operation rate                                                    |                        |                                              |
|                                                  | Methods to increase response rate                                     |                        |                                              |
| Survey methods                                   | Telephonic/online methods/offline                                    |                        |                                              |
| Sample size                                      | Estimation of sample size                                            |                        |                                              |
| Is a valid questionnaire available?              | Develop or translate the questionnaire, add as annexure              |                        |                                              |
| Questionnaire                                    | Number of questions, questionnaire format, questionnaire length, language of questions, Multiple-choice questions, dichotomous questions, semantic differential scale questions, rank order questions, and rating scale questions, scales for response, appropriate number of response options, methods to avoid multiple entries from a same participant | |                                              |
| Validity and reliability                         | Has preliminary pilot testing been done?                              |                        |                                              |
|                                                  | Reliability testing- Internal consistency, test-retest reliability, inter rate reliability | |                                              |
| Analysis                                         | Validity testing- Content validity, construct validity, other validity |                        |                                              |
|                                                  | Methods for statistical data analysis applied, Are different statistical methodology used for quantitative and qualitative research questions, How missing data and reference standard handled? | |                                              |
| Ethical considerations                           | Ensure guarantee of respondent anonymity and informed consent from participants |                        |                                              |
| Other information                                | Sources of funding and other support; the role of funders            |                        |                                              |
| Visual layout of survey                          | A link or figure can be ensured by correspondent of survey team       |                        |                                              |
| Any other comments                               |                                                                      |                        |                                              |

*SMART-Specific, Measurable, Achievable, Realistic, and Timely*
India’ or ‘Research Registry of India’ and separate sub-registries/portals can be made under it for RCTs, observational studies, surveys, retrospective studies, etc. The central survey registry can capture details of investigators, survey sites, and the date of enrolment for the surveys. After a survey is registered, all updates and changes can be recorded and made available for public display. Meticulous planning and execution are the key to successful survey-based research. Nevertheless, the setting up of a centralised survey registry and compulsory registration of all surveys in this registry will ensure lucidity and attainability in true and useful survey research in the coming days.

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Conflicts of interest
There are no conflicts of interest.

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