

Summary of Methods to collect meaningful and actionable insights from your community.

Methods	Quantitative [1,2]	Qualitative [3-6]	Mixed methods [7-9]
What are they?	Research methods resulting on numbers and figures to better understand a specific topic.	Research methods based on more interactive collection instruments that allow in-depth exploration of individuals' perspectives about a specific topic.	Multimethod research that uses more than one method of data collection, combining quantitative and qualitative methods. e.g., Delphi process.
Tools	<p>Questionnaires, database analysis, etc.</p> <p>Questionnaires :</p> <ul style="list-style-type: none"> - They can be administered online on paper, over the phone. - They can be filled by participants themselves or by the research team. - Inexpensive tools that can allow to gather data from small & large audiences. 	<p>Interviews, focus groups, observations, archives, etc.</p> <ul style="list-style-type: none"> - One to one interview, a single participant is interviewed at a time. - Focus groups usually of 6 - 8 participants where discussions are led by moderators and ideally observers can be involved to take notes. 	Questionnaires, interviews, focus groups, etc. used in combination
When shall I use each of them?	<p>Good choice if you are interested in measuring 'how many' or 'how often'</p> <p>When conducted correctly, and when the sample is representative, the findings can be generalised to a wider population. When the same survey is conducted in the same way over time, it allows to measure progress (e.g., if healthcare experience improved over time).</p>	<p>Good choice if you are interested in measuring 'why' or 'how'</p> <p>Interviews or focus groups can make the participants feel more listened to and in charge. Instead of simply being asked about things that someone else has decided are important, they can openly share their views. <u>Note that:</u> Adding an open-ended question at the end of a questionnaire does not replace the use of qualitative methods but can also make respondents give more insights on the topic and feel more heard.</p>	<p>Mixed methods approach allows to combine the advantages of the measurable conclusions of quantitative data and the in-depth, detailed insights of qualitative data. On the one hand, "stories" can provide meaning to "numbers"; on the other hand, "numbers" can strengthen "stories".</p> <p>You may begin by administering a quantitative instrument followed by qualitative research. This may allow to "explain" or illustrate the quantitative results. Alternatively, you may first perform qualitative research and then administer a questionnaire. This allows to get insights on the experience and opinions of respondents that will help you design a more meaningful and adapted questionnaire.</p>

Practical Tips to develop Quantitative, Qualitative and/or Mixed data collection projects

Methods	Practical tips - Do's and Don'ts
Quantitative [1,2]	<ul style="list-style-type: none"> • Have only one question per item, to be sure of what you are measuring. If you include two questions as in “does your doctor, ensure follow-up after visits and have good communication skills?” and you will not know which question respondents answered. • Limit the list of questions to the absolute minimum needed for to answer your research question. • Use simple and understandable language. When technical language is unavoidable, try to explain it as much as possible in the question itself or in a footnote just under the question. • Be specific when asking about frequency (e.g., use “daily”, “more than once a week” rather than “regularly”) • Privilege the use of positive phrasing, particularly where you are asking how much someone agrees or disagrees with a statement, e.g. “To what extent do you agree that people should pay for their prescriptions?” • Avoid questions that could “lead” the respondent to a particular answer. • Propose as many “positive” and “negative” items to a question. e.g., avoid having 3 “yes” (“yes, it is easy”, “yes, it is hard”, “yes but I manage”) and only 1 “no”. • Choose the most appropriate format for each question There are several possible question formats (e.g., single choice, multiple choice, scales, matrix, open-ended, numerical...). Be aware that open-ended questions can lead to high participant dropout rates (not finishing the survey). Also, straightforward close-ended questions will make your analysis easier, help you to meet the objectives of your research, and provide you with more reliable evidence on which to base your decisions. <u>However, open-ended questions can be useful to get participants’ insight on a subject, and often allow researchers to interpret answers to close-ended questions, or to have innovative thoughts, especially when open-ended questions come at the end of the questionnaire.</u> If you intend to have open-ended questions and a lot of respondents, you must make sure to have the resources - time, competencies, and human resources - to analyse all answers properly, as data generated from open-ended questions must be analysed using qualitative data analysis methods. • Choose the most appropriate means to administer your questionnaire (online, paper-based, telephone), dissemination channel (face-to-face, email, social media, post, hospitals) and dissemination partners (patient organisations, clinicians, others). <p>You can find a repository of questions you can directly use or adapt to your context and needs. The repository includes a list of questions, items and instructions organised by variables, such as sociodemographic information, communication, among other. All of them are available in 23 languages.</p>
Qualitative [3–6]	<ul style="list-style-type: none"> • Create an interview guide, i.e., a list of questions that you will bring to all interviews and ask to all interviewees. • Make simple and flexible questions that are adaptable to the insights shared by the participant and do not be too strict on the order in which questions are discussed during the interview. • Plan and devise a reliable way to collect the data. If possible, record/audio tape the interview/focus group but if not feasible or acceptable written notes can be taken. A combination of these methods can also be used e.g., audio tape focus group discussion and having moderators and observers taking notes. If you record the interviews, you may need to get a transcription service. • Don't forget to get demographics data such as age/age range, gender, country, role - e.g., professional, patient, family caregiver. Relevant sociodemographic questions will depend on the goal of your research project. • Data analysis should be performed by, at least, 2 independent researchers to ensure result robustness and unbiasedness. It is important to get advice and involve social researchers.
Mixed Methods [9]	<ul style="list-style-type: none"> • The Do's and don'ts of Quantitative and Qualitative methods are applicable to mixed methods. In addition, consider that mixed methods research can be more expensive than only using one data collection method. It is also very labour-intensive and will require involving more diverse expertise.

References

1. NHS England. Insight - What is already available? 2019. Available : <https://www.england.nhs.uk/wp-content/uploads/2019/08/bite-size-guide-whats-already-available-v3.pdf>
2. NHS England. Writing an effective questionnaire. 2018. Available : <https://www.england.nhs.uk/wp-content/uploads/2018/01/bitesize-guide-writing-an-effective-questionnaire.pdf>
3. NHS England. Building greater insight through qualitative research. 2017. Available: <https://www.england.nhs.uk/wp-content/uploads/2017/04/bitesize-guide-qualitative-research.pdf>
4. Busetto L, Wick W, Gumbinger C. How to use and assess qualitative research methods. *Neurological Research and Practice*. 2020;2. doi:10.1186/s42466-020-00059-z
5. Gill P, Stewart K, Treasure E, Chadwick B. Methods of data collection in qualitative research: Interviews and focus groups. *British Dental Journal*. 2008;204: 291–295. doi:10.1038/bdj.2008.192
6. Becker HS. *Writing for Social Scientists: How to Start and Finish Your Thesis, Book, or Article*: 2nd edition. The University of Chicago Press, editor. Chicago; 2007.
7. Cavaller-Bellaubi M, Faulkner SD, Teixeira B, Boudes M, Molero E, Brooke N, et al. Sustaining Meaningful Patient Engagement Across the Lifecycle of Medicines: A Roadmap for Action. *Therapeutic Innovation and Regulatory Science*. 2021;55: 936–953. doi:10.1007/s43441-021-00282-z
8. PARADIGM. THE PARADIGM DELPHI Process Expectations for effective and meaningful patient engagement in three phases of the medicines development lifecycle. 2019. Available : <https://imi-paradigm.eu/Paradigm-documents/The-PARADIGM-DELPHI-Process.pdf>
9. George T. *Mixed Methods Research | Definition, Guide & Examples*. 4 Apr 2022 [cited 19 May 2022]. Available: <https://www.scribbr.com/methodology/mixed-methods-research/>