

Summary

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Questionnaires

By: [Michael Atkinson](#)

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Questionnaires

Every once in a while my telephone rings at around 6:30pm and I cringe. I'm never expecting a call from my mother, workmate or a friend at that time. Perhaps foolishly, I pick up the phone and sheepishly say, 'hello'. On the other end of the line is normally a young woman who immediately says, 'Hi there, sir, I am from Company X, and I was wondering if you had a few minutes to answer some questions we have for you about your [household needs of some sort].' Why am I so stupid, and answer the phone every time! But then I quickly remember that she and I are not so different. We are both just researchers trying to gather empirical information about a subject at hand. I reflect and ask myself, do I make other people cringe when I ask them to participate in a survey of mine? That's a very sobering thought, so about 9 times out of 10, I say to the young researcher, 'sure, no problem at all' because I understand the role of survey research as an important data collection tool across social institutions.

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What Is This Concept?

Many elite athletes use visualisation techniques in training and competition. There are many stories of athletes who've used these techniques to cultivate not only a competitive edge, but also to create renewed mental awareness, a heightened sense of well-being and confidence. All of these factors have been shown to contribute to an athlete's sports success in existing sports psychological research. Generally speaking, visualisation is the process of creating a mental image or intention of what you want to happen or feel.

But do athletes, in general, know anything about visualisation and its effectiveness? How do athletes feel about and understand the importance of visualisation in their training and performance regimens? How ubiquitous is visualisation in sports cultures? Are there key socio-demographic differences between athletes who employ visualisation and those who do not? What leads an athlete to these techniques? I could develop a whole range of predictive hypotheses to test my theoretical ideas regarding how athletes come to use visualisation and how they experience the effects. Rather than interview several hundred athletes, I could develop a survey to collect my information. Surveys are a classically positivist approach to hypothesis testing. Designed to minimise the impact of researcher bias in the question-asking process, surveys are lauded as standardised research instruments that ask respondents to 'score' or rank themselves on the variables we are measuring in a study. Because survey questions are standardised (i.e. every respondent receives the same survey questionnaire, using the identical question wording, ordering and general appearance), the survey approach to measurement lends itself well to replication, and therefore, may generate high levels of reliability and external validity.



Survey/questionnaire-based research is common in the social and psychological study of sport and exercise, and is normally undertaken for either purely descriptive or deductive/theory-testing purposes. There are literally dozens and dozens of existing questionnaires and surveys that researchers use to study everything from population level involvement in organised, leisure and physical activity, to the psychological mood states and profiles of athletes, to attitudes about sport programmes offered in an area. Not only do academics within universities employ survey methods quite widely, government and 'official statistics' agencies regularly survey groups in order to track health behaviours, physical activity pursuits, and knowledge of physical activity opportunities

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in a region. Surveys are used from time to time to gather information from a small group of people, but the data collection technique is ideal for collecting and statistically analysing large amounts of information on people.

Surveys are regarded as ideal tools for data collection when researchers need to gather simple descriptive information on people's behaviours and backgrounds, or when they seek to measure people's attitudes about a given subject. Surveys take on a variety of forms (see below) but normally contain three basic types of question. The questions on surveys are the empirical measurements (indicators) for variables in the hypotheses guiding our research. Even more importantly, they represent or stand in for the empirical concepts in the theory(ies) which initially inform the hypotheses themselves. Very cool. Questions on a survey are categorised as *closed*, *open-ended* or *scale-based*. Closed questions represent the lion's share of measures on a survey, and are structured so that how participants' answers vary is determined by the researchers' themselves before the survey is administered. A question is asked, and then respondents select from a standard, pre-determined range of responses available to them. Open-ended questions are more qualitative questions in which researchers ask subjects to briefly describe something or provide a subjective reaction to a statement provided on the survey related to the research question.

Finally, scale-based questions are a special and revered form of attitude measurement. Many socio-cultural and psychological researchers of sport believe that we can measure both conscious and subconscious attitudes people have pertaining to sport, exercise, physical activities, health and wellness. These attitudes can be measured by a series of projective and inferential techniques, or by straightforwardly asking people to self-evaluate how they feel about a particular subject, or a personal characteristic. Scale questions in general ask respondents to rank or quantify their attitudes or the frequency of their behaviours (from which we infer attitudes). Popular are Likert-type scale and visual analogue questions in which people are asked a question in a 'statement format' (such as 'Visualisation has improved my self-confidence in the past year') and then presented with a numeric scale underneath the question on which they rank how strongly they agree or disagree with the statement. These scales normally range from 1 to 5 or 1 to 7, with numbers corresponding to answers including, 1 = strongly disagree; 2 = somewhat disagree; 3 = neither agree nor disagree; 4 = somewhat agree; 5 = strongly agree).

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Why Is This Relevant to Me?

Survey research designs have been around for a long time, and all indications suggests they will continue to thrive in academia. Surveys are tailor-made techniques for hypothesis testing in scenarios when experiments are inappropriate or unneeded, but we need standardised data on a large number of people. It's just that simple. Surveys are most relevant for psychologists, sociologists, pedagogues, policy analysts and management experts in sport and exercise because they are generally used to measure people's personal 'characteristics', attitudes, behaviours and emotions (or mood states) related to sport, exercise and health phenomena.

Sport England's 'Active People Survey' has been collected in the UK since 2005. The survey provides by far the largest sample size ever established for a sport and recreation survey and produces previously unavailable levels of detailed analysis on patterns of participation in physical activity and how they vary from place to place and between different groups in the British population. The survey measures, among other things, the proportion of the adult population who volunteer in sport on a weekly basis, club membership, involvement in organised sport/competition, receipt of tuition or coaching, and overall satisfaction with levels of sporting provision in the local community. In the first year of the survey alone, 363,724 adults in England (aged 16 plus) responded to the Active People Survey questionnaire. Since then, a minimum of 1,000 surveys have been completed in every local authority in England (354 local authorities) on a yearly basis. The questionnaire is designed to enable analysis of the findings by a broad range of demographic information, such as gender, social class, ethnicity, household structure, age and disability.



The steps in the survey process come about as close to a tried, tested and true formula as one could find in research methodology. The real 'grunt work' in conducting survey-based research is in the initial phases of survey construction. Constructing a survey from scratch is a time-consuming and frustrating task. Without delving into too much detail, copious amounts of time are devoted to ensuring the survey questions themselves well capture the meaning of the concepts/variables they are measuring (validity issues) and are also consistent as measures (reliability issues). Indeed, months may be spent testing the reliability of our questions, especially when multiple questions are used to measure a

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single variable (here, we employ techniques like the split-half or test-retest method in 'large' pilot tests in order to examine reliability). A 'minor' checklist of issues to consider when designing a survey is comprised of at least the following:

- Whether we have done well in translating the theoretical meaning of concepts into variables and then measures on our survey;
- Whether or not we have achieved 'full dimensionality' (i.e. whether the measures capture the full meaning of the concepts);
- How we can maximise response rate for the survey (e.g. are there too many questions for people; is too much knowledge assumed; is the layout of the survey frustrating or confusing for people?).

We reflexively examine our surveys in order to inspect them for systematic error at this stage. But in order to really test the survey's strength, we need to conduct a pilot test using a convenience sample of respondents. A pilot test is crucial for examining whether there is any systematic measurement error in the survey and if/when/how random error emerges – threats to reliability and validity in our research can be identified quite quickly at this stage.

If everything is fine during the pilot testing, then we proceed on to the full administration of the survey. There are three general formats of surveys: *the self-report survey*, *the telephone survey* and the *face-to face survey*. Self-report surveys are 'sent' to the sample of respondents in one manner or another (normally through the mail or via an online survey site). Self-report surveys are more cost effective than other survey techniques, allow researchers to cover a wide geographic distribution of respondents, provide heightened anonymity for respondents and reduce desirability effects in the data collection process. However, they tend to produce lower response rates than other techniques, and are normally shorter than other forms of surveys. Telephone surveys are like self-report surveys (questions, format, etc.) but are administered to people directly over the telephone. They are quite cost efficient techniques with the potential to reach geographically spread-out members of the population, and tend to have higher response rates than self-report surveys (think about that ... it's easier to throw away a mailed survey, or delete an emailed request to fill in an online survey than it is to say no to someone on the phone). But what about people who cannot be contacted by phone easily? Does the 'presence' of an administrator influence how people answer? How long can we keep someone on the phone, and

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does the length of the survey potentially affect how people answer? Finally, face-to-face surveys are exactly as they sound; a survey administered to someone directly to them in person. Face-to-face surveys produce the highest response rates and can effectively combat problems with random error (usually due to respondent confusion over one or another question), but with them comes a massive (personnel) cost and a large risk of social desirability effects entering into the process.

Wonderful, great, now how do we proceed after all of the surveys are returned? Every answer, to every question, for every respondent is transformed into a number and entered into a master file in a data processing or statistics program like SPSS, STATA, R, or Excel. All of the rules and orders for the coding process need to be established long before any shred of empirical evidence is gathered. Given the statistical results, inferences are then drawn as to what can be concluded about the hypotheses under investigation in our research.

Problems, Pitfalls and Controversies

Even though I fully understand the need to participate in surveys as a researcher myself, my response rate for surveys that come across my email, desk or home is probably less than 30%. Low response rates in survey methods is very, very common and kills one's confidence in the results. Why? Because when the potential pool of respondents is lowered by 50% or more, one's sense that the respondent sample will be a microcosm of the broader theoretical population is reduced – limiting the inferences allowable from the data and their overall credibility. This is why there are any number of built-in mechanisms within the method (the use of online surveys, follow-up letters, monetary incentive, phone call reminders, carefully worded introductions to the survey proclaiming how important the research is and how grateful the researchers are that one is participating) to try and bolster response rates.

ways obtain information by asking people questions. Those questions are designed to succinctly measure some topic of interest, and validity and reliability of survey questions is often critiqued. Careful crafting of survey questions is essential, and even slight variations

in wording can produce rather different results.

Among the best ways of ensuring the reliability of respondents' answers is to use multiple questions on a survey that measure a behaviour, or gather a large enough sample that will 'correct for' tendencies in under- and over-reporting amongst some subjects. Even when reliable

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and valid questions are asked, there can still be serious problems due to missing data. Missing data comes in three varieties: people who refuse to participate (the issue of response rates), questions that are left unanswered (the issue of items missing values), and (in longitudinal studies), respondents who are lost to follow-up (the issue of attrition). The problem is that missing data results in: (1) biased findings if the people for whom data is missing are systematically different; (2) inefficient statistical estimates due to the loss of information; and (3) increased analytic complexity in reading sample data. Finally, perhaps the most important limitation of cross-sectional surveys has to do with their relative lack of ability to empirically demonstrate causal relationships.

See also: [Causality](#); [Descriptive Statistics](#); [Distributions](#); [Hypotheses](#); [Inferential Statistics](#); [Populations and Samples](#); [Reliability](#); [Validity](#).

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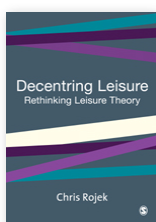
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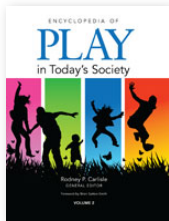


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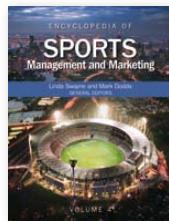


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