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Meaning of Coding

Assigning labels to

Data

1. Interview transcripts
2. Documents
3. Artifacts
4. Field notes

A code is a word, phrase, or sentence that represents aspect(s) of a data or captures the essence or feature(s) of a data

(Saldana, 2013)

COMMENTARY

Role of qualitative research in exercise science and sports medicine

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Abstract

Qualitative research is featuring more frequently in health sciences research, a field in which the 'hard sciences' and statistics have traditionally dominated. For example, within the fields of exercise science and sports medicine, qualitative research methods are included to evaluate intervention programmes. These methods are also being used in studies that require measurement of behavioural perspectives, such as an understanding of individuals' motivations, attitudes, beliefs and perceptions. Qualitative research methods are also becoming increasingly useful in the investigation of contextual factors that impact on physical activity and sporting performance. The purpose of this article is to clarify the role of qualitative research in exercise science and sports medicine and provide the reader with a basic understanding of the basis of qualitative research. Qualitative data collection and analysis, sampling strategies in qualitative research, the role of the qualitative researcher, and issues of scientific rigour regarding qualitative research will be addressed.

Introduction

Qualitative, in the context of research, refers to 'quality in the sense of hallmarks, features, character, nuances, complexity, or nature of the phenomenon under study'. Qualitative research methods are the strategies used in the process of collecting, organising and interpreting text obtained through observation, or from communication with individuals or groups.

Qualitative research is used most commonly in the social sciences, such as psychology, sociology and social anthropology, and qualitative research methods are also used frequently in market research. However, the qualitative approach and qualitative methods are now being used more frequently in health sciences research, a field in which the 'hard sciences' and statistics have traditionally

dominated. The purpose of this article is to clarify the role of qualitative research in exercise science and sports medicine and provide the reader with a basic understanding of qualitative research.

Where qualitative research is used in exercise science and sports medicine

Within the fields of exercise science and sports medicine, qualitative research methods are being included more frequently in studies designed to evaluate programmes. For example, programmes that need to be evaluated may have a health promotion focus, such as school- and community-based programmes promoting physical activity, or may be sport related, such as a life skills programme for elite athletes. In programme evaluation qualitative research methods are particularly helpful when evaluating less tangible outcomes that are difficult to quantify, e.g. an evaluation of the participants' experiences of the programme. If these methods are properly implemented they can provide valuable insight into factors contributing to success and/or failure of programmes, including both individual and contextual factors, as well as the strengths and weakness of a programme.

Sometimes studies in exercise science and sports medicine require measurement of behavioural perspectives such as an understanding of individuals' motivations, attitudes, beliefs and perceptions. These factors are difficult to assess without using qualitative research methods. Qualitative methods are also becoming increasingly useful in the investigation of contextual factors that impact on physical activity and sporting performance.

Collecting qualitative data

The main methods of collecting qualitative data are in-depth interviews, focus groups, observation and open-ended questions in questionnaires. An open-ended question requires a response from the participant rather than merely choosing an option from a provided list of options.

In-depth interviews can be described as conversations between an interviewer and interviewee, where the interviewer's main role is to listen carefully to the interviewee and frame questions around the interviewee's responses. In this context the interviewee is not so much a subject under examination, but more a partner, having an active role in directing the interview discussion and bringing the interviewer to a point of understanding his or her unique perspective. In-depth interviews are generally structured around relatively general, open-ended guide questions.¹ Interviews are most useful in studies where it is likely that there will be a range of individual perspectives and experiences.

Key informant interviews are a type of in-depth interviews. Key informants are defined as individuals who are knowledgeable in a particular area, or who hold special status or skills. These types of informants are able to share their knowledge and skills, as well as their unique perspectives, observations and insights to which the

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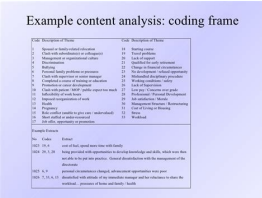
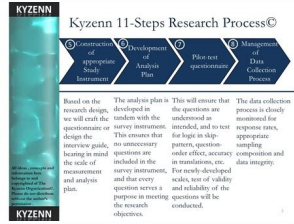
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Chapter Outline

- Defining Surveys and Experiments
- Components of a Survey Method Plan
 - The Survey Design
 - The Population and Sample
 - Instrumentation
 - Variables in the Study
 - Data Analysis and Interpretation
- Components of an Experimental Method Plan
 - Participants
 - Variables
 - Instrumentation and Materials
 - Experimental Procedures
 - Threats to Validity
 - The Procedure
 - Data Analysis
 - Interpreting Results



Creswell definition of qualitative research. What is qualitative research creswell. Creswell qualitative research methods.

Behavioral Research Program Integrative data analysis (IDA) refers to a set of strategies in which two or more independent data sets are pooled or combined into one and then statistically analyzed. IDA approaches differ from and offer advantages over other methodological techniques that also strive to build cumulative knowledge bases, such as meta-analysis. In meta-analysis, summary statistics across multiple studies are pooled together. Because IDA techniques pool original raw data, there is no loss of individual information as found within meta-analytic approaches, which allows researchers to find out what works, for whom, and in which contexts. In addition, the use of IDA affords expanded inquiry within many areas of health behavior research. IDA can be used to incorporate big data that were not originally intended for the examination of theoretically relevant measures. For example, searches on Google for health-related topics could be used as an objective measure of information seeking that could supplement what is gleaned from a self-report data source such as the Health Information National Trends Survey (HINTS). Data integration typically takes one of two forms: merging data by common data elements (units of information that are shared or widely used across data collection efforts.), where these elements are often multi-item scales or indices but can be individual items; or linking data sets through a common factor at the record level (e.g., linking across data through demographic information) such as that seen in the Surveillance, Epidemiology, and End Results (SEER)-Medicare data set, or at multiple levels such as the environmental or policy level (e.g., linking state- or county-level information with individual-level data). The Behavioral Research Program seeks to promote the use of IDA to answer novel cancer control questions to accelerate scientific discovery. Funding Opportunity Announcements View Past Funding Announcements Publications Within sociology, many researchers collect new data for analytic purposes, but many others rely on secondary data in order to conduct a new study. When research uses secondary data, the kind of research they perform on it is called secondary analysis. Secondary analysis is a research method that involves analyzing data collected by someone else. A great deal of secondary data resources and data sets are available for sociological research, many of which are public and easily accessible. There are both pros and cons to using secondary data. Researchers can mitigate the cons of using secondary data by learning about the methods used to collect and clean the data in the first place, and by careful usage of it and honest reporting on it. Secondary analysis is the practice of using secondary data in research. As a research method, it saves both time and money and avoids unnecessary duplication of research effort. Secondary analysis is usually contrasted with primary analysis, which is the analysis of primary data independently collected by a researcher. Unlike primary data, which is collected by a researcher herself in order to fulfill a particular research objective, secondary data is data that was collected by other researchers who likely had different research objectives. Sometimes researchers or research organizations share their data with other researchers in order to ensure that its usefulness is maximized. In addition, many government bodies within the U.S. and around the world collect data that they make available for secondary analysis. In many cases, this data is available to the general public, but in some cases, it is only available to approved users. Secondary data can be both quantitative and qualitative in form. Secondary quantitative data is often available from official government sources and trusted research organizations. In the U.S., the U.S. Census, the General Social Survey, and the American Community Survey are some of the most commonly used secondary data sets within the social sciences. In addition, many researchers make use of data collected and distributed by agencies including the Bureau of Justice Statistics, the Environmental Protection Agency, the Department of Education, and the U.S. Bureau of Labor Statistics, among many others at federal, state, and local levels. While this information was collected for a wide range of purposes including budget development, policy planning, and city planning, among others, it can also be used as a tool for sociological research. By reviewing and analyzing numerical data, sociologists can often uncover unnoticed patterns of human behavior and large-scale trends within society. Secondary qualitative data is usually found in the form of social artifacts, like newspapers, blogs, diaries, letters, and emails, among other things. Such data is a rich source of information about individuals in society and can provide a great deal of context and detail to sociological analysis. This form of secondary analysis is also called content analysis. Secondary data represents a vast resource to sociologists. It is easy to come by and often free to use. It can include information about very large populations that would be expensive and difficult to obtain otherwise. Additionally, secondary data is available from time periods other than the present day. It is literally impossible to conduct primary research about events, attitudes, styles, or norms that are no longer present in today's world. There are certain disadvantages to secondary data. In some cases, it may be outdated, biased, or improperly obtained. But a trained sociologist should be able to identify and work around or correct for such issues. To conduct meaningful secondary analysis, researchers must spend significant time reading and learning about the origins of the data sets. Through careful reading and vetting, researchers can determine: The purpose for which the material was collected or created The specific methods used to collect it The population studied and the validity of the sample captured The credentials and credibility of the collector or creator The limits of the data set (what information was not requested, collected, or presented) The historic and/or political circumstances surrounding the creation or collection of the material In addition, before using secondary data, a researcher must consider how the data are coded or categorized and how this might influence the outcomes of secondary data analysis. She should also consider whether the data must be adapted or adjusted in some way prior to her conducting her own analysis. Qualitative data is usually created under known circumstances by named individuals for a particular purpose. This makes it relatively easy to analyze the data with an understanding of biases, gaps, social context, and other issues. Quantitative data, however, may require more critical analysis. It is not always clear how data was collected, why certain types of data were collected while others were not, or whether any bias was involved in the creation of tools used to collect the data. Polls, questionnaires, and interviews can all be designed to result in pre-determined outcomes. When dealing with biased data, it is absolutely critical that the researcher is aware of the bias, its purpose, and its extent. However, biased data can still be extremely useful, as long as the researchers carefully consider the potential effects of the bias. How to Perform Factor Analysis What Are Extraneous Variables in... Advantages & Disadvantages of a... How to Write a Relative Merit Report How to Show the Results of a Survey How to Design a Good Questionnaire What is a Fishbone Diagram? What Statistical Tools of Analysis... How to Conduct a Gage R&R Study Components of Market Analysis How to Write Relational Analysis... Scaling Techniques in Business... How to Analyze Performance Reports How to Write a Situational Analysis... The Use of Models in Economics In statistics, qualitative data—sometimes referred to as categorical data—is data that can be arranged into categories based on physical traits, gender, colors or anything that does not have a number associated with it. The hair colors of players on a football team, the color of cars in a parking lot, the letter grades of students in a classroom, the types of coins in a jar, and the shape of candies in a variety pack are all examples of qualitative data so long as a particular number is not assigned to any of these descriptions. Qualitative data is contrasted with quantitative data wherein quantitative data sets have numbers associated with them that evaluate the quantity of an object or objects with shared features. Oftentimes, quantitative data is used to analyze qualitative data sets. It's pretty easy to understand the difference between qualitative and quantitative data: the former doesn't include numbers in its definition of traits of an object or group of objects while the latter does. Still, it can get confusing when thinking in terms of statistical attributes, which include size and dimensions, which are quantitative and not qualitative data. In order to better understand these concepts, it's best to observe examples of particular datasets and how they can be defined. Observe which are qualitative and which are quantitative data sets in the following examples: The cats' have orange, brown, black, or white fur (qualitative). The boys have brown, black, blonde, and red hair (qualitative). There are four black cats and five orange cats (quantitative). The cake was 50 percent chocolate and 50 percent vanilla (quantitative). Even when a particular feature or attribute of an object is qualitative, such as chocolate for the cake or black for the cats, the inclusion of a number in the data set makes it a quantitative one, though this interplay is important for the study of statistics as it provides categories for which mathematicians can then compare numerically. Whereas quantitative data is important in determining the particular frequency of traits or characteristics, the sizes, and dimensions of objects, and that sort of information about a given topic, qualitative data like the

color of hair or skin of employees in a company or the healthiness of a pet's coat can be important in statistical analysis, especially when paired with quantitative data about these qualitative features. Essentially, qualitative data is important because it allows statisticians to form parameters through which to observe larger sets of data. For instance, a company that wanted to determine the diversity of its workforce would want to look at a set of qualitative data like race and ethnicity of its employees as well as the quantitative data of the frequency of employees to belong to those races and ethnicities. Qualitative data provides the means for which observers can quantify the world around them—there are three blondes, two brunettes, and three black-haired women at the table or there are 16 freshmen and 15 sophomores attending the annual band trip.

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