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## Introduction

Consult any thesaurus and you will find that synonyms for 'research' include: 'investigate', 'study', 'explore', 'look into' and 'examine'. Psychologists do all these things in their quest to understand human behaviour and social phenomena, and to generate new knowledge about these.

In the past, most psychological research was concentrated on observable, measurable behaviour and phenomena. To study this psychologists used quantitative research methods, which, broadly speaking, produce numeric data for statistical analysis. Then some psychologists began to use qualitative research methods, which, broadly speaking, produce textual data in order to understand phenomena from the perspective of the research participants. This led to several years of polarised debate about the relative merits of quantitative and qualitative research. However, most psychologists now accept that both approaches are equally legitimate approaches, and that in many instances quantitative and qualitative approaches provide complementary insights into human behaviour and social phenomena. This chapter subscribes to this view and, as we explore each of the steps in the research process, both approaches will be described where relevant.

Figure 2.1 provides a useful depiction of the typical steps in the research process. These apply equally to quantitative and qualitative research. Each of the steps is dependent on the others. Obviously, one would not analyse data (step 4) before having collected it (step 3). However, variations in this cycle will occur depending on the nature of the behaviour or phenomenon that is being researched. Depending on the methodology employed, greater emphasis may be placed on some of the steps while others might be ignored. We will now consider each step in turn.

## Step 1: Planning

## Selecting a research topic

Selecting a research topic is obviously the first step in the research process. Bless, Higson-Smith and Kagee (2006) suggest a number of sources of research topics. Firstly, observation of everyday life is a good source. Secondly, prior research often prompts further studies, particularly if there have been vague, unclear or contradictory results, or if there have been concerns about the

Step 1: Planning
Exploring the research topic, and formulating research questions and/or hypotheses


Step 4: Data analysis
Using descriptive statistics, and/or thematic, narrative or discourse analysis
Figure 2.1: The research cycle

# Middle childhood 

## Sibusiso Ntshangase

## CHAPTER OBJECTIVES

After studying this chapter you should be able to:

- demonstrate a basic understanding of what middle childhood entails
- understand and discuss the factors that influence the physical development of children during middle childhood
- describe the factors that influence the social and
emotional development of children during middle childhood
- describe the factors that influence the cognitive development of children during middle childhood
- explain the risk and resilience factors that are likely to have an impact during middle childhood.

One of Nosipho's clearest and earliest memories of being a young child was her first day at primary school. She didn't think she was as frightened as she had been when she started at the educare centre, but she had vivid recollections of sitting at a desk for the first time, feeling stiff and uncomfortable. Even thinking about it now, she could still feel the tightness of her new school shoes on her feet and how the material of her dress felt strange and hard against her skin. The rest of the day was a blur, but thinking back on it, she could imagine how hard it must have been for her, a child who loved running and doing handstands, to have to sit quietly in a classroom all day.

It was really mind-blowing to think about how much she must have had to learn through those first years of school. Naturally, only some of that learning was of the kind the teachers were trying to teach. In Nosipho's mind, what stood out were not the lessons themselves, but rather some of the teachers she had liked - and those she had disliked! In particular, she remembered her Grade 5 teacher who had encouraged her to voice her opinions in class, and recalled how this had made her feel much more confident that she had felt before. She also remembered an unpleasant man who had taught her maths and put her off it altogether.

He seemed to think that only the boys needed to learn maths and teased the girls, saying they should rather concentrate on learning to cook for their husbands. Thank goodness her high school maths teacher had got her interested again and helped her to realise it was actually something she was quite good at. If she hadn't kept on with it she would not have been able to get into her psychology course!

Most of the things she remembered from primary school, though, had happened outside of the classroom. She had had a best friend, Thandi, for the first three years of school, and they had walked around the school grounds arm in arm. It was at the beginning of Grade Four that another girl had joined the pair, and she had watched jealously as Thandi got more and more friendly with her. She remembered crying one day after Thandi had finally chosen to sit next to her new friend during the break and Nosipho had found herself wondering around the playground on her own. She remembered the difficulty of trying to find her way into another group of girls, and her relief when they had finally accepted her. It was funny the way that everyone talked about childhood being such a happy time. If you thought about it, it was actually pretty difficult at times.

### 9.3 CONTROVERSIES IN THE ASSESSMENT OF PERSONALITY

Can psychological experiences be measured in the same manner as physical objects? Many psychologists believe that if a psychological phenomenon exists, it also exists in some amount and thus one should be able to measure it. Therefore all personality attributes, if they exist at all, should be observable in some way and measurable. Other psychologists dismiss this notion and are critical of the practice of reducing complex psychological experiences to a set of numbers. These psychologists feel that the quantification of personality results in a loss of meaning and may even dehumanise the person.

## Using psychological tests for job applicants

Some companies administer a battery of psychological tests to job candidates and, on the basis of their performance on these, invite some of them to be interviewed for the job. Those candidates whose scores fall in an undesirable range will not be invited for an interview. Defenders of this practice say that interviewing is a resource-intensive and time-consuming task, and therefore employers want to be reasonably sure that interview candidates are within the acceptable range in terms of their personality attributes. Opponents of this practice feel that one can only really get to know someone in a face-to-face context, and that pre-testing with personality tests is reductionist and dehumanising. They feel that the human personality exists in relation to other people, and that the interaction between the interviewer and the
candidate best represents how the candidate will perform in a work environment.

## Making psychological tests for psychologists

In psychotherapy process research the empathy of the therapist towards the client has been the focus of measurement. Many psychologists have criticised this effort, saying that empathy is an intangible phenomenon that cannot be reduced to a single number. Yet, it may be said that therapist A is consistently more empathetic than therapist B. This kind of statement automatically assumes some form of quantification, even if this is less precise than the measurement of length, weight or volume. Thus, those psychologists who are determined to measure as many constructs as possible, advocate the development of psychometric instruments that assess phenomena such as empathy, love and trust.

## Making psychological tests for other qualities that are difficult to measure

The questions of how to measure compatibility between romantic partners, trust between co-workers, or the bond between a parent and a child seem to defy quantification. Some psychometricians view these situations as challenges for their field, while other psychologists think that it is futile to try and measure these kinds of concepts. What do you think?
are summarised neatly in one of the most fundamental equations of classical psychometric theory:

$$
\text { observed score }=\text { true score }+ \text { error score }
$$

This equation makes an important distinction between observed scores and true scores. The score a participant obtains on a measurement scale is his/her observed score. If one person is evaluated with the same scale on a number of different occasions, it can be expected that his/her scores will not be exactly the same every time. However, they should be similar. If it were possible to evaluate a person with the scale an infinite number of times, the mean (or average) of these scores would represent his/her true score. As it is impossible to test people an infinite number of times, the true score is thought of as a hypothetical score.

There are many reasons why respondents' observed
scores might differ from their true scores. These reasons are largely due to measurement error, represented by the error score in the equation above. The relative influence of error in a set of observed scores is determined by means of a reliability coefficient.

There are four types of reliabilities: test-retest reliability, parallel-forms reliability, split-half reliability, and internal-consistency reliability.

## Test-retest reliability

Test-retest reliability is the type of reliability that is related to the degree to which individuals' scores remain constant over repeated administrations of a scale. As the name suggests, the same measurement scale is completed by the same group of people on more than one occasion. Usually, only two administrations are conducted; the second one between five and ten days after the first.

## KEY CONCEPTS

accommodation: a process in which new information transforms existing cognitive structures
achieving stage: a stage in adult thinking that occurs during young adulthood where individuals use their intellectual competencies in the areas of prob-lem-solving and decision-making
adaptation: the process whereby thinking is changed by means of assimilation, where new information is integrated into previous information, and/or accomodation, where new information changes previous information
algorithm: a step-by-step process that will always provide the solution to a problem
alignment heuristic bias: a tendency to line up two objects in a straight line close to the lines of latitude or longitude
analogy: a heuristic device that involves seeing a similarity between a current problem and one that has been encountered in the past
assimilation: the incorporation of a new object into an existing category
cognitive map: an internal representation of the spatial arrangements of the environment
concept: a mental category by which people classify objects, events, processes or abstract ideas
deduction: a form of reasoning that involves working from general statements to draw particular conclusions that are true in relation to these statements
diagnostic models: over-arching bodies of knowledge that are central to thinking and that enable the evaluation of important phenomena
everyday thinking: the kind of thinking that occurs as we deal with the mundane, practical things of life
executive stage: a stage in adult thinking where, through increasing knowledge, individuals in middle adulthood learn to apply their problem-solving and decision-making skills to management situations, such as in their families, careers and the broader community
functional fixedness: a barrier to problem-solving that occurs when problem-solvers focus on a particular characteristic of an object, and fail to see alternative characteristics of the object that would assist in solving the problem at hand
heuristic: a short-cut method to problem-solving that reduces the problem space and often, but not always, works
induction: a form of reasoning that draws conclusions from particular cases, and is based on relationships between real events
information-processing approach: a major perspective in cognitive psychology where the computer is thought to be a useful metaphor for understanding how humans process information
means-end analysis: a heuristic strategy that involves breaking down a problem into a series of sub-problems
mental set: a barrier to problem-solving that occurs when problem-solvers continue to use the same solution they have used with previous problems, even though there may be more efficient ways of solving a particular problem
problem space: the starting state and the end state of a problem
prototype: a representative example of an object, event, abstract idea or process
reasoning: systematically drawing conclusions from statements or facts
reintegration stage: a stage in adult thinking during old age where individuals use their accumulated intellectual skills to assess life and to give meaning to their pasts
representation: when something stands in for or refers to the thing a person is thinking about
responsibility stage: a stage in adult thinking where individuals use their own solutions, not only for personal and career decisions, but also for prob-lem-solving and decision-making that involves, for example, their families and the broader community rotation heuristic bias: when figures that are slightly tilted are 'seen' as more vertical or more horizontal than they really are
schemas: the more over-arching networks of knowledge that are central in our thinking
script: one kind of schema or network of knowledge about procedures, sequences of events or processes
socio-historical approach: an approach to thinking that suggests that thinking is a social process and linked to the interaction between the individual and the setting in which the thinking occurs
state-action analysis: a description of the states, steps and strategies taken within a problem space
syllogism: a particular form of deductive reasoning that has two premises (propositions) that are followed by a conclusion

