CHAPTER 3

METHODOLOGY

3.1. RESEARCH DESIGN

A quantitative descriptive cross sectional study with an analytical design using record review was used to investigate several characteristics of record keeping.

A cross sectional study was appropriate as it aims to describe a relationship in a specified sample at a particular time, without regard for what may have preceded the study. It is not meant to establish causal relationships or distinguish between newly or long-established practices. The method allows one to measure the frequency of the variables (items within the checklist and questionnaire) and demonstrate associations between variables. They cannot identify cause-and-effect relationships[41].

Cross-sectional studies and record reviews are a useful way to gather information on people's knowledge, attitudes, and practices as required for this research[41].

The study was done in three parts:

Part 1: Development of a Checklist

A checklist based on literature, requirements of the education department and legal requirements was developed to evaluate existing clinical occupational therapy records in LSEN schools.

Part 2: Audit of Clinical Records

An audit of the clinical occupational therapy records in LSEN Schools in the Western Cape in terms of what records are kept and the quality of the records was done. A new adjusted checklist for future use was drawn up, based on the information gathered.

Part 3: Role and Importance of record keeping in Occupational Therapy

A questionnaire to evaluate the roles in record keeping played by occupational therapists employed as education therapists at the schools was drawn up. This

included questions in which the therapists were requested to grade each item on the questionnaire according to its level of importance in maintaining records. The questionnaire reflected the same items used on the checklist for the evaluation the records.

All the data was combined to recommend the type and quality of record keeping that should be included in the job description of occupational therapists working in schools in the Western Cape.

3.2. ETHICAL CONSIDERATIONS

Ethical clearance was applied for and received from the Ethics Committee for Research on Human Subjects at the University of the Witwatersrand - Reference R14/49, Protocol number M060415 (Appendix A).

The application to conduct research in public schools in the Western Cape was obtained from the Western Cape Education Department on 9 March 2007 (Appendix B).

The principals of the schools and the occupational therapists were invited to take part in the study. An information sheet was provided before informed consent (Appendix C) was obtained from the occupational therapists and principals of the selected schools to use their clinical occupational therapy records as well as requesting the occupational therapists to complete a questionnaire.

Confidentiality was ensured as no identifying information from the schools, occupational therapists or the learner's files was documented. The researcher only documented whether the information was present or not. The name of the occupational therapist, learner and school were recorded separately with the same code as that on the data collection sheet. Only the researcher had access to this information.

Participation was voluntary and occupational therapists could withdraw at any time from the research project if they no longer wished to participate. Withdrawing had no consequences to them. This was made known to the participants in the information and consent letter.

Feedback regarding the results of the research will be given to each of the participating schools as well as to the Western Cape Education Department.

3.3. PART 1: DEVELOPMENT OF A CHECKLIST

3.3.1. Development of the Measurement Tools

The checklist (Appendix D) and questionnaire (Appendix E) were developed through a critical review of literature concerning record keeping by health professionals and educators. The literature included journal articles, books, internet resources as well as official documentation from the education and health departments e.g. White Paper 6, Integrated Quality Management System and legal requirements for the keeping and storing of records. The literature was reviewed critically to ensure that it is valid and reliable before being included in the checklist.

As there was little literature regarding record keeping in occupational therapy the researcher made use of the following literature to develop the checklist:

- Research regarding record keeping in other medical fields like nursing, as well as in the field of education.
- The role of the occupational therapist within schools.

The format of the checklist was similar to that suggested by Prabst-Hunt [42] The checklist and questionnaire contained the same items.

3.3.2. Pilot Study on the Checklist and Questionnaire

In order to make the checklist and the questionnaire valid the following guidelines were followed in the development of instruments.

- The use of simple language, without medical or educational jargon, which could be understood by all occupational therapists.

- Being clear and very specific so that each item could not be interpreted in different ways.
- Asking only one question at a time.
- Ensuring that questions do not contain negatives.

Basing the checklist and questionnaire on the literature reviewed, ensured construct validity. The following sections were therefore included in the checklist and questionnaire:

- Personal information – this included aspects such as the learner's gender, date of birth, address, language, population group, religion, referral information, grade, academic results, interests, extra-mural participation, discipline and the occupational therapist's name.

  This information is included because traditional record keeping most often includes student demographics, grades, test scores and attendance to therapy[31]. The occupational therapist's role includes the academic, administrative, educational and disciplinary aspects that form the part of any health professionals' responsibilities as well as the added obligations of organising extra-curricular and co-curricular activities to promote education of learners[5].

- Socio-economic information – this includes aspects such as parent information, sibling information, financial support and type of dwelling.

  This information is required in order to provide community-based, family-centred services and to ensure continuity of care, minimise service fragmentation and increase service co-ordination[14]. Therapists must respond to ongoing implementation of family-centred services and changing population demographics[14].

- Medical history – this includes aspects such as diagnosis, pregnancy and birth history, developmental milestones, operations, illnesses, health status and allergies.

Occupational therapists are responsible to prevent secondary disabilities by focusing on teaching healthy behaviour and self-advocacy as part of the therapeutic process[14].

- Assessments – this includes aspects such as referral information, pre-admission assessments, screening, type of assessment, whether standardized and non-standardized assessments are reported in full, recommendations, interviews, teacher's expectations and identifying obstacles.

  Additional information gathered from learners, teachers and parents should also be recorded as this could help the therapist in the targeting of appropriate services and support[31].

- Treatment plan – this includes aspects such as identifying problems and strengths, outcomes, goals and objectives, client's aims, progress records, annual reports, user satisfaction, provision of equipment, home programs, collaboration with other professionals, contribution to IEP and type of service delivery.

  This information is included because occupational therapists are required to monitor progress, develop home and class programs and issue equipment[14]. Occupational therapists should use records of the functional outcomes of treatment as a framework for daily practice, to determine the effectiveness of specific interventions and as a guide for clinical decision-making[14].

- Treatment sessions – this includes aspects such as date, time and duration of sessions, group or individual sessions, aims, behaviour, activities used, performance of activities, re-evaluations and attendance.

  This information is included because the occupational therapist's current role is to provide direct intervention and consultation[14]. At present the administrative duties of an occupational therapist with regards to direct intervention, is to report on an ongoing basis on the learner's developmental progress by planning, co-ordinating, controlling, administering, evaluating

and re-evaluating therapy and making the necessary changes to the intervention strategies[5]. In order to satisfy minimum expectations, essential records containing evidence of treatment planning and learner progress should be available[34]. This data must be recorded regularly for it to be useful in decision-making[31].

- Discharge information – this includes aspects such as learner's status at the end of occupational therapy intervention as well as leaving school, placement after discharge, follow-up information, changes in status of functioning, discharge report and discharge plan.
  Discharge information is included because ooccupational therapists take responsibility in the prevention of secondary disabilities by focusing on teaching healthy behaviour and self-advocacy as part of the therapeutic process and by considering long-term benefits and outcomes[14].

- General – this includes aspects such as use of abbreviations, legibility, confidentiality, access of records and storage facilities.
  This information is included because structuring the records effectively influences the ease of information retrieval[7, 10]. Unless adequate systems are in place to file, store and retrieve records of patients, the data that contributes to the development of a standard of quality of patient care will be seriously compromised[8].

The occupational therapists were required to complete the questionnaire by grading each item on the questionnaire on a scale of 1 to 4 according to the level of importance of that item in maintaining good quality records. The checklist was completed by the researcher by indicating whether each item was present in a learner's occupational therapy file or not.

A pilot study was carried out to assess the checklist and the questionnaire for content validity. The questionnaire was completed by an experienced occupational therapist working at an LSEN school that was not one of the schools selected for the research project. This was to eliminate ambiguity and to check the content

validity and so an indication of which records were thought to be important could be established. The changes that were required was the inclusion of the item “Other” in each section of the questionnaire to enable the occupational therapists to indicate possible records that should have been included in the section.

The checklist was completed by the researcher while auditing the selected school’s clinical occupational therapy records. This allowed the researcher to establish the content validity in terms of what was important and what is actually kept in the files.

No testing of the test-retest reliability of the questionnaire was carried out but the test-retest reliability of the checklist was not at risk because of the yes/no responses required indicating records either were or were not present. As there was only one observer completing the checklist, there was no need to establish inter-rater reliability for the same reason.

3.4. PART 2: AUDIT OF CLINICAL RECORDS

The selection process of the schools and the learners' records for each selected school is described below.

3. Selection of Schools

Stratified sampling was used to select seven LSEN schools in the Western Cape that employ occupational therapists. The researcher received a list of LSEN schools in the Western Cape from the research department of the Western Cape Education Department. There are 80 LSEN Schools in the Western Cape and the list was divided into seven regions (metropoles / Education Management and Development Centres) by the education department. The researcher randomly selected one school from each region. The researcher contacted the schools to find out whether or not they employed an occupational therapist. If not, the next school on the list was contacted. Therefore a total of seven schools were selected.

The researcher ensured that the sample was balanced according to geographical and socio-economic area. Inclusion criteria needed variety in terms of:

- Education Management and Development Centres (EMDC) in which the school is situated.
- Number of therapists employed by the school – to be included in the study the school was required to employ at least one occupational therapist. The sample needed variety with regards to the amount of occupational therapists: some schools may only have one occupational therapist, but other schools that were selected should have many.
- Type of disability of learners – there should be variety in terms of the type of disability of the learners so that the study isn't limited by the occupational therapy intervention only being focused on one type of disability e.g. visual impairment.
- Learners should come from higher and lower income homes.
- Rural and urban areas – there should be variety with regards to the location of the school as well as the areas from which the learners come.

Although only five schools were required for the research project seven schools were selected in case some of the schools were unable or unwilling to participate in the research project. Therefore two additional schools were selected. A total of seven schools were selected to request permission to conduct research at the schools from the Western Cape Education Department. In order to maintain anonymity of the schools the schools were coded as School 1 to 7.

Of the seven schools approached, the occupational therapist at one school had resigned and was not replaced. The headmaster refused permission at a second school saying it would take too much time and the occupational therapists at a third school refused as they had no record keeping system in place at the time of the request. Four schools were therefore included in the research.

3.4.2. Selection of Learners Records

Stratified simple random sampling was used in order to identify which learner's records would be evaluated. Subgroups (strata) of the population were taken into

account in the analysis, the population was divided into 5 different subgroups: foundation phase, intermediate phase, senior phase, further education and training (FET) phase and previous student records. This was necessary as the level of intervention of younger learners is often different to older learners.

Some LSEN schools do not have all 5 subgroups, therefore in these schools there were fewer subgroups. In other schools, there were additional strata that were specific to that school like ”Learners on leave”. Five learners’ records from each subgroup were then selected by simple random sampling. The procedure of selecting the learners' files differed from school to school depending on the amount of files that there were. In some schools there were less than 5 files being maintained in a subgroup, therefore all the files in that subgroup were evaluated. In schools where there were more than 5 files in the subgroup then the amount of files was divided by 5 (amount of files / 5 = n), then every n^{th} file was evaluated. E.g. if there were 60 files, then every 12^{th} file was evaluated.

This implied that from a proposed sample of 20 to 25 records at each school a total of 100 to 125 records would be reviewed.

3.4.3. Research procedure

The researcher obtained a list of LSEN schools in the Western Cape from the Research Department of the Western Cape Education Department in January 2007 via telephonic and e-mail contact. With assistance from S. Olorunju (Statistician), stratified sampling was used to select 7 LSEN schools in the Western Cape that employ occupational therapists according to geographical and socio-economic area.

The researcher contacted the principals of the schools telephonically to obtain permission to conduct research in the school and to contact the occupational therapists working at the schools during March and April 2007.

The researcher contacted the occupational therapists working at the schools telephonically to obtain permission to conduct research within their department and to set appointment dates.

A letter outlining the proposed research and a letter of consent was faxed or e-mailed to the principal and occupational therapist before the appointment dates. When requested, the checklist and letter of approval from the Western Cape Education Department was also faxed or e-mailed to the school.

The researcher spent one day at each school. The first 10 to 20 minutes were spent discussing the research, what the researcher required, any questions the occupational therapists had, the role of the occupational therapists in that specific school and the method of recording data. The researcher asked for the signed informed consent form from the occupational therapist and principal.

The researcher used simple random sampling to select 5 learners' files from each subgroup and completed a checklist for each learner's file, marking "yes" if the information was present and "no" if the information was not present in the file.

3.5. PART 3: ROLE AND IMPORTANCE OF RECORD KEEPING IN OCCUPATIONAL THERAPY

Occupational therapists working at LSEN schools were approached to fill out the questionnaire on their role in record keeping and which records they thought were important to keep.

3.5.1. Research procedure

All the occupational therapists employed by the schools selected were requested to complete the questionnaire. The occupational therapists graded each item on the questionnaire on a scale of 1 to 4 according to the level of importance of that item in maintaining good quality records.

The questionnaire was used to determine what occupational therapists working at LSEN schools feel should be included in each learner's file that is kept in the Occupational Therapy Department.

The occupational therapists indicated the importance of each item on a scale of 1 to 4.

1 = This information is not important to me.
2 = This information should sometimes be recorded.
3 = This information is important to be recorded for me.
4 = This information is most important to me.

The occupational therapists were asked whether they had any questions regarding the questionnaire. If the occupational therapist had completed the questionnaire it was given to the researcher, if not the occupational therapist was asked to fax it to the researcher as soon as possible after the appointment.

3.6 DATA ANALYSIS METHODS

Data was analysed with the assistance from S. Olorunju, a statistician. The results were analysed using descriptive data from the checklist and questionnaire and used to determine if there was a difference in the type and quality in the records kept at the different schools.

The correlation between the quality of the records and what standards occupational therapists feel are important, was also determined using Pearson's correlation coefficient.

The student t test was used to establish the difference between the percentage of recorded information and the percentage that the occupational therapists indicated that this information should be recorded.