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Healthcare Transition Practices of Occupational Therapists in South African Public Healthcare Facilities

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UNIVERSITY OF THE WITWATERSRAND, JOHANNESBURG

HEALTHCARE TRANSITION PRACTICES OF OCCUPATIONAL THERAPISTS IN SOUTH AFRICAN PUBLIC HEALTHCARE FACILITIES

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A research report submitted to the Faculty of Health Sciences, School of Therapeutic Sciences, University of the Witwatersrand, Johannesburg, in partial fulfilment of the requirements for the degree of Master of Science in Occupational Therapy.

Human Ethics Clearance number: M211054

Supervisors: Mrs. Fiona Breytenbach & Dr Janine van der Linde

Johannesburg, 2024

Declaration

I, Ilhaam Hoosen, declare that this Research Report is my own, unaided work. It is being submitted for the Master of Science in Occupational Therapy degree at the University of the Witwatersrand, Johannesburg. It has not been submitted before for any degree or examination at any other University.



_____

Signature of candidate
30th day of June 2024 in Pretoria

Abstract

Introduction

Healthcare transition (HCT) is the process of transitioning an adolescent from family-centred paediatric models of care, to adult models of care that involve greater autonomy of the adolescent. This process is vital for improving the long-term health of adolescents with chronic conditions. The role of occupational therapy in HCT has not been well researched. This is necessary to ensure that adolescents have coordinated, optimal and uninterrupted access to appropriate occupational therapy services throughout this period of development. This research study aims to describe the healthcare transition practices used by occupational therapists in South African public healthcare facilities when transitioning service-users from paediatric to adult-oriented services.

Methods

The study utilised a quantitative, non-experimental, descriptive cross-sectional design. Simple convenience and snowballing sampling were used to recruit participants via professional databases and social media forums. An online survey was used to collect and store data within an access-controlled and encrypted REDCap account. Descriptive statistics and simple content analysis was used to analyse the information.

Results

Sixty-five responses for this study were received between January and June 2023 (response rate: 5.3%). The study reveals limitations in the understanding and practical application of HCT concepts. Implementation of HCT appears to be characterised by the use of no (29%) or minimal (42%) policy on HCT, with 66% of participants using age as the primary factor in determining transition readiness. Over 60% of participants indicated that adolescents and caregivers are not involved in HCT process and that HCT outcomes are not formally measured. Participants highlighted the need for improved training and policy development to support HCT implementation within South African occupational therapy practice.

Conclusion

There is a need for the development of training programmes and practice guidelines to optimise and standardise the HCT practice of occupational therapists in South African public healthcare facilities. These should be developed in collaboration with service-users and caregivers, and should include tools to identify transition readiness, guide the process of transition and evaluate outcomes of transition.

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Table of Contents

Declaration ii

Abstract iii

Acknowledgements iv

Table of Contents v

List of Tables x

List of Figures xi

List of Appendices xii

List of Abbreviations xiii

Operational Definitions xiv

Chapter 1 Introduction, Literature Review, and Methods 1

1.1. Introduction 1

1.1.1. Introduction to the study 1

1.1.2. Statement of the problem 3

1.1.3. Purpose of the study 3

1.1.4. Research question 4

1.1.5. Aim of the study 4

1.1.6. Objectives of the study 4

1.1.7. Justification of the study 4

1.1.8. Outline of this research report 5

1.2. Literature Review 5

1.2.1. Introduction to the literature review 5

1.2.2. The concept of healthcare transition 6

1.2.2.1. Definitions and historical emergence of Healthcare Transition 7

1.2.2.2. Need for Healthcare Transition 7

1.2.2.3. Challenges of Healthcare Transition 9

1.2.3. Healthcare transition practices globally 12

1.2.3.1. Age of transition 13

1.2.3.2. HCT Policies and guidelines to facilitate successful transition 14

1.2.3.3. Transition Models 16

1.2.3.4. An HCT guideline for resource-limited settings 19
1.2.4. Healthcare transition in the South African healthcare context 20
1.2.4.1. Historical influences on SA healthcare sector 20
1.2.4.2. Public Health in South Africa 21
1.2.4.3. Adolescent Health in South Africa 22
1.2.4.4. Policies and Guidelines for promoting adolescent health in South Africa 24
1.2.5. Healthcare transition in occupational therapy 25
1.2.5.1. Occupational therapy philosophy 25
1.2.5.2. Occupational therapy role in adolescence 26
1.2.5.3. Best practice guidelines on HCT for Occupational Therapy Practitioners 27
1.2.5.4. Global Occupational Therapy HCT Practices 29
1.2.5.5. South African Occupational therapy healthcare transition practices 29
1.2.6. Conclusion of literature review 30
1.3. Methods 30
1.3.1. Study design 30
1.3.2. Study setting 31
1.3.3. Participants 31
1.3.3.1. Population 31
1.3.3.2. Sample selection 32
1.3.3.3. Sampling method 32
1.3.3.4. Sample size: 32
1.3.4. Procedure of data collection 33
1.3.4.1. Instrumentation 33
1.3.4.2. Process 34
1.3.4.3. Data management 35
1.3.5. Ethical considerations 36
1.3.6. Data analyses 36
1.3.7. Rigour of research 37
1.3.8. Translation and Dissemination 37
Chapter 2 Submissible Manuscript 39
2.1. Manuscript Details 39
2.2. Details of Author contribution 39

2.3. Abstract 40
2.3.1. Background 40
2.3.2. Objectives 40
2.3.3. Methods 40
2.3.4. Results 40
2.3.4. Conclusion 40
2.3.5. Contribution 40
2.4. Introduction 41
2.5. Research Methods and Design 42
2.5.1. Study design 42
2.5.2. Population and sampling 42
2.5.3. Inclusion criteria and sample composition 43
2.5.4. Data Collection 43
2.5.5. Ethical considerations for research with human participants 44
2.5.6. Data analysis 44
2.5.7. Rigour of the study 44
2.6. Results 45
2.6.1. Section 1: Demographic Profile 46
2.6.2. Section 2: HCP understanding of HCT concepts and processes 48
2.6.2.1. Self-perceived awareness and knowledge of HCT 49
2.6.2.2. Understanding of core HCT concepts 49
2.6.3 Section 3: HCT practices of occupational therapists 50
2.6.3.1. Policies used to guide the HCT process: 52
2.6.3.2. Planning and preparation for transition: 52
2.6.3.3.Determining transition readiness: 53
2.6.3.4. Collaboration between paediatric- and adult-oriented therapists: 53
2.6.3.5. SU and caregiver involvement in reviewing HCT process 53
2.6.3.6. Measuring outcomes of HCT process 53
2.6.4. Section 4: Factors that promote or hinder the success of HCT within occupational therapy services in South African public healthcare facilities. 54
2.7. Discussion 55

2.7.1. Demographic profile of participants 55
2.7.2. Perceptions and understanding of HCT: 56
2.7.3. Current practices of occupational therapists in South African public healthcare facilities: 57
2.7.3.1. Discrepancy between perception of HCT and current practice 57
2.7.3.2. Current HCT practice pathways 58
2.7.4. Factors that promote and hinder HCT 61
2.7.4.1. Policy and guidelines 61
2.7.4.2. Other factors promoting the HCT process 63
2.7.4.3. Other hindrances to the HCT process 65
2.7.5. Current HCT practice as compared to best practice guidelines 66
2.8. Strengths and Limitations 66
2.8.1. Strengths 66
2.8.2. Limitations 67
2.9. Recommendations 67
2.10. Conclusion 67
2.11. Acknowledgements 68
2.12. Competing interests 68
2.13. Authors' contributions 68
2.14. Funding: 68
2.15 Data availability 68
2.16 Disclaimer 68
2.17. References 69
Chapter 3 Synthesis 75
3.1. Strengths and limitations 75
3.1.1. Strengths 75
3.1.2. Limitations 75
3.2. Recommendations 76
3.3. Conclusion 76
References 77

APPENDIX A: LITERATURE REVIEW MATRIX EXAMPLE AND CONCEPT MAP 89
APPENDIX B: PILOT STUDY FEEDBACK 92
APPENDIX C: HEALTHCARE TRANSITION PRACTICES QUESTIONNAIRE 123
APPENDIX D: PARTICIPANT INFORMATION SHEET AND CONSENT FORMS 134
APPENDIX E: ETHICAL CLEARANCE CERTIFICATE 136
APPENDIX F: CONTENT VALIDITY CALCULATIONS BASED ON PILOT STUDY RESULTS 138
APPENDIX G: AFRICAN JOURNAL OF DISABILITY SUBMISSION GUIDELINES 140
APPENDIX H: FULL TABLES OF RESULTS 143
APPENDIX I: SUBMISSION TO AFRICAN JOURNAL OF DISABILITY 146
APPENDIX I: PLAGIARISM DECLARATION 147
APPENDIX K: TURNITIN REPORT 148

List of Tables

TABLE 1-1: QUESTIONNAIRE DESIGN..... 33

TABLE 2-1: DETAILS OF AUTHOR CONTRIBUTIONS..... 39

TABLE 2-2: DEMOGRAPHIC PROFILE OF OCCUPATIONAL THERAPISTS WHO PARTICIPATED IN STUDY (N=65) (SUMMARISED) 46

TABLE 2-3: CURRENT HCT PRACTICES OF OCCUPATIONAL THERAPISTS IN SOUTH AFRICAN PUBLIC HEALTHCARE FACILITIES (SUMMARISED) (N=41)..... 50

APPENDIX - TABLE 1: DEMOGRAPHIC PROFILE OF OCCUPATIONAL THERAPISTS WHO PARTICIPATED IN STUDY (FULL TABLE)..... 143

APPENDIX - TABLE 2: SOURCES OF PARTICIPANT UNDERSTANDING OF HCT (FULL TABLE) 144

APPENDIX - TABLE 3: CURRENT HCT PRACTICES OF OCCUPATIONAL THERAPISTS IN SOUTH AFRICAN PUBLIC HOSPITALS (FULL TABLE)..... 144

List of Figures

FIGURE 1-1 OUTLINE OF THE RESEARCH REPORT 5

FIGURE 2-1: NUMBER OF PARTICIPANTS PER SECTION 45

FIGURE 2-2: OCCUPATIONAL THERAPISTS' AWARENESS AND KNOWLEDGE OF HCT (N=52) 49

FIGURE 2-3: OCCUPATIONAL THERAPISTS' PERCEPTION OF FACTORS THAT SHOULD INFLUENCE TIMING OF TRANSITION (N=52) 50

FIGURE 2-4: FACTORS PERCEIVED TO PROMOTE OR HINDER HCT IMPLEMENTATION BY OCCUPATIONAL THERAPISTS IN SOUTH AFRICAN PUBLIC HEALTH FACILITIES (N=41) 54

List of Appendices

APPENDIX A: LITERATURE REVIEW MATRIX EXAMPLE AND CONCEPT MAP 89

APPENDIX B: PILOT STUDY FEEDBACK 92

APPENDIX C: HEALTHCARE TRANSITION PRACTICES QUESTIONNAIRE 123

APPENDIX D: PARTICIPANT INFORMATION SHEET AND CONSENT FORMS 134

APPENDIX E: ETHICAL CLEARANCE CERTIFICATE 136

APPENDIX F: CONTENT VALIDITY CALCULATIONS BASED ON PILOT STUDY RESULTS 138

APPENDIX G: AFRICAN JOURNAL OF DISABILITY SUBMISSION GUIDELINES 140

APPENDIX H: FULL TABLES OF RESULTS 143

APPENDIX I: SUBMISSION TO AFRICAN JOURNAL OF DISABILITY 146

APPENDIX I: PLAGIARISM DECLARATION 147

APPENDIX K: TURNITIN REPORT 148

List of Abbreviations

ADHD: Attention Deficit/ Hyperactivity Disorder

ADL: Activities of Daily Living

AOTA: American Occupational Therapy Association

HCP: Healthcare Professional

HCT: Healthcare Transition

HIV/AIDS: Human Immunodeficiency Virus/ Acquired Immune Deficiency Syndrome

IADL: Instrumental Activities of Daily Living

MDT: Multi-disciplinary team

OTASA: Occupational Therapy Association of South Africa

RuReSA: Rural Rehab South Africa

WFOT: World Federation of Occupational Therapy

WHO: World Health Organisation

Operational Definitions

Transition: the process of moving from one condition or phase to another, or the passage from one stable state to the next (Lindmark, Bülow, Mårtensson, Rönning, Ahlstrand, Broström, Fransson, Fridlund, Gunnarsson, Henricsson, Kjellström & Sandgren, 2019).

Healthcare transition: the process through which children with chronic health needs can be successfully transferred from child- to adult-oriented healthcare, which may or may not involve a change of healthcare provider (White & Cooley, 2018). This process takes into consideration the medical, psychological, social, educational and vocational needs of young people with chronic conditions (Blum, Garell, Hodgman, Jorissen, Okinow, Orr & Slap, 1993).

Child-oriented healthcare: family-orientated care that involves a more paternalistic, highly supervised approach to healthcare and includes a focus on school and general development (Robertson, 2006; Castillo & Kitsos, 2017).

Adult-oriented healthcare: individual-focused care that involves shared decisions with the patient, less supervision and a focus on adult roles and vocation (Robertson, 2006; Castillo & Kitsos, 2017).

Adolescence: the period between childhood and adulthood, in which young people experience significant biological, physical, emotional, social and cognitive changes and begin to develop their identity and roles in society (Toska, Hodes, Cluver, Atujuna & Laurenzi, 2019). Adolescence is defined by Statistics South Africa and the World Health Organisation as the age between 10 and 19, but it is recommended that adolescence be broadened to young adolescence (age10-14), middle adolescence (age 15-19) and late adolescence (age 20-24) as youth show growing tendencies to adopt adult roles later in life (Kinghorn, Shanaube, Toska, Cluver & Bekker, 2018a).

Occupational therapy: a profession centred around improving the health and wellbeing of people through occupation, by enabling people to take part in everyday activities that they are required to do or want to do (World Federation of Occupational Therapists, 2012).

Multidisciplinary team: A group of professionals from different disciplines who work together to decide on the intervention strategy provided to patients (National Health Service, 2022).

Chapter 1 Introduction, Literature Review, and Methods

1.1. Introduction

1.1.1. Introduction to the study

Healthcare transition (HCT) is the process of transferring an adolescent from child-oriented to adult-oriented healthcare in an uninterrupted, developmentally appropriate and coordinated manner (Blum *et al.*, 1993; Hasegawa & Gleeson, 2018). The process of HCT bridges the gap between supervised, family-centred paediatric-oriented care, to an adult-centred model in which the adolescent has increased autonomy over their own healthcare. This process may or may not involve a change in healthcare provider. The success of this process is vital for optimal, long-term health of adolescents with chronic health conditions (Gabriel, McManus, Rogers & White, 2017).

HCT services are usually required when service-users with chronic health needs reach adolescence, which spans the gap between childhood and adulthood. Adolescence is a period of tremendous change in physical, mental, emotional and social development in which occupational identity develops and adolescents begin establishing valued roles in society (Levanon-Erez, Cohen, Traub Bar-Ilan & Maeir, 2017; Toska *et al.*, 2019). For adolescents with chronic health conditions, presence of an illness or disability may result in difficulty participating fully in the meaningful activities that make up each life role. Occupational therapy plays a vital role in facilitating the functional independence of adolescents in these chosen roles, thereby ensuring they are able to make a meaningful contribution to their society (Clarkson, Boshoff & Kernot, 2021). Occupational therapy also has a significant role to play in fostering the development of autonomy and self-management skills in adolescents, so that they are better able to manage their health needs as they enter adulthood. For this reason, an effective HCT process is important for the provision of continuous and developmentally appropriate occupational therapy services.

Emerging studies on HCT indicate many challenges experienced throughout the process, both globally and in the South African setting (Stewart, Stavness, King, Antle & Law, 2006; Betz, Lobo, Nehring & Bui, 2013; Westwood, Langerak & Fieggen, 2014; Kung, Wallace, Snyder, Robson, Mabud, Kalombo & Bekker, 2016; Zanoni, Archary, Sibaya, Musinguzi & Haberer, 2020). These include a lack of standardised protocols, implementation guidelines and funding models for HCT (Betz, 2017; Hobart & Phan, 2019). In South Africa, some studies indicate that the transition of many adolescents to adult-oriented care remains an age-related abrupt shift (Westwood *et al.*, 2014; Zanoni *et al.*, 2020). Other studies indicate that clinicians have begun to apply more stringent clinical reasoning to the transition process, including identifying

transition readiness, and providing counselling and education (Haghighat, Toska, Cluver, Gulaid, Mark & Bains, 2019; Zanoni, Archary, Sibaya, Musinguzi, Kelley, McManus & Haberer, 2021).

In the South African context, the majority of HCT research is in the fields of medicine and Human Immunodeficiency Virus (HIV), as adolescents with HIV form a large proportion of the population needing HCT. (Kung *et al.*, 2016; Haghighat *et al.*, 2019; Zanoni *et al.*, 2020). A major barrier to the implementation of HCT in South Africa is the lack of research and policies around the transition process, which affects the availability of funding for and training in HCT. Insufficient monitoring and development of HCT practices can result in a lack of standardisation in practice and insufficient support being provided to adolescents at a critical stage of development (Westwood *et al.*, 2014; Kung *et al.*, 2016). In Africa, approximately 10% of adolescents with HIV die during the transition from paediatric to adult care, which is often linked to failure to follow-up with health services or poor adherence to antiretroviral therapy (Abaka & Nutor, 2021).

Occupational therapy services have a valuable role to play in adolescence, to prevent loss of function and improve overall health outcomes for adolescents with special health needs (American Occupational Therapy Association, 2018; Clarkson *et al.*, 2021). Occupational therapists work with service-users throughout the lifespan who experience barriers to engagement in meaningful occupation as a result of illness or injury (Kielhofner, 2009; World Federation of Occupational Therapists, 2012; American Occupational Therapy Association, 2020). Occupational therapists are experts in analysing the fit between the person, the environment and the occupation, to ensure that the person is able to fulfil expected and desired life roles. One of the areas in which occupational therapy can intervene is the development of health management skills. Through this process, occupational therapists can identify an adolescent's readiness for HCT and prepare them for the challenges of managing their own healthcare. This skill positions occupational therapy as not only a valuable member of the HCT team, but as a potential coordinator of the HCT process within the MDT.

While HCT literature has grown significantly in recent years, the vast majority of HCT models and guidelines have been developed in high income countries, such as the United States, Canada and the United Kingdom, limiting their use in lower- to middle-income countries such as South Africa (Jones, Ritchwood & Taggart, 2019).Existing HCT models and guidelines have been developed in other health fields, predominantly in medicine (Hobart & Phan, 2019; Kerin, Lynch & McNicholas, 2020; Pierce, Hossain & Gannon, 2020; Ritchwood, Malo, Jones, Metzger, Atujuna, Marcus, Conserve, Handler & Bekker, 2020). The role of occupational

therapy in HCT, as well as current occupational therapy HCT practices and challenges is not well documented.

1.1.2. Statement of the problem

There is no current research on the HCT practices used by occupational therapists when transitioning service-users from paediatric to adult services within South African public healthcare facilities. Current assumptions about HCT are based on anecdotal information rather than literature. While this topic is gaining momentum in other health spheres in South Africa, HCT remains relatively unfamiliar, with many healthcare professionals (HCPs) being unaware of HCT concepts and implementation guidelines (Zanoni et al, 2021). Research on HCT in the field of occupational therapy remains limited. Without current research on HCT practices in South African occupational therapy, we cannot evaluate the effectiveness of these services against best practice guidelines and formalise the role of occupational therapy in HCT. This process is essential to ensure consistent delivery of quality care (Esposito, 2014). It is therefore important that current HCT processes used by occupational therapists is investigated, so that this research can serve as a foundation for improving the continuum of occupational therapy services offered to adolescents as they transition from child-oriented to adult-oriented care.

1.1.3. Purpose of the study

This study aims to improve the body of knowledge around current HCT practices in South African occupational therapy by describing the perspectives of occupational therapists on HCT concepts, the practices used when transferring service-users from child- to adult-oriented occupational therapy within South African public healthcare facilities, and the factors that affect HCT within this context. It is necessary to explore the processes that are currently being used when transitioning service-users from child- to adult-oriented occupational therapy, so that these practices can be evaluated against best practice guidelines and current health trends. This is important for the development of successful transition programmes in the future that can be standardised across different practice settings. Adolescence, the critical stage of development in which HCT occurs, is the period in which adolescents establish the foundations of their future health behaviour and life roles (Levanon-Erez *et al.*, 2017; Kinghorn, Shanaube, Toska, Cluver & Bekker, 2018b). Occupational therapy plays an important role in these processes (Clarkson *et al.*, 2021). Hence, it is important that adolescents are able to have coordinated and uninterrupted access to appropriate occupational therapy services throughout this period of development. To ensure that these services are in line with global advances in HCT, it is important that these practices are investigated. For this reason, this study aims to describe current occupational therapy practice in HCT and provide an overview

of the perceived factors affecting optimal HCT. This will provide a baseline upon which HCT programmes can be built or improved in the future.

This study provides novel data on HCT within the context of South African occupational therapy. This can serve as the foundation for future research on the topic, which can potentially be integrated into the educational curriculum for training of occupational therapists in the future. This study may also serve as a starting point for the development of policy on HCT, in collaboration with hospital management and occupational therapy heads of department, which can allow for the translation of research into practice.

1.1.4. Research question

How is HCT understood and practised by occupational therapists when transferring service users from child- to adult-oriented occupational therapy in South African public healthcare facilities, and what are the factors affecting this process?

1.1.5. Aim of the study

The aim of the study is to describe the perspectives of occupational therapists on HCT concepts, the practices used when transferring service-users from child- to adult-oriented occupational therapy within South African public healthcare facilities, and the factors that affect HCT within this context.

1.1.6. Objectives of the study

i. To describe occupational therapists' understanding of the concept of HCT in the context of South African public healthcare facilities.
ii. To describe the practices used by these occupational therapists when transitioning service-users from paediatric to adult-based services.
iii. To describe factors that promote or hinder the success of HCT within occupational therapy services in South African public healthcare facilities.

1.1.7. Justification of the study

Most studies on HCT have been conducted in the medical field, with literature on the occupational therapy role in HCT within South African healthcare institutions remaining notably absent. It is important to continuously evaluate healthcare practice to ensure consistent delivery of quality healthcare that is in line with global, national and professional standards(Esposito, 2014). In particular, many studies have stressed a need for constant evaluation, monitoring and improvement of paediatric- to adult HCT processes to bring about optimal health outcomes for young people (Okumura, Ong, Dawson, Nielson, Lewis, Richards, Brindis & Kleinhenz, 2014; Westwood *et al.*, 2014; Kung *et al.*, 2016; Quinn, Chung, Kuo,

Maslow, Ho, Schwartz & Tuchman, 2020). For this reason, it is important that HCT within South African occupational therapy practice is evaluated, because this will provide a baseline upon which HCT programmes can be further monitored and improved.

1.1.8. Outline of this research report

This research report follows a submissible manuscript format. The layout of the report is indicated below:

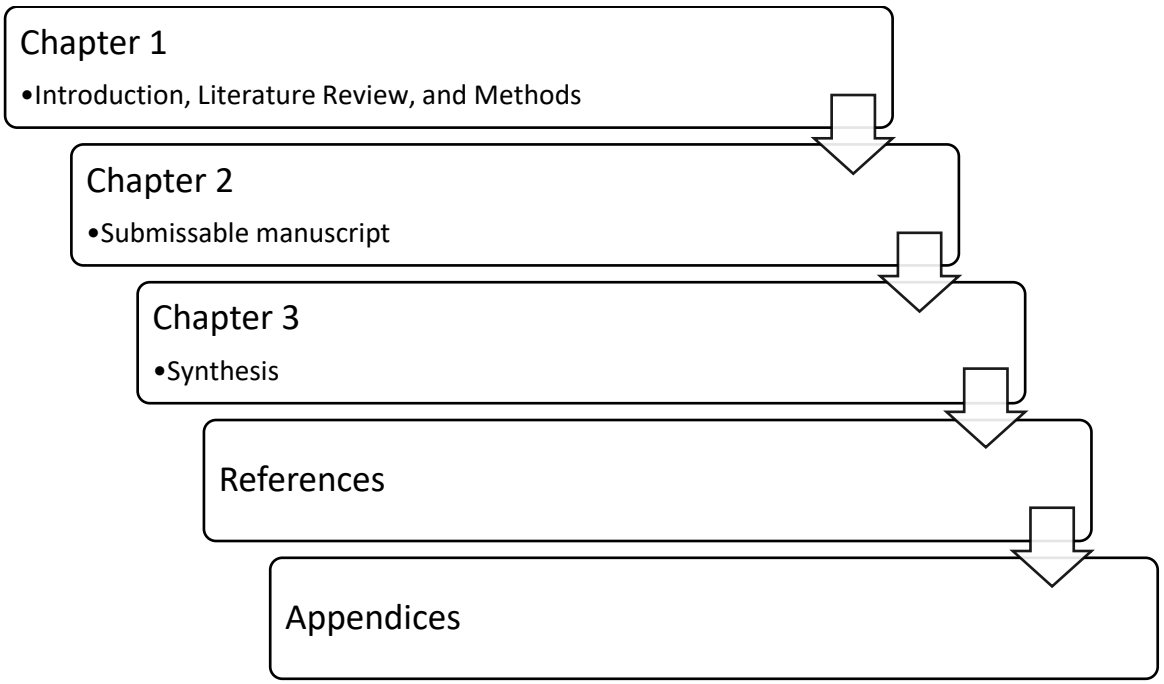


FIGURE 1-1 OUTLINE OF THE RESEARCH REPORT

1.2. Literature Review

1.2.1. Introduction to the literature review

To obtain literature on this topic, the key phrases 'healthcare transition', 'health care transition' 'adolescence', 'adolescent health' and 'paediatric to adult healthcare' were entered into EBSCO*host*, PubMed, and Google Scholar. EBSCOhost was selected as the primary search system as it was easily accessible through the university library, contained relevant databases and, like PubMed, has been found suitable for synthesising evidence (Gusenbauer,& Haddaway, 2020). While Google Scholar is not recommended as a primary search system, it was used for convenience to supplement the other two search systems. The time parameters were set at articles published between 2018 and 2022 to identify recent and relevant literature; however, older articles that were referenced by more than three recent publications were also reviewed and included. These articles included seminal literature on HCT, such as publications released by the Society of Adolescent Medicine on HCT. Literature emerging from South Africa was accepted within a wider timeframe of ten years (2013-2022), as South

African research on HCT was less readily available. The literature review was conducted in 2022; however, an additional article published in 2023 was added at a later stage due to its relevance to the topic.

Each article was summarised into a literature matrix to identify the main themes (Appendix A). The themes were then arranged into a concept map to outline the flow and content of the literature review. The core concepts of HCT are discussed first, including definitions of HCT, global trends and practices, the age of transition, benefits of HCT and challenges to its effective implementation. HCT is then discussed in the context of the South African health system, specifically, the South African public health system. Finally, HCT is discussed in the context of occupational therapy practice, both globally and within South Africa.

A trend visible in the literature is the greater amount of literature emerging from high income countries such as the United States, Canada and the United Kingdom, as compared to lower income regions such as Southern Africa (Betz, O'Kane, Nehring & Lobo, 2016; Gabriel *et al.*, 2017; Hobart & Phan, 2019; Heron, Agarwal, Greenup, Maddux, Attong & Burke, 2020; Narla, Ratner, Bastos, Owusu, Osei-Bonsu & Russ, 2021). This may have implications for the application of HCT concepts guidelines in the context of South Africa, as limited literature exists in this context to guide the HCT process.

The majority of HCT research identified in the literature review, both globally and in South Africa, exists within the field of medicine. There is a notable dearth of literature emerging from the fields of rehabilitation and, more specifically, from the profession of occupational therapy. Although broader trends in the literature indicate the value of HCT (Tepper, Zaner & Ryscavage, 2017; Hobart & Phan, 2019), there is insufficient literature in the field of occupational therapy to make the same assertion. With the growing focus on evidence-based practice, the limitations in HCT research within the field of occupational therapy may have implications for the effective implementation of HCT in practice. This can have direct effects on the type and quality of occupational therapy services provided to adolescents during the transition from childhood to adulthood.

1.2.2. The concept of healthcare transition

The Society of Adolescent Medicine identified the need for HCT in 1993 with the publication of their position paper, which defined and set out guidelines for the HCT process (Blum et al.,1993). Concepts around HCT have since expanded, and guidelines have emerged to guide the HCT process.

1.2.2.1. Definitions and historical emergence of Healthcare Transition

HCT is defined by Blum et al. (1993, p570) as the: "[P]urposeful, planned movement of adolescents and young adults with chronic physical and medical conditions from child-centred to adult-oriented health care systems that is uninterrupted, coordinated, developmentally appropriate, psychosocially sound, and comprehensive." HCT may include a change in the healthcare provider (HCP), or the same HCP may accompany the adolescent through the HCT process (White & Cooley, 2018).

HCT is initiated at different times for different individuals and progresses in accordance with the adolescent's context, level of development, health condition and personal characteristics (Castillo & Kitsos, 2017; Hasegawa & Gleeson, 2018; Hobart & Phan, 2019). HCT is an active process; HCPs continuously collaborate and negotiate with adolescents, caregivers and other health professionals to provide appropriate support and health services throughout the HCT process (White & Cooley, 2018).

Adolescents with chronic illnesses or functional limitations may experience difficulty in transitioning from paediatric to adult healthcare services due to differences in services and reduced HCP support that occurs during transition (Castillo & Kitsos, 2017). For this reason, a structured HCT process is necessary. In response to the growing need for adolescent-focused care, the Society for Adolescent Medicine in the United States and Canada published a position paper of HCT in 1993 (Blum *et al.*, 1993). In this paper, HCT was described as a formal plan of care for adolescents with chronic health needs to ensure that they received long-term, uninterrupted health services as they transitioned into adult care. HCT has been integrated into healthcare in the United States and Canada over the past two decades through programmes such as the Six Core Elements (Got Transition, 2022), HCT has also been introduced into the National Health Service in the United Kingdom over the past decade through the Ready, Steady, Go, Hello programme (Nagra et al., 2015). HCT programmes and guidelines have been slower to emerge in lower-income countries; however, the past decade has seen a growing focus on HCT in Africa, particularly in the medical field, largely due to the need for transition services for youth living with HIV (Abaka and Nutor, 2021; Zanoni et al., 2021)

1.2.2.2. Need for Healthcare Transition

HCT is a process that is essential to bridge the gap between adult and paediatric health services (Betz, 2017). HCT takes into consideration the unique needs of adolescence when preparing service-users for the shift to adult models of care.

1.2.2.2.1. Needs of adolescence

The age range that defines adolescence is not consistent across the literature. Adolescence has traditionally been defined as occurring between the ages of 10 and 19 years of age, but with changes in modern lifestyle, the age of adolescence may continue into the early twenties (Toska *et al.*, 2019).

The developmental needs of adolescence must be considered when planning and implementing HCT. The period of adolescence is defined by changes in the physiological, psychosocial, neurocognitive and social development of a young person (Alderman, Breuner, Grubb, Powers, Upadhya & Wallace, 2019). Adolescence is accompanied by the onset of puberty, which includes many physical and mental changes, such as sexual maturity and identity. These changes result in a shift from dependency to autonomy. During this period, adolescents must overcome physical, social and mental challenges to succeed in activities that are valued to them (Toska *et al.*, 2019). Adolescents are at a stage of development where autonomy and achievements in vocational and recreational spheres are valued (Wan, Carey, D'Silva, Kasparian & Farrar, 2019). The presence of illness or medical conditions can hinder adolescents from developing the typical patterns of adolescence and can negatively affect the development of autonomy, vocation and relationships (Tepper *et al.*, 2017; Anderson, Sosnowy, Kuo & Shattuck, 2018). The challenges and achievements adolescents experience in vocation, relationships and recreation can contribute towards the development of identity and the formation of long-term habits.

The changes in brain development through synaptic pruning that occurs during the adolescent period results in the formation of behaviour patterns (Alderman & Breuner, 2019). Consequently, the health behaviours formed during adolescence may persist and affect lifelong quality of life (Renedo, Miles & Marston, 2020). For adolescents with chronic conditions, engaging in health-promoting activities can make them feel isolated and apart from the 'norm', which can create tension between the desire to fit in and the drive to be responsible about their health (self-actualisation vs. health promotion). This tension can result in self-stigma when young people perceive themselves as inadequate due to being unable to meet perceived demands of autonomy and productivity (Renedo *et al.*, 2020).This tension can also result in interruptions in healthcare during the period (Ritchwood *et al.*, 2020). Adolescents with chronic illnesses may need more support to negotiate between health roles and other life roles, and maintain health behaviours (Blum *et al.*, 1993; Jones *et al.*, 2019). Paediatric models of health do not sufficiently support these specific developmental needs of adolescents, leaving adolescents unprepared for the shift to adult healthcare (Betz, 2017).

Responsibility and autonomy in health decisions is further encouraged by the change in legal status at age 18 (Alderman *et al.*, 2019). Once adolescents are classified as adults, privacy and confidentiality requirements may also change, necessitating changes in the way HCPs engage with adolescents (Bailey, O'Connell & Pearce, 2003; Mbalinda et al., 2021). To successfully bridge the divide between paediatric and adult care, an HCT process is needed.

1.2.2.2.2. The benefits of appropriate HCT practices

HCT is a vital factor in improving health outcomes. Successful HCT can improve retention rate in health services, adherence to intervention, stability of medical condition, and reduced mortality (Tepper *et al.*, 2017; Ritchwood *et al.*, 2020). Successful HCT programmes also have the potential to improve health literacy and self-care skills (Tepper *et al.*, 2017).

In Africa, approximately 10% of adolescents with HIV die during the transition from paediatric to adult care, which is often linked to failure to follow-up with health services or poor adherence to antiretroviral therapy (Abaka & Nutor, 2021). Engaging in the HCT process has been shown to improve the retention rates, health outcome measures and survival rates of adolescents with chronic illnesses, such as HIV (Ritchwood *et al.*, 2020).

The HCT process aims to improve the adolescent's ability to function within the context of adulthood. Among the skills that adolescents need to develop during the HCT process is self-management. This includes the ability to know when and how to disclose information about their condition to others, and how to access services they require (Betz, 2017). Part of being able to manage their own healthcare also involves developing the skills needed to live a meaningful life with a chronic illness or condition. Successful HCT can promote the development of self-discipline in adolescents by challenging them to take responsibility for their own health. This can have a beneficial impact on other adolescent life roles, such as education and social engagement (Renedo *et al.*, 2020).

1.2.2.3. Challenges of Healthcare Transition

HCT has many challenges that affect its implementation, which are demonstrated extensively in available literature on HCT. These challenges can affect the quality of HCT services, and can negatively affect the health outcomes of adolescents with chronic conditions.

1.2.2.3.1. Access to HCT Services

Unavailability and inaccessibility of HCT services remains a major challenge. Adolescents often have difficulties obtaining referrals to adult care due to lack of equivalent adult services or poor paediatric-adult HCP collaboration (Minnesota Department of Health, 2019; Price, Janssens, Woodley, Allwood & Ford, 2019). Adolescents with Attention Deficit/Hyperactivity

Disorder (ADHD) are sometimes discharged once weaned off their medication, or are discharged to unspecialised general practitioners rather than being transitioned to an equally specialised adult practitioner (Price *et al.*, 2019). The absence of equivalent adult practitioners can be partially attributed to a lack of training of HCPs in HCT. Training in HCT is not part of health training in many institutions; as a result, many HCPs feel unprepared for engaging in the HCT process (Anderson *et al.*, 2018; Sadun, Chung, Pollock & Maslow, 2019). The lack of confidence in HCT can result in unwillingness to assume roles in HCT, which can affect the availability of HCT services.

Inaccessibility to HCT services can be exacerbated by socioeconomic conditions. Studies show that youth from lower socioeconomic backgrounds tend to have lower retention rates and adherence to intervention (Tepper *et al.*, 2017). This may be due to transportation difficulties, lack of medical insurance, or a prioritisation of other basic needs, such as food or housing, over medical care (Tepper *et al.*, 2017; Hobart & Phan, 2019; Narla *et al.*, 2021). Racial disparities have also been identified in HCT, with white patients showing higher rates of healthcare system utilisation compared to other race groups (Hobart & Phan, 2019). The lack of funding allocated to HCT is another barrier to the accessibility of HCT programmes (Castillo & Kitsos, 2017; Minnesota Department of Health, 2019). Funding is necessary for training of HCPs, development of resources and for running HCT programmes.

1.2.2.3.2. Intrinsic barriers to HCT

The developmental period during which HCT occurs can also challenge the success of the HCT process. HCT occurs during a time when adolescents are already undergoing many other life transitions (Kerin *et al.*, 2020). The developmental stage of adolescence is characterised by changes in lifestyle and relationships, which can increase psychosocial stress and lead to anxiety, depression and risky behaviours (Pierce *et al.*, 2020). The additional change of clinics can be an additional stressor during this period (Kerin *et al.*, 2020). For adolescents with chronic illnesses, psychosocial stressors may be more prevalent and can negatively affect health literacy and engagement in HCT (Tepper *et al.*, 2017). Adolescents with chronic illness may also experience physical, neurocognitive or psychosocial difficulties associated with their condition. These may affect the adolescent's ability to learn and manage their own healthcare (Jones *et al.*, 2019). HCT in HIV has additional challenges that hinder efficacy of the transition process. One of the most prominent barriers to HCT in HIV is the stigma surrounding the disease, which can prevent adolescents from seeking healthcare (Tepper *et al.*, 2017).

1.2.2.3.3. Discrepancies in care between paediatric and adult services

Discrepancies exist in the services provided in paediatric care, as compared to adult care. Adolescents transitioning from paediatric to adult care experience lack of preparation for the transition, which is often accompanied by an abrupt reduction in HCP support (Jones *et al.*, 2019; Wan *et al.*, 2019; Halyard, Doraivelu, Camacho-González, Río & Hussen, 2021). Adult clinics are usually larger and busier, and may lack support structures, such as peer support groups(Jones *et al.*, 2019).

In Africa, many adolescents with HIV discontinue intervention during the transition process, or fail to follow-up due to the stark differences between paediatric and adult care (Mbalinda *et al.*, 2021). Adolescents reported anxiety around stigma, loss of confidentiality and loss of peer support when transitioning to adult clinics (Abaka & Nutor, 2021; Mbalinda *et al.*, 2021). The lack of support and perceived inability to meet the demands of adult care can cause younger patients to be more likely to miss appointments and reduces patient retention (Wan *et al.*, 2019; Overbury, Huynh, Bohnsack, Frech & Hersh, 2021).

The bond created between paediatric clinics and adolescents can also pose a challenge to HCT. HCPs are sometimes reluctant to discharge adolescents into adult care due to the rapport developed between the adolescent and the paediatric team (Tepper *et al.*, 2017; Jones *et al.*, 2019). Similarly, adolescents are often reluctant to leave the paediatric clinic due to the degree of support received from adolescent clinics (Jones *et al.*, 2019).

1.2.2.3.4. Communication barriers

The discrepancies between paediatric and adult healthcare services are exacerbated by a lack of communication between adult and paediatric HCPs, which is critical for a seamless transition. Collaboration is necessary for HCPs to have a broad and holistic understanding of the adolescent's history and needs (Kerin, Lynch & McNicholas, 2020; Ritchwood et al., 2020).

Communication barriers are not limited to professional communication. Studies show the consultation with adolescents and parents is often not optimised during the HCT process, which can cause confusion and impede the transition period (Jones *et al.*, 2019). A study in Florida, USA revealed that no discussions usually occurred prior to the transition being initiated (Heron *et al.*, 2020). In a systematic review of HCT in ADHD, young people, caregivers and adolescents reported that insufficient information was provided by clinicians on HCT and they felt inadequately prepared for transition (Price *et al.*, 2019). Participants in this review felt that they required more information on what services would be provided and where to access these services. The communication challenges are bidirectional; caregivers and adolescents

felt that their input was essential, but was not often sought by HCPs when planning the HCT process (Price *et al.*, 2019).

Some information is neglected in the communication between HCP and adolescent during the HCT process, such as sexual education, which is necessary considering that adolescents with disabilities have an increased risk of sexual exploitation, sexually-transmitted diseases and unplanned pregnancies (Goodwin, Swaab & Campbell, 2020).

1.2.2.3.5. Ambiguity surrounding the role of caregivers

The role of caregivers is an important component of the HCT process that can pose a challenge to HCT if not well navigated (Kerin *et al.*, 2020). Caregivers of adolescents with special health needs experience a change in the caregiver role as the adolescent begins to assume more autonomy. Caregivers report challenges in being able to balance the adolescents' need for support and autonomy (Anderson *et al.*, 2018; Kerin *et al.*, 2020). Parents may experience difficulty relinquishing the caregiver role, which can intrude on the privacy of youth during the transition process (Goodwin *et al.*, 2020). In Ghana, over-involvement of caregivers was cited as a significant challenge in the HCT process, as transition was directed by the HCP and the caregiver without considering the opinions or needs of the adolescent (Abaka & Nutor, 2021).

1.2.2.3.6. Heterogeneity of HCT programmes

The HCT approaches available display significant heterogeneity and many are not yet supported by strong evidence (Tepper *et al.*, 2017). The production of strong evidence to guide HCT is dependent on research, but research demonstrating the effectiveness of specific HCT programmes in improving health outcomes, while emerging, remains limited (Pierce *et al.*, 2020). The majority of available studies are qualitative in nature and highlight the challenges experienced by HCPs, adolescents and caregivers during the HCT process.

Guidelines on HCT are emerging, but many have notable gaps, including the role of caregivers in the HCT process, the training process for HCPs on HCT, funding models for HCT, and methods of monitoring HCT outcomes (Jones *et al.*, 2019). This results in a lack of standardisation and coordination of HCT practices (Minnesota Department of Health, 2019).

1.2.3. Healthcare transition practices globally

Globally, HCT has become more relevant as the healthcare needs of adolescents are being increasingly recognised; however, HCT practices vary in terms of when transition is initiated, what the transition process entails, and what the outcome measures are for successful HCT

(Tepper *et al.*, 2017; Wan *et al.*, 2019). Hussen et al., (2019) describe three trajectories of HCT that were identified in a United States HIV centre, and which may be useful in studying global HCT trends. The three trajectories were 1) Ideal Transition, 2) Abrupt Transition and 3) De Facto Transition. In Ideal transition, a well-planned HCT process was followed with youth who were already well engaged in paediatric care. Youth were orientated to adult care a year prior to transition and met adult HCPs for discussion around expectations of adult care. In abrupt transition, HCT discussions occurred just prior to transition or in the last paediatric session. De facto transition occurred when youth left paediatric services before HCT was discussed, and automatically entered into the adult system when the re-entered the health system. The latter two transition trajectories occurred when there was erratic engagement in healthcare prior to transition, which hindered the transition process.

1.2.3.1. Age of transition

Variance exists in the age at which HCT occurs. The age at which HCT is initiated is determined by the setting in which HCT occurs, and in many cases is not well recorded (Jarvis, Richardson, Flemming & Fraser, 2021). HCT is initiated at around 18 years of age in the UK, while in the United States, transition often occurs in the early twenties (Tepper *et al.*, 2017). In Canada, HCPs indicated that HCT should be initiated between the ages of 12 and 20, and should be completed between the ages of 17 and 26 (Kerr, Widger, Cullen-Dean, Price & O'Halloran, 2020). Castillo & Kitsos (2017) state that while the time of transition should be individualised, transition should ideally occur by 18-21 years of age.

According to the Society for Adolescent Medicine, age of the adolescent should not be the primary criterion for initiating transition; instead, transition should occur when the adolescent demonstrates sufficient ability to begin managing their own healthcare (Santelli, 2003). This point is termed transition readiness, and can vary from person to person (Hobart & Phan, 2019). The idea of the age of transition being a continuum rather than a discrete event is supported by many HCT theorists. HCT requires adolescents to remain involved and engaged in healthcare from early adolescence (age 11-14), through middle adolescence (age 15-17) and into late adolescence (age 18-21) and adulthood (22-25) (Gabriel *et al.*, 2017). Early adolescence is the age at which health behaviours are formed and adolescents begin reducing their reliance on caregivers and making their own health-related decisions. This is also the stage at which HCPs can begin discussing the transition plan and changes in health services and privacy. In middle adolescence, physical, emotional, cognitive and social skills develop and the HCP can use transition readiness scales to determine whether skills are sufficiently developed to initiate transition to adult care. In late adolescence, the health priority is to orientate the adolescent to the adult model of care, including changes in confidentiality and

the plan of care in an adult setting. In early adulthood, the HCP supports the integration of the young adult into the adult health system and the development of self-management skills (Gabriel *et al.*, 2017).

1.2.3.2. HCT Policies and guidelines to facilitate successful transition

Guidelines on HCT have begun to emerge in recent decades, the majority of which have been developed in high income countries. This may limit their suitability in lower to middle income countries, which often have different healthcare models and socioeconomic resources (Jones *et al.*, 2019). While guidelines are beginning to emerge from lower- and middle-income countries, particularly in HIV, much more research is still needed, particularly considering the high adolescent disease burden in these countries (Narla *et al.*, 2021).

The Society for Adolescent Medicine in the United States and Canada published one of the first guidelines on HCT in 1993, which is still widely used in the development of HCT programmes globally. According to these guidelines, HCT must have certain key elements in order to be effective (Blum *et al.*, 1993). These guidelines are discussed in further detail below.

1.2.3.2.1. Provision of appropriate support for transition

HCT must provide professional and environmental support for the adolescent to achieve biological, social and emotional maturation (Blum *et al.*, 1993). This can include support from HCPs, caregivers, peers or mentors, all of which can assist the adolescent to develop self-management skills and adapt better to change (Wan *et al.*, 2019; Abaka & Nutor, 2021). Peer support in particular, is associated with improved adherence to intervention and greater resilience (Jones *et al.*, 2019). Peer support was cited by adolescents as one of the most beneficial components of the transition process, as they could relate to and learn from others who had experienced the same conditions and processes (Abaka & Nutor, 2021).

Part of providing appropriate support is ensuring that HCT services are culturally appropriate and meet the needs of the adolescent population (Minnesota Department of Health, 2019). If youth understand and resonate with the HCT process, they are more likely to maintain good health behaviours (Minnesota Department of Health, 2019).

To be successful, the HCT programme must consider the individualised personal and health needs of the adolescent to assess and develop transition readiness (Tepper *et al.*, 2017). The adolescent's readiness for transition has been identified as one of the key factors influencing success of the HCT process(Ritchwood *et al.*, 2020). The process of ensuring transition readiness involves discussion with the adolescent on the process and expectations of transition, meetings with the adult HCP before transition (if change in HCP is involved) and

orientation to the adult clinic (Ritchwood *et al.*, 2020). The education provided to the adolescent during this process should include information about the medical diagnosis and the intervention that will be received. Guidance must also be provided on how to navigate the healthcare system, including information on health insurance and making appointments. Information should also include stress management and life skills training, which can improve transition outcomes (Jones *et al.*, 2019).

1.2.3.2.2. Involvement of multidisciplinary services

HCT must involve the multidisciplinary team so that organised, holistic services can be provided(Blum *et al.*, 1993). The HCT approaches that have shown success in recent years are those that incorporate a multidisciplinary approach (Tepper *et al.*, 2017). Integrated MDT services should include mental health, reproductive health, dental and pharmaceutical services, as these are linked to improved retention and success of HCT (Jones *et al.*, 2019).

Collaboration should also be present between paediatric and adult HCPs and health settings (Blum *et al.*, 1993). The coordination of care between paediatric and adult HCPs is one of the most important predictors of successful HCT (Hobart & Phan, 2019). HCT programmes that emphasise early integration of the adult team and constant clear collaboration between paediatric and adult services in the transition process have been shown to achieve greater success (Tepper *et al.*, 2017). This should include joint sessions and pre-transition meetings involving adolescents and clinicians from both health spheres(Jones *et al.*, 2019). Collaboration is essential to improve overall understanding of how childhood conditions can manifest in adolescence and adulthood (Blum *et al.*, 1993). This understanding is critical for both health settings to be able to cater appropriately to the changing psychosocial capacity of adolescents. To improve understanding of adolescent health and to improve collaboration, adequate training and inter-clinic protocols are necessary for HCPs in both spheres of health care (Hobart & Phan, 2019; Ritchwood *et al.*, 2020).

1.2.3.2.3. Provision of opportunities for self-management in healthcare

Adolescents must be given increasing opportunities to make decisions about their healthcare and to take responsibility for their healthcare (Blum *et al.*, 1993). Adolescents should be included in decision-making around the HCT process, including the degree of support that is needed (Hasegawa & Gleeson, 2018). The degree of HCP and family support provided to adolescents must also be negotiated according to the capacity of the adolescent so that appropriate support is provided throughout the transition process (Blum *et al.*, 1993; Jones *et al.*, 2019). The role of the caregiver must be clearly discussed so that they can appropriately support the adolescent's decision-making and autonomy (Hobart & Phan, 2019).

1.2.3.2.4. Government or institution-level support should be present

Blum et al., (1993) recommend that transition programmes need to be supported at a government or institution level. This is important to allow for the development of large-scale funding models that can ensure adequate financial resources and operationalization of HCT programmes (Blum *et al.*, 1993; Castillo & Kitsos, 2017; Anderson *et al.*, 2018; Hobart & Phan, 2019). Hasegawa & Gleeson (2018) recommend that HCT should be part of hospital standard operating protocols, involving input from senior executives, administrative staff, and both paediatric and adult clinics. They recommend that data should be collected at an institutional level to establish efficacy of the chosen HCT model. Part of the HCT plan should include training of all clinical staff on adolescent health and development (Anderson *et al.*, 2018; Jones *et al.*, 2019). Training should also equip HCPs with expertise on maintaining the confidentiality and safety of adolescents during transition, particularly vulnerable adolescent populations (Alderman *et al.*, 2019).

Data collection at an institutional level will contribute to the research base around HCT, which is important to align health services with needs of adolescents (Blum *et al.*, 1993). Research should be done on the health outcomes, continuity of care, service-user satisfaction and functional outcomes of youth engaging in the HCT process (Hasegawa & Gleeson, 2018). This is important for creating environments that provide the correct level and type of support needed by adolescents to successfully transition to adult care (Anderson *et al.*, 2018). Randomised controlled trials are also needed to establish efficacy of HCT models and protocols (Hasegawa & Gleeson, 2018).

1.2.3.3. Transition Models

In response to the recognised need for HCT, transition models have been developed over recent years. These models address HCT readiness, the process of HCT, and HCT outcomes. While these models provide a valuable starting point for the implementation of effective HCT programmes, more extensive research is still needed to document the outcomes of implementation of these models. The models that have emerged include Got Transition®, The Ready, Steady, Go, Hello programme, and The Transition to Adult Services for Young adults with Life-limiting conditions. There are also a number of transition readiness evaluations that have been developed in recent years, which will be discussed below.

1.2.3.3.1. Got Transition®

Got Transition® is a transition programme developed in the United States in response to the 2018 Clinical report on Health Care transition that was published by the American Academy

of Paediatrics, the American College of Physicians and the American Academy of Family physicians (Got Transition, 2022). Got Transition® is a HCT programme that has six core elements. These elements are: a transition and care policy or guide, tracking and monitoring, transition readiness, transition planning, transfer of care and transition completion (Got Transition, 2022).

The Got Transition® programme contains assessment and implementation guides for each core element and can be used in three different practice settings. The different practice settings are: transition to an adult care setting, transition to an adult approach of care without change of clinician, and integration into adult healthcare (Got Transition, 2022).

The Got Transition® programme is available for free non-commercial use by HCPs, provided the programme is referenced when used. This model's free availability, as well as its applicability to different practice settings, has potential for its adaptation to the South African context.

1.2.3.3.2. The Ready, Steady, Go, Hello programme

The Ready, Steady, Go, Hello Programme was developed in the United Kingdom in a National Health Service teaching hospital (Nagra, McGinnity, Davis & Salmon, 2015). This programme caters for youth with long term conditions over the age of 11 years. Youth are introduced to the programme through an introductory video and information leaflet. The programme prepares youth for managing their own healthcare by using a series of questionnaires to promote discussion around the transition to adult health care. The first stage is 'Ready', in which the questionnaire establishes the needs of the adolescent and introduces concepts of confidentiality and shared-decision making. The next stage, occurring between 13 and 14 years of age, is 'Steady', which includes a questionnaire to monitor progress on issues of concern to the adolescent and set targets for the following two years. The 'Go' stage and questionnaire are initiated at around 16 years of age and involves ensuring that adolescents possess all the necessary skills and knowledge to progress to adult services. At this stage, the adolescent should be able to conduct the entire consult independently. The adolescent is also introduced to the adult team at this stage. The 'Hello' stage questionnaire is administered within the adult clinic during the adolescent's first clinic appointment, and involves supporting the young adult as they integrate into adult care.

The 'Ready Steady Go' and 'Hello to adult services' materials are permitted for use in their original format for non-commercial purposes; however, no modifications to materials are permitted. This may limit its potential for use in the South African context.

1.2.3.3.3. The Transition to Adult Services for Young adults with Life-limiting conditions

The Transition to Adult Services for Young adults with Life-limiting conditions theory was developed in Canada in response to a growing need for a contextually appropriate model that could identify the contextual factors and intervention mechanisms that would ensure successful HCT of adolescents (Kerr *et al.*, 2020). According to this theory, changes in the intervention mechanism or variations in the context can affect the HCT outcomes. This theory describes principles for successful HCT:

i. The transition process should be started early
ii. Collaboration and communication are needed between adult and paediatric services when planning and implementing HCT. This includes developing efficient channels of communication with identified partner practitioners, including referral letters and joint clinic meetings.
iii. Collaboration is needed between interdisciplinary services and other stakeholders in the HCT process.
iv. Young adults should be orientated to adult services prior to transition through orientation programmes, tours of the adult clinic and discussions around the change.
v. A transition coordinator is needed
vi. The HCT process should develop the autonomy of young adults. This can be done through providing adolescents with opportunities to book their own appointments and begin making decisions around their care.
vii. A person-centred approach should be used to guide care
viii. Parents and caregivers should be involved in the HCT process. This should include preparing the caregiver for transition, so that they can begin to relinquish some control over adolescents' care.

While this model is specific to adolescents with life-limiting conditions, such as HIV and other chronic medical conditions, the basic principles can be used when designing context-specific guidelines for HCT within South African rehabilitation services.

1.2.3.3.4. Transition Readiness scales

Transition readiness measures are important to identify adolescents' stage of readiness and identify progress (Spiegel, Tucker, Duffy, Lalloo, Hundert, Bourre-Tessier, Hazel, Luca, Mosher, Nguyen, Stringer, Victor & Stinson, 2021). The HIV Adolescent Readiness for Transition Scale (HARTS) was developed in South Africa and has been validated for use with HIV-positive adolescents. The tool measures four components that affect transition readiness: disclosure of HIV status, health navigation skills, self-advocacy skills, and health literacy skills (Zanoni *et al.*, 2021). While this tool has the benefit of being contextually relevant, it has bene

specifically designed for use with adolescents who have HIV, which limits its applicability to use with adolescents with other long-term conditions, such as cognitive or mental health conditions.

Other transition readiness tools have been developed in the United States. The University of North Carolina has developed the TRxANSITION Index™ and the self-report Smooth Transition to Adulthood with Rx questionnaire, both of which measure overall readiness of adolescents to transition into adult care. The TRxANSITION Index™ assesses the knowledge and skill of adolescents in 10 domains, including medication, Adherence, nutrition, self-management, reproductive knowledge, vocation, insurance, support and ability to adapt to a new HCP (Hobart & Phan, 2019). The Smooth Transition to Adulthood with Rx questionnaire is self-administered and focuses on three main domains, namely communication with the HCP, knowledge of illness, and self-management (Hobart & Phan, 2019). These tools are still in the early stages of implementation. More research is still needed to determine their effectiveness in ensuring adolescents are smoothly transitioned when they are ready to enter adult care.

The Transition Readiness Assessment Questionnaire is a developmental assessment used to assess the health and healthcare self-management skills of adolescents on a regular basis (every six to twelve months) (Wood, Sawicki, Miller, Smotherman, Lukens-Bull, Livingood, Ferris & Kraemer, 2014). The tool aims to facilitate goal setting for adolescents and young adults, with the end goal being the achievement of independence in managing their health conditions. This questionnaire is considered to be the most reliable, valid, and widely used tool to measure transition readiness of adolescents and young adults (Parfeniuk, Petrovic, MacIsaac, Cook & Rempel, 2020). Among its advantages are its disease-neutral design and validation in three languages, which creates the potential for it to be used more widely and with less modification required in different contexts (Parfeniuk *et al.*, 2020).

1.2.3.4. An HCT guideline for resource-limited settings

As the majority of HCT guidelines and models have emerged from higher-income countries, there is a need to make provision for the implementation of HCT in lower-income contexts. In order to inform equitable health policy on HCT in resource-limited settings, Narla et al., (2021) created a guideline focusing specifically on HCT in lower- and middle-income contexts.

i. HCT should be initiated when the adolescent has met clinical milestones, which include both physiological and transition-related milestones. A holistic and individualised approach should be used to determine transition readiness.

ii. The health system must be able to adapt in response to the needs of adolescents with chronic illness.
iii. Social resources should be optimised to improve efficacy of HCT. This includes mental health support, financial empowerment and youth development. Financial empowerment in particular was found to be a key facilitator in improving HCT and quality of life of adolescents. Peer support through group therapy has also been highlighted as an effective means of providing adolescents with social skills and networks that can assist them to succeed in life. the importance of utilising culturally sensitive outcome measures to evaluate transition. These should include language validation and be chosen and implemented based on the needs of diverse populations. They emphasise that "tools should be made with intentional inclusivity so that resultant policy and programmes are created to preferentially support those at the periphery" (Narla et al., 2021, pg.9).

1.2.4. Healthcare transition in the South African healthcare context

The South African healthcare sector is divided into public and private healthcare sectors, with a historical and persisting imbalance between the services provided by both these sectors. The public healthcare system is government-funded and caters for the majority of the population but is characterised by poorly managed and under resourced services (Maphumulo & Bhengu, 2019). The private healthcare sector in South Africa has the highest spending on healthcare globally, but caters for the health needs of just 16.2% of the population (National Department of Health, 2015).

1.2.4.1. Historical influences on SA healthcare sector

South Africa's political history has had a significant impact on the healthcare sector. One of the remnants of South Africa's Apartheid system is the fragmentation of the health system. In 1897, the Public Health Amendment Act was passed, which segregated healthcare on racial lines and created severe disparities in the quality of healthcare received by different communities in South Africa (Coovadia, Jewkes, Barron, Sanders & McIntyre, 2009). Post-1994, the health system was restructured to improve equality, accessibility and integration of health services; however, many skilled HCPs were offered severance packages and left the public health sector to join a growing private health sector (Coovadia *et al.*, 2009). This led to a loss of critical workforce and experience, which still persists in the public healthcare sector today (Coovadia *et al.*, 2009; Dookie & Singh, 2012; Mayosi & Benatar, 2014).

In the early 2000s, under the leadership of Thabo Mbeki, the macroeconomic policies of the South African government were aimed at improving economic growth of the country rather

than redistributing wealth and revitalising the healthcare system (Coovadia *et al.*, 2009). The reduction of healthcare funding and wasteful expenditure deepened the divide between public and private healthcare, and contributed to the ongoing dysfunction of many public hospitals and facilities (Mayosi & Benatar, 2014). This period was marked by the height of the HIV epidemic; however, inadequate policies were put into place to mitigate the spread of the disease and antiretroviral intervention was denied by the Mbeki administration (Mayosi & Benatar, 2014; Satoh & Boyer, 2019). Today, Southern Africa remains the epicentre of the HIV epidemic, which places great strain on an overburdened South African health system (Coovadia *et al.*, 2009; Mayosi & Benatar, 2014; Satoh & Boyer, 2019). This has also contributed to a large proportion of healthcare funding being placed on curative healthcare rather than preventative programmes (Mayosi & Benatar, 2014).

1.2.4.2. Public Health in South Africa

Public health in South Africa is government-funded healthcare that is available to all citizens. While public healthcare aims to fulfil the constitutional right of all South Africans to free, good quality healthcare, the current public health services face many challenges (Maphumulo & Bhengu, 2019).

The majority (83.8%) of the South African population utilises public healthcare, which accounts for only 50% of health expenditure (Maphumulo & Bhengu, 2019). The South African government has attempted to improve access to healthcare by decentralising the healthcare system. This has led to three levels of healthcare: tertiary specialised hospitals located in major cities, secondary provincial and district hospitals, and local primary healthcare centres. While the decentralisation has allowed healthcare to be accessed by previously disadvantaged groups, it has also resulted in health resources being spread thin and being of poor quality in poorer resourced areas (Maphumulo & Bhengu, 2019).

Post-1994, many policies and legislation around healthcare have been developed, including the Constitution, the Patient's Rights Charter, 1997 White Paper for the transformation of the Health System, the National Health Act, as well as policies around free healthcare and primary healthcare (Ned, Cloete & Mji, 2017; Maphumulo & Bhengu, 2019). The office of health Standards Compliance was also formed to ensure maintenance of good quality healthcare. Plans are in place to implement universal health care under the National Health Insurance fund in an attempt to address the inequalities in healthcare, but implementation of this process has been delayed and opposed (National Department of Health, 2015; Maphumulo & Bhengu, 2019).

South Africa has a high burden of disease, which places strain on the public health system. South Africa has a high prevalence of HIV/AIDS, tuberculosis, non-communicable diseases and violent injuries (Maphumulo & Bhengu, 2019). South Africa also has a high rate of healthcare-associated infections in public healthcare (Maphumulo & Bhengu, 2019). These infections are caused by poor infection control mechanisms, poor waste management and cleaning services, overcrowding, and inadequate isolation of patients with drug-resistant disease (Maphumulo & Bhengu, 2019). The public healthcare sector is characterised by a severe shortage of HCPs, due to poor workforce recruitment, retention and management (National Department of Health, 2015; Ned *et al.*, 2017; Maphumulo & Bhengu, 2019). The majority of HCPs work in the private sector, with many public HCPs also working part-time in the private sector (Maphumulo & Bhengu, 2019; Ned, Tiwari, Buchanan, Van Niekerk, Sherry & Chikte, 2020).

Poor leadership and management negatively affect public healthcare (Maphumulo & Bhengu, 2019). This emerges as corruption, lack of performance monitoring and general misconduct. As a result of poor leadership, there has been slow progress in restructuring the health system (Maphumulo & Bhengu, 2019).

Many of the challenges affecting the public healthcare system filter down into the rehabilitation sector, which includes occupational therapy services. Rehabilitation services in South African public health care settings remains poorly utilised and inaccessible to many populations(Ned *et al.*, 2017). While the demand for rehabilitation is growing, due to an ageing population and high burden of disease, rehabilitation services are often minimally funded or absent from health policies, such as the National Health Insurance bill (Ned *et al.*, 2017, 2020). This limits the accessibility of rehabilitation services to communities utilising public healthcare. Existing rehabilitation services often face staffing limitations due to freezing of posts and a lack of resources (Ned *et al.*, 2020). Due to limited resources and effective policies, rehabilitation remains predominantly curative and problem-based rather than utilising a strengths-based approach to promote health and prevent illness (Naidoo, Van Wyk & Joubert, 2016; Ned *et al.*, 2017).

1.2.4.3. Adolescent Health in South Africa

South Africa's high burden of both communicable and non-communicable diseases extends to its adolescent population. Adolescents form a significant group of the South African population. Youth aged 10 to 19 comprised 18.5% of the South African population in 2016, with the number of adolescents projected to rise by 2050 (Jonas, Ramraj, Goga, Bhana & Mathews, 2019).

In South Africa, the mortality and morbidity among 10- to 14-year-olds is largely due to HIV/AIDS, tuberculosis and violent injuries (Toska *et al.*, 2019). HIV is one of the largest priorities of the health system. For this reason, it is unsurprising that the majority of HCT literature emerging from South Africa is centred around HIV (Kung *et al.*, 2016; Haghighat *et al.*, 2019; Zanoni *et al.*, 2020, 2021).

The presence of illnesses, such as HIV and tuberculosis, can affect adolescents' educational and vocational performance significantly if they are not able to manage their health adequately. Adolescents' ability to self-manage their health conditions can have a positive impact on adherence to treatment, which can improve health outcomes (Crowley, van der Merwe, Kidd & Skinner, 2020). An important component of HCT is the development of self-management skills in adolescents; hence, good HCT practices have the potential to decrease mortality and morbidity among South African adolescents and young adults.

The implementation of HCT programmes for adolescents with long term health conditions in South Africa remains a major challenge. Some of the challenges identified are a lack of suitable expertise of adult HCPs on childhood-onset health conditions, poor collaboration between childhood, adolescent and adult service providers, poor planning and limited resources (Westwood *et al.*, 2014; Zanoni *et al.*, 2020). Studies on HCT in South Africa reveal that HCT often occurs arbitrarily based on age of the adolescent rather than their physical and psychosocial readiness for HCT (Westwood *et al.*, 2014; Zanoni *et al.*, 2021). Many adolescents are transferred abruptly to adult care at the age of 12 without preparation for the transfer, which has been associated with poor clinical outcomes and reduced retention in care (Zanoni *et al.*, 2020). This practice has been strongly discouraged by the Society for Adolescent Medicine (2020), who state that the HCT process is a continuum and not a discrete event. While the literature identifies transition readiness assessments as a useful tool in deciding when to initiate HCT, these measures are not routinely used (Zanoni *et al.*, 2020).

HCT in South Africa is challenged by the lack of evidence-based protocols on HCT, which results in a lack of standardisation of care (Malapela, Thupayagale-Tshweneagae & Ibitoye, 2020a). A significant barrier to the production and implementation of HCT protocols is limited HCP awareness of and training in HCT. A lack of evidence-based protocols may have a negative effect on HCT outcomes, which can lead to failure to follow up, non-adherence to intervention and, consequently, health complications (Zanoni *et al.*, 2021).

The significant divide between paediatric and adult services that emerged in global literature on HCT is also present in the South African context. In a systematic review conducted by

(Ritchwood *et al.*, 2020), 64.7% of adolescents chose to remain in paediatric care rather than transition to adult care. This reluctance to leave paediatric care resulted from a strong rapport with paediatric HCPs and anxiety over entering the adult clinic. Some of the concerns expressed by participants were fears of being stigmatised in adult clinics, a lack of expertise of adult HCPs in dealing with adolescent needs, and anxiety over assuming more responsibility for their own health.

1.2.4.4. Policies and Guidelines for promoting adolescent health in South Africa

In response to the growth in the adolescent population and the need to ensure the health of this population, South Africa has adopted policies and frameworks around adolescent health. These policies aim to improve the health, education, vocation and safety of adolescents; however, discrepancies and omissions in these policies affects effective implementation of these policies(Toska *et al.*, 2019).

The National Department of Health has implemented the Adolescent and Youth Health policy 2017, which aims to effectively implement health programmes for young people aged 10-24 years as they transition from childhood to adulthood(South African National Department of Health, 2017). The Adolescent and Youth Health policy has six main objectives primarily focused on improving the physical, sexual and mental health of adolescents. Some of the programmes that form part of this policy include Adolescent and Youth Friendly Services, the Integrated school health programme, Ideal Clinics, B-Wise and the She Conquers Campaign. The Adolescent and Youth Friendly Services aims to improve access to high quality health services to adolescents in clinics (Jonas *et al.*, 2019). This programme has faced challenges in implementation at some facilities, with research indicating that adolescents were dissatisfied with the long waiting times, insufficient staff and resources, as well as poor staff attitude towards youth (James, Pisa, Imrie, Beery, Martin, Skosana & Delany-Moretlwe, 2018). Similarly, the , which aims to provide school-based services for general health, nutrition, as well as reproductive and sexual health, has faced a number of challenges, including a lack of adequate staff training, poor communication and consultation with relevant stakeholders, as well as inadequate resources for effective implementation (Lenkokile, Hlongwane & Clapper, 2019; Ramukumba, Rasesemola & Matshoge, 2019). Another factor affecting implementation of youth-related health programmes is the lack of clear timelines and funding models for interventions outlined in the policies, which can affect initiating and progress of these programmes (Toska *et al.*, 2019).

Toska et al., (2019) propose several principles for promoting adolescent health in South Africa, which emphasises the individually-tailored support needed by adolescents when transitioning from paediatric to adult care. Other principles are outlined below:

i. A holistic approach should be used, which considers both the individual and the population and addresses the social determinants of health.
ii. Interventions should be context-based and relevant to the needs of adolescents
iii. Interventions should provide adolescents with the resources they need to be resilient in their chosen occupations
iv. Clinic services should include accessible and relevant services for adolescents that are individualised and prioritise privacy and confidentiality
v. A strong management and referral system should be put into place to ensure continuity of care
vi. Supportive environments should be provided for adolescents to access health and recreational services.
vii. Evidence-based policies should be formulated and implemented nationally, involving collaboration between adolescents, researchers and policy makers.

Despite the presence of innovative policies and guidelines around adolescent health, recent literature highlights that current practices are insufficient to meet the health needs of the South African adolescent population (Ned *et al.*, 2017; James *et al.*, 2018; Jonas *et al.*, 2019; Pike, Celum & Bekker, 2020; George, Jacobs, Ved, Jacobs, Rasanathan & Zaidi, 2021). Many of the challenges experienced in current adolescent health practice are those faced by the health system as a whole, including human and financial resource constraints, poor planning and insufficient infrastructure and support for these programmes. Additionally, the implementation of adolescent health programmes requires an understanding of the unique developmental needs of adolescence, which necessitates additional training for South African HCPs (Ferguson, Ahmed, Motshwane, Pleaner, Toska, Weiss & Bekker, 2022). The successful implementation of adolescent health initiatives also requires multisectoral collaboration between the health system and social support structures, which remains a challenge in many parts of South Africa (George *et al.*, 2021).

1.2.5. Healthcare transition in occupational therapy

1.2.5.1. Occupational therapy philosophy

Occupational therapy is founded on the belief that engaging in meaningful occupation has a positive relationship with health and wellbeing (American Occupational Therapy Association, 2020). Occupation is defined by the World Federation of Occupational Therapy (WFOT) as

the things people need to do, choose to do or are expected to do (World Federation of Occupational Therapists, 2012).

Occupational therapy has undergone a number of paradigm shifts since inception of the profession. The most recent shift is from the mechanistic paradigm of the late nineties to the current contemporary paradigm (Kielhofner, 2009). The mechanistic paradigm emerged out of a need to establish the profession within the medical model and focused on improving functional outcomes through improving limitations in the underlying neuromotor, musculoskeletal and psychological systems. The contemporary paradigm focuses on occupation as the central construct, and aims to bring about wellbeing and quality of life through enabling participation in occupation (Kielhofner, 2009). The contemporary paradigm considers the interaction between the person, the occupation and the environment and aims to facilitate the engagement of people and communities in meaningful occupation by analysing the extrinsic and intrinsic supports and barriers to occupation (American Occupational Therapy Association, 2020). An important value linked to the contemporary paradigm is client-centred intervention, which emphasises a collaborative relationship between the occupational therapist and service-user.

1.2.5.2. Occupational therapy role in adolescence

The engagement in occupations leads to the formation of habits and roles, and the development of identity, particularly during the stage of adolescence (Levanon-Erez *et al.*, 2017).Occupational therapists work with adolescents who experience barriers to function as a result of physical, cognitive or mental conditions. Occupational therapy utilises an analytical and problem-solving approach to identify the source of occupational dysfunction and develop strategies to adapt the individual's skills or the environment to ensure that occupation can be carried out (American Occupational Therapy Association, 2020). This can include training of the adolescent, development of assistive devices or creating a more supportive environment to promote their engagement in vocational, educational and leisure-based occupations (Clarkson *et al.*, 2021). Practice guidelines and literature on the role of occupational therapy during the period of transition from childhood to adulthood are emerging, predominantly from the United States.

The occupational therapy practice framework – Version 4, which guides the scope of occupational therapy practice, highlights the role of occupational therapy during adolescence, when transition occurs from one role to the next (American Occupational Therapy Association, 2020). According to the practice framework, occupational therapy services should include

preparation for transition, education on the change in roles and expectations during transition, and assistance to adapt to a new role or life situation.

The American Occupational Therapy Association (AOTA) published occupational therapy practice guidelines for children and youth aged 5 to 21 years (Cahill & Beisbier, 2020). These guidelines emphasise that intervention with adolescents should focus on engaging in occupations that are age-appropriate and meaningful to this population. One of the important occupations of adolescence is instrumental activities of daily living (IADLs), which emerge from the activities of daily living (ADLs) developed in childhood (Cahill & Beisbier, 2020). IADLs are the everyday activities that support engagement in the community, such as caring for others, driving or commuting, financial management, home management, meal preparation, shopping, spiritual engagement and health management (Shin, Decker & Blanchard, 2022). Promoting independence in IADLs is important, as independence in IADLs can contribute to self-actualisation, employability and community membership (Eismann, Weisshaar, Capretta, Cleary, Kirby & Persch, 2017).

The IADL and educational activities engaged in in childhood and adolescence form the foundation for prevocational and vocational roles. Occupational therapists are trained in preparing adolescents for fulfilling these roles by providing life-skills training and vocational support; therefore, the continuity of occupational therapy services during the transition period can improve the overall functional outcomes of adolescents with disabilities or chronic health needs (Eismann et al., 2017; Weiss et al., 2021).

Occupational therapy also has a role in providing services to adolescents with mental health difficulties. The prevalence of mental illnesses, such as depression and anxiety, are increasing in adolescent populations, creating a need for health services with this population (Brooks & Bannigan, 2021). In South Africa, the absence of adequate coping mechanisms to overcome challenges in the environment may lead to substance abuse in vulnerable youth, which can contribute to a deterioration in health and functional outcomes (Temane, Rikhotso, Poggenpoel & Myburgh, 2023). Occupational therapy can play a role in helping adolescents cope with demands of the transition to adulthood by providing functional skills training and improving resilience to change (Brooks & Bannigan, 2021).

1.2.5.3. Best practice guidelines on HCT for Occupational Therapy Practitioners

Practice guidelines on the transition of adolescents from child- to adult-oriented occupational therapy in a healthcare setting is not readily available. Available guidelines tend to be more general, aimed at either occupational therapy practice as a whole, or focusing specifically on

transition in the school setting(Eismann *et al.*, 2017; American Occupational Therapy Association, 2018; Podvey & Myers, 2018; Cahill & Beisbier, 2020).

In the United States, the Individuals with Disabilities Education Improvement Act of 2004 has prompted the development of occupational therapy guidelines around the role of occupational therapy in preparing children with disabilities for further education and employment (Podvey & Myers, 2018). According to the AOTA Practice Guidelines, occupational therapy plays a role in preparing adolescents for the transition to adulthood by enabling the development of independent living and community participation skills (Cahill & Beisbier, 2020). Occupational therapists have a role in preparing the adolescent, caregivers and community for a change in life roles and routines that will occur during the transition to adulthood (Podvey & Myers, 2018). This preparation includes planning what support the adolescent will need during the transition and educating family and teachers on how to provide the required support in new roles and environments. Occupational therapy services during transition should include skills training that takes place in the natural context of occupation, and should involve feedback from the occupational therapist to allow the adolescent to evaluate their own performance and develop self-management skills (Cahill & Beisbier, 2020). Skills training should also include the peers and family to provide support for participation and enable the adolescent to develop meaningful and supportive relationships (Podvey & Myers, 2018). According to the AOTA Practice guidelines, technology may be a useful medium to aid in skill development of adolescents (Cahill & Beisbier, 2020). For example, the use of smartphones to schedule appointments or reminders to take medication could be a useful strategy to aid compliance.
Since the majority of the aforementioned practice guidelines have been formulated in high income countries, particularly the United States, there is a significant gap in the knowledge base for low to middle income countries. The World Health Organisation rehabilitation competency framework can complement these to provide a more globally relevant guide for the role of occupational therapists (World Health Organisation, 2020).

The World Health Organisation (WHO) competency framework examines the roles of rehabilitation workers, and the core competencies that these workers need to have in order to complete the expectations of their role. One of the key practice competencies for rehabilitation workers is the ability to develop and adapt rehabilitation plans that ensure continuity of care (World Health Organisation, 2020). This includes efficient handover when referring to a new HCP. This becomes important during HCT, as many adolescents are lost to the system due to a lack of continuity during the transition between paediatric and adult health services.
Another practice competency is the utilisation of client- and family-centred practice, which involves collaboration and communication with service-users and their families.

The rehabilitation worker should also advocate for rehabilitation and use research to strengthen the evidence base for rehabilitation services (World Health Organisation, 2020). Another important competency is the improvement of education and training in rehabilitation to meet the needs of the population.

1.2.5.4. Global Occupational Therapy HCT Practices

Although occupational therapy services can play an important role in supporting adolescents with chronic health needs during the transition from paediatric to adult care, services are not always continuous. In studies conducted in the US and Canada, the utilisation of occupational therapy services by people with autism spectrum disorder declined as the client became older. Only 7.5% of students with disabilities received occupational therapy services during the transition period (Eismann *et al.*, 2017). The most significant decline in occupational therapy services occurred between the ages of 5 and 17 (Benevides, Tao, Becker, Verstreate & Shea, 2022). As a result of the loss of structure following termination of health services, adolescents with autism experienced a reduction in meaningful activity participation (Weiss *et al.*, 2021). The loss of meaningful activity can result in reduced quality of life and poor mental health (Weiss *et al.*, 2021)

The utilisation of occupational therapy services appears to change during the period of transition between childhood and adulthood (Benevides *et al.*, 2022). Children were more likely to receive direct therapy, while adults were more likely to make use of occupation-based ADL or home management services. The manner in which adolescents were transitioned between these two services is not clear. One of the reasons identified for the discontinuation of services in occupational therapy is the change in health funding that occurs between childhood and adulthood (Benevides *et al.*, 2022). While children may access occupational therapy through health insurance or educational systems in childhood, these services may not be continued into adulthood.

There is no literature to indicate whether similar trends occur in South African occupational therapy practice.

1.2.5.5. South African Occupational therapy healthcare transition practices

Available South African literature on occupational therapy during the period of transition focuses on transition in the context of school and vocation. According to these articles, the role of the occupational therapist during the transition from childhood to adulthood is to facilitate the adolescent's engagement in meaningful academic or non-academic occupations (Nel, van der Westhuyzen & Uys, 2007; Jacobs-Nzuzi Khuabi, Swart & Soeker, 2019). This involves collaboration with the adolescent to set goals, develop academic, social and

vocational skills, and implement a graded integration into desired life roles (Jacobs-Nzuzi Khuabi *et al.*, 2019).

There is no literature available on HCT in the context of occupational therapy within South African public healthcare facilities. From anecdotal knowledge, service-users in South African public hospitals are typically transferred to adult care once they reach the age of 12 or 13, with minimal preparation for the transfer. Literature is not currently available to support or refute this observation. Service-users with learning disabilities are sometimes discharged from hospital-based health services earlier, at the age of six, as it is expected that they will be managed further by the department of education and placed in schools with access to specialised services, such as occupational therapy (van Niekerk, Dada & Tönsing, 2019).

1.2.6. Conclusion of literature review

In recent decades, literature has emphasised the value of HCT in bridging the gap between paediatric and adult healthcare. HCT has the potential to improve the health and functional outcomes of adolescents by ensuring the continuity of health services during the period of adolescence. Despite the growing need for HCT, policies and guidelines on HCT remain disparate and limited, particularly in lower- and middle-income contexts. Guidelines on the occupational therapy role in HCT are scarce, which limits the involvement of the profession in HCT. Given their role in facilitating functional independence in all areas of one's life , occupational therapists are best positioned to drive the HCT process to consolidate the formation of health management habits during adolescence. The potential value of occupational therapy in HCT highlights the need for further research into HCT, particularly in the South African and occupational therapy contexts. This research is important for the development of context- and profession-specific guidelines, which can adequately cater for the needs of the South African adolescent population.

1.3. Methods

1.3.1. Study design

The study follows a quantitative, non-experimental, descriptive cross-sectional design. A cross-sectional design was chosen because it is valuable in providing broad information about a topic of interest at a specific point in time (Cresswell & Cresswell, 2018). This will be useful in examining current HCT practices across a broader sample of South African occupational therapists. This design is also cost-effective and has a rapid data collection phase (Cresswell & Cresswell, 2018), which makes it feasible for a research report. The study approach is non-experimental and descriptive, as the aim is merely to describe HCT as it is understood and

practised by occupational therapists within South African public healthcare facilities without any manipulation of variables (Cresswell & Cresswell, 2018).

1.3.2. Study setting

The research is rooted within the South African context, specifically the public healthcare system. The health needs of the vast majority of the population (80%) are catered for by the public health setting; therefore, occupational therapy practices in public health settings have the potential to have further reaching effects. For this reason, this study focuses on occupational therapy services within the public healthcare system. The public health setting is marked by a shortage of human and financial resources, and inefficient administrative practices (Maphumulo & Bhengu, 2019). These factors may extend to occupational therapy practice as well. For purposes of this study, research focuses on occupational therapy transition practices within public healthcare facilities settings specifically, as this is where the majority of occupational therapists in the public health sphere are employed (Jejelaye, Maseko & Franzsen, 2019). Occupational therapists in private practice are excluded from this study so that a degree of homogeneity is maintained in the study population. This is necessary for study feasibility.

1.3.3. Participants

1.3.3.1. Population

The research population consists of occupational therapists who are currently working in South African public healthcare facilities. The number of occupational therapists involved specifically in HCT within public health settings is unknown as no prior studies have investigated this topic in South Africa. Hence, the full cohort of occupational therapists in public healthcare facilities will be sampled, as it cannot be assumed that only certain subsets of occupational therapy practice (such as Paediatric therapists) would be involved in HCT.

According to the Health Professions Council of South Africa (HPCSA) annual report 2020/2021, 5876 occupational therapists were registered with the HPCSA in 2021 (Health Professions Council of South Africa, 2021). Of these, 25.2% were expected to be practicing in public healthcare(Ned *et al.*, 2020). Using these figures, around 1480 occupational therapists can be identified as practicing in public healthcare. As the number of public healthcare posts tend to remain the same or decrease due to freezing of posts (Ned *et al.*, 2020), it is assumed that the number of occupational therapists in public healthcare facilities would not have increased substantially since the study was conducted. By excluding community service occupational therapists, who are approximately 260 graduates per year (World Federation of Occupational Therapists, 2020), the total number of occupational therapists in independent

practice within public healthcare can be estimated at 1220. A number of registered professionals may not be practicing in South Africa currently, as many professionals may have emigrated abroad but elected to retain their HPCSA membership (Ned *et al.*, 2020). This may mean that the actual population of actively practicing South African occupational therapists is significantly lower. Certain subsets of occupational therapy practice, such as therapists working in geriatrics, may not be involved in HCT, which would reduce the overall population size; however, data is not available to estimate the extent to which the population size should be reduced to accommodate this.

1.3.3.2. Sample selection

1.3.3.2.1. Inclusion criteria

- Occupational therapists who are currently working in South African public healthcare facilities
- Occupational therapists registered with the HPCSA as independent practitioners
- Occupational therapists who have a minimum one year of experience in a public healthcare facility as independent practitioners.

1.3.3.2.2. Exclusion criteria

- Community service therapists

Community service therapists were excluded as the survey occurred in the first half of the year. Community service therapists would have had less than six months' experience in a public healthcare setting and may not have had sufficient experience to provide a clear picture of current HCT practices. Community service therapists are in their first year of working and rotate through sections frequently to acquire training. This provides insufficient opportunity to undergo a full HCT process with a client.

1.3.3.3. Sampling method

Single-stage convenience sampling was used to recruit participants meeting the eligibility criteria. A combination of simple convenience and snowballing sampling was used. The Occupational Therapy Association of South Africa (OTASA), Rural Rehab South Africa (RURESA) and the OT Tree were contacted to request that the survey link and information sheet be sent out through their all-member mailing. Invitations to participate were also sent out on social media-based occupational therapy forums to recruit prospective participants. Snowball sampling was chosen as an additional sampling method to make use of natural networks within the occupational therapist population to reach more potential participants.

1.3.3.4. Sample size:

According to Cochran's sample size formula for categorical data, with an estimated maximum population of 1220 occupational therapists working in public healthcare facilities, an alpha level of 0.025 and a margin of error of 0.05, the estimated minimum returned sample size should be approximately 278 participants for the results to be generalisable to the entire population (Bartlett, Kotrlik & Higgins, 2001). However, given that previous studies targeting South African occupational therapists tend to yield low response rates of between 3.6 to 13%, (Pitout, 2014; ver Loren Van Themaat, 2015; Monareng, Franzsen & van Biljon, 2018), it was expected that approximately 44 to 159 participants may realistically be recruited. This may be due in part to a lower actual therapist population size than the HPCSA statistics indicate, due to HPCSA-registered practitioners being inactive in South Africa.

To attempt to reach as many potential participants as possible, the survey was circulated to as many occupational therapists as possible through both email and social media platforms, and invitations were re-sent two to three times per platform.

1.3.4. Procedure of data collection

1.3.4.1. Instrumentation

Data were collected through use of an online survey that was administered using Research Electronic Data Capture (REDCap®) electronic data capture tools (Harris, Taylor, Thielke, Payne, Gonzalez & Conde, 2009; Harris, Taylor, Minor, Elliott, Fernandez, O'Neal, McLeod, Delacqua, Delacqua, Kirby & Duda, 2019). The steps outlined by Polit and Yang (2016) were used in design of the survey. The purpose of the survey was determined through review of literature on HCT and identification of the research objectives. Existing literature and instruments were researched to provide a theoretical basis for the development of this instrument.

The survey contained four sections. The first consisted of multiple-choice questions on participants' demographic information, including information on the participants' age, geographical location, and experience.

The latter three sections each addressed a research question, as indicated below:

TABLE 1-1: QUESTIONNAIRE DESIGN

Section	Research objective	Information included	Theoretical basis	Question type
Section 2 (Q8-22)	To explore occupational therapists' understanding of the concept of HCT in the context of South	• Self-rated understanding of HCT • Knowledge of theoretical concepts involved in HCT • Source of HCT knowledge	Definitions of HCT and theoretical constructs based on HCT position paper by Society for Adolescent Medicine (Quinn *et al.*, 2020) and existing South African HCT literature (Westwood *et*	Likert scale (5-point) Multiple choice: multi-answer

	African public healthcare facilities.		*al.*, 2014; Kung *et al.*, 2016; Haghighat *et al.*, 2019; Zanoni *et al.*, 2020)	
Section 3 (Q23-33)	To describe the processes used by occupational therapists when transitioning service-users from paediatric to adult-based services.	• Use of policies • Tracking and monitoring • Evaluation of transition readiness • Transition planning processes • Transfer of care processes • Service-user and caregiver feedback and leadership	The Six Core Elements of Health Care Transition™: current practice evaluation rating tool, based on a paediatric-to-adult transitional care plan developed by the US national resource centre on health care transition. This instrument has not been validated, but has been successfully piloted (McManus, White, Pirtle, Hancock, Ablan & Corona-Parra, 2015).	Multiple choice: single answer Likert scale (5 point) Open-ended (short)
Section 4 (Q34-38)	To describe factors that promote or hinder the success of HCT within occupational therapy services in South African public healthcare facilities.	• Describe perceived effectiveness of HCT process • Perceived factors currently hindering or promoting effective HCT • Opinions on factors that can promote HCT in the future	Prior literature from global and South African studies in other health spheres that review the HCT process and identify key factors that influence it (Okumura *et al.*, 2014; Westwood *et al.*, 2014; Aldiss, Ellis, Cass, Pettigrew, Rose & Gibson, 2015; Kung *et al.*, 2016; Sabbagh, Ronis & White, 2018; Haghighat *et al.*, 2019; Hobart & Phan, 2019; Quinn *et al.*, 2020; Zanoni *et al.*, 2020)	Likert scale (5 point) Multiple choice (multi-answer) Open-ended (medium)

1.3.4.2. Process

The survey was piloted with five occupational therapists who met the inclusion criteria of the study and had over ten years of experience in a public health setting. Pilot participants were required to provide feedback on the relevance, essentiality and clarity of each question (Appendix B). Pilot participants were also able to provide comments on each question and on the survey as a whole. This was done to identify the need for revisions, as well as to evaluate face and content validity (Polit & Yang, 2016; Cresswell & Cresswell, 2018).

The finalised survey (Appendix C) was administered online via REDCap® (Harris *et al.*, 2009, 2019). Participants were able to access the survey questionnaire using a digital link that was propagated through the OTASA, RuReSA and OT Tree networks, as well as through occupational therapy social media groups on platforms such as Facebook, WhatsApp and LinkedIn. The information sheet (Appendix D) was contained within the body of the email or

social media broadcast message. Participants were required to indicate prior to commencing the survey that they had read the information sheet and consented voluntarily to participate. Data collection occurred over seven months, with two to three reminders sent to each email database or social media group over this period.

1.3.4.3. Data management

The POPI act and the HPCSA General Ethical Guidelines for Health Researchers guided the management of data (South Africa, 2013; Health Professions Council of South Africa, 2016a). This ensured that participants' information and rights were protected.

1.3.4.3.1. Managing and storing data

Survey responses were collected electronically and stored via REDCap®. REDCap® is a web-based platform designed for electronic data collection for research purposes and is hosted by the University of the Witwatersrand. It is access-controlled (password protected) and contains sufficient firewalls to protect the information (Patridge & Bardyn, 2018). Data were exported to Microsoft Excel for analysis.

1.3.4.3.2. Backing up data and data preservation

REDCap® is an online platform hosted by a server and backed up at frequent intervals. Exported files for data analysis were saved to an access-controlled cloud-based platform; the researcher's University of the Witwatersrand's Google Drive account. Raw data was not kept on any hard drives due to the risk of loss, theft or damage. All data will be preserved for a minimum of two years after the final report is published, or six years if no publication is done (Health Professions Council of South Africa, 2016a). Thereafter, all data will be destroyed accordingly.

1.3.4.3.3. Data security and confidentiality

An information letter was contained within the survey invite, and informed consent was obtained at the start of the survey before any questions were presented to the participant. No names, surnames, identity numbers or contact information were collected. The only potential identifier required from participants were the last 4 digits of their HPCSA number, which was used to eliminate duplications. This information was insufficient to confirm identity of the participants and was deleted during data cleaning once duplicate responses were removed.

1.3.4.3.4. Data sharing and access

Only the researcher and research supervisors have access to the REDCap® account on which the data will be stored, so that confidentiality is maintained.

Any researcher wishing to re-use the data in future must obtain written permission from the principal researcher, University of the Witwatersrand Department of Occupational Therapy and HREC.

1.3.5. Ethical considerations

Ethical clearance was obtained from the University of the Witwatersrand Human Research Ethics Committee (HREC) (Clearance number: M211054) (Appendix E). The ethical principles outlined by the HPCSA were adhered to during the research process (Health Professions Council of South Africa, 2016b).

Informed consent: Participants were fully informed of the voluntary nature and expectations of the study through an information letter that was included within the body of the invitatory email (Appendix D). The participants were required to indicate that they had read the information sheet and consented voluntarily to participate in the survey. Survey responses were collected via and contained within REDCap®, as it contains sufficient firewalls to protect the information(Patridge & Bardyn, 2018).

Confidentiality: Participants taking part in the study were not required to divulge any personal identifiers, with the exception of the last 4 digits of their HPCSA number. This was insufficient to identify the participant but was used to reduce the risk of duplication, and was deleted during data cleaning.

Non-maleficence: No risk was anticipated to the participants as a result of their participation in this study. As the survey will be administered online, the participants were able to complete it at a time convenient to them, which did not require any face-to-face contact. This mitigated any potential risk to the participants. Participants derived no direct benefits from participation in this study.

1.3.6. Data analyses

Data were exported from REDCap® to Microsoft Excel for analysis. Descriptive statistics methods were used to analyse the information. Data were analysed using frequencies and percentages. Conventional content analysis was used to analyse open-ended questions. Answers were categorised and represented in terms of the frequency of identified themes. All data were represented graphically.

In the discussion section, data were analysed in relation to existing literature and published best practice guidelines on HCT. Results were also analysed in relation to the existing guidelines on HCT and OT practice outlined by the WHO, WFOT, HPCSA and AOTA

(American Occupational Therapy Association, 2018; Health Professions Council of South Africa, 2020; World Health Organisation, 2020).

1.3.7. Rigour of research

Validity: There were no standardised evaluations for HCT practice identified at the time of this study. Hence, the accuracy of this self-developed survey was be assessed through piloting the instrument and using literature as the basis for development of the tool. Piloting of the tool assessed face and content validity through gaining input from therapists experienced in HCT on the degree to which the instrument reflects the domain of HCT practice.

The guidelines outlined by Lynn (1986) and Polit and Beck (2009) were used to determine criteria for retention, revision or elimination based on item-level content validity index (I-CVI) scores (Appendix F). Lynn states that for 5 participants, 100% interrater agreement must be present; hence, items with an I-CVI of below 0.99 are candidates for elimination (Lynn, 1986). However, according to Polit and Beck, items with an I-CVI lower than 0.78 should considered candidates for revision or elimination, regardless of the number of experts. They state that 100% agreement is only necessary for 3-4 experts. Items with an I-CVI of below 0.99 were thus revised, but as none were below 0.78, no items were eliminated based on I-CVI scores.
For clarity values below 3, minor revisions were done to improve clarity, based on the recommendations of reviewer. Two new questions were added post-review, based on reviewer recommendations.
The average scale-level content validity index (S-CVI/Ave) was calculated based on the I-CVI scores of the full instrument, with a final score of 0.99. This indicated a satisfactory level of content validity for the instrument(Yusoff, 2019).

Bias: because this survey investigates HCT practices from the perspectives of occupational therapists, there is a potential for social desirability response bias. Therapists may have given answers that were perceived as more desirable or more in line with their professional values rather than answers that are a true reflection of current practice. Anonymity is a method that was used to encourage candid responses, as there is very minimal risk of identification of participants (Polit & Yang, 2016). The importance of candour in answering the questions was also stated at the beginning of the survey.

1.3.8. Translation and Dissemination

This research has the potential to influence occupational therapy practice, training and policy development. The research will be submitted for publication and will be presented at the school of therapeutic health sciences research day. A summarised version of the research will

be drawn up for potential presentation to regional occupational therapy forums. The research will also be disseminated to interested therapists who requested a copy of the results during the course of data collection.

Chapter 2 Submissible Manuscript

This chapter follows the format of a manuscript prepared for submission to a journal. The manuscript has been submitted as an original research article to the African Journal of Disability (AJOD). The target journal has a world limit of 7000 words (excluding the abstract, tables, figures, graphs, and references)

2.1. Manuscript Details

This manuscript has been written in accordance with the AJOD submission guidelines (Appendix G). This journal has a focus on human development, disability and inclusion within the African context (AJOD, 2023). This study is relevant to the focus of the AJOD due to its focus on healthcare transition services that ensure continuity of rehabilitation services during the developmental period of adolescence within the South African context. This journal is DHET accredited (AJOD, 2023). The manuscript title is “Healthcare transition practices of occupational therapists in South African public healthcare facilities”.

2.2. Details of Author contribution

The primary researcher in this study is I. Hoosen. F. Breytenbach and J. van der Linde are co-authors and supervisors. The authors’ contributions to this manuscript are detailed in the Table 2.1 according to the relevant aspects of the Contributor Role Taxonomy (CRediT) (Allen et al. 2019).

TABLE 2-1: DETAILS OF AUTHOR CONTRIBUTIONS

CRediT terms	I. Hoosen	F. Breytenbach	J. van der Linde
Conceptualization	X	X	
Methodology	X	X	
Formal analysis	X	X	
Investigation	X		
Resources	X		
Data curation	X	X	
Writing manuscript- draft	X		X
Writing manuscript- reviewing and editing	X	X	X
Supervision		X	X

2.3. Abstract

2.3.1. Background

Healthcare transition (HCT), the process of transitioning an adolescent from paediatric- to adult-oriented care, is vital for improving the long-term health of adolescents with chronic conditions. The role of occupational therapy in HCT has not been well researched. Effective HCT practices are necessary to ensure that adolescents have access to coordinated and uninterrupted occupational therapy services

2.3.2. Objectives

This study describes occupational therapists' understanding of HCT within the context of South African public healthcare facilities, the HCT practices used, and the factors that promote or hinder the success of HCT within this context.

2.3.3. Methods

The study utilised a quantitative, non-experimental, descriptive cross-sectional design. Simple convenience and snowballing sampling were used to recruit participants via professional databases and social media forums. An online survey was used to collect data. Descriptive statistics and simple content analysis was used to analyse the information.

2.3.4. Results

A response rate of 5.3% was obtained (n=65). This study identifies limitations in the understanding and practical implementation of HCT within occupational therapy practice in South African public healthcare facilities. Current HCT practice is characterised by inadequate use of policies, insufficient transition preparation and poor outcome measurements.

2.3.4. Conclusion

There is a need to develop training programmes and practice guidelines to optimise and support HCT implementation within South African occupational therapy practice.

2.3.5. Contribution

This study provides novel data on HCT practices utilised by occupational therapists in South African public healthcare facilities. This study may contribute to the development of future HCT programmes in Africa.

2.4. Introduction

Healthcare transition (HCT) is a critical, but often neglected, process that is integral to ensuring the continuity of healthcare services between childhood and adulthood. HCT is the process of transferring an adolescent from child-oriented to adult-oriented healthcare in an uninterrupted, developmentally appropriate and coordinated manner (Blum *et al.*, 1993; Hasegawa & Gleeson, 2018). The process of HCT bridges the gap between supervised, family-centred paediatric-oriented care, to an adult-centred model in which the adolescent has increased autonomy. This process may or may not involve a change in healthcare provider. The success of this process is vital for optimal, long-term health of adolescents (Gabriel *et al.*, 2017).

Emerging studies on HCT indicate many challenges experienced throughout the process, both globally and in Africa (Betz *et al.*, 2013; Westwood *et al.*, 2014; Kung *et al.*, 2016; Zanoni *et al.*, 2020; Abaka & Nutor, 2021; Mbalinda *et al.*, 2021). In Africa, some studies indicate that the transition of many adolescents to adult-oriented care remains an age-related abrupt shift with adolescents feeling insufficiently prepared (Westwood *et al.*, 2014; Zanoni *et al.*, 2020; Abaka & Nutor, 2021; Mbalinda *et al.*, 2021). Other studies indicate that clinicians have begun to apply more stringent clinical reasoning to the transition process, including identifying transition readiness, and providing counselling and education (Haghighat *et al.*, 2019; Zanoni *et al.*, 2021). A major barrier to the implementation of HCT in South Africa is the lack of research and policies around the transition process, which affects the availability of funding for and training in HCT. Insufficient monitoring and development of HCT practices can result in a lack of standardisation in practice and insufficient support being provided to adolescents at a critical stage of development (Westwood et al., 2014; Kung et al., 2016). In Africa, approximately 10% of adolescents with HIV die during the transition from paediatric to adult care, which is often linked to failure to follow-up with health services or poor adherence to antiretroviral therapy (Abaka & Nutor, 2021).

Limited research is available on current HCT practices used in occupational therapy when transitioning service-users from paediatric-to adult-oriented care. Existing HCT models and guidelines have been developed in other health fields, predominantly in medicine (Hobart & Phan, 2019; Kerin *et al.*, 2020; Pierce *et al.*, 2020; Ritchwood *et al.*, 2020). The role of occupational therapy in HCT, as well as current occupational therapy HCT practices and challenges, is not well documented. Occupational therapy plays a vital role in facilitating the functional independence of adolescents with special health needs as they transition from childhood roles to adult roles, thereby ensuring they are able to make a meaningful contribution to their society (Levanon-Erez *et al.*, 2017; Toska *et al.*, 2019; Clarkson *et al.*, 2021). Occupational therapy also has a significant role to play in fostering the development of

autonomy and self-management skills in adolescents with physical, cognitive or mental disabilities, so that they are better able to manage their health needs as they enter adulthood (American Occupational Therapy Association, 2020). Occupational therapists are thus well positioned to coordinate the HCT process and ensure adolescents are adequately prepared for meeting the demands of adult roles, including health management. For this reason, the development of an effective HCT process is important in the management of adolescents within occupational therapy services.

This study aims to discuss current HCT perceptions and practices within South African occupational therapy services, and evaluate these against HCT literature and best practice guidelines. This process is essential to ensure consistent delivery of quality health services (Esposito, 2014). This study describes occupational therapists' understanding of HCT within the context of South African public healthcare facilities, the HCT practices used, and the factors that promote or hinder the success of HCT within this context.

2.5. Research Methods and Design

2.5.1. Study design

The study follows a quantitative, non-experimental, descriptive cross-sectional design with the aim of describing HCT as it is currently understood and practised by occupational therapists within South African public healthcare facilities (Cresswell & Cresswell, 2018).

2.5.2. Population and sampling

The research population consisted of occupational therapists currently working in South African public health facilities. Public healthcare in South Africa is government-funded, available to all citizens, and utilised by the majority (83.8%) of the population (Maphumulo & Bhengu 2019). The public healthcare system has three levels of healthcare; tertiary specialised hospitals located in major cities, secondary provincial and district hospitals, and local primary healthcare centres (Maphumulo & Bhengu 2019).

The number of occupational therapists currently involved in HCT within South African public health is unknown due to the absence of prior studies. Hence, the full cohort of occupational therapists in public healthcare facilities were invited to participate in the study. The total number of occupational therapists in independent practice within public healthcare was estimated at 1220 using available data (Ned *et al.*, 2017; Health Professions Council of South Africa, 2021; Occupational Therapy Association of South Africa, 2021)

A combination of simple convenience and snowballing sampling was used to recruit participants via the Occupational Therapy Association of South Africa (OTASA), Rural Rehab South Africa (RURESA) the OT Tree, and social media-based occupational therapy forums.

2.5.3. Inclusion criteria and sample composition

Inclusion criteria

- Occupational therapists currently working in South African public healthcare facilities, registered with the HPCSA as independent practitioners with a minimum one year of experience in a public healthcare facility.

According to the HPCSA annual report 2020/2021, 5876 occupational therapists were registered with the HPCSA in 2021 (Health Professions Council of South Africa 2021). Of these, 25.2% were expected to be practicing in public healthcare (Ned et al. 2020). Using these figures, around 1480 occupational therapists can be identified as practicing in public healthcare. As the number of public healthcare posts tend to remain the same or decrease due to freezing of posts (Ned et al. 2020), it is assumed that the number of occupational therapists in public hospitals would not have increased substantially since the study was conducted. By excluding community service occupational therapists, who are approximately 260 graduates per year (World Federation of Occupational Therapists 2020), the total number of occupational therapists in independent practice within public healthcare can be estimated at 1220. Many registered professionals may not be practicing in South Africa currently as they may have emigrated abroad but elected to retain their HPCSA membership (Ned et al. 2020). This may mean that the actual population of actively practicing South African occupational therapists is significantly lower. According to Cochran's sample size formula for categorical data, with an estimated maximum population of 1220 occupational therapists working in public hospitals in South Africa, an alpha level of 0.025 and a margin of error of 0.05, the estimated minimum returned sample size was 278 participants (Bartlett, Kotrlik & Higgins 2001). Previous studies targeting South African occupational therapists yielded low response rates of between 3.6 to 13%, (Pitout, 2014; ver Loren Van Themaat, 2015; Monareng *et al.*, 2018); hence, it was expected that approximately 44 to 159 participants may realistically be recruited.

2.5.4. Data Collection

Data were collected through use of an online survey administered using Research Electronic Data Capture (REDCap®) electronic data capture tools (Harris *et al.*, 2009, 2019). The steps outlined by Polit and Yang (2016), as well as existing literature, were used in design of the survey. The survey was piloted with five occupational therapists who met the inclusion criteria

of the study and had over ten years of experience in a public health setting. Based on the content validity scores the survey was adapted for gathering valid data.

The finalised survey was administered online via REDCap® (Harris *et al.*, 2009, 2019) between January and July 2023. Participants were able to access the survey questionnaire using a digital link that was propagated through the OTASA, RuReSA and OT Tree networks, as well as through occupational therapy social media groups.

The POPI act and the HPCSA General Ethical Guidelines for Health Researchers guided the management of data(South Africa, 2013; Health Professions Council of South Africa, 2016a).

2.5.5. Ethical considerations for research with human participants

Ethical clearance was obtained from the university of the Witwatersrand Human Research Ethics Committee (HREC) (Clearance number: M211054). The ethical principles outlined by the HPCSA were adhered to during the research process (Health Professions Council of South Africa, 2016b). Consent was obtained from all participants prior to commencing the study, and it was made clear that participation was voluntary and participants could leave at any time. No information that could identify participants was collected. No risk was anticipated to the participants as a result of their participation in this study. Participants derived no direct benefits from participation in this study.

2.5.6. Data analysis

Data were extracted from REDCap® as a .csv file and processed within Microsoft Excel. Duplications and incomplete responses were removed prior to analysis. Simple descriptive statistics methods were used to analyse the information through reporting frequencies and percentages of responses. Conventional content analysis was used to analyse open-ended questions (Assarroudi, et al., 2018). Answers were categorised and represented in terms of the frequency of identified themes. All data were tabulated and converted into graphs within Microsoft Excel for visual representation of results.

2.5.7. Rigour of the study

Validity: the accuracy of the self-developed survey was assessed through piloting the instrument to establish face and content validity (Polit & Yang, 2016; Cresswell & Cresswell, 2018), as well as through using literature as the basis for development of the tool. The content validity scores guided the validity of the final questionnaire. The guidelines outlined by Polit, Beck and Owen (2007) were used to determine criteria for retention, revision or elimination based on item-level content validity index (I-CVI) scores. Items with an I-CVI score of below 0.99 were revised, but as none were below 0.78, no items were eliminated based on I-CVI

scores. The scale-level content validity index (S-CVI/Ave) was 0.99, which is interpreted as excellent (Polit, Beck & Owen, 2007)

Bias: there is a potential for social desirability response bias within this study. Anonymity is a method that was used to encourage candid responses (Polit & Yang, 2016).

2.6. Results

The results have been presented using graphs and summarised tables to present the results. Full results tables are available in the appendices.

A total of 74 respondents consented to participate in the survey. During data cleaning, 9 responses were discarded due to not meeting the inclusion criteria (n=8), or due to being duplicate responses (n=1). The remaining 65 responses were utilised for the study. With the number of occupational therapists in South African public hospitals estimated at 1220 (Health Professions Council of South Africa 2021; Ned et al. 2020) this equates to a response rate of 5.3% (65/1220*100). This response rate is within the range of 3.6% to 13 % reported by previous researchers surveying a similar population (Pitout, 2014; ver Loren Van Themaat, 2015; Monareng *et al.*, 2018).

Sixty-five participants completed section 1, 52 participants completed section 2, and 41 participants completed section 3. The loss of participants between section 1 and section 4 of the survey may be due to a perceived lack of need for HCT in cases where there is no change in therapist during adolescence, as 45.5% of participants who indicated working with service-users across the lifespan did not complete the survey, as compared to 27.8% of participants who received service-users from paediatric services or 28.6% of those who referred service-users to adult services.

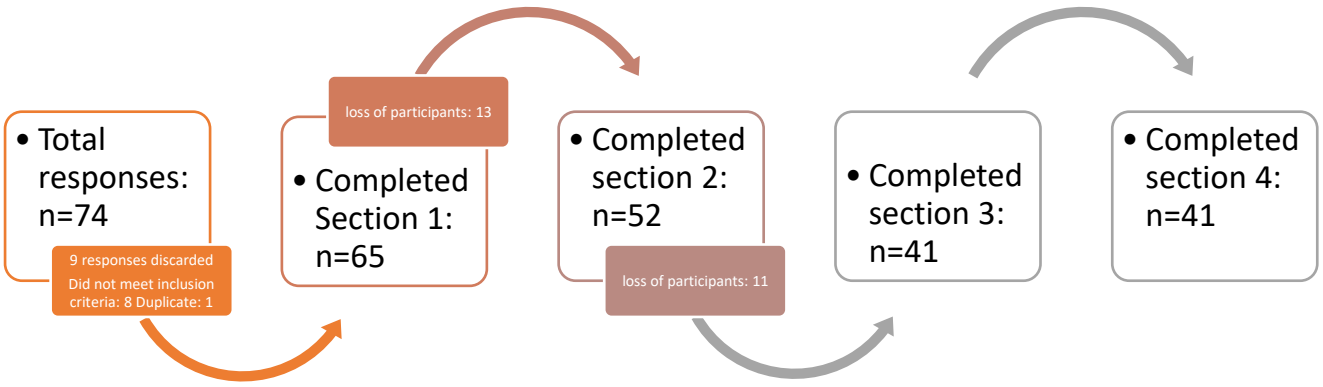


FIGURE 2-1: NUMBER OF PARTICIPANTS PER SECTION

2.6.1. Section 1: Demographic Profile

The first section of the study provided a profile of participants involved in the study**.**

TABLE 2-2: DEMOGRAPHIC PROFILE OF OCCUPATIONAL THERAPISTS WHO PARTICIPATED IN STUDY (N=65) (SUMMARISED)

Variable	Category	Frequency (n=65)	Percentage (%)
Years of experience in public healthcare	1-5 years	25	38.5
	6-10 years	22	33.9
	over 10 years	18	27.7
Province	Gauteng	36	55.4
	KwaZulu Natal	8	12.3
	Western Cape	8	12.3
	Limpopo	5	7.7
	Mpumalanga	3	4.6
	Eastern Cape	2	3.1
	North West	2	3.1
	Free State	1	1.5
	Northern Cape	0	-
Type of public health facility	Tertiary (Academic) Hospital	26	40.0
	District hospital	21	32.3
	Central (Academic) Hospital	6	9.2
	Regional/ provincial hospital	5	7.7
	Other (State-owned enterprises, specialised psychiatric or rehabilitation facility)	5	7.7
	Primary health care facility	2	3.1
Age range of service-users seen	0 years and above (full age range)	23	35.4
	0-12 years	10	15.4
	0-18 years	2	3.1
	13-18 years	3	4.6
	13 years and above	24	36.9
	None selected	3	4.6
Conditions seen	Neurological disorders	51	78.5

	Orthopaedic conditions	37	56.9
	Learning disabilities	36	55.4
	Congenital disorder	33	50.8
	Psychiatric disorders	25	38.5
	Chronic illness	22	33.9
	Sensory integration difficulties	22	33.9
	Visual impairment	21	32.3
	Other (e.g. burns)	5	7.7
Role in HCT	Working with service-users along the full child-to-adult age spectrum	33	50.8
	Referring to adult-oriented occupational therapy services	28	43.1
	Receiving service-users s from child-oriented occupational therapy	18	27.7
	None selected	3	4.6

As can be seen in Table 2-2, the majority of participants had less than 10 years' experience in public healthcare, with the highest frequency present in the category of 1-5 years' experience. Representation was received from all levels of public health services and eight out of nine provinces. The majority of responses (55.4%) were received from participants working in Gauteng province, with the second highest frequency of responses received from KwaZulu Natal and the Western Cape (12.3% respectively).

The age range of service-users seen varied among participants. Participants were able to select more than one category, as some participants saw multiple age categories at once, or rotated within the department, seeing different age categories at different times. A large proportion (35.4%) of participants worked with service-users across the full age range. The distribution of service-users by age suggests that service-users between the ages of 13 and 18 are more commonly seen by therapists who provide adult-orientated services (36.9%), as opposed to child-orientated services (15.4%) or purely adolescent services (4.6%).

Participants reported working with a wide variety of conditions across physical, cognitive, mental and functional domains. The most frequently seen conditions were neurological disorders (78.5%), orthopaedic conditions (56.9%), learning disabilities (55.4%) and congenital disorders (50.8%). Other conditions that were commonly encountered were

psychiatric disorders (38.5%), chronic medical illnesses (33.9%), sensory integration difficulties (33.9%) and visual impairment (32.3%). A small proportion of therapists reported working in specific fields, such as burns, functional capacity evaluations and medicolegal cases (7.7%).

The majority of participants (50.8%) provided both child- and adult-oriented services within the scope of their practice. Where a clear demarcation existed between adult and paediatric services, 43.1% referred service-users to adult-oriented occupational therapy and 27.7% received adolescent referrals from paediatric-oriented therapists. This question allowed participants to select more than one option; hence the total number of responses is greater than the number of participants due to some participants selecting multiple options. Where multiple options were selected, the participants reported working in a rotational role, where therapists spent a fraction of each year in different occupational therapy sections within the department, such as adult orthopaedic or neurological rehabilitation, paediatric rehabilitation or psychiatric rehabilitation. Some of these sections worked with service-users across the full age range with a specific condition, such as orthopaedic conditions, while other sections, such as paediatrics, were clearly demarcated along age lines.

2.6.2. Section 2: HCP understanding of HCT concepts and processes

The second section investigated general perceptions held by occupational therapists around HCT using a series of Likert scale questions. Figures 2-2 and 2-3 present a visual representation of these perceptions.

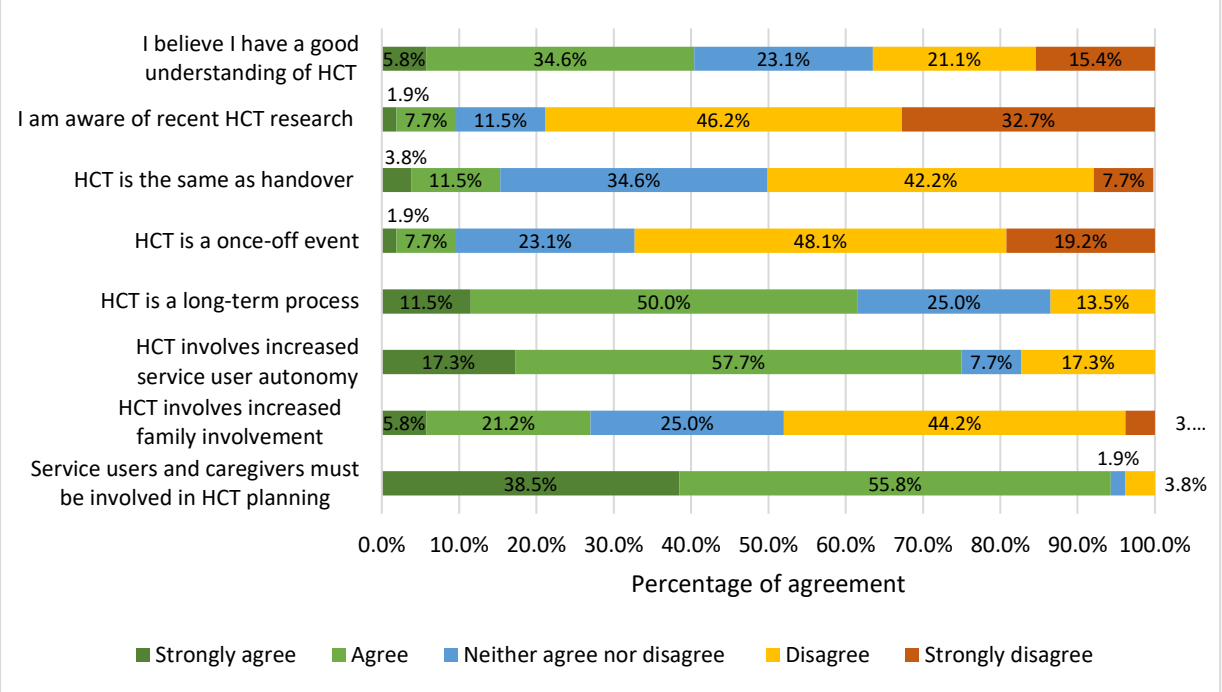


FIGURE 2-2: OCCUPATIONAL THERAPISTS' AWARENESS AND KNOWLEDGE OF HCT (N=52)

2.6.2.1. Self-perceived awareness and knowledge of HCT

As can be seen in figure 2-2, 40.4% of participants believed they had a good understanding of HCT (agree or strongly agree), while 36.5% expressed disagreement with the statement. In a follow-up question, participants reported deriving the majority of their understanding of HCT from in-service experience (51.9%). Other sources of knowledge on HCT were undergraduate training (15.4%), CPD programmes (7.7%), publications (7.7%), and postgraduate training (3.9%). A significant result was the fact that 32.7% of participants indicated no understanding of HCT.

Only 9.6% of participants indicated that they were aware of recent research on HCT, with 78.8% expressing disagreement with this statement.

2.6.2.2. Understanding of core HCT concepts

The majority of participants expressed disagreement with the statements that HCT is the same as handover (50%), and that HCT is a once-off event (67.3%); however, a large proportion of participants expressed a neutral response to these statements. The majority of participants agreed that HCT is a long-term process (61.5%) and that it involves increased autonomy of the service user (75%). Responses around the degree of family involvement during HCT varied, with 48.1% of participants believing that family involvement should decrease during HCT, and 26.9% believing that family involvement should increase during HCT. Participants

expressed a strong agreement (94%) that service-users and caregivers should be involved in HCT planning.

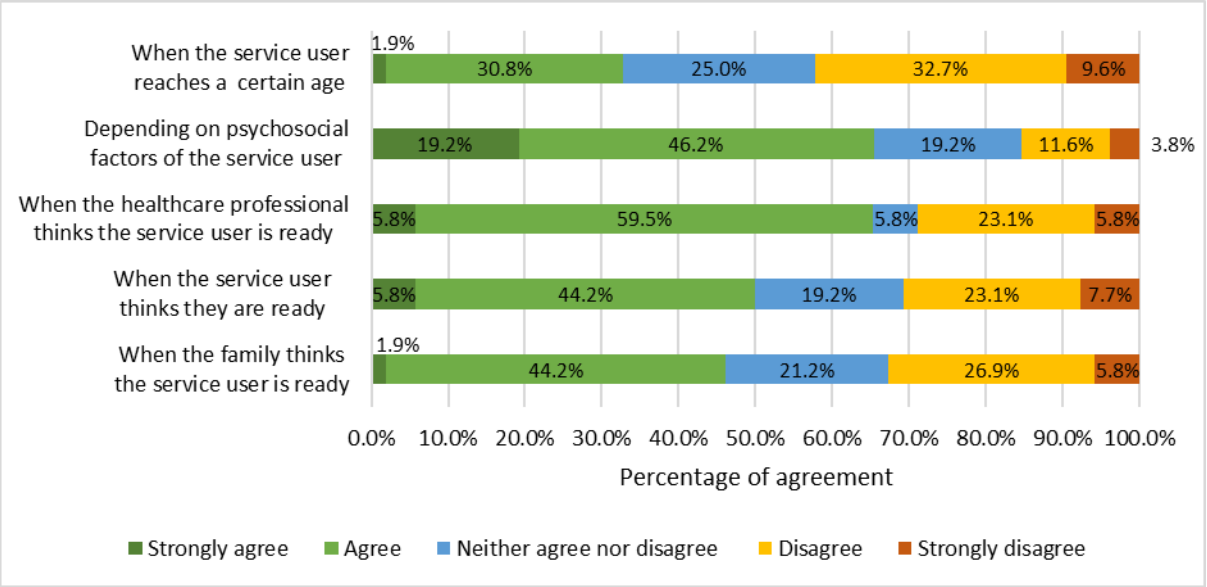


FIGURE 2-3: OCCUPATIONAL THERAPISTS' PERCEPTION OF FACTORS THAT SHOULD INFLUENCE TIMING OF TRANSITION (N=52)

As seen in Figure 2-3, in order of participant agreement, the factors that participants felt should influence when HCT commences are: psychosocial factors (level of maturity, family situation, schooling etc.), (65.4% agreement), HCP determination of readiness through clinical reasoning (65.4%), service-user's subjective perception of their readiness (50%), family's subjective perception of the service-user's readiness (46.1%), and age of the service-user (32.7%).

2.6.3 Section 3: HCT practices of occupational therapists

This section reports the main HCT practices of occupational therapists in South African public healthcare facilities, focusing on departmental HCT policies and guidelines, preparation for transition, stakeholder collaboration and outcome measurement.

TABLE 2-3: CURRENT HCT PRACTICES OF OCCUPATIONAL THERAPISTS IN SOUTH AFRICAN PUBLIC HEALTHCARE FACILITIES (SUMMARISED) (N=41)

Variable	Category	Freq. (n=41)	Perc. (%)
	None	12	29.3
	Verbal/ written policy indicating age of transfer	17	41.5

Policies used to guide the HCT process	Written policy on process of HCT	7	17.1
	Written policy on HCT process, with input from youth and caregivers	1	2.4
	Other (no department to transfer to)	4	9.8
Planning and preparation for transition	There is no transition plan	17	41.5
	Referral done to adult-oriented therapist	11	26.8
	Goal-directed plan of care created (with/ without referral to new therapist)	3	7.3
	Goal-directed plan of care created with service user and caregiver (with/ without referral to new therapist)	5	12.2
	Other	5	12.2
When is a service user deemed ready for transition?	At a stipulated age	27	65.9
	Subjectively determined by referring therapist	6	14.6
	Objectively evaluated using a transition evaluation	1	2.4
	Objectively evaluated using a standardised transition evaluation	2	4.9
	Other	5	12.2
Collaboration between paediatric- and adult-oriented therapists	Service-user's records sent to new therapist	19	46.3
	Service-user's records, and report or summary sent to new therapist	5	12.2
	Transfer package sent to the new therapist	2	4.9
	Transfer package sent to the new therapist and direct communication with new therapist	2	4.9
	No change in therapist occurs	9	22.0
	Other	4	9.8
Service user and caregiver involvement in reviewing HCT process (policies, guidelines, evaluations)	No involvement	26	63.4
	Some involvement	3	7.3
	Consistent involvement	2	4.8
	Consistent involvement; and service-user's and caregivers involved in creating, planning, reviewing and disseminating HCT resources	5	12.2
	Other	5	12.2
	No formal process	27	65.9

Measuring outcomes: How is feedback obtained on HCT process?	Informal verbal feedback sessions used to evaluate HCT process	10	24.4
	HCT feedback survey is used	0	0.0
	HCT feedback survey is used, and service user and caregivers involved in survey development and review	1	2.4
	Other	3	7.3

Table 2-3 indicates the practices used by occupational therapists within South African public healthcare facilities when implementing HCT.

2.6.3.1. Policies used to guide the HCT process:

Twenty nine percent of participants indicated the absence of departmental policy on HCT. Where HCT policies existed, 41.5% of participants indicated that policy stipulated just the age of transfer, while 17.1% of participants had an HCT policy that additionally described the process that should be followed when transitioning a service-user from paediatric to adult services.

The majority of participants were either somewhat familiar (34.1%) or unfamiliar (29.3%) with their departmental policies on HCT, with only 17.1% of participants expressing good familiarity with departmental HCT policies (extremely familiar: 7.3% and very familiar: 9.8%)

2.6.3.2. Planning and preparation for transition:

This section investigated the processes used to identify service-users in need of transition to adult care, and prepare service-users for the transition process. A significant proportion of participants (41.5%) indicated that there was no formal plan drawn up to prepare the service-user for the transition to adult-oriented services. For 26.8% of participants, a referral to adult services was the extent of transition planning.

In a follow-up question, participants reported that changes in privacy were not always discussed with the service-user or caregiver in preparation for transition. Where the discussion around privacy took place, more participants reported routinely discussing changes in privacy with the parent (36.6%) than the service-user (22%).

A number of respondents in this section (12.2%) indicated ‘other’ to all questions in this section, stating in the comments that these preparatory processes were not applicable to their departments due to a lack of any HCT services within their practice context.

2.6.3.3.Determining transition readiness:

The majority of participants (58.5%) identified service-users in need of transition on an individual basis. The initiation of transition appears to be primarily based on age, as 65.9% of participants reported initiating transition at a stipulated age. A subjective evaluation of readiness by the referring therapist was used by 14.6% of respondents. While 7.3% of participants indicated that an objective transition readiness evaluation was used, no transition evaluations were named in the comments section provided. Instead, other evaluations, such as literacy tests, were named. It is likely that participants are unaware of HCT models and tools, possibly due to limited familiarity with current research on HCT.

2.6.3.4. Collaboration between paediatric- and adult-oriented therapists:

Twenty two percent of participants indicated that no change in therapist occurred, as the same therapist provided both child- and adult-oriented services. Where a change in therapist occurred, 46.3% of participants communicated with the new therapist through sending the service-user’s records/ patient file to the new therapist. Fewer than 10% of participants made use of a comprehensive transfer package containing therapy records, reports or summaries, goals, action plans, transition readiness evaluations and legal documents.

2.6.3.5. *SU and caregiver involvement in reviewing HCT process*

A significant percentage of participants (63.4%) report no involvement of service-users and caregivers throughout the HCT process. A number of participants (12.2%) reported consistent involvement of SU’s and caregivers in creating, planning, reviewing and disseminating HCT resources.

2.6.3.6. Measuring outcomes of HCT process:

The majority of participants (65.9%) do not use any formal process to measure the success of the HCT process. Informal verbal feedback sessions are used by 24.4% of participants to evaluate the HCT process. When rating the perceived effectiveness of their current HCT processes in a follow-up question, the majority of participants (63.5%) rated the HCT process as either ineffective (34.2%) or minimally effective (29.3%). Departmental HCT processes were rated as somewhat effective by 29.3% of participants and very effective by 7.3% of participants.

An open-ended question allowed participants to state what could improve the effectiveness of current HCT practices. A content analysis of the responses revealed a high frequency of participants (46.3%) citing the need for education/ training on HCT as a means of improving HCT practice, as many had not been exposed to the concept previously, or felt they had a limited understanding of HCT practice. 24.4% of participants stated that policies and guidelines on HCT needed to be put into place to guide the HCT process. 9.8% of participants stated that communication between different stakeholders in the HCT process needed to be improved. Other recommendations made by participants included the need for improving the resources required for HCT, such as more permanent staff members, adolescent wards and programmes, and better record-keeping systems so that the outcomes of HCT may be more accurately measured.

2.6.4. Section 4: Factors that promote or hinder the success of HCT within occupational therapy services in South African public healthcare facilities.

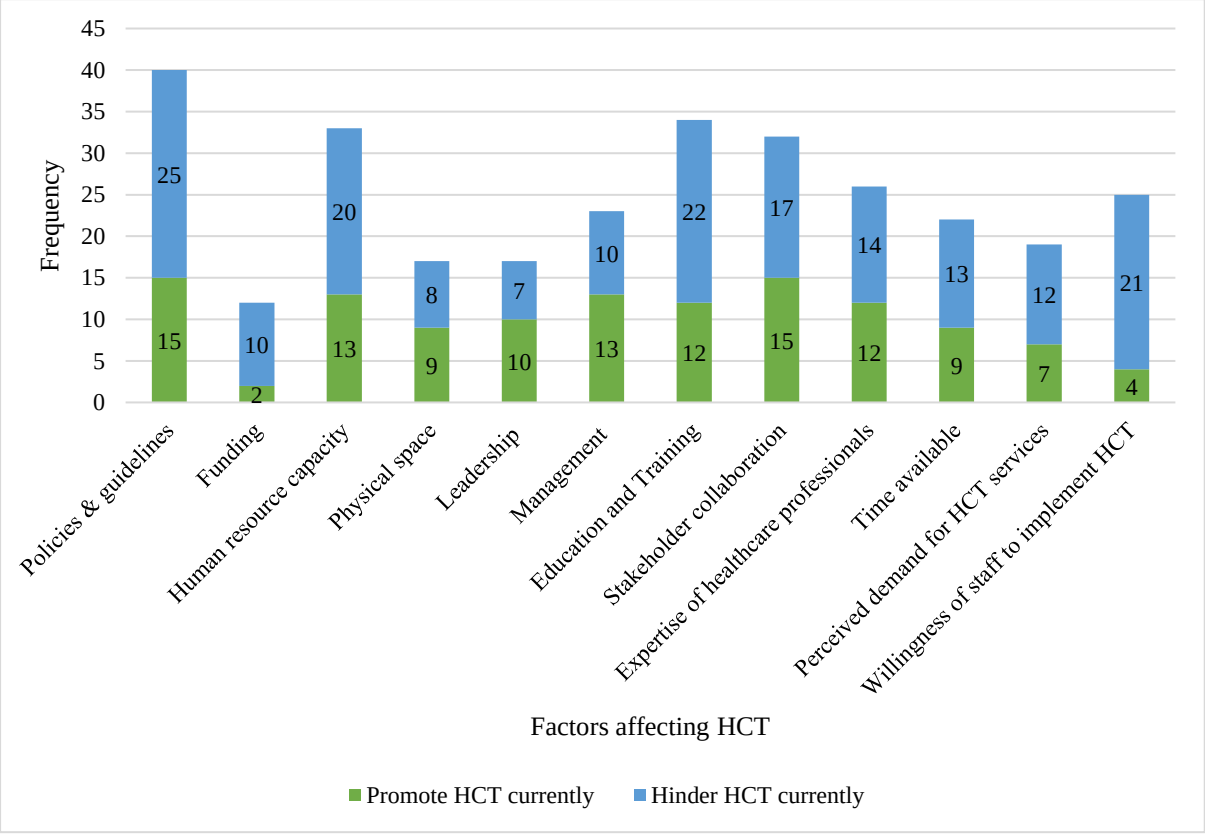


FIGURE 2-4: FACTORS PERCEIVED TO PROMOTE OR HINDER HCT IMPLEMENTATION BY OCCUPATIONAL THERAPISTS IN SOUTH AFRICAN PUBLIC HEALTH FACILITIES (N=41)

In the survey, participants were provided with a list of factors that could be selected as a facilitator, and/or a barrier, or neither, to HCT practices. For example, 'policies & guidelines' may have been selected as a facilitator by participants with established HCT guidelines in the workplace, whereas a participant with a lack of HCT policies and guidelines could have selected this factor as a barrier. Given that the list was not collectively exhaustive, an 'other' option was available for text responses. The duality to each factor as either a promoter or facilitator is presented in Figure 2-4 in terms of frequencies. Overall, more factors were perceived as hinderances than promoters.

As shown in Figure 2-4, the three main factors perceived by participants as hindering the HCT process in the workplace are insufficient development of policies and guidelines (61%, n=25), inadequate education and training (53.7%, n=22), and limited willingness and motivation to carry out HCT programmes (51.2%, n=21). The three greatest factors identified by participants (n=41) as promoting HCT processes are the presence of policies and guidelines (36.6%, n=15), stakeholder collaboration (36.6%, n=15), and human resource capacity (31.7%, n=13) indicating that sufficient therapists were present to support the implementation of HCT. Effective management at a departmental and institutional level was also cited as an important factor promoting HCT by 31.7% (n=13) of participants.

2.7. Discussion

The HCT practices of occupational therapists working in South African public healthcare facilities has not been previously documented. This study identified limitations in the knowledge and practical implementation of HCT within South African occupational therapy practice. Participants reported an inadequate use of policies and HCT tools to guide the transition process, insufficient transition preparation and poor outcome measurements. In this section, results are analysed in relation to existing literature and published best practice guidelines on HCT (American Occupational Therapy Association, 2018; Health Professions Council of South Africa, 2020; World Health Organisation, 2020).

2.7.1. Demographic profile of participants

Responses were received from participants in all levels of South African public healthcare working with service-users with physical, cognitive, mental or combined disabilities. The ability for occupational therapists to intervene with a wide range of conditions using a client-centred approach presents the potential for occupational therapists to facilitate the HCT process and prepare service-users for entering adult healthcare, regardless of the nature of their diagnosed condition.

The majority of participants worked in the Gauteng province (55.4%), followed by KwaZulu Natal and Western Cape (12.3%). This may be due to the higher number of occupational therapists in these provinces, as Gauteng has the highest concentration of occupational therapists in South Africa, followed by the Western Cape and KwaZulu Natal (Ned et al., 2020). The higher number of respondents in Gauteng may also be due to the fact that the first entry point for snowball sampling was in Gauteng; hence, more therapists in Gauteng may have been made aware of the study than in other provinces.

The majority of participants had less than 10 years' experience in public healthcare, with the highest frequency present in the category of 1-5 years' experience. This is consistent with finding by Ned (2020), who found that retention of occupational therapists in public health is poor, resulting in a high therapist turnover and a younger workforce. Considering that the majority of participants derived their knowledge of HCT from in-service experience, a high frequency of younger, less experienced therapists in public health may affect the department's understanding of HCT and ability to carry out an effective HCT process. An ineffective HCT process may limit the continuity of services provided to adolescents, which may affect their functional outcomes as they transition from childhood to adult roles and occupations.

2.7.2. Perceptions and understanding of HCT:

Participants' limited understanding of HCT was a theme that emerged within the study. While many participants initially perceived themselves to have a good understanding of HCT, later responses revealed misconceptions around HCT concepts and an awareness by participants that education and training on HCT is needed. Previous studies conducted in the United States have yielded similar findings: many HCPs have reported feeling unprepared for engaging in the HCT process due to a lack of training and expertise in HCT processes (Anderson *et al.*, 2018; Sadun *et al.*, 2019).

Some core concepts of HCT resonated with participants. Most participants agreed that HCT is not a once-off event. This is in line with the society for adolescent medicine's definition of HCT, which describes it as a long-term process occurring between childhood and adolescence (Blum *et al.*, 1993). Participants also agreed that HCT should commence when the service-user is ready, which demonstrates an awareness of the need for assessing transition readiness. Considering the individualised personal and health needs of the adolescent before initiating transition is one of the key factors influencing success of the HCT process (Tepper *et al.*, 2017; Ritchwood *et al.*, 2020).

A significant misconception that emerged at various points throughout the responses is the perception that HCT is not necessary if the service-user remains with the same therapist during their transition from childhood to adulthood. This emerged in the content analysis of the open-ended questions, as participants cited no change in therapist as a potential reason why HCT, in particular, transition readiness and planning, was not needed. HCT is still considered necessary even with no change in therapist, as there is still a need to move the adolescent from the more family-orientated, supervised services of paediatric-oriented care, to the individual-focused adult-oriented care that grants the service-user more autonomy as they begin to navigate adult roles and vocation (Robertson, 2006; Castillo & Kitsos, 2017). According to the Got Transition guidelines, the HCT process without change in HCP would still require the HCP to assess the service-user's readiness for transition to an adult model of healthcare, and prepare the service-user to assume a more autonomous role in managing their healthcare (Got Transition, 2022). This would involve preparing the service-user for reduced parent/caregiver involvement in therapy and increased involvement of the service-user in setting their own appointments and making decisions about the goals of therapy.

2.7.3. Current practices of occupational therapists in South African public healthcare facilities:

Within this study, the reported HCT practices of occupational therapists within South African public healthcare facilities. Policy on HCT, where it exists, is often limited and HCT tools, such as transition readiness questionnaires or outcome measures, do not appear to be routinely used. Limited policy and guidelines are likely to affect the standardisation of HCT processes and measurement of HCT outcomes within this context.

2.7.3.1. Discrepancy between perception of HCT and current practice

Although an understanding of some HCT concepts was expressed by participants, this did not appear to translate into routine practice. While participants selected age of the service-user as the least important factor in determining transition readiness, 66% of participants used age as the criterion for initiating transition within their practice settings. Although 94% of participants agreed that service-users and caregivers should be involved in the HCT process, 63.4% reported no input from caregivers and service-users in current HCT practice.

Occupational therapy as a profession stresses the importance of client-centred practice in collaboration with the service-user and their family (Kielhofner, 2009). This value is an integral part of the contemporary paradigm of the profession, and forms an important aspect of undergraduate occupational therapy training. Family and client-centred practice is also recognised as an important core competency within the WHO Rehabilitation competency

framework (World Health Organisation, 2020). These underlying professional principles may have guided participants to identify the discrepancy between what HCT should look like and current HCT practice, with 63.5% of participants evaluating their department's HCT practices as ineffective or minimally effective. The discrepancy between the values of the occupational therapy profession and current practices may result from an ineffective translation of occupational therapy values into the public healthcare setting. Previous research has identified a tendency for occupational therapists working in public healthcare to fall into a mechanistic or medical model of practice that sometimes fails to embody the fundamental philosophy of the profession (Naidoo *et al.*, 2016).

2.7.3.2. Current HCT practice pathways

It appears that current HCT practices among occupational therapists in South African public healthcare facilities take two possible pathways: 1) service-users remain with the same occupational therapist throughout the therapy process until discharge, or 2) service-users are referred from paediatric to adult occupational therapists when deemed ready.

2.7.3.2.1. Pathway 1: service-users remain with the same occupational therapist throughout the therapy process

This study found that in South Africa, half the participating public sector occupational therapists (50.1%) work with service-users across the lifespan. This is due to either being the only therapist in the department, or due to a rotational system in which therapists see service-users according to their availability. As mentioned previously, the lack of change in therapist was perceived by some participants as a reason why HCT processes were considered unnecessary. This indicates a need for clarifying the process of HCT in cases where there is no change in HCP, as this appears to be a significant therapy context with South African public healthcare facilities.

According to the Got Transition guidelines, the HCT process without change in healthcare professional would still require the healthcare professional to assess the service-user's readiness for transition to an adult model of healthcare and prepare the service-user to assume greater autonomy for managing their healthcare (Got Transition 2022). Identifying transition readiness and creating a transition plan should be done in collaboration with the service-user, family/ caregiver and in accordance with the adolescent's level of psychosocial development (Castillo & Kitsos 2017; Hasegawa & Gleeson 2018; Hobart & Phan 2019). Some adolescents may be able to work towards setting their own appointments and making decisions about the goals of therapy, while others may require parent/caregiver involvement

for a longer period or indefinitely. As a child moves into adolescence and early adulthood, it is expected that the focus of occupational therapy would move from a focus on childhood occupations, such as play, learning and activities of daily living, to adult occupations, such as work, leisure and instrumental activities of daily living (American Occupational Therapy Association, 2020). Additionally, it would be expected that service-users begin to assume greater responsibility for their therapy(Castillo & Kitsos, 2017). Applying an HCT model would ensure that the therapist prepares the service-user adequately for these changes during adolescence, even where no change in therapist occurs.

An important part of the preparation process is discussing changes in privacy and confidentiality that accompany the transition from child- to adult-oriented services(Bailey *et al.*, 2003; Mbalinda *et al.*, 2021). This study revealed that changes in privacy and confidentiality are not routinely discussed with service-users and caregivers. This indicates a potentially significant gap in the HCT preparation process, which may have ethical implications. Practical training is needed on the ethics involved in the shift from paediatric to adult-oriented services within South African occupational therapy.

2.7.3.2.2. Pathway 2: service-users are referred from paediatric to adult occupational therapists when deemed ready

Where occupational therapy services were split into paediatric-oriented and adult-oriented services, the majority of participants initiated transition at a stipulated age, around the age of 12 to 13 years. The tendency to initiate HCT based on age alone has been documented in other studies on HCT in South Africa (Westwood *et al.*, 2014; Zanoni *et al.*, 2021). Many adolescents are transferred abruptly to adult care at the age of 12 without preparation for the transfer, which has been associated with poor clinical outcomes and reduced retention in care (Zanoni *et al.*, 2020). According to the Society for Adolescent Medicine, age of the adolescent should not be the primary criterion for initiating transition; instead, transition readiness should be determined by the adolescent's ability to begin managing their own healthcare (Santelli, 2003). While transition readiness assessments have been identified as a useful tool in deciding when to initiate HCT, these measures are not routinely used in practice (Zanoni *et al.*, 2020). This is consistent with the findings of this study.

Within this study, it appears that adolescents from the age of 13 and above were more likely to be seen by adult-oriented occupational therapy services than paediatric or adolescent-specific services. An abrupt shift to adult-oriented care at the age of 13 may result in adolescents being placed within a model of care that they are unprepared for or that does not

meet their developmental needs. Adult-oriented health services tend to be characterised by a significant reduction in HCP support and an increased demand on service-users to take responsibility for their own health (Ritchwood *et al.*, 2020). The support of healthcare providers during healthcare transition is a key factor in adolescents' experience of the HCT process in South Africa (Malapela, Thupayagale-Tshweneagae & Ibitoye, 2020b). The lack of support and perceived inability to meet the demands of adult care has been associated with a reduction in adherence to healthcare services and a tendency to miss appointments (Wan *et al.*, 2019; Abaka & Nutor, 2021; Mbalinda *et al.*, 2021; Overbury *et al.*, 2021). Inadequate therapist support during HCT poses a significant risk that adolescents may be lost to occupational therapy services at a critical stage in their development.

A lack of access to occupational therapy services in adolescence may result in poor support for adolescents during development of important life roles and occupations, such as IADL and educational activities. These occupations form the foundation for prevocational and vocational roles in adulthood; hence, the absence of support for successful engagement in these occupations may have a negative effect on the overall functional outcomes of adolescents with disabilities or chronic health needs (Eismann et al., 2017; Weiss et al., 2021).

The inaccessibility of adolescent-specific services during the HCT process has been identified as a challenge both globally and in South Africa (Westwood *et al.*, 2014; Minnesota Department of Health, 2019; Price *et al.*, 2019). In South Africa, despite the presence of innovative policies and guidelines around adolescent health, recent literature highlights that current practices are insufficient to meet the health needs of the South African adolescent population (Ned *et al.*, 2017; James *et al.*, 2018; Jonas *et al.*, 2019; Pike *et al.*, 2020; George *et al.*, 2021). Many of the challenges experienced in current adolescent health practice are those faced by the health system as a whole, including human and financial resource constraints, poor planning and insufficient infrastructure and support for adolescent programmes. Additionally, the implementation of adolescent health programmes requires an understanding of the unique developmental needs of adolescence, which necessitates additional training for South African HCPs (Ferguson *et al.*, 2022). The successful implementation of adolescent health initiatives also requires multisectoral collaboration between the health system and social support structures, which remains a challenge in many parts of South Africa (George *et al.*, 2021).

In South Africa, the absence of adequate coping mechanisms to overcome challenges in the environment may lead to substance abuse in vulnerable youth, which can contribute to a deterioration in health and functional outcomes (Temane *et al.*, 2023). Occupational therapy

has a vital role in helping adolescents cope with demands of the transition to adulthood by providing functional skills training and improving resilience to change (Brooks & Bannigan, 2021). Poor access to occupational therapy services in adolescence may thus have a negative effect on the overall health and wellbeing of adolescents with special health needs. According to the occupational therapy practice framework (OTPF), occupational therapy services during adolescence should include preparation for transition, education on the change in roles and expectations during transition, and assistance to adapt to new roles or life situation (American Occupational Therapy Association, 2020). The continuity of occupational therapy services during the transition period is critical to improve the overall functional outcomes of adolescents with disabilities or chronic health needs (Eismann et al., 2017; Weiss et al., 2021).This necessitates the presence of a strong HCT process that ensures that adolescents are retained in occupational therapy services until they are able to adequately manage their health and other life roles. There is thus a need for HCT to bridge the divide between paediatric- and adult-oriented occupational therapy services so that transition is less abrupt and takes into consideration the service-user's readiness for transition to adult-oriented care.

2.7.4. Factors that promote and hinder HCT

HCT practice appears to be influenced by a number of factors. It must be noted that all factors perceived to promote HCT by some participants, with the exception of management and leadership, were viewed as hindrances to HCT by a greater number of participants. This variation in perception may be due to varying practice contexts, or varying understandings of what an ideal HCT process should look like.

The presence or absence of policy on HCT was perceived to be either a promoter of or hindrance to HCT in different practice settings. Other factors that were perceived to promote HCT were stakeholder collaboration, human resource capacity and effective management at a departmental and institutional level. Other factors perceived to hinder HCT by the majority of participants were inadequate education and training and limited willingness and motivation to carry out HCT programmes.

2.7.4.1. Policy and guidelines

The presence or absence of policy and guidelines on HCT was the main factor identified as influencing the HCT process. Some participants viewed the presence of policy around HCT as a factor that promoted the effective implementation of HCT; however, available policy guiding the transition of adolescents from paediatric to adult services in South African occupational therapy practice appears to be predominantly departmental or institutional policy that stipulates the age at which adolescents should be transferred to adult care. Existing policy

does not appear to clearly outline the process of HCT or make use of available transition evaluations or tools. This suggests that existing policy promotes HCT only to the extent of ensuring that transition occurs at a specific stage of development and that continuity of therapy is maintained.

The majority of participants viewed the absence or insufficiency of HCT policies as a hindrance to its effective implementation. Although no formal processes were used to measure the success of HCT, most participants subjectively rated their HCT process as ineffective or minimally effective. This perception is supported by Malapela et.al. (2020) and Zanoni et.al. (2021), who identified that HCT in South Africa is challenged by the lack of evidence-based protocols, which results in a lack of standardisation of care and can negatively affect HCT outcomes. Poor HCT outcomes can lead to failure to follow up, non-adherence to intervention and, consequently, health complications for adolescents (Westwood *et al.*, 2014; Kung *et al.*, 2016; Zanoni *et al.*, 2021).

To be successful, the HCT process requires policy and guidelines that indicate the criteria for determining transition readiness, beyond just age, as well as the process that should be followed and the roles of different stakeholders within the HCT process (Kerr, Price, Nicholl & O'Halloran, 2018; Narla *et al.*, 2021). An efficient and context-specific method for measuring HCT outcomes should be included in policy development. Occupational therapy policies on HCT should also consider the profession's values and contribution to HCT within the MDT. This can include a client-centred and collaborative approach to designing the HCT process, identifying transition readiness based on holistic evaluation of the adolescent and their life roles, and considering the functional outcomes of successful HCT. Occupational therapy services during transition should include skills training in developmentally appropriate occupations, such as health management, that takes place in the natural context of occupation (Cahill & Beisbier, 2020).

The development of HCT programmes and policies that will be effective and meet the needs of South African adolescents requires input and collaboration at multiple levels. Hasegawa & Gleeson (2018) recommend that HCT should be part of healthcare facilities standard operating protocols, involving input from senior executives, administrative staff, and both paediatric and adult clinics. They recommend that data should be collected at an institutional level to establish efficacy of the chosen HCT model. This process is important to allow for the development of large-scale funding models that can ensure adequate financial resources and operationalization of HCT programmes (Blum *et al.*, 1993; Anderson *et al.*, 2018; Hobart & Phan, 2019). In South Africa, the National Department of Health has implemented the

Adolescent and Youth Health policy 2017, which aims to effectively implement physical, sexual and mental health programmes for young people aged 10-24 years as they transition from childhood to adulthood (South African National Department of Health 2017). There is potential for HCT to be implemented as part of this programme, as existing policies and structures are already in place.

2.7.4.2. Other factors promoting the HCT process

Stakeholder collaboration and human resource capacity were the most frequently identified promoters of HCT after policy and guidelines; however, it must be noted that overall, more participants identified these factors as hindrances to HCT than promoters. The presence of good management and leadership at a departmental an institutional level were the only factors perceived more frequently as promoters than hindrances to HCT implementation.

2.7.4.2.1. Stakeholder collaboration

Good stakeholder collaboration was a factor perceived to promote effectiveness of the HCT process by some participants. In cases where transition was accompanied by a change in therapist, the presence of communication channels, particularly between paediatric- and adult-oriented occupational therapists, was a factor that assisted in ensuring a smoother transition. These communication channels have been identified as one of the most important predictors of successful HCT (Hobart & Phan, 2019). Communication between paediatric and adult occupational therapy services is critical for a seamless transition process, as it is important that both HCPs understand the adolescent's context, history and needs (Kerin, Lynch & McNicholas, 2020; Ritchwood et al., 2020). HCT programmes that integrate collaboration with the adult team early in the transition process have been shown to achieve greater success (Tepper *et al.*, 2017).

Where a change in occupational therapist occurred during adolescence, the majority of participants indicated that communication between paediatric and adult occupational therapy services consists mainly of sending the service-user's records and/or a report or summary to the new therapist. This suggests the potential for improving communication through additional measures, such as joint sessions and pre-transition meetings involving adolescents and clinicians from both health services (Jones *et al.*, 2019).

Although participants highlighted stakeholder collaboration as a promoter of HCT, not all stakeholders appear to be part of the collaborative process. Despite 94% of participants indicating that service-users and caregivers should be involved in planning the HCT process, input from youth and caregivers was rarely considered when developing HCT policy. The vast

majority of participants indicated that there was no involvement of service-users and caregivers in reviewing the HCT process (policies, guidelines, evaluations) to evaluate outcomes. Studies show that consultation with adolescents and parents is often not optimised during the HCT process, which can cause confusion and impede the transition period (Jonas *et al.*, 2019; Kerin *et al.*, 2020; Abaka & Nutor, 2021). Poor involvement of adolescents and youth in the HCT process can result in service-users being inadequately prepared for transition, which can have a negative effect on the outcomes of the HCT process and can result in poor adherence to therapy (Price et al., 2019). It is important that collaborative efforts are extended to service-users and caregivers to enhance the HCT process.

2.7.4.2.2. Human resource capacity

The presence of sufficient human resource capacity was cited as a factor that promoted the HCT process, with some participants indicating that sufficient therapists were present to support the implementation of HCT. Significantly more participants indicated that insufficient human resource capacity was a hindrance to effective HCT implementation.

Human resource capacity has been identified as barrier to the overall implementation of health programmes across the South African health sector. The severe shortage of HCPs in the public health sector, particularly rehabilitation services such as occupational therapy, is often due to poor workforce recruitment, retention and management (National Department of Health, 2015; Ned *et al.*, 2017; Maphumulo & Bhengu, 2019). Rehabilitation services in particular often face staffing limitations due to freezing of posts and a lack of resources (Ned *et al.*, 2020).

2.7.4.2.3. Management and Leadership

Interestingly, the categories of management and leadership were the only two categories that more participants highlighted as promoters of HCT than hindrances to the process. The presence of effective institutional and departmental management has the potential to ensure HCT processes are adequately planned for, implemented, and monitored (Hasegawa & Gleeson, 2018).

The perception of management and leadership being a factor that promotes HCT programmes is unexpected. Previous literature indicates that the public healthcare sector is characterised by poor leadership and management, which has resulted in corruption, lack of performance monitoring and poor health outcomes for people utilising public health (National Department of Health, 2015; Ned *et al.*, 2017; Maphumulo & Bhengu, 2019).

2.7.4.3. Other hindrances to the HCT process

2.7.4.3.1. Insufficient education and training

Participants' limited knowledge of HCT core concepts and processes was highlighted throughout the study as a significant hindrance to the implementation of HCT. The need for training in HCT was the most frequent theme mentioned by participants as a way of improving the effectiveness of their HCT practice. Training in HCT is needed to develop therapist expertise and improve motivation to put effective HCT programmes into place. This finding correlates with earlier research by Zanoni et al. (2021), who identified limited HCP awareness of and training in HCT as a significant barrier to the production and implementation of HCT protocols.

The development of HCT training programmes for occupational therapists within the South African public health context will require the input of occupational therapist clinicians, academic staff, service-users and caregivers. Training should be integrated into undergraduate occupational therapy programmes, but also needs to be part of in-service education and mentorship programmes. This is particularly important considering that most participants stated that they derived their knowledge of HCT from in-service experience. Training on HCT should include a focus on adolescent health and development (Anderson *et al.*, 2018; Jones *et al.*, 2019). Training should also equip HCPs with expertise on maintaining the confidentiality and safety of adolescents during transition (Alderman *et al.*, 2019).

2.7.4.3.2. Limited willingness and motivation to carry out HCT programmes

A significant barrier to HCT implementation is limited motivation of occupational therapists to carry out HCT programmes. This may be due to unfamiliarity with the process, a lack of clear departmental protocols on HCT, or a high workload that does not leave sufficient mental and physical capacity for carrying out HCT programmes.

As the majority (72.31%) of participants had less than 10 years' experience, a lack of experience in HCT may limit willingness to implement programmes. This trend is in line with research by Ned et.al., (2017), who report a high turnover of therapists in the South African public health sector, resulting in a younger, less experienced workforce. This can have implications for the implementation of new programmes and processes, as continuity of programmes may be more difficult with a fluctuating workforce.

2.7.5. Current HCT practice as compared to best practice guidelines

As highlighted in the discussion, current HCT practice of occupational therapists in South African public health settings needs to be optimised in line with occupational therapy professional values, the WHO competency framework, and available context-specific HCT practice guidelines.

Occupational therapy practice should adopt a client-centred and collaborative approach to prepare adolescents for the transition to an adult model of healthcare and health management roles, as well as for the transition to other adult roles (Cahill and Beisbier, 2020; Clarkson et al., 2021). In current practice, adolescents and caregivers are often not consulted as part of the HCT process. This contradicts the collaborative approach valued by the occupational therapy profession as well as the WHO competency framework, which also recommends the utilisation of family- and client-centred practice (World Health Organisation, 2020).

While the majority of HCT-specific practice guidelines have been developed in high income countries, Narla et al. (2021) developed an HCT guideline specifically for lower-income and resource limited settings. These guidelines recommend that HCT is initiated when the adolescent has met clinical milestones and is deemed ready for transfer using a holistic and individualised approach. Currently, the majority of occupational therapists who participated in this study initiate transition based on age alone, which is contrary to these guidelines. Narla et al. (2021) also recommend utilising social resources, such as peer support groups and culturally sensitive tools to support the HCT process. These do not appear to be integrated into current practice.

2.8. Strengths and Limitations

2.8.1. Strengths

This study is the first to examine the HCT practices of occupational therapists within the context of South African public health. This study provides an overview of current HCT practices and allows for analysis of these practices against existing best practice guidelines. The study contains input from all levels of public health practice, from primary to tertiary health services, and across the eight most densely populated provinces in South Africa. Participants worked with a range of service-users across different age and diagnostic profiles. This provides a large-scale overview of HCT practices, which can be a starting point for further in-depth research, as well as for the development of HCT policies that can be applicable at multiple levels of public health.

2.8.2. Limitations

Participants' limited familiarity with the topic was a limitation to this study, as a common theme emerging was participants' perceived lack of knowledge about HCT and insufficient training in HCT. This is likely to have affected the response rate within this study, as there was a 36.9% loss of participants between sections 1 and 4. A low response rate means that, while similarities in practice may exist, the findings of this study cannot be generalised to the entire population of South African occupational therapists working in public health.

Limited familiarity with HCT may have contributed to misunderstandings regarding HCT concepts, which may have affected participants' ability to select appropriate responses. For example, participants reported using standardised transition evaluation tools, but analysis of the comments revealed use of other standardised tests and possible lack of familiarity with standardised transition tools.

2.9. Recommendations

This study identifies a need for improved education of clinicians on HCT core concept and guidelines. Training on HCT should be integrated into undergraduate curriculum planning as well as in-service continuing education programmes. Future research in South Africa and in other African countries is needed to investigate the role of occupational therapy and other health professions in HCT. Qualitative methods can be utilised to provide a more in-depth and nuanced perspective on how occupational therapists understand HCT. An important aspect that will need to be investigated further is the difference between paediatric and adult models of occupational therapy, and how to optimise the shift between these models of care. This may assist in the development of training programmes in the future.

Realistic and contextually relevant policies on HCT need to be developed to optimise the transition of adolescents from paediatric to adult models of occupational therapy services. It is important that the development of HCT policies and integration of HCT into South African occupational therapy practice occurs with the input of adolescents and caregivers. These are important stakeholders whose participation appears to be limited in current HCT practice.

2.10. Conclusion

This study provides a baseline overview of current HCT practices within South African occupational therapy practice. While there appears to be an awareness of the need for HCT among participants, challenges exist in the understanding and practical implementation of

HCT within the context of South African public occupational therapy services. HCT practice needs to be optimised to ensure that South African occupational therapists are able to provide uninterrupted and developmentally appropriate therapy services that can meet the needs of adolescents with chronic health conditions.

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2.12. Competing interests

The authors declare that they have no financial or other associations that may have inappropriately influenced this study.

2.13. Authors' contributions

I. Hoosen contributed to the conceptualization, methodology, analysis, investigation, resources, data curation, writing, editing, and reviewing of the article. F. Breytenbach contributed to conceptualization, methodology, analysis, data curation, supervision, and reviewing and editing of the article. J. van der Linde contributed to the supervision, reviewing and editing of the article.

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2.15 Data availability

The raw data is not publicly available for this study.

2.16 Disclaimer

The views and opinions expressed in this article are those of the authors and do not necessarily reflect the position of any affiliated institution of the authors.

2.17. References

Abaka, P. & Nutor, J.J., 2021, 'Transitioning from pediatric to adult care and the HIV care continuum in Ghana: a retrospective study', *BMC Health Services Research* 21(1), 1-14. https://doi.org/10.1186/s12913-021-06510-4

Alderman, E.M., Breuner, C.C., Grubb, L.K., Powers, M.E., Upadhya, K. & Wallace, S.B., 2019, 'Unique needs of the adolescent', *Pediatrics* 144(6). https://doi.org/10.1542/peds.2019-3150

American Occupational Therapy Association, 2020, 'Occupational therapy practice framework: Domain and process (4th ed.)', *American Journal of Occupational Therapy* 74(Suppl. 2), 7412410010. https://doi.org/10.5014/ajot.2020.74S2001

Anderson, K.A., Sosnowy, C., Kuo, A.A. & Shattuck, P.T., 2018, 'Transition of individuals with autism to adulthood: A review of qualitative studies', *Pediatrics* 141(Supplement_4), S318–S327. https://doi.org/10.1542/peds.2016-4300I

Assarroudi, A., Heshmati Nabavi, F., Armat, M. R., Ebadi, A., & Vaismoradi, M., 2018, Directed qualitative content analysis: the description and elaboration of its underpinning methods and data analysis process. *Journal of research in nursing*, 23(1), 42–55. https://doi.org/10.1177/1744987117741667

Bailey, S., O'Connell, B. & Pearce, J., 2003, 'The transition from paediatric to adult health care services for young adults with a disability: an ethical perspective', *Australian Health Review* 26(1), 64-69. https://doi.org/10.1071/ah030064

Bartlett, J.E., Kotrlik, J.W. & Higgins, C.C., 2001, 'Organizational research: Determining appropriate sample size in survey research', *Information Technology, Learning, and Performance Journal* 19(1), 43–50.

Betz, C.L., Lobo, M.L., Nehring, W.M. & Bui, K., 2013, 'Voices not heard: a systematic review of adolescents' and emerging adults' perspectives of health care transition', *Nursing Outlook* 61(5), 311–336. https://doi.org/10.1016/j.outlook.2013.01.008

Blum, R.W., Garell, D., Hodgman, C.H., Jorissen, T.W., Okinow, N.A., Orr, D.P. & Slap, G.B., 1993, 'Transition from child-centered to adult health-care systems for adolescents with chronic conditions', *Journal of Adolescent Health* 14(7), 570-576. https://doi.org/10.1016/1054-139X(93)90143-D

Cahill, S.M. & Beisbier, S., 2020, 'Occupational therapy practice guidelines for children and youth ages 5–21 years', *The American Journal of Occupational Therapy* 74(4), 7404397010p1-7404397010p48. https://doi.org/10.5014/ajot.2020.744001

Castillo, C. & Kitsos, E., 2017, 'Transitions From pediatric to adult care', *Global Pediatric Health* 4, 1-2. https://doi.org/10.1177/2333794X17744946

Clarkson, C., Boshoff, K. & Kernot, J., 2021, 'Occupational therapy interventions for adolescents: A scoping review', *The Allied Health Scholar* 2(1), 51-102. https://doi.org/10.21913/TAHS.v2i1.1575

Cresswell, J.W. & Cresswell, J.D., 2018, *Research Design: Qualitative, Quantitative and Mixed Methods Approaches*, 5th edn., SAGE Publications, Los Angeles.

Eismann, M.M., Weisshaar, R., Capretta, C., Cleary, D.S., Kirby, A. V. & Persch, A.C., 2017, 'Characteristics of students receiving occupational therapy services in transition and factors related to postsecondary success', *The American Journal of Occupational Therapy* 71(3), 7103100010p1-7103100010p8. https://doi.org/10.5014/ajot.2017.024927

Esposito, P., 2014, 'Clinical audit, a valuable tool to improve quality of care: General methodology and applications in nephrology', *World Journal of Nephrology* 3(4), 249. https://doi.org/10.5527/wjn.v3.i4.249

Gabriel, P., McManus, M., Rogers, K. & White, P., 2017, 'Outcome evidence for structured pediatric to adult health care transition interventions: A systematic review', *The Journal of Pediatrics* 188, 263-269. https://doi.org/10.1016/j.jpeds.2017.05.066

Got Transition n.d., *Six Core Elements of Healthcare Transition*, viewed 19 June 2022, from https://www.gottransition.org/six-core-elements/.

Haghighat, R., Toska, E., Cluver, L., Gulaid, L., Mark, D. & Bains, A., 2019, 'Transition pathways out of pediatric care and associated HIV outcomes for adolescents living with HIV in South Africa', *JAIDS Journal of Acquired Immune Deficiency Syndromes*, 82(2), 166-174. https://doi.org/10.1097/QAI.0000000000002125

Harris, P.A., Taylor, R., Minor, B.L., Elliott, V., Fernandez, M., O'Neal, L. et al., 2019, 'The REDCap consortium: Building an international community of software platform partners', *Journal of Biomedical Informatics* 95, 103208 https://doi.org/10.1016/j.jbi.2008.08.010

Harris, P.A., Taylor, R., Thielke, R., Payne, J., Gonzalez, N. & Conde, J.G., 2009, 'Research electronic data capture (REDCap)—A metadata-driven methodology and workflow process for providing translational research informatics support', *Journal of Biomedical Informatics* 42(2), 377-381. https://doi.org/10.1016/j.jbi.2008.08.010

Hasegawa, Y. & Gleeson, H., 2018, 'Three practical principles in planning and developing health care transition: our personal perspectives', *Clinical Pediatric Endocrinology* 27(3), 109–112. https://doi.org/10.1297/cpe.27.109

Health Professions Council of South Africa, 2016, *General Ethical Guidelines for Health Researchers: Booklet 13*, Booklet, HPCSA, Pretoria.

Health Professions Council of South Africa, 2021, *Health Professions Council of South Africa Annual Report 2020 -2021*, Booklet, HPCSA, Pretoria.

Hobart, C.B. & Phan, H., 2019, 'Pediatric-to-adult healthcare transitions: Current challenges and recommended practices', *American Journal of Health-System Pharmacy* 76(19), 1544-1554. https://doi.org/10.1093/ajhp/zxz165

Jonas, K., Ramraj, T., Goga, A., Bhana, A. & Mathews, C., 2019, 'Achieving universal health coverage for adolescents in South Africa: health sector progress and imperatives', *South African Health Review* 2019(1), 155-165.

Jones, C., Ritchwood, T.D. & Taggart, T., 2019, 'Barriers and facilitators to the successful transition of adolescents living with HIV from pediatric to adult care in low and middle-income countries: A systematic review and policy analysis', *AIDS and Behavior* 23(9), 2498–2513. https://doi.org/10.1007/s10461-019-02621-6

Kerin, L., Lynch, D. & McNicholas, F., 2020, 'Participatory development of a patient–clinician communication tool to enhance healthcare transitions for young people with 22q11.2', *Irish Journal of Medical Science (1971 -)* 189(3), 761–769. https://doi.org/10.1007/s11845-019-02104-6

Kerr, H., Price, J., Nicholl, H. & O'Halloran, P., 2018, 'Facilitating transition from children's to adult services for young adults with life-limiting conditions (TASYL). Programme theory developed from a mixed methods realist evaluation', *International Journal of Nursing Studies*, 86, 125–138. https://doi.org/10.1016/j.ijnurstu.2018.06.015

Kielhofner, G., 2009, *Conceptual Foundations of Occupational Therapy*, 4th edn., FA Davis Company, Philadelphia.

Kung, T.H., Wallace, M.L., Snyder, K.L., Robson, V.K., Mabud, T.S., Kalombo, C.D. et al., 2016, 'South African healthcare provider perspectives on transitioning adolescents into adult HIV care', *South African Medical Journal* 106(8), 804–808. https://doi.org/10.7196/SAMJ.2016.v106i8.10496

Levanon-Erez, N., Cohen, M., Traub Bar-Ilan, R. & Maeir, A., 2017, 'Occupational identity of adolescents with ADHD: A mixed methods study', *Scandinavian Journal of Occupational Therapy* 24(1), 32-40. https://doi.org/10.1080/11038128.2016.1217927

Malapela, G.R., Thupayagale-Tshweneagae, G. & Ibitoye, O.F., 2020, 'Nurses' perceived role in healthcare transition of adolescents with intellectual disabilities', *African Journal of Disability*, 9(0), a674. https://doi.org/10.4102/ajod.v9i0.674

Maphumulo, W.T. & Bhengu, B.R., 2019, 'Challenges of quality improvement in the healthcare of South Africa post-apartheid: A critical review', *Curationis* 42(1), 1-9. https://doi.org/10.4102/curationis.v42i1.1901

Mbalinda, S.N., Bakeera-Kitaka, S., Amooti, D.L., Magongo, E.N., Musoke, P. & Kaye, D.K., 2021, 'Ethical challenges of the healthcare transition to adult antiretroviral therapy (ART) clinics for adolescents and young people with HIV in Uganda', *BMC Medical Ethics* 22(1), 35. https://doi.org/10.1186/s12910-021-00602-w

Monareng, L.L., Franzsen, D. & van Biljon, H., 2018, 'A survey of occupational therapists' involvement in facilitating self-employment for people with disabilities', *South African Journal of Occupational Therapy* 48(3), 52-57. https://doi.org/10.17159/2310-3833/2017/vol48n3a8

Naidoo, D., van Wyk, J. & Joubert, R.W.E., 2016, 'Exploring the occupational therapist's role in primary health care: Listening to voices of stakeholders', *African Journal of Primary Health Care & Family Medicine* 8(1), 1-9. https://doi.org/10.4102/phcfm.v8i1.1139

Narla, N.P., Ratner, L., Bastos, F.V., Owusu, S.A., Osei-Bonsu, A. & Russ, C.M., 2021, 'Paediatric to adult healthcare transition in resource-limited settings: a narrative review', *BMJ Paediatrics Open* 5(1), e001059. https://doi.org/10.1136/bmjpo-2021-001059

National Department of Health, 2017, National Health Act 2003 - *National health Insurance for South Africa: Towards Universal Health Coverage.* Pretoria, Republic of South Africa.

Ned, L., Cloete, L. & Mji, G., 2017, 'The experiences and challenges faced by rehabilitation community service therapists within the South African Primary Healthcare health system', *African Journal of Disability* 6(0), a311. https://doi.org/10.4102/ajod.v6i0.311

Ned, L., Tiwari, R., Buchanan, H., van Niekerk, L., Sherry, K. & Chikte, U., 2020, 'Changing demographic trends among South African occupational therapists: 2002 to 2018', *Human Resources for Health* 18, 1-12. https://doi.org/10.1186/s12960-020-0464-3

Occupational Therapy Association of South Africa, 2021, *OTASA Annual Report 2021/2022*, viewed 19 June 2022, from https://www.otasa.org.za/wp-content/uploads/2024/02/2021-2022.-ANNUAL-REPORT-pdf.pdf

Overbury, R.S., Huynh, K., Bohnsack, J., Frech, T. & Hersh, A., 2021, 'A novel transition clinic structure for adolescent and young adult patients with childhood onset rheumatic disease improves transition outcomes', *Pediatric Rheumatology* 19, 1-10. https://doi.org/10.1186/s12969-021-00651-w

Pierce, J., Hossain, J. & Gannon, A., 2020, 'Validation of the Healthcare Transition Outcomes Inventory for Young Adults With Type 1 Diabetes', *Journal of Pediatric Psychology* 45(7), 767–779. https://doi.org/10.1093/jpepsy/jsaa051

Pitout, H., 2014, 'Barriers and strategies to increase research involvement of South African occupational therapists', *South African Journal of Occupational Therapy* 44(2), 17–21.

Polit, D.F., Beck, C.T. & Owen, S. V., 2007, 'Is the CVI an acceptable indicator of content validity? Appraisal and recommendations', *Research in Nursing & Health* 30(4), 459-467. https://doi.org/10.1002/nur.20199

Polit, D.F. & Yang, F.M., 2016, *Measurement and the Measurement of Change*, 1st edn., Wolters Kluwer, Philadelphia.

Ritchwood, T.D., Malo, V., Jones, C., Metzger, I.W., Atujuna, M., Marcus, R. et al., 2020, 'Healthcare retention and clinical outcomes among adolescents living with HIV after transition from pediatric to adult care: a systematic review', *BMC Public Health* 20(1), 1195. https://doi.org/10.1186/s12889-020-09312-1

Robertson, L., 2006, 'When should young people with chronic rheumatic disease move from paediatric to adult-centred care?', *Best Practice and Research: Clinical Rheumatology* 20(2), 387–397. https://doi.org/10.1016/j.berh.2005.11.005

Sadun, R.E., Chung, R.J., Pollock, M.D. & Maslow, G.R., 2019, 'Lost in transition: resident and fellow training and experience caring for young adults with chronic conditions in a large United States' academic medical center', *Medical Education Online* 24(1), 1605783. https://doi.org/10.1080/10872981.2019.1605783

Santelli, J.S., Rogers, A.S., Rosenfeld, W.D., Lyss, S., Wimberly, Y., Schissel, A. et al., 2003, 'Guidelines for adolescent health research. A position paper of the Society for Adolescent Medicine', *Journal of Adolescent Health* 33(5), 396-409. https://doi.org/10.1016/j.jadohealth.2003.06.009

South African Government, 2013, *Protection of Personal Information Act 4 of 2013*. Cape Town, Republic of South Africa.

Tepper, V., Zaner, S. & Ryscavage, P., 2017, 'HIV healthcare transition outcomes among youth in North America and Europe: a review', *Journal of the International AIDS Society* 20, 21490. https://doi.org/10.7448/IAS.20.4.21490

Toska, E., Hodes, R., Cluver, L., Atujuna, M. & Laurenzi, C., 2019, 'Thriving in the second decade: Bridging childhood and adulthood for South Africa's adolescents', *South African child gauge*, 81–94.

Ver Loren Van Themaat, D.C., 2015, 'The practice profile of occupational therapists delivering work practice services in South Africa', MSc thesis, Department of Health and Rehabilitation Sciences, University of Cape Town .

Wan, H.W.Y., Carey, K.A., D'Silva, A., Kasparian, N.A. & Farrar, M.A., 2019, '"Getting ready for the adult world": how adults with spinal muscular atrophy perceive and experience healthcare, transition and well-being', *Orphanet Journal of Rare Diseases* 14, 1-13. https://doi.org/10.1186/s13023-019-1052-2

Weiss, J.A., Lai, J.K.Y., Lee, V. & Lunsky, Y., 2021, 'Predictors of Changes in Daily Activity in Transition-Age Autistic Youth', *Autism Research* 14(2), 324–332. https://doi.org/10.1002/aur.2371

Westwood, A., Langerak, N. & Fieggen, G., 2014, 'Transition from child- to adult-orientated care for children with long-term health conditions: A process, not an event', *South African Medical Journal* 104(4), 310-313. https://doi.org/10.7196/SAMJ.8201

White, P.H., & Cooley, W.C., 2018, 'Supporting the health care transition from adolescence to adulthood in the medical home', *Pediatrics* 142(5). https://doi.org/10.1542/peds.2018-2587.

World Federation of Occupational Therapists., 2020, *Human Resources Project 2020: Global demographics of the occupational therapy profession*, viewed 19 June 2022, from https://wfot.org/resources/occupational-therapy-human-resources-project-2020-alphabetical

World Health Organisation, 2020, *Rehabilitation Competency Framework*, viewed 6 May 2024, from https://iris.who.int/bitstream/handle/10665/338782/9789240008281-eng.pdf?sequence=1

Zanoni, B.C., Archary, M., Sibaya, T., Musinguzi, N. & Haberer, J.E., 2020, 'Transition from pediatric to adult care for adolescents living with HIV in South Africa: A natural experiment and survival analysis', *PLOS ONE* 15(10), e0240918. https://doi.org/10.1371/journal.pone.0240918

Zanoni, B.C., Archary, M., Sibaya, T., Musinguzi, N., Kelley, M.E., McManus, S. & Haberer, J.E., 2021, 'Development and validation of the HIV adolescent readiness for transition scale (HARTS) in South Africa', *Journal of the International AIDS Society* 24(7), e25767. https://doi.org/10.1002/jia2.25767

Chapter 3 Synthesis

This chapter discusses the strengths and limitations of this study, and provides recommendations for future research, policy development, and clinical application.

3.1. Strengths and limitations

3.1.1. Strengths

This study is the first to examine the HCT practices of occupational therapists within the context of South African public health. This study provides an overview of current HCT practices and allows for analysis of these practices against existing best practice guidelines. The study contains input from all levels of public health practice, from primary to tertiary health services, and across the eight most densely populated provinces in South Africa. Participants worked with a range of service-users across different age and diagnostic profiles. This provides a large-scale overview of HCT practices, which can be a starting point for further in-depth research, as well as for the development of HCT policies that can be applicable at multiple levels of public health.

3.1.2. Limitations

Participants' limited familiarity with the topic was evident, as a common theme emerging was participants' perceived lack of knowledge about HCT and insufficient training in HCT. This is likely to have affected the response rate within this study, as there was a 36.9% loss of participants between sections 1 and 4. A low response rate means that, while similarities in practice may exist, the findings of this study cannot be generalised to the entire population of South African occupational therapists working in public health.

Participants' limited familiarity with HCT may have contributed to misunderstandings regarding HCT concepts, which may have affected participants' ability to select appropriate responses. For example, participants reported using standardised transition evaluation tools, but analysis of the comments revealed use of other standardised tests and possible lack of familiarity with standardised transition tools.

This study did not request participants to indicate whether their department was located in a rural or urban location. This may be a limitation due to the difference in services and resources between the two settings, which may have affected homogeneity of results.

3.2. Recommendations

i. Recommendations for further research: Future research utilising qualitative methods, such as focus groups, can provide a more in-depth and nuanced perspective on how occupational therapists understand HCT. An important aspect that will need to be investigated further is the difference between paediatric and adult models of occupational therapy, and how to optimise the shift between these models of care. This may assist in the development of training programmes in the future. Further research is also needed in other lower to middle income countries so that current HCT practices can be compared and improved. Research on the roles other HCPs play in the HCT process may also be beneficial.

ii. Development of context-specific HCT policies and protocols is needed. This should be done in collaboration with occupational therapists within both clinical and academic roles, as well in collaboration with service-users and their families.

iii. CPD programmes on HCT may be useful in developing therapist expertise in HCT concepts and existing practice guidelines. This may also increase therapist familiarity with the topic and improve therapist motivation to be involved in the development of practice guidelines for the South African context.

iv. HCT should be integrated into undergraduate occupational therapy curriculum planning as part of the role of occupational therapy in adolescence.

3.3. Conclusion

This study provides a wide overview of current HCT perceptions and practices within South African occupational therapy practice. The study highlights challenges that exist in the understanding and practical implementation of HCT within the context of South African public occupational therapy services. While transition services exist, these practices described by participants are not in line with global HCT guidelines and, consequently, may be insufficient to meet the developmental needs of the adolescent population. There is a need for improved education of clinicians on HCT core concept and guidelines. Contextually relevant policies on HCT need to be developed in collaboration with all stakeholders to optimise the transition of adolescents from paediatric to adult models of occupational therapy services. This is critical to ensure that South African occupational therapists are able to provide uninterrupted and developmentally appropriate therapy services that can meet the needs of adolescents with chronic health conditions.

References

Abaka, P. & Nutor, J.J. 2021. Transitioning from pediatric to adult care and the HIV care continuum in Ghana: a retrospective study. *BMC Health Services Research*. 21(1):462. DOI: 10.1186/s12913-021-06510-4.

Alderman, E.M. & Breuner, C.C. 2019. Unique needs of the adolescent. *Pediatrics*. 144(6). DOI: 10.1542/peds.2019-3150.

Alderman, E.M., Breuner, C.C., Grubb, L.K., Powers, M.E., Upadhya, K. & Wallace, S.B. 2019. Unique Needs of the Adolescent. *Pediatrics*. 144(6). DOI: 10.1542/peds.2019-3150.

Aldiss, S., Ellis, J., Cass, H., Pettigrew, T., Rose, L. & Gibson, F. 2015. Transition From Child to Adult Care – 'It's Not a One-Off Event': Development of Benchmarks to Improve the Experience. *Journal of Pediatric Nursing*. 30(5). DOI: 10.1016/j.pedn.2015.05.020.

American Occupational Therapy Association. 2018. *Transitions for Children and Youth: How Occupational Therapy Can Help*. Bethesda.

American Occupational Therapy Association. 2020. Occupational Therapy Practice Framework: Domain and Process—Fourth Edition. *The American Journal of Occupational Therapy*. 74(Supplement_2):7412410010p1-7412410010p87. DOI: 10.5014/ajot.2020.74S2001.

Anderson, K.A., Sosnowy, C., Kuo, A.A. & Shattuck, P.T. 2018. Transition of Individuals With Autism to Adulthood: A Review of Qualitative Studies. *Pediatrics*. 141(Supplement_4):S318–S327. DOI: 10.1542/peds.2016-4300I.

Assarroudi, A., Heshmati Nabavi, F., Armat, M. R., Ebadi, A., & Vaismoradi, M., 2018, Directed qualitative content analysis: the description and elaboration of its underpinning methods and data analysis process. Journal of research in nursing, 23(1), 42–55. DOI:10.1177/1744987117741667

Bailey, S., O'connell, B. & Pearce, J. 2003. *The transition from paediatric to adult health care services for young adults with a disability: an ethical perspective*.

Bartlett, J.E., Kotrlik, J.W. & Higgins, C.C. 2001. Organizational Research: Determining Appropriate Sample Size in Survey Research. *Information Technology, Learning, and Performance Journal*. 19(1):43–50.

Benevides, T.W., Tao, S., Becker, A., Verstreate, K. & Shea, L. 2022. Occupational Therapy Service Delivery Among Medicaid-Enrolled Children and Adults on the Autism Spectrum and

With Other Intellectual Disabilities. *The American Journal of Occupational Therapy*. 76(1). DOI: 10.5014/ajot.2022.049202.

Betz, C.L. 2017. Self-management and health care transition: Trials, tribulations and triumphs. *Journal of Pediatric Rehabilitation Medicine*. 10(3–4):177–183. DOI: 10.3233/PRM-170446.

Betz, C.L., Lobo, M.L., Nehring, W.M. & Bui, K. 2013. Voices not heard: A systematic review of adolescents' and emerging adults' perspectives of health care transition. *Nursing Outlook*. 61(5):311–336. DOI: 10.1016/j.outlook.2013.01.008.

Betz, C.L., O'Kane, L.S., Nehring, W.M. & Lobo, M.L. 2016. Systematic review: Health care transition practice service models. *Nursing Outlook*. 64(3). DOI: 10.1016/j.outlook.2015.12.011.

Blum, R.WM., Garell, D., Hodgman, C.H., Jorissen, T.W., Okinow, N.A., Orr, D.P. & Slap, G.B. 1993. Transition from child-centered to adult health-care systems for adolescents with chronic conditions. *Journal of Adolescent Health*. 14(7). DOI: 10.1016/1054-139X(93)90143-D.

Brooks, R. & Bannigan, K. 2021. Occupational therapy interventions in child and adolescent mental health to increase participation: A mixed methods systematic review. *British Journal of Occupational Therapy*. 84(8):474–487. DOI: 10.1177/03080226211008718.

Cahill, S.M. & Beisbier, S. 2020. Occupational Therapy Practice Guidelines for Children and Youth Ages 5–21 Years. *The American Journal of Occupational Therapy*. 74(4):7404397010p1-7404397010p48. DOI: 10.5014/ajot.2020.744001.

Castillo, C. & Kitsos, E. 2017. Transitions From Pediatric to Adult Care. *Global Pediatric Health*. 4. DOI: 10.1177/2333794X17744946.

Clarkson, C., Boshoff, K. & Kernot, J. 2021. Occupational Therapy Interventions for Adolescents: A Scoping Review. *The Allied Health Scholar*. 2(1). DOI: 10.21913/TAHS.v2i1.1575.

Coovadia, H., Jewkes, R., Barron, P., Sanders, D. & McIntyre, D. 2009. The health and health system of South Africa: historical roots of current public health challenges. *The Lancet*. 374(9692):817–834. DOI: 10.1016/S0140-6736(09)60951-X.

Cresswell, J.W. & Cresswell, J.D. 2018. *Research Design: Qualitative, Quantitative and Mixed Methods Approaches*. 5th ed. Los Angeles: SAGE Publications.

Crowley, T., van der Merwe, A., Kidd, M. & Skinner, D. 2020. Adolescent human immunodeficiency virus self-management: Associations with treatment adherence, viral suppression, sexual risk behaviours and health-related quality of life. *Southern African journal of HIV medicine*. 21(1):1054. DOI: 10.4102/sajhivmed.v21i1.1054.

Dookie, S. & Singh, S. 2012. Primary health services at district level in South Africa: a critique of the primary health care approach. *BMC Family Practice*. 13(1):67. DOI: 10.1186/1471-2296-13-67.

Eismann, M.M., Weisshaar, R., Capretta, C., Cleary, D.S., Kirby, A. V. & Persch, A.C. 2017. Characteristics of Students Receiving Occupational Therapy Services in Transition and Factors Related to Postsecondary Success. *The American Journal of Occupational Therapy*. 71(3):7103100010p1-7103100010p8. DOI: 10.5014/ajot.2017.024927.

Esposito, P. 2014. Clinical audit, a valuable tool to improve quality of care: General methodology and applications in nephrology. *World Journal of Nephrology*. 3(4). DOI: 10.5527/wjn.v3.i4.249.

Ferguson, B.J., Ahmed, N., Motshwane, F.M.M., Pleaner, M., Toska, E., Weiss, H.A. & Bekker, L.-G. 2022. Building capacity to facilitate policy implementation: A short course in adolescent and youth health in South Africa. *Journal of Public Health in Africa*. 13(1). DOI: 10.4081/jphia.2022.1855.

Gabriel, P., McManus, M., Rogers, K. & White, P. 2017. Outcome Evidence for Structured Pediatric to Adult Health Care Transition Interventions: A Systematic Review. *The Journal of Pediatrics*. 188. DOI: 10.1016/j.jpeds.2017.05.066.

George, A., Jacobs, T., Ved, R., Jacobs, T., Rasanathan, K. & Zaidi, S.A. 2021. Adolescent health in the Sustainable Development Goal era: are we aligned for multisectoral action? *BMJ Global Health*. 6(3):e004448. DOI: 10.1136/bmjgh-2020-004448.

Goodwin, J., Swaab, L. & Campbell, L.E. 2020. “She’ll be able to live independently… as long as I’m around”: The “lived” experience of parenting a child with 22q11.2 deletion syndrome in the transition to adulthood. *Journal of Applied Research in Intellectual Disabilities*. 33(3):565–573. DOI: 10.1111/jar.12700.

Got Transition. 2022. *Six Core Elements of Healthcare Transition*. Available: https://www.gottransition.org/six-core-elements/ [2022, June 19].

Gusenbauer, M., & Haddaway, N. R. 2020. Which academic search systems are suitable for systematic reviews or meta-analyses? Evaluating retrieval qualities of Google Scholar,

PubMed, and 26 other resources. *Research synthesis methods*, 11(2), 181–217. DOI:10.1002/jrsm.1378

Haghighat, R., Toska, E., Cluver, L., Gulaid, L., Mark, D. & Bains, A. 2019. Transition Pathways Out of Pediatric Care and Associated HIV Outcomes for Adolescents Living With HIV in South Africa. *JAIDS Journal of Acquired Immune Deficiency Syndromes*. 82(2). DOI: 10.1097/QAI.0000000000002125.

Halyard, A.S., Doraivelu, K., Camacho-González, A.F., Río, C. & Hussen, S.A. 2021. Examining healthcare transition experiences among youth living with HIV in Atlanta, Georgia, USA: a longitudinal qualitative study. *Journal of the International AIDS Society*. 24(2). DOI: 10.1002/jia2.25676.

Harris, P.A., Taylor, R., Thielke, R., Payne, J., Gonzalez, N. & Conde, J.G. 2009. Research electronic data capture (REDCap)—A metadata-driven methodology and workflow process for providing translational research informatics support. *Journal of Biomedical Informatics*. 42(2). DOI: 10.1016/j.jbi.2008.08.010.

Harris, P.A., Taylor, R., Minor, B.L., Elliott, V., Fernandez, M., O'Neal, L., McLeod, L., Delacqua, G., Delacqua, F., Kirby, J. & Duda, S.N. 2019. The REDCap consortium: Building an international community of software platform partners. *Journal of Biomedical Informatics*. 95. DOI: 10.1016/j.jbi.2019.103208.

Hasegawa, Y. & Gleeson, H. 2018. Three practical principles in planning and developing health care transition: our personal perspectives. *Clinical Pediatric Endocrinology*. 27(3):109–112. DOI: 10.1297/cpe.27.109.

Health Professions Council of South Africa. 2016a. *General Ethical Guidelines for Health Researchers: Booklet 13*. Pretoria.

Health Professions Council of South Africa. 2016b. *General Ethical Guidelines for Health Researchers - Booklet 13*. Pretoria. Available: http://www.hpcsa.co.za.

Health Professions Council of South Africa. 2020. *The Minimum Standards for the Education of Occupational Therapists*. Pretoria.

Health Professions Council of South Africa. 2021. *Health Professions Council of South Africa Annual Report 2020 -2021*. Pretoria.

Heron, L.M., Agarwal, R., Greenup, J., Maddux, M., Attong, N. & Burke, S.L. 2020. Disparities in healthcare transition support received by adolescents with special healthcare

needs. *Journal of Applied Research in Intellectual Disabilities*. 33(2):180–192. DOI: 10.1111/jar.12658.

Hobart, C.B. & Phan, H. 2019. Pediatric-to-adult healthcare transitions: Current challenges and recommended practices. *American Journal of Health-System Pharmacy*. 76(19). DOI: 10.1093/ajhp/zxz165.

Hussen, S.A., Chakraborty, R., Camacho-Gonzalez, A., Njiemoun, B., Grossniklaus, E., Goodstein, E., Stephenson, R. & del Rio, C. 2019. Beyond “purposeful and planned”: varied trajectories of healthcare transition from pediatric to adult-oriented care among youth living with HIV. *AIDS Care*. 31(1):45–47. DOI: 10.1080/09540121.2018.1488029.

Jacobs-Nzuzi Khuabi, L.-A., Swart, E. & Soeker, M.S. 2019. A Service User Perspective Informing the Role of Occupational Therapy in School Transition Practice for High School Learners with TBI: An African Perspective. *Occupational Therapy International*. 2019:1–15. DOI: 10.1155/2019/1201689.

James, S., Pisa, P.T., Imrie, J., Beery, M.P., Martin, C., Skosana, C. & Delany-Moretlwe, S. 2018. Assessment of adolescent and youth friendly services in primary healthcare facilities in two provinces in South Africa. *BMC Health Services Research*. 18(1):809. DOI: 10.1186/s12913-018-3623-7.

Jarvis, S.W., Richardson, G., Flemming, K. & Fraser, L. 2021. Estimation of age of transition from children’s to adult healthcare for young people with long term conditions using linked routinely collected healthcare data. *International Journal of Population Data Science*. 6(1). DOI: 10.23889/ijpds.v6i1.1685.

Jejelaye, A., Maseko, L. & Franzsen, D. 2019. Occupational therapy services and perception of integration of these at Primary Healthcare Level in South Africa. *South African Journal of Occupational Therapy*. 49(3). DOI: 10.17159/2310-3833/2019/vol49n3a8.

Jonas, K., Ramraj, T., Goga, A., Bhana, A. & Mathews, C. 2019. *Achieving universal health coverage for adolescents in South Africa: health sector progress and imperatives* . Durban.

Jones, C., Ritchwood, T.D. & Taggart, T. 2019. Barriers and Facilitators to the Successful Transition of Adolescents Living with HIV from Pediatric to Adult Care in Low and Middle-Income Countries: A Systematic Review and Policy Analysis. *AIDS and Behavior*. 23(9):2498–2513. DOI: 10.1007/s10461-019-02621-6.

Kerin, L., Lynch, D. & McNicholas, F. 2020. Participatory development of a patient–clinician communication tool to enhance healthcare transitions for young people with 22q11.2. *Irish Journal of Medical Science (1971 -)*. 189(3):761–769. DOI: 10.1007/s11845-019-02104-6.

Kerr, H., Price, J., Nicholl, H. & O'Halloran, P. 2018. Facilitating transition from children's to adult services for young adults with life-limiting conditions (TASYL). Programme theory developed from a mixed methods realist evaluation. *International Journal of Nursing Studies*. 86:125–138. DOI: 10.1016/j.ijnurstu.2018.06.015.

Kerr, H., Widger, K., Cullen-Dean, G., Price, J. & O'Halloran, P. 2020. "Transition from children's to adult services for adolescents/young adults with life-limiting conditions: developing realist programme theory through an international comparison". *BMC Palliative Care*. 19(1):115. DOI: 10.1186/s12904-020-00620-2.

Kielhofner, G. 2009. *Conceptual Foundations of Occupational Therapy*. 4th ed. Philadelphia: FA Davis Company.

Kinghorn, A., Shanaube, K., Toska, E., Cluver, L. & Bekker, L.-G. 2018a. Defining adolescence: priorities from a global health perspective. *The Lancet Child & Adolescent Health*. 2(5). DOI: 10.1016/S2352-4642(18)30096-8.

Kinghorn, A., Shanaube, K., Toska, E., Cluver, L. & Bekker, L.-G. 2018b. Defining adolescence: priorities from a global health perspective. *The Lancet Child & Adolescent Health*. 2(5). DOI: 10.1016/S2352-4642(18)30096-8.

Kung, T.H., Wallace, M.L., Snyder, K.L., Robson, V.K., Mabud, T.S., Kalombo, C.D. & Bekker, L.G. 2016. South African healthcare provider perspectives on transitioning adolescents into adult HIV care. *South African Medical Journal*. 106(8):804–808. DOI: 10.7196/SAMJ.2016.v106i8.10496.

Lawshe, C.H. 1975. A Quantitative Approach to Content Validity. *Personnel Psychology*. 28(4):563–575. DOI: 10.1111/j.1744-6570.1975.tb01393.x.

Lenkokile, R., Hlongwane, P. & Clapper, V. 2019. Implementation of the Integrated School Health Policy in public primary schools in Region C, Gauteng Province. *African Journal of Public Affairs*. 11(1):196–211. DOI: 10.10520/EJC-15642cda67.

Levanon-Erez, N., Cohen, M., Traub Bar-Ilan, R. & Maeir, A. 2017. Occupational identity of adolescents with ADHD: A mixed methods study. *Scandinavian Journal of Occupational Therapy*. 24(1). DOI: 10.1080/11038128.2016.1217927.

Lindmark, U., Bülow, P.H., Mårtensson, J., Rönning, H., Ahlstrand, I., Broström, A., Fransson, E.I., Fridlund, B., Gunnarsson, N., Henricsson, M., Kjellström, S. & Sandgren, A. 2019. The use of the concept of transition in different disciplines within health and social welfare: An integrative literature review. *Nursing Open*. 6(3). DOI: 10.1002/nop2.249.

ver Loren Van Themaat, D.C. 2015. The practice profile of occupational therapists delivering work practice services in South Africa. PhD thesis: Cape Town

Lynn, M.R. 1986. Determination and quantification of content validity. *Nursing research*. 35(6):382–5.

Malapela, G.R., Thupayagale-Tshweneagae, G. & Ibitoye, O.F. 2020a. Nurses' perceived role in healthcare transition of adolescents with intellectual disabilities. *African Journal of Disability*. 9. DOI: 10.4102/ajod.v9i0.674.

Malapela, G.R., Thupayagale-Tshweneagae, G. & Ibitoye, O.F. 2020b. Nurses' perceived role in healthcare transition of adolescents with intellectual disabilities. *African Journal of Disability*. 9. DOI: 10.4102/ajod.v9i0.674.

Maphumulo, W.T. & Bhengu, B.R. 2019. Challenges of quality improvement in the healthcare of South Africa post-apartheid: A critical review. *Curationis*. 42(1). DOI: 10.4102/curationis.v42i1.1901.

Mayosi, B.M. & Benatar, S.R. 2014. Health and Health Care in South Africa — 20 Years after Mandela. *New England Journal of Medicine*. 371(14):1344–1353. DOI: 10.1056/NEJMsr1405012.

Mbalinda, S.N., Bakeera-Kitaka, S., Amooti, D.L., Magongo, E.N., Musoke, P. & Kaye, D.K. 2021. Ethical challenges of the healthcare transition to adult antiretroviral therapy (ART) clinics for adolescents and young people with HIV in Uganda. *BMC Medical Ethics*. 22(1):35. DOI: 10.1186/s12910-021-00602-w.

McManus, M., White, P., Pirtle, R., Hancock, C., Ablan, M. & Corona-Parra, R. 2015. Incorporating the Six Core Elements of Health Care Transition Into a Medicaid Managed Care Plan: Lessons Learned From a Pilot Project. *Journal of Pediatric Nursing*. 30(5). DOI: 10.1016/j.pedn.2015.05.029.

Minnesota Department of Health. 2019. *White Paper on the Transition from Pediatric to Adult Health Care*. St. Paul.

Monareng, L.L., Franzsen, D. & van Biljon, H. 2018. A survey of occupational therapists' involvement in facilitating self-employment for people with disabilities. *South African Journal of Occupational Therapy*. 48(3). DOI: 10.17159/2310-3833/2017/vol48n3a8.

Nagra, A., McGinnity, P.M., Davis, N. & Salmon, A.P. 2015. Implementing transition: Ready Steady Go. *Archives of disease in childhood - Education & practice edition*. 100(6). DOI: 10.1136/archdischild-2014-307423.

Naidoo, D., Van Wyk, J. & Joubert, R.W.E. 2016. Exploring the occupational therapist's role in primary health care: Listening to voices of stakeholders. *African Journal of Primary Health Care & Family Medicine*. 8(1). DOI: 10.4102/phcfm.v8i1.1139.

Narla, N.P., Ratner, L., Bastos, F.V., Owusu, S.A., Osei-Bonsu, A. & Russ, C.M. 2021. Paediatric to adult healthcare transition in resource-limited settings: a narrative review. *BMJ Paediatrics Open*. 5(1):e001059. DOI: 10.1136/bmjpo-2021-001059.

National Department of Health. 2015. *National health Insurance for South Africa: Towards Universal Health Coverage*. (39506). Pretoria.

National Health Service. 2022. *NHS Model and Dictionary*. Retrieved from https://transform.england.nhs.uk/information-governance/guidance/information-governance-guidance-support-multidisciplinary-teams-mdts/ [10 October 2022]

Ned, L., Cloete, L. & Mji, G. 2017. The experiences and challenges faced by rehabilitation community service therapists within the South African Primary Healthcare health system. *African Journal of Disability*. 6. DOI: 10.4102/ajod.v6i0.311.

Ned, L., Tiwari, R., Buchanan, H., Van Niekerk, L., Sherry, K. & Chikte, U. 2020. Changing demographic trends among South African occupational therapists: 2002 to 2018. *Human Resources for Health*. 18(1). DOI: 10.1186/s12960-020-0464-3.

Nel, L., van der Westhuyzen, C. & Uys, K. 2007. Introducing a school-to-work transition model for youth with disabilities in South Africa. *Work (Reading, Mass.)*. 29(1).

van Niekerk, K., Dada, S. & Tönsing, K. 2019. Influences on selection of assistive technology for young children in South Africa: perspectives from rehabilitation professionals. *Disability and Rehabilitation*. 41(8):912–925. DOI: 10.1080/09638288.2017.1416500.

Occupational Therapy Association of South Africa. 2021. *OTASA Annual Report 2021/2022*. Pretoria.

Okumura, M.J., Ong, T., Dawson, D., Nielson, D., Lewis, N., Richards, M., Brindis, C.D. & Kleinhenz, M.E. 2014. Improving transition from paediatric to adult cystic fibrosis care: programme implementation and evaluation. *BMJ Quality & Safety*. 23(Suppl 1). DOI: 10.1136/bmjqs-2013-002364.

Overbury, R.S., Huynh, K., Bohnsack, J., Frech, T. & Hersh, A. 2021. A novel transition clinic structure for adolescent and young adult patients with childhood onset rheumatic disease improves transition outcomes. *Pediatric Rheumatology*. 19(1):164. DOI: 10.1186/s12969-021-00651-w.

Parfeniuk, S., Petrovic, K., MacIsaac, P.L., Cook, K.A. & Rempel, G.R. 2020. Transition readiness measures for adolescents and young adults with chronic health conditions: a systematic review. *Journal of Transition Medicine*. 2(1). DOI: 10.1515/jtm-2020-0020.

Patridge, E.F. & Bardyn, T.P. 2018. Research Electronic Data Capture (REDCap). *Journal of the Medical Library Association*. 106(1). DOI: 10.5195/JMLA.2018.319.

Pierce, J., Hossain, J. & Gannon, A. 2020. Validation of the Healthcare Transition Outcomes Inventory for Young Adults With Type 1 Diabetes. *Journal of Pediatric Psychology*. 45(7):767–779. DOI: 10.1093/jpepsy/jsaa051.

Pike, C., Celum, C. & Bekker, L.-G. 2020. Adolescent healthcare: I'm Lovin' it. *Southern African Journal of HIV Medicine*. 21(1). DOI: 10.4102/sajhivmed.v21i1.1147.

Pitout, H. 2014. Barriers and strategies to increase research involvement of South African occupational therapists. *South African Journal of Occupational Therapy*. 44:17–21.

Podvey, M.C. & Myers, C.T. 2018. *Transitions for Children and Youth How Occupational Therapy Can Help*. Bethesda.

Polit, D.F. & Yang, F.M. 2016. *Measurement and the Measurement of Change*. 1st ed. Philadelphia: Wolters Kluwer.

Polit, D.F., Beck, C.T. & Owen, S. V. 2007. Is the CVI an acceptable indicator of content validity? Appraisal and recommendations. *Research in Nursing & Health*. 30(4). DOI: 10.1002/nur.20199.

Price, A., Janssens, A., Woodley, A.L., Allwood, M. & Ford, T. 2019. Review: Experiences of healthcare transitions for young people with attention deficit hyperactivity disorder: a systematic review of qualitative research. *Child and Adolescent Mental Health*. 24(2):113–122. DOI: 10.1111/camh.12297.

Quinn, S., Chung, R., Kuo, A., Maslow, G., Ho, J., Schwartz, L. & Tuchman, L. 2020. Transition to Adulthood for Youth With Chronic Conditions and Special Health Care Needs. *Journal of Adolescent Health*. 66(5). DOI: 10.1016/j.jadohealth.2020.02.006.

Ramukumba, T.S., Rasesemola, R.R. & Matshoge, G.P. 2019. Compliance to the Integrated School Health Policy : intersectoral and multisectoral collaboration. *Curationis*. 42(1):1–8. DOI: 10.4102/curationis.v42i1.1912.

Renedo, A., Miles, S. & Marston, C. 2020. Transitions to adulthood: self-governance and disciplining in the making of patient citizens. *Sociology of Health & Illness*. 42(3):481–495. DOI: 10.1111/1467-9566.13019.

Ritchwood, T.D., Malo, V., Jones, C., Metzger, I.W., Atujuna, M., Marcus, R., Conserve, D.F., Handler, L. & Bekker, L.-G. 2020. Healthcare retention and clinical outcomes among adolescents living with HIV after transition from pediatric to adult care: a systematic review. *BMC Public Health*. 20(1):1195. DOI: 10.1186/s12889-020-09312-1.

Robertson, L. 2006. When should young people with chronic rheumatic disease move from paediatric to adult-centred care? DOI: 10.1016/j.berh.2005.11.005.

Rodrigues, I.B., Adachi, J.D., Beattie, K.A. & MacDermid, J.C. 2017. Development and validation of a new tool to measure the facilitators, barriers and preferences to exercise in people with osteoporosis. *BMC Musculoskeletal Disorders*. 18(1). DOI: 10.1186/s12891-017-1914-5.

Sabbagh, S., Ronis, T. & White, P.H. 2018. Pediatric rheumatology: addressing the transition to adult-orientated health care. *Open Access Rheumatology: Research and Reviews*. Volume 10. DOI: 10.2147/OARRR.S138370.

Sadun, R.E., Chung, R.J., Pollock, M.D. & Maslow, G.R. 2019. Lost in transition: resident and fellow training and experience caring for young adults with chronic conditions in a large United States' academic medical center. *Medical Education Online*. 24(1):1605783. DOI: 10.1080/10872981.2019.1605783.

Santelli, J. 2003. Guidelines for Adolescent Health Research, A position paper of the Society for Adolescent Medicine. *Journal of Adolescent Health*. 33(5). DOI: 10.1016/j.jadohealth.2003.06.009.

Satoh, S. & Boyer, E. 2019. HIV in South Africa. *The Lancet*. 394(10197):467. DOI: 10.1016/S0140-6736(19)31634-4.

Shin, J., Decker, B. & Blanchard, S. 2022. Instrumental Activities of Daily Living in Pediatric Occupational Therapy Practice: A Survey of Current Practice Patterns and Perceived Importance. *Physical & Occupational Therapy In Pediatrics*. 42(1):46–61. DOI: 10.1080/01942638.2021.1932687.

South Africa. 2013. *Protection of Personal Information Act*. Cape Town: Republic of South Africa.

South African National Department of Health. 2017. *National Adolescent and Youth Health Policy 2017*. Pretoria.

Spiegel, L., Tucker, L., Duffy, K.W., Lalloo, C., Hundert, A., Bourre-Tessier, J., Hazel, E., Luca, N., Mosher, D., Nguyen, C., Stringer, E., Victor, C. & Stinson, J. 2021. Development

and validation of the RACER (Readiness for Adult Care in Rheumatology) transition instrument in youth with juvenile idiopathic arthritis. *Pediatric Rheumatology*. 19(1):83. DOI: 10.1186/s12969-021-00579-1.

Stewart, D., Stavness, C., King, G., Antle, B. & Law, M. 2006. A Critical Appraisal of Literature Reviews About the Transition to Adulthood for Youth with Disabilities. *Physical & Occupational Therapy In Pediatrics*. 26(4). DOI: 10.1080/J006v26n04_02.

Temane, A.A., Rikhotso, T., Poggenpoel, M. & Myburgh, C. 2023. Adolescents' lived experiences of substance abuse in the Greater Giyani Municipality. *Curationis*. 46(1):e1–e9. DOI: 10.4102/curationis.v46i1.2379.

Tepper, V., Zaner, S. & Ryscavage, P. 2017. HIV healthcare transition outcomes among youth in North America and Europe: a review. *Journal of the International AIDS Society*. 20:21490. DOI: 10.7448/IAS.20.4.21490.

Toska, E., Hodes, R., Cluver, L., Atujuna, M. & Laurenzi, C. 2019. Thriving in the second decade: Bridging childhood and adulthood for South Africa's adolescents, in. 81–94.

Wan, H.W.Y., Carey, K.A., D'Silva, A., Kasparian, N.A. & Farrar, M.A. 2019. "Getting ready for the adult world": how adults with spinal muscular atrophy perceive and experience healthcare, transition and well-being. *Orphanet Journal of Rare Diseases*. 14(1):74. DOI: 10.1186/s13023-019-1052-2.

Weiss, J.A., Lai, J.K.Y., Lee, V. & Lunsky, Y. 2021. Predictors of Changes in Daily Activity in Transition-Age Autistic Youth. *Autism Research*. 14(2):324–332. DOI: 10.1002/aur.2371.

Westwood, A., Langerak, N. & Fieggen, G. 2014. Transition from child- to adult-orientated care for children with long-term health conditions: A process, not an event. *South African Medical Journal*. 104(4). DOI: 10.7196/SAMJ.8201.

White, P.H. & Cooley, W.C. 2018. Supporting the Health Care Transition From Adolescence to Adulthood in the Medical Home. *Pediatrics*. 142(5). DOI: 10.1542/peds.2018-2587.

Wood, D.L., Sawicki, G.S., Miller, M.D., Smotherman, C., Lukens-Bull, K., Livingood, W.C., Ferris, M. & Kraemer, D.F. 2014. The Transition Readiness Assessment Questionnaire (TRAQ): Its Factor Structure, Reliability, and Validity. *Academic Pediatrics*. 14(4):415–422. DOI: 10.1016/j.acap.2014.03.008.

World Federation of Occupational Therapists. 2012. *About Occupational therapy*. Available: [Online] Available at: https://www.wfot.org/about/about-occupational-therapy [Accessed 19 06 2021]. [2021, June 19].

World Federation of Occupational Therapists. 2020. *Human Resources Project 2020: Global demographics of the occupational therapy profession*. London.

World Health Organisation. 2020. *Rehabilitation Competency Framework*. Geneva.

Yusoff, M.S.B. 2019. ABC of Content Validation and Content Validity Index Calculation. *Education in Medicine Journal*. 11(2):49–54. DOI: 10.21315/eimj2019.11.2.6.

Zamanzadeh, V., Rassouli, M., Abbaszadeh, A., Majd, H.A., Nikanfar, A. & Ghahramanian, A. 2015. Details of content validity and objectifying it in instrument development. *Nursing Practice Today*. 1(3). Available: https://npt.tums.ac.ir/index.php/npt/article/view/24.

Zanoni, B.C., Archary, M., Sibaya, T., Musinguzi, N. & Haberer, J.E. 2020. Transition from pediatric to adult care for adolescents living with HIV in South Africa: A natural experiment and survival analysis. *PLOS ONE*. 15(10). DOI: 10.1371/journal.pone.0240918.

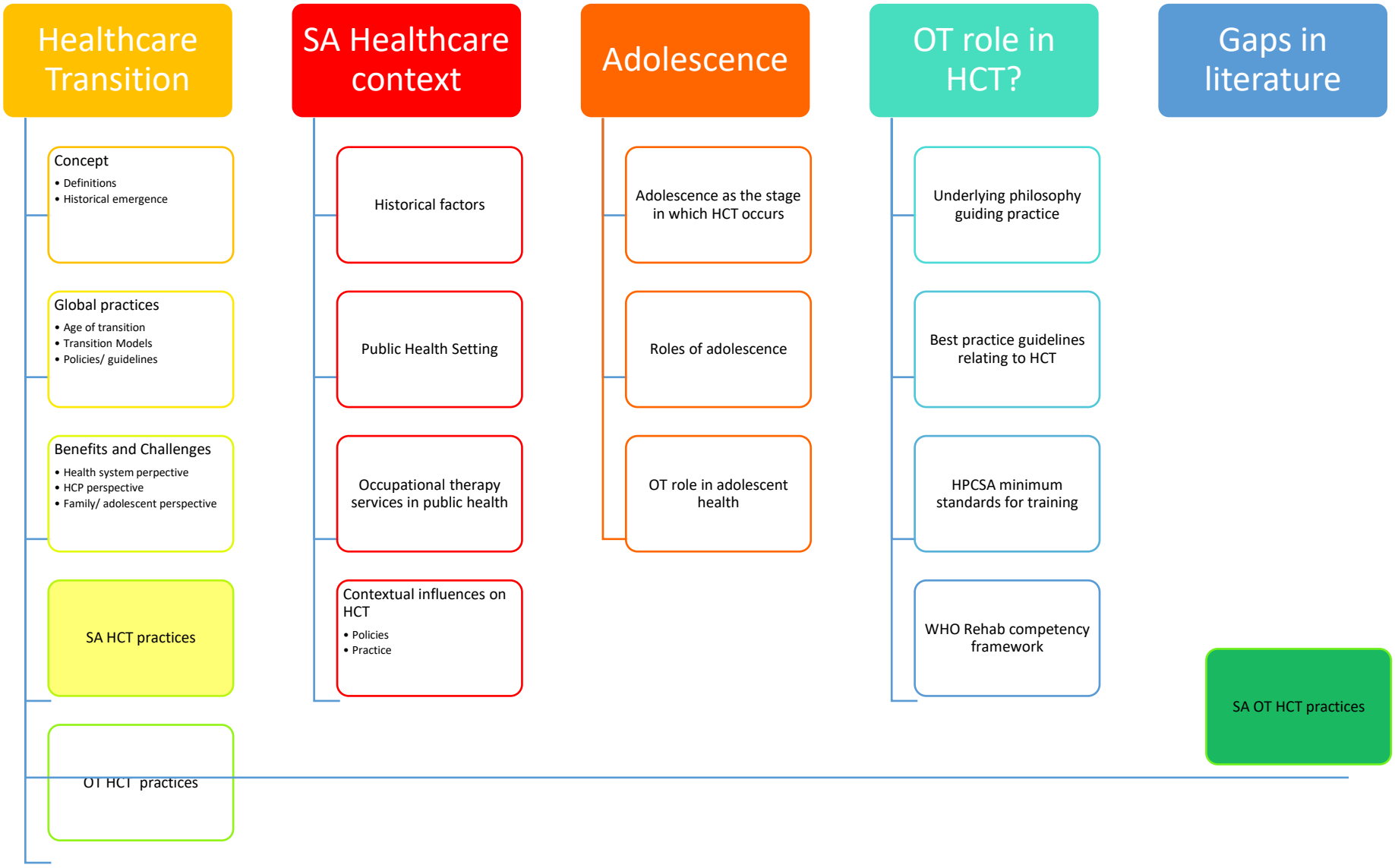
Zanoni, B.C., Archary, M., Sibaya, T., Musinguzi, N., Kelley, M.E., McManus, S. & Haberer, J.E. 2021. Development and validation of the HIV adolescent readiness for transition scale (HARTS) in South Africa. *Journal of the International AIDS Society*. 24(7). DOI: 10.1002/jia2.25767.

APPENDICES

APPENDIX A: LITERATURE REVIEW MATRIX EXAMPLE AND CONCEPT MAP

Search Site (words)	Authors	Date	Title	Purpose	Population	HCT/ Background info	Theme 1	Theme 2	Theme 3
Seminal work on HCT: referenced by nearly all papers on HCT	Blum, R.W., Garell, D., Hodgman, C.H., Jorissen, T.W., Okinow, N.A., Orr, D.P. et al	1993	Transition from child-centered to adult health-care systems for adolescents with chronic conditions: A position paper of the society for adolescent medicine'	To address transition issues faced by the teenagers and young adults with significant chronic illness or disability	N/A	Healthcare transition is the: "[P]urposeful, planned movement of adolescents and young adults with chronic physical and medical conditions from child-centred to adult-oriented health care systems that is uninterrupted, coordinated, developmentally appropriate,	Due to advances in medicine and technology, over 85% of children with chronic conditions are surviving into adulthood. This necessitates an effective system of transitioning adolescents to adult care. Adolescents and young adults historically have been unable to access developmentally appropriate care.	**Need for HCT Programmes:** Discrepancy between ideals of adolescent care and practice: many HCPs are unsure of transition approaches or uninvolved, resulting in slow systemic change and uncoordinated entrance of adolescents into the adult system. Adolescence is a period of many transitions, such as puberty, identity development, education and vocational change. Adolescents with chronic illness may make navigating these transitions more challenging and requires multidisciplinary care. Adolescent care is aimed at developing autonomy, as decision-making shifts from the parent to the young adult. Paediatric models do not sufficiently cater for this development of autonomy, and often avoid aspects such as	**Assumptions on HCT:** 1. Transition is an active, holistic process that considers the medical, psychosocial and educational/vocational needs of adolescents as they move from paediatric-focused to adult-focused healthcare with or without a change in healthcare provider. 2. Healthcare transition facilitates other life transitions by improving independent behaviour and autonomy. 3. Transition is initiated and progresses at different rates for different individuals. HCPs must collaborate and negotiate with adolescents and their families to support them through the process. The time of transition will depend on the level of development, health problems, personal characteristics of the adolescent and family, as well

Search Site (words)	Authors	Date	Title	Purpose	Population	HCT/ Background info	Theme 1	Theme 2	Theme 3
						psychosocially sound, and comprehensive." (p. 570)		sexual/reproductive health, substance use etc.	as the availability of appropriately skilled HCPs 4. The transition process is more complex for adolescents with severe functional limitations or complex medical conditions. These adolescents require a formal plan over a longer period of time, covering transfer to multiple specialists and assistance with educational and vocational activities.


Healthcare Transition
Concept
• Definitions
• Historical emergence
Global practices
• Age of transition
• Transition Models
• Policies/ guidelines
Benefits and Challenges
• Health system perpective
• HCP perspective
• Family/ adolescent perspective
SA HCT practices
OT HCT practices
SA Healthcare context
Historical factors
Public Health Setting
Occupational therapy services in public health
Contextual influences on HCT
• Policies
• Practice
Adolescence
Adolescence as the stage in which HCT occurs
Roles of adolescence
OT role in adolescent health
OT role in HCT?
Underlying philosophy guiding practice
Best practice guidelines relating to HCT
HPCSA minimum standards for training
WHO Rehab competency framework
Gaps in literature
SA OT HCT practices

APPENDIX B: PILOT STUDY FEEDBACK

The review survey was embedded into the REDCap questionnaire so that expert clinicians could rate each question sequentially and provide comments on the REDCap platform.

Healthcare Transition Practices of Occupational Therapists in South African Public Hospitals

Dear Pilot Participant,

Thank you for reviewing this survey. Please follow the instructions below to assess each survey question and provide overall feedback at the end of the survey.

Thank you for your assistance in improving this data collection tool.

This questionnaire contains 4 sections and a total of 38 items.

Please evaluate the relevance, clarity and essentiality of each item. The scoring for each aspect is as follows:

Relevance (how appropriate is this question to the research objectives? Research objectives can be found in the participant information sheet within the body of the email)

1= not relevant

2= somewhat relevant 3=quite relevant 4=very relevant

Clarity (how clear is the wording)

1= not clear

2=item needs revision 3=very clear

Essentiality (how necessary is this question)

INSTRUCTIONS:

a. Completing this survey is completely voluntary.

b. It will take about 10-15 minutes to complete.

c. I have read the Participant information sheet provided in the body of the email and I voluntarily consent to participate in this survey. I believe I fully understand why the study is being conducted and what the intended outcomes will be. I understand that there will be no immediate benefit to me, should I agree to participate, nor will I receive any payment; conversely, participation will not cost me anything but my

time.

I understand that, even if I initially consent to take part in the study, I may subsequently withdraw at any time and would not be required to give any reasons.

◯ Yes

SECTION 1: Demographic Information

1. Please provide the last 4 digits of your HPCSA number (this will only be used to ensure there are no duplicate responses)

_____

Q1: Relevance

◯ 1= not relevant
◯ 2= somewhat relevant
◯ 3=quite relevant
◯ 4=very relevant

Q1: Clarity

◯ 1= not clear
◯ 2=item needs revision
◯ 3=very clear

Q1: Essentiality

◯ 1= not essential
◯ 2= useful, but not essential
◯ 3=essential

Q1: Comments

2. Are you currently working in a public hospital in South Africa?

◯ Yes ◯ No

Q2: Relevance

◯ 1= not relevant
◯ 2= somewhat relevant
◯ 3=quite relevant
◯ 4=very relevant

Q2: Clarity

◯ 1= not clear
◯
◯

2=item needs revision
3=very clear

Q2: Essentiality

◯ 1= not essential
◯ 2= useful, but not essential
◯ 3=essential

Q2: Comments

---

3. How many years of experience do you have in a public hospital setting?

◯ 0-1 year
◯ 1-5 years
◯ 5-10 years
◯ Over 10 years

Q3: Relevance

◯ 1= not relevant
◯ 2= somewhat relevant
◯ 3=quite relevant
◯ 4=very relevant

Q3: Clarity

◯ 1= not clear
◯ 2=item needs revision
◯ 3=very clear

Q3: Essentiality

◯ 1= not essential
◯ 2= useful, but not essential
◯ 3=essential

Q3: Comments

---

4. Which province are you currently practicing in?

◯ Eastern Cape
◯ Free State
◯ Gauteng
◯ KwaZulu-Natal
◯ Limpopo
◯ Mpumalanga
◯ Northern Cape
◯ North West
◯ Western Cape

Q4: Relevance

◯ 1= not relevant
◯ 2= somewhat relevant
◯ 3=quite relevant
◯ 4=very relevant

Q4: Clarity

◯ 1= not clear
◯ 2=item needs revision
◯ 3=very clear

Q4: Essentiality

◯ 1= not essential
◯ 2= useful, but not essential
◯ 3=essential

Q4: Comments

SECTION 2: Healthcare Transition context

5. Which healthcare transition activities (HCT) are you typically involved in?

☐ Referring children to adult-oriented occupational therapists Receiving
☐ referrals from child-oriented occupational therapists Working with
☐ service-users along the full child-to-adult age spectrum

Q5: Relevance

◯ 1= not relevant
◯ 2= somewhat relevant
◯ 3=quite relevant
◯ 4=very relevant

Q5: Clarity

◯ 1= not clear
◯ 2=item needs revision
◯ 3=very clear

Q5: Essentiality

◯ 1= not essential
◯ 2= useful, but not essential
◯ 3=essential

Q5: Comments

---

6. What is the age-group of your typical service-user population? (Tick all that apply)

☐ 0-12 years
☐ 12-18 years
☐ 18-24 years
☐ Above age 24

Q6: Relevance

◯ 1= not relevant
◯ 2= somewhat relevant
◯ 3=quite relevant
◯ 4=very relevant

Q6: Clarity

◯ 1= not clear
◯ 2=item needs revision
◯ 3=very clear

Q6: Essentiality

◯ 1= not essential
◯ 2= useful, but not essential
◯ 3=essential

Q6: Comments

7. What are the typical conditions seen in your service-user population? (Tick all that apply)

☐ Neurological disorders
☐ Orthopaedic
☐ conditions Psychiatric
☐ disorders Congenital
☐ disorder Chronic illness
☐ Learning disabilities
Other {other_answer}

Q7: Relevance

◯ 1= not relevant
◯ 2= somewhat relevant
◯ 3=quite relevant
◯ 4=very relevant

Q7: Clarity

◯ 1= not clear
◯ 2=item needs revision
◯ 3=very clear

Q7: Essentiality

◯ 1= not essential
◯ 2= useful, but not essential
◯ 3=essential

Q7: Comments

SECTION 3: Understanding of healthcare transition:

8. I believe I have a good understanding of the concept 'healthcare transition' (HCT)

◯ Strongly agree
◯ Agree
◯ Neither agree nor disagree
◯ Disagree
◯ Strongly disagree

Q8: Relevance

◯ 1= not relevant
◯ 2= somewhat relevant
◯ 3=quite relevant
◯ 4=very relevant

Q8: Clarity

◯ 1= not clear
◯ 2=item needs revision
◯ 3=very clear

Q8: Essentiality

◯ 1= not essential
◯ 2= useful, but not essential
◯ 3=essential

Q8: Comments

9. I am aware of recent developments in the field of healthcare transition

◯ Strongly agree
◯ Agree
◯ Neither agree nor disagree
◯ Disagree
◯ Strongly disagree

Q9: Relevance

◯ 1= not relevant
◯ 2= somewhat relevant
◯ 3=quite relevant
◯ 4=very relevant

Q9: Clarity

◯ 1= not clear
◯ 2=item needs revision
◯ 3=very clear

Q9: Essentiality

◯ 1= not essential
◯ 2= useful, but not essential
◯ 3=essential

Q9: Comments

---

10. HCT is a once-off event

◯ Strongly agree
◯ Agree
◯ Neither agree nor disagree
◯ Disagree
◯ Strongly disagree

Q10: Relevance

◯ 1= not relevant
◯ 2= somewhat relevant
◯ 3=quite relevant
◯ 4=very relevant

Q10: Clarity

◯ 1= not clear
◯ 2=item needs revision
◯ 3=very clear

Q10: Essentiality

◯ 1= not essential
◯ 2= useful, but not essential
◯ 3=essential

Q10: Comments

11. HCT should occur when a service-user reaches a certain age.

◯ Strongly agree
◯ Agree
◯ Neither agree nor disagree
◯ Disagree
◯ Strongly disagree

Q11: Relevance

◯ 1= not relevant
◯ 2= somewhat relevant
◯ 3=quite relevant
◯ 4=very relevant

Q11: Clarity

◯ 1= not clear
◯ 2=item needs revision
◯ 3=very clear

Q11: Essentiality

◯ 1= not essential
◯ 2= useful, but not essential
◯ 3=essential

Q11: Comments

12. The time of HCT should depend on psychosocial factors affecting the service-user (e.g., level of maturity, family situation, schooling etc.)

◯ Strongly agree
◯ Agree
◯ Neither agree nor disagree
◯ Disagree
Strongly disagree

Q12: Relevance

◯ 1= not relevant
◯ 2= somewhat relevant
◯ 3=quite relevant
◯ 4=very relevant

Q12: Clarity

◯ 1= not clear
◯ 2=item needs revision
◯ 3=very clear

Q12: Essentiality

◯ 1= not essential
◯ 2= useful, but not essential
◯ 3=essential

Q12: Comments

---

13. HCT should occur when the healthcare provider thinks the service-user is ready

◯ Strongly agree
◯ Agree
◯ Neither agree nor disagree
◯ Disagree
◯ Strongly disagree

Q13: Relevance

◯ 1= not relevant
◯ 2= somewhat relevant
◯ 3=quite relevant
◯ 4=very relevant

Q13: Clarity

◯ 1= not clear
◯ 2=item needs revision
◯ 3=very clear

Q13: Essentiality

◯ 1= not essential
◯ 2= useful, but not essential
◯ 3=essential

Q13: Comments

14. HCT should occur when the service-user thinks they are ready

◯ Strongly agree
◯ Agree
◯ Neither agree nor disagree
◯ Disagree
◯ Strongly disagree

Q14: Relevance

◯ 1= not relevant
◯ 2= somewhat relevant
◯ 3=quite relevant
◯ 4=very relevant

Q14: Clarity

◯ 1= not clear
◯ 2=item needs revision
◯ 3=very clear

Q14: Essentiality

◯ 1= not essential
◯ 2= useful, but not essential
◯ 3=essential

Q14: Comments

15. HCT should occur when the family thinks the service-user is ready

◯ Strongly agree
◯ Agree
◯ Neither agree nor disagree
◯ Disagree
◯ Strongly disagree

Q15: Relevance

◯ 1= not relevant
◯ 2= somewhat relevant
◯ 3=quite relevant
◯ 4=very relevant

Q15: Clarity

◯ 1= not clear
◯ 2=item needs revision
◯ 3=very clear

Q15: Essentiality

◯ 1= not essential
◯ 2= useful, but not essential
◯ 3=essential

Q15: Comments

16. Healthcare transition is the same as handover of a service-user

◯ Strongly agree
◯ Agree
◯ Neither agree nor disagree
◯ Disagree
◯ Strongly disagree

Q16: Relevance

◯ 1= not relevant
◯
◯
◯

2= somewhat relevant
3=quite relevant
4=very relevant

Q16: Clarity

1= not clear
2=item needs revision
3=very clear

Q16: Essentiality

◯ 1= not essential
◯ 2= useful, but not essential
◯ 3=essential

Q16: Comments

---

17. Healthcare transition is a long-term process

◯ Strongly agree
◯ Agree
◯ Neither agree nor disagree
◯ Disagree
◯ Strongly disagree

Q17: Relevance

◯ 1= not relevant
◯ 2= somewhat relevant
◯ 3=quite relevant
◯ 4=very relevant

Q17: Clarity

◯ 1= not clear
◯ 2=item needs revision
◯ 3=very clear

Q17: Essentiality

◯ 1= not essential
◯ 2= useful, but not essential
◯ 3=essential

Q17: Comments

18. Moving from child-oriented to adult-oriented healthcare involves an increase in the autonomy of theservice-user

◯ Strongly agree
◯ Agree
◯ Neither agree nor disagree
◯ Disagree
◯ Strongly disagree

Q18: Relevance

◯ 1= not relevant
◯ 2= somewhat relevant
◯ 3=quite relevant
◯ 4=very relevant

Q18: Clarity

◯ 1= not clear
◯ 2=item needs revision
◯ 3=very clear

Q18: Essentiality

◯ 1= not essential
◯ 2= useful, but not essential
◯ 3=essential

Q18: Comments

19. Moving from child-oriented to adult-oriented healthcare involves increased family involvement in therapy services

◯ Strongly agree
◯ Agree
◯ Neither agree nor disagree
◯ Disagree
◯ Strongly disagree

Q19: Relevance

◯ 1= not relevant
◯ 2= somewhat relevant
◯ 3=quite relevant
◯ 4=very relevant

Q19: Clarity

◯ 1= not clear
◯ 2=item needs revision
◯ 3=very clear

Q19: Essentiality

◯ 1= not essential
◯ 2= useful, but not essential
◯ 3=essential

Q19: Comments

---

20. Service-users and caregivers must be involved in HCT planning

◯ Strongly agree
◯ Agree
◯ Neither agree nor disagree
◯ Disagree
◯ Strongly disagree

Q20: Relevance

◯ 1= not relevant
◯ 2= somewhat relevant
◯ 3=quite relevant
◯ 4=very relevant

Q20: Clarity

◯ 1= not clear
◯ 2=item needs revision
◯ 3=very clear

Q20: Essentiality

◯ 1= not essential
◯ 2= useful, but not essential
◯ 3=essential

Q20: Comments

---

21. Where did you develop your understanding of HCT? (Tick all that apply)

☐ Undergraduate training
☐ Postgraduate training
☐ CEU programmes
☐ Publications
☐ In-service experience
☐ Other {other_answer}
☐ Not applicable

Q21: Relevance

◯ 1= not relevant
◯ 2= somewhat relevant
◯ 3=quite relevant
◯ 4=very relevant

Q21: Clarity

◯ 1= not clear
◯ 2=item needs revision
◯ 3=very clear

Q21: Essentiality

◯ 1= not essential
◯ 2= useful, but not essential
◯ 3=essential

Q21: Comments

---

22. At what age do you think HCT should commence?

☐ 8 years
☐ 10 years
☐ 12 years
☐ 14 years
☐ 16 years
☐ 18 years
☐ 20 years

Q22: Relevance

◯ 1= not relevant
◯ 2= somewhat relevant
◯ 3=quite relevant
◯ 4=very relevant

Q22: Clarity

◯ 1= not clear
◯ 2=item needs revision
◯ 3=very clear

Q22: Essentiality

◯ 1= not essential
◯ 2= useful, but not essential
◯ 3=essential

Q22: Comments

SECTION 4: Current Practices

The questions in this section have been adapted from the Transitioning Youth to an Adult Health Care Six Core Elements of Health Care Transition™ 3.0

Policies:

23. What policies do you currently use in your practice to guide the healthcare transition process:

◯ None: transition process varies from therapist to therapist
◯ Department-based verbal or written guidelines that indicate the age of transfer
◯ Written standard policy/guideline that clearly outline the age of transfer and the process that should be followed
◯ Standard policy/ guideline that indicates the age of transfer, process that should be followed, and involves input from youth and their caregivers.
◯ Other: Please state: {other_answer}

Q23: Relevance

◯ 1= not relevant
◯ 2= somewhat relevant
◯ 3=quite relevant
◯ 4=very relevant

Q23: Clarity

◯ 1= not clear
◯ 2=item needs revision
◯ 3=very clear

Q23: Essentiality

◯ 1= not essential
◯ 2= useful, but not essential
◯ 3=essential

Q23: Comments

---

24. How familiar are you with your department's policies on healthcare transition:

◯ Extremely familiar
◯ Very familiar
◯ Somewhat familiar
◯ Unfamiliar
◯ Not applicable

Q24: Relevance

◯ 1= not relevant
◯ 2= somewhat relevant
◯ 3=quite relevant
◯ 4=very relevant

Q24: Clarity

◯ 1= not clear
◯ 2=item needs revision
◯ 3=very clear

Q24: Essentiality

◯ 1= not essential
◯ 2= useful, but not essential
◯ 3=essential

Q24: Comments

Tracking and Monitoring

25. How do you currently track service-users who are nearing transition readiness?

◯ Service-users are individually identified when they require transition
◯ There is a uniform procedure to identify service-users needing to be transitioned
◯ The practice has a flow sheet or registry that identifies service-users who require transition
◯ The practice has a flow sheet or registry that identifies and tracks service-users throughout the entire process of transition

Q25: Relevance

◯ 1= not relevant
◯ 2= somewhat relevant
◯ 3=quite relevant
◯ 4=very relevant

Q25: Clarity

◯ 1= not clear
◯ 2=item needs revision
◯ 3=very clear

Q25: Essentiality

◯ 1= not essential
◯ 2= useful, but not essential
◯ 3=essential

Q25: Comments

Transition readiness:

26. When is transition of a service-user initiated in your practice setting?

◯ When the service-user reaches a stipulated age
◯ Once the child's readiness for transition has been subjectively determined by the referring occupational therapist
◯ Once the child's readiness for transition has been objectively evaluated using a transition evaluation Once
◯ the child's readiness for transition has been objectively evaluated by using a standardised transition readiness evaluation.

Q26: Relevance

◯ 1= not relevant
◯ 2= somewhat relevant
◯ 3=quite relevant
◯ 4=very relevant

Q26: Clarity

◯ 1= not clear
◯ 2=item needs revision
◯ 3=very clear

Q26: Essentiality

◯ 1= not essential
◯ 2= useful, but not essential
◯ 3=essential

Q26: Comments

27. If you indicated that an evaluation is used to identify transition readiness, kindly provide the name of the evaluation/s used:

Q27: Relevance

◯ 1= not relevant
◯ 2= somewhat relevant
◯ 3=quite relevant
◯ 4=very relevant

Q27: Clarity

◯ 1= not clear
◯ 2=item needs revision
◯ 3=very clear

Q27: Essentiality

◯ 1= not essential
◯ 2= useful, but not essential
◯ 3=essential

Q27: Comments

Transition Planning

28. Which of the following statements on healthcare transition planning applies best to your practice?

◯ There is no transition plan implemented with the service-user to prepare them for transfer to adult occupational therapy

◯ Transition planning involves referring the service-user to an occupational therapist who can provide adult-oriented OT services

◯ Transition planning involves creating a plan of care with goals for the service-user, with or without referral to another therapist

◯ Transition planning involves creating a plan of care with goals, in collaboration with the service-user and their caregiver, with or without referral to another therapist

---

Q28: Relevance

◯ 1= not relevant
◯ 2= somewhat relevant
◯ 3=quite relevant
◯ 4=very relevant

Q28: Clarity

◯ 1= not clear
◯ 2=item needs revision
◯ 3=very clear

Q28: Essentiality

◯ 1= not essential
◯ 2= useful, but not essential
◯ 3=essential

Q28: Comments

29. Are expected changes in privacy and consent discussed with the child?

- ◯ No
- ◯ Sometimes
- ◯ Often
- ◯ Always

Q29: Relevance

- ◯ 1= not relevant
- ◯ 2= somewhat relevant
- ◯ 3=quite relevant
- ◯ 4=very relevant

Q29: Clarity

- ◯ 1= not clear
- ◯ 2=item needs revision
- ◯ 3=very clear

Q29: Essentiality

- ◯ 1= not essential
- ◯ 2= useful, but not essential
- ◯ 3=essential

Q29: Comments

Transfer of care:

30. When transferring a service-user from child- to adult-oriented occupational therapy services, which of the following processes apply to your practice:

- ◯ The service-user's occupational therapy records are sent to the new therapist
- ◯ The service-user's occupational therapy records and a report or summary is sent to the new therapist
- ◯ A transfer package is sent to the new therapist, including therapy records, a report/ summary, goals and action plans, transition readiness evaluations and, if necessary, legal documents
- ◯ A transfer package is sent to the new therapist, including therapy records, a report/ summary, goals and action plans, transition readiness evaluations and, if necessary, legal documents, and the transferring occupational therapist communicates directly with the new therapist about the transfer of care
- ◯ No change in therapist occurs during the transition from child- to adult-oriented occupational therapy service

Q30: Relevance

◯ 1= not relevant
◯ 2= somewhat relevant
◯ 3=quite relevant
◯ 4=very relevant

Q30: Clarity

◯ 1= not clear
◯ 2=item needs revision
◯ 3=very clear

Q30: Essentiality

◯ 1= not essential
◯ 2= useful, but not essential
◯ 3=essential

Q30: Comments

---

31. When the transfer is complete, which follow-up procedures best applies to your practice:

◯ There is no formal follow-up done with the service-user or new therapist
◯ Transferring therapists encourage service-users to inform them once they have attended their first appointment with the new therapist
◯ Transferring therapists communicate with the new therapist to confirm the first appointment was attended, and to offer consultation assistance if necessary
◯ Transferring therapists communicate with both the new therapist and the service-user to get feedback on the transfer, and offer consultation services if necessary
◯ No change in therapist occurs during the transition from child- to adult-oriented occupational therapy service

---

Q31: Relevance

◯ 1= not relevant
◯ 2= somewhat relevant
◯ 3=quite relevant
◯ 4=very relevant

Q31: Clarity

◯ 1= not clear
◯ 2=item needs revision
◯ 3=very clear

Q31: Essentiality

◯ 1= not essential
◯ 2= useful, but not essential
◯ 3=essential

Q31: Comments

Service-user and caregiver feedback and leadership

32. Which of the following statements applies best to your practice?

◯ There is no formal process to obtain feedback from service-users and caregivers about the support received during the healthcare transition process
◯ Informal verbal feedback sessions are done to obtain feedback from the service-user and caregiver on support received during the healthcare transition
◯ A Healthcare transition survey is used to obtain feedback on the healthcare transition process
◯ A Healthcare transition survey is used to obtain feedback on the healthcare transition process, and parents are caregivers are involved in developing and reviewing the survey

---

Q32: Relevance

◯ 1= not relevant
◯ 2= somewhat relevant
◯ 3=quite relevant
◯ 4=very relevant

Q32: Clarity

◯ 1= not clear
◯ 2=item needs revision
◯ 3=very clear

Q32: Essentiality

◯ 1= not essential
◯ 2= useful, but not essential
◯ 3=essential

Q32: Comments

---

33. Which of the following statements applies best to your practice?

◯ Service-users and their caregivers are not involved in reviewing the healthcare transition resources (policies, guidelines and evaluations)

◯ Service-users and their caregivers are sometimes involved in reviewing the healthcare transition resources (policies, guidelines and evaluations)

◯ Service-users and their caregivers are consistently involved in reviewing and recommending changes to healthcare transition resources (policies, guidelines and evaluations

◯ Service-users and their caregivers are consistently involved in creating, planning, reviewing and disseminating healthcare transition resources (including policies, guidelines and evaluations)

Q33: Relevance

◯ 1= not relevant
◯ 2= somewhat relevant
◯ 3=quite relevant
◯ 4=very relevant

Q33: Clarity

◯ 1= not clear
◯ 2=item needs revision
◯ 3=very clear

Q33: Essentiality

◯ 1= not essential
◯ 2= useful, but not essential
◯ 3=essential

Q33: Comments

---

34. In your opinion, how effective do you think your current health care transition programme is?

◯ Very effective
◯ Somewhat effective
◯ Minimally effective
◯ Not effective

Q34: Relevance

◯ 1= not relevant
◯ 2= somewhat relevant
◯ 3=quite relevant
◯ 4=very relevant

Q34: Clarity

◯ 1= not clear
◯ 2=item needs revision
◯ 3=very clear

Q34: Essentiality

◯ 1= not essential
◯ 2= useful, but not essential
◯ 3=essential

Q34: Comments

---

35. Why do you feel this way? State your answer briefly below?

Q35: Relevance

◯ 1= not relevant
◯ 2= somewhat relevant
◯ 3=quite relevant
◯ 4=very relevant

Q35: Clarity

◯ 1= not clear
◯ 2=item needs revision
◯ 3=very clear

Q35: Essentiality

◯ 1= not essential
◯ 2= useful, but not essential
◯ 3=essential

Q35: Comments

36. What are the factors that promote effective healthcare transition in your practice?

☐ Policies and guidelines
☐ Budget/ funding
☐ Human resource capacity
☐ Physical space Leadership
☐ Management
☐ Training
☐ Collaboration
☐ Expertise Time
☐ available
☐ Demand for HCT services
☐ Other: please state: {other_answer}

Q36: Relevance

◯ 1= not relevant
◯ 2= somewhat relevant
◯ 3=quite relevant
◯ 4=very relevant

Q36: Clarity

◯ 1= not clear
◯ 2=item needs revision
◯ 3=very clear

Q36: Essentiality

◯ 1= not essential
◯ 2= useful, but not essential
◯ 3=essential

Q36: Comments

37. What are the factors that hinder effective healthcare transition in your practice:

☐ Inadequate policy/ guidelines
☐ Insufficient budget/finding
☐ Insufficient human resource capacity
☐ Limited space
☐ Poor leadership
☐ Poor management
☐ Inadequate training
☐ Insufficient collaboration
☐ Lack of expertise
☐ Lack of time available
☐ Lack of demand for HCT services
☐ Other: please state: {other_answer}

Q37: Relevance

◯ 1= not relevant
◯ 2= somewhat relevant
◯ 3=quite relevant
◯ 4=very relevant

Q37: Clarity

◯ 1= not clear
◯ 2=item needs revision
◯ 3=very clear

Q37: Essentiality

◯ 1= not essential
◯ 2= useful, but not essential
◯ 3=essential

Q37: Comments

38. How do you think healthcare transition practices of occupational therapists can be improved? State your answer briefly below:

Q38: Relevance

◯ 1= not relevant
◯ 2= somewhat relevant
◯ 3=quite relevant
◯ 4=very relevant

Q38: Clarity

◯ 1= not clear
◯ 2=item needs revision
◯ 3=very clear

Q38: Essentiality

◯ 1= not essential
◯ 2= useful, but not essential
◯ 3=essential

Q38: Comments

Thank you for evaluating each survey question. Kindly provide overall feedback on the survey in the sections below:

Please provide feedback on the clarity of the participant information sheet (found within the body of the emailed survey invitation):

Does the participant information sheet clearly outline the research topic and what is expected from the participant?

Please provide feedback on the duration of the survey:

How long do you think it would take participants to read the participant information sheet and complete the survey?

Please provide feedback on the user-friendliness of the survey format :

Was the survey easy to access and was the format easy to follow and answer?

Please provide feedback on the flow of the survey: Do the questions seem to follow a logical sequence?

Are there any changes you would recommend to improve the survey?

APPENDIX C: HEALTHCARE TRANSITION PRACTICES QUESTIONNAIRE



INSTRUCTIONS:

a. Completing this survey is completely voluntary.

b. It will take about 15 minutes to complete *(time will be confirmed after pre-test of the instrument)*

c. I have read the Participant information sheet provided in the body of the email and I voluntarily consent to participate in this survey. I believe I fully understand why the study is being conducted and what the intended outcomes will be. I understand that there will be no immediate benefit to me, should I agree to participate, nor will I receive any payment; conversely, participation will not cost me anything but my time.

I understand that, even if I initially consent to take part in the study, I may subsequently withdraw at any time and would not be required to give any reasons.

- Yes

SECTION 1: Demographic Questions:

1. Please provide the last 4 digits of your HPCSA number (this will only be used to ensure there are no duplicate responses)

2. Are you currently working in a public health facility in South Africa, or have you worked in a South African public hospital within the last 5 years (2017 to 2022)?

- No *(if "No", survey ends)*
- Yes, I am currently working in a South African public health facility

3. How many years of experience do you have in a public health setting?

- Less than 1 year *(if selected, survey ends)*
- 1-5 years
- 6-10 years
- Over 10 years

4. What type of public health facility are you working in?

- Primary health care facility

- District hospital
- Regional/ provincial hospital
- Tertiary (Academic) Hospital
- Central (Academic) Hospital
- Other: please state

5. Which province are you currently practicing in?

- Eastern Cape
- Free State
- Gauteng
- KwaZulu-Natal
- Limpopo
- Mpumalanga
- Northern Cape
- North West
- Western Cape

SECTION 2: Healthcare Transition context

Healthcare transition (HCT) is the process of transitioning young people from child- to adult-oriented healthcare. HCT should occur in an uninterrupted, developmentally appropriate and coordinated manner and may or may not involve a change of healthcare provider.

6. Which healthcare transition activities (HCT) are you typically involved in?

- I refer children to adult-oriented occupational therapy services
- I receive referrals from child-oriented occupational therapy
- I work with service-users along the full child-to-adult age spectrum

7. What is the age-group of your typical service-user population? (Tick all that apply)

☐ 0-12 years

- ☐ 13-18 years
- ☐ 19-24 years
- ☐ Above age 24

8. What are the typical conditions seen in your service-user population (Tick all that apply):

- ☐ Neurological disorders
- ☐ Orthopaedic conditions
- ☐ Psychiatric disorders
- ☐ Congenital disorder
- ☐ Chronic illness
- ☐ Learning disabilities
- ☐ Sensory regulation difficulties
- ☐ Visual impairment
- ☐ Other: please name:

SECTION 3: Understanding of healthcare transition:

Indicate your response to each of the following questions by selecting a response from ‘strongly agree’ to ‘strongly disagree’

9. I believe I have a good understanding of the term ‘healthcare transition’ (HCT)

- ○ Strongly agree
- ○ Agree
- ○ Neither agree nor disagree
- ○ Disagree
- ○ Strongly disagree

10. I am aware of recent research in the field of healthcare transition
    - ○ Strongly agree
    - ○ Agree
    - ○ Neither agree nor disagree
    - ○ Disagree
    - ○ Strongly disagree

11. HCT is a once-off event
    - ○ Strongly agree
    - ○ Agree
    - ○ Neither agree nor disagree

- Disagree
- Strongly disagree

12. HCT should occur when a service-user reaches a certain age.
    - Strongly agree
    - Agree
    - Neither agree nor disagree
    - Disagree
    - Strongly disagree

13. The time of HCT should depend on psychosocial factors affecting the service-user (e.g., level of maturity, family situation, schooling etc.)
    - Strongly agree
    - Agree
    - Neither agree nor disagree
    - Disagree
    - Strongly disagree

14. HCT should occur when the healthcare provider thinks the service-user is ready
    - Strongly agree
    - Agree
    - Neither agree nor disagree
    - Disagree
    - Strongly disagree

15. HCT should occur when the service-user thinks they are ready
    - Strongly agree
    - Agree
    - Neither agree nor disagree
    - Disagree
    - Strongly disagree

16. HCT should occur when the family thinks the service-user is ready
    - Strongly agree
    - Agree
    - Neither agree nor disagree
    - Disagree
    - Strongly disagree

17. Healthcare transition is the same as handover of a service-user
    - Strongly agree
    - Agree
    - Neither agree nor disagree
    - Disagree
    - Strongly disagree

18. Healthcare transition is a long-term process
    - Strongly agree
    - Agree

- Neither agree nor disagree
- Disagree
- Strongly disagree

19. Moving from child-oriented to adult-oriented healthcare involves an increase in the autonomy and independence of the service-user
    - Strongly agree
    - Agree
    - Neither agree nor disagree
    - Disagree
    - Strongly disagree

20. Moving from child-oriented to adult-oriented healthcare involves increased family involvement in therapy services
    - Strongly agree
    - Agree
    - Neither agree nor disagree
    - Disagree
    - Strongly disagree

21. Service-users and caregivers must be involved in HCT planning
    - Strongly agree
    - Agree
    - Neither agree nor disagree
    - Disagree
    - Strongly disagree

22. Where did you develop your understanding of HCT? (Tick all that apply)

- ☐ Undergraduate training
- ☐ Postgraduate training
- ☐ CEU/CPD programmes
- ☐ Publications
- ☐ In-service experience
- ☐ Other: name
- ☐ Not applicable (I have not heard of HCT before)

23. When do you think HCT should commence?

SECTION 4: Current Practices:

The questions in this section have been adapted from the Transitioning Youth to an Adult Health Care Six Core Elements of Health Care Transition™ 3.0

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Policies:

24. What policies do you currently use in your Occupational Therapy department to guide the healthcare transition process:

- None: transition process varies from therapist to therapist
- Department-based verbal or written policy/ guidelines that indicate the age of transfer
- Written departmental or institutional policy/guideline that clearly outline the age of transfer **and** the process that should be followed
- Written departmental or institutional policy/ guideline that indicates the age of transfer, process that should be followed, **and** involves input from youth and their caregivers.
- Other: Please state:

25. How familiar are you with your Occupational Therapy department's policies on healthcare transition:

- Extremely familiar
- Very familiar
- Somewhat familiar
- Unfamiliar
- Not applicable (there are no HCT policies in my department that I am aware of)

Tracking and Monitoring

26. How do you currently track service-users who are nearing transition readiness?

- Service-users are individually identified when they require transition
- There is a uniform procedure to identify service-users needing to be transitioned
- There is a uniform procedure to identify service-users needing to be transitioned **and** the OT department has a flow sheet or registry that identifies service-users who require transition
- There is a uniform procedure to identify service-users needing to be transitioned and the OT department has a flow sheet or registry that identifies and tracks service-users throughout the **entire process** of transition
- My OT department uses another way of tracking adolescents nearing transition readiness: please state:

Transition readiness:

27. When is transition of a service-user initiated in your practice setting?

- When the service-user reaches a stipulated age

- Once the child's readiness for transition has been subjectively determined by the referring occupational therapist
- Once the child's readiness for transition has been objectively evaluated using a transition evaluation
- Once the child's readiness for transition has been objectively evaluated by using a standardised transition readiness evaluation.
- Other: please state:

28. If you indicated that an evaluation is used to identify transition readiness, kindly provide the name or type of the evaluation/s used (standardised or non-standardised): :

Transition Planning

29. Which of the following statements on healthcare transition planning applies best to your OT department?

- There is no transition plan implemented with the service-user to prepare them for transfer to adult occupational therapy
- Transition planning involves referring the service-user to an occupational therapist who can provide adult-oriented OT services
- Transition planning involves creating a plan of care with goals for the service-user, with or without referral to another therapist
- Transition planning involves creating a plan of care with goals, in collaboration with the service-user and their caregiver, with or without referral to another therapist
- Other: please state

30. Are expected changes in privacy and consent discussed with the adolescent?

- No
- Sometimes
- Often
- Always

31. Are expected changes in privacy and consent discussed with the parent/guardian?

- No
- Sometimes

- Often
- Always

Transfer of care:

32. When transferring a service-user from child- to adult-oriented occupational therapy services, which of the following processes apply to your OT department:

- The service-user's occupational therapy records are sent to the new therapist
- The service-user's occupational therapy records and a report or summary is sent to the new therapist
- A transfer package is sent to the new therapist, including therapy records, a report/ summary, goals and action plans, transition readiness evaluations and, if necessary, legal documents
- A transfer package is sent to the new therapist, including therapy records, a report/ summary, goals and action plans, transition readiness evaluations and, if necessary, legal documents, and the transferring occupational therapist communicates directly with the new therapist about the transfer of care
- No change in therapist occurs during the transition from child- to adult-oriented occupational therapy service
- Other: please state:

33. When the transfer is complete, which follow-up procedures best applies to your OT department:

- There is no formal follow-up done with the service-user or new therapist
- Transferring therapists encourage service-users to inform them once they have attended their first appointment with the new therapist
- Transferring therapists communicate with the new therapist to confirm the first appointment was attended, and to offer consultation assistance if necessary
- Transferring therapists communicate with both the new therapist and the service-user to get feedback on the transfer, and offer consultation services if necessary
- No change in therapist occurs during the transition from child- to adult-oriented occupational therapy service
- Other: please state

Service-user and caregiver feedback and leadership

34. Which of the following statements applies best to your OT Department?

- There is no formal process to obtain feedback from service-users and caregivers about the support received during the healthcare transition process

- Informal verbal feedback sessions are done to obtain feedback from the service-user and caregiver on support received during the healthcare transition
- A Healthcare transition survey is used to obtain feedback on the healthcare transition process
- A Healthcare transition survey is used to obtain feedback on the healthcare transition process, and parents are caregivers are involved in developing and reviewing the survey
- Other: please state:

35. Which of the following statements applies best to your OT department?

- Service-users and their caregivers are not involved in reviewing the healthcare transition resources (policies, guidelines and evaluations)
- Service-users and their caregivers are sometimes involved in reviewing the healthcare transition resources (policies, guidelines and evaluations)
- Service-users and their caregivers are consistently involved in reviewing and recommending changes to healthcare transition resources (policies, guidelines and evaluations
- Service-users and their caregivers are consistently involved in creating, planning, reviewing and disseminating healthcare transition resources (including policies, guidelines and evaluations)

Factors affecting healthcare transition practices:

36. In your opinion, how effective do you think your current health care transition programme is?

- Very effective
- Somewhat effective
- Minimally effective
- Not effective

37. Why do you feel this way? State your answer briefly below?

38. What are the factors that promote effective healthcare transition in your practice? (Tick all that apply)

- ☐ Policies and guidelines
- ☐ Budget/ funding
- ☐ Human resource capacity
- ☐ Physical space

- ☐ Leadership (governmental/ institutional values, vision, mission or goals align with HCT)
- ☐ Management (institutional/ departmental strategies for implementing programmes and allocating resources support HCT)
- ☐ Training in HCT processes
- ☐ Collaboration between HCT stakeholders (adult and paediatric healthcare providers, caregivers adolescents, funders etc.)
- ☐ Expertise of healthcare professionals in HCT
- ☐ Time available
- ☐ Demand for HCT services
- ☐ Other: please state:

39. What are the factors that hinder effective healthcare transition in your practice:

- ☐ Inadequate policy/ guidelines
- ☐ Insufficient budget/finding
- ☐ Insufficient human resource capacity
- ☐ Limited space
- ☐ Poor leadership (governmental/ institutional values, vision, mission or goals do not align with HCT)
- ☐ Poor management (institutional/ departmental strategies for implementing programmes and allocating resources do not support HCT)
- ☐ Inadequate training in HCT processes
- ☐ Insufficient collaboration between HCT stakeholders (adult and paediatric healthcare providers, caregivers adolescents, funders etc.)
- ☐ Lack of expertise of healthcare professionals in HCT
- ☐ Lack of time available
- ☐ Lack of demand for HCT services
- ☐ Lack of staff motivation
- ☐ Institutional/ departmental resistance to change
- ☐ Other: please state:

40. How do you think healthcare transition practices of occupational therapists can be improved? State your answer briefly below:

Thank you for your participation!

If you know of another occupational therapist who may be able to provide more information on this topic, kindly forward them the survey link. Thank you.

APPENDIX D: PARTICIPANT INFORMATION SHEET AND CONSENT FORMS



Study title: HEALTHCARE TRANSITION PRACTICES OF OCCUPATIONAL THERAPISTS IN SOUTH AFRICAN PUBLIC HOSPITALS

Good day,

My name is Ilhaam Hoosen and I am an Occupational Therapy Master's student at the University of the Witwatersrand. I am doing research on the practices used by occupational therapists when transitioning a service-user from child- to adult-oriented occupational therapy within South African public hospitals.

In this study, I want to find out:

- How occupational therapists understand the concept of healthcare transition in the context of South African public hospitals
- The processes used by occupational therapists when transitioning service-users from paediatric to adult-based services.
- The factors that promote or hinder the healthcare transition of service users from paediatric to adult occupational therapy services in South African public hospitals, from the perspective of occupational therapists.

Invitation to Participate: If you are an occupational therapist who is currently working in a public hospital in South Africa and have at least one year of experience in a public hospital setting, you are invited to participate in this survey.

What is involved in the study?

1. If you choose to participate, you will be required to complete an electronic survey questionnaire that will take approximately 20 minutes to complete.
2. The survey can be done online on any device via this link: *(link)*
3. The survey consists of mainly multiple-choice questions, with some open-ended questions that require short typed responses.
4. Please note that completing the online survey indicates that you have consented to participate in the study.

Risks of being involved in the study: No risks have been identified for participation in this study.

Benefits of being in the study: There is no direct benefit to participating in this study; however, information you provide may be beneficial in improving the healthcare transition services provided to service-users

Participation is voluntary: your participation is entirely voluntary. Refusal to participate or withdrawal from the study will involve no penalties.

Anonymity and Confidentiality: Your participation will remain anonymous, and all information you provide will be stored securely on a protected database. You will be required to provide the last 4 digits of your HPCSA number, to make sure that there are no duplicated responses. This information will not allow the researchers to identify you, and will be deleted as soon as the data is cleaned.

All data collected in the course of the study will be securely retained for two (2) years, if a scientific publication arises from the study and six (6) years, if there is no publication. Thereafter it will be destroyed accordingly.

Outputs

This study will be written up as a research report in partial fulfilment of the requirements of the degree of Master of Science of Occupational Therapy. Upon completion, this research study will also be submitted for publishing in peer reviewed journals. The findings of the study will also be made available to participants upon request.

Contact details of HREC administrator and chair

This study has been approved by the Human Research Ethics Committee (Medical) of the University of the Witwatersrand, Johannesburg ("Committee") *(insert ethic number).* A principal function of this Committee is to safeguard the rights and dignity of all human subjects who agree to participate in a research project and the integrity of the research.

If you have any concern over the way the study is being conducted, please contact the Chairperson of this Committee who is Professor Clement Penny, who may be contacted on telephone number 011 717 2301, or by e-mail on Clement.Penny@wits.ac.za. The telephone numbers for the Committee secretariat are 011 717 2700/1234 and the e-mail addresses are Zanele.Ndlovu@wits.ac.za and Rhulani.Mukansi@wits.ac.za

If you require any further information, please contact me on 079 178 2409 or at 608513@students.wits.ac.za.

Your assistance is greatly appreciated,

Kind regards,

Ilhaam Hoosen

Researcher/ MSc Student

Research Supervisors

Fiona Breytenbach and Janine van der Linde

Email: Fiona.breytenbach@wits.ac.za

Tel: 011 717 3701

Thank you for reading this Study Information Sheet.

APPENDIX E: ETHICAL CLEARANCE CERTIFICATE

UNIVERSITY OF THE WITWATERSRAND JOHANNESBURG

R49 Ms I Hoosen

HUMAN RESEARCH ETHICS COMMITTEE (MEDICAL)
CLEARANCE CERTIFICATE NO. M211054

NAME: (Principal Investigator)	Ms I Hoosen
DEPARTMENT:	School of Therapeutic Sciences Department of Occupational Therapy Medical School University
PROJECT TITLE:	*Healthcare transition practices of occupational therapists in South African public hospitals*
DATE CONSIDERED:	2021/10/29
DECISION:	Approved unconditionally
CONDITIONS:	
NOTE:	If contact information regarding student study participants is required, please contact the Registrar's office - <Nicoleen.Potgieter@wits.ac.za>
SUPERVISOR:	Ms D Thupae
APPROVED BY:	Dr CB Penny, Chairperson, HREC (Medical)
DATE OF APPROVAL:	2021/12/15

This Clearance Certificate is valid for 5 years from the date of approval. An extension may be applied for.

DECLARATION OF INVESTIGATORS

To be completed in duplicate and **ONE COPY** returned to the Research Office secretariat on the 3rd floor, Phillip Tobias Building, Parktown, University of the Witwatersrand, Johannesburg.

I/we fully understand the conditions under which I am/we are authorized to carry out the above-mentioned research and I/we undertake to ensure compliance with these conditions. Should any departure be contemplated from the research protocol as approved, I/we undertake to submit details to the Committee. **I agree to submit a yearly progress report**. When a funder requires annual re-certification, the application date will be one year after the date when the study was initially reviewed. In this case, the study was initially reviewed in October and therefore reports and re-certification will be due in the month of **October** each year. Unreported changes to the study may invalidate the clearance given by the HREC (Medical).

Signature of Principal Investigator

03/01/2022
Date

UNIVERSITY OF THE WITWATERSRAND, JOHANNESBURG	HUMAN RESEARCH ETHICS COMMITTEE (MEDICAL)

Office of the Deputy Vice-Chancellor (Research and Innovation)

TO:	Ms I Hoosen School of Therapeutic Sciences Department of Occupational Therapy Medical School University E-mail: 608513@students.wits.ac.za
CC:	Supervisor: Ms D Thupae <Dineo.Thupae@wits.ac.za> and <HREC-Medical Research Office@wits.ac.za>
FROM:	Mr Iain Burns Human Research Ethics Committee (Medical) Tel: 011 717 1252 E-mail: Iain.Burns@wits.ac.za
DATE:	2021/12/15
REF:	R14/49
PROTOCOL NO:	**M211054** (This is your ethics application reference number. Please quote it in all enquiries, oral or written, relating to this study.)
PROJECT TITLE:	*Healthcare transition practices of occupational therapists in South African public hospitals*

Please find attached the Clearance Certificate for the above project. I hope it goes well and that an article in a recognized publication comes out of it. This will reflect well on your professional standing and contribute to Government funding of the University.



MSWorks2000/Iain0007/Clearscan.wps

APPENDIX F: CONTENT VALIDITY CALCULATIONS BASED ON PILOT STUDY RESULTS

Pilot Study Results: S-CVI/Ave Test for content validity(Polit *et al.*, 2007; Zamanzadeh *et al.*, 2015; Rodrigues, Adachi, Beattie & MacDermid, 2017):

Item	# of Participants indicating relevance (3/4)	# of Participants indicating relevance (1/2)	I-CVI	# indicating "essential"	CVR (N_e-N/2)/(N/2) N= 5	Interpretation	Clarity (Ave) 3=clear 2=needs revision 1= not clear	Action
1	5	0	1	5	1	Retained	3	No change
2	5	0	1	4	0.6	Requires revision/elimination	2.61	Major revision
3	5	0	1	5	1	Retained	2.4	Minor revision
4	4	1	0.8	4	0.6	Requires revision/elimination	3	Question eliminated
5	5	0	1	5	1	Retained	2.61	Minor revision
6	5	0	1	5	1	Retained	2.19	Minor revision
7	5	0	1	5	1	Retained	3	No change
8	5	0	1	5	1	Retained	2.79	Minor revision
9	4	1	0.8	4	0.6	Requires revision/elimination	2.79	Question eliminated
10	5	0	1	5	1	Retained	3	No change
11	5	0	1	5	1	Retained	3	No change
12	5	0	1	5	1	Retained	3	No change
13	5	0	1	5	1	Retained	3	No change
14	5	0	1	5	1	Retained	3	No change
15	5	0	1	5	1	Retained	3	No change
16	5	0	1	5	1	Retained	3	No change
17	5	0	1	5	1	Retained	3	No change
18	5	0	1	5	1	Retained	2.79	Minor revision
19	5	0	1	5	1	Retained	3	No change
20	5	0	1	5	1	Retained	3	No change
21	5	0	1	4	0.6	Requires revision/elimination	2.61	Major revision
22	4	1	0.8	4	0.6	Requires revision/elimination	2.19	Major revision
23	5	0	1	5	1	Retained	2.61	Minor revision

24	5	0	1	5	1	Retained	2.79	Minor revision
25	5	0	1	5	1	Retained	2.79	Minor revision
26	5	0	1	5	1	Retained	2.79	Minor revision
27	5	0	1	5	1	Retained	2.79	Minor revision
28	5	0	1	5	1	Retained	2.79	Minor revision
29	5	0	1	5	1	Retained	2.79	Minor revision
30	5	0	1	5	1	Retained	2.79	Minor revision
31	5	0	1	5	1	Retained	3	No change
32	5	0	1	5	1	Retained	2.79	Minor revision
33	5	0	1	5	1	Retained	3	No change
34	5	0	1	5	1	Retained	3	No change
35	5	0	1	4	0.6	Requires revision/elimination	3	Item revised
36	5	0	1	4	0.6	Requires revision/elimination	2.4	Item revised
37	5	0	1	4	0.6	Requires revision/elimination	2.4	Item revised
38	5	0	1	5	1	Retained	3	No change
S-CVI/Ave			0.99			Excellent		

APPENDIX G: AFRICAN JOURNAL OF DISABILITY SUBMISSION GUIDELINES

Original Research Articles

An original research article needs to provide an overview of innovative research in a particular field within or related to the focus and scope of the journal, presented according to a clear and well-structured format.

Submission status	open
Word limit	7000 words (excluding the abstract, tables, figures, graphs, and references)
Abstract	maximum: 250 words requires structural headings: Background, Objectives, Method, Results, Conclusion and Contribution
Main text	requires structural headings, refer to the full structure 'Ethical considerations' is a sub-section in the manuscript and must include: • Name of the ethical review committee • Study approval number • Manner of consent (written, oral) for human participants • Description of measures taken to maintain the confidentiality of data • If the study was not human or animal research or the study was determined to be non-human subjects research or exempt, the authors must provide a statement with those details in this section.
References	60 or less, adhere to the **Harvard referencing style**
Tables, figures and graphs	7 or less, adhere to the Illustrations requirements found in the AOSIS House style guide
Formatting requirements	apply the guidelines located on the **Formatting requirements page** and the **AOSIS house style guide**
Compulsory supplementary file(s)	the **Authorship, disclosure statements, copyright, and license agreement form**, **Ethical Clearance/Waiver Documentation** and any other relevant form applicable to your submission
Ethical clearance/waiver documentation	evidence of ethical clearance for the study, such as the study approval letter or certificate from the Institutional Review Board (IRB), a waiver from the IRB et cetera

Original Research Article full structure

Title: The article's full title should contain a maximum of 95 characters (including spaces).

Abstract: The abstract, written in English, should be no longer than 250 words and must be written in the past tense. The abstract should give a succinct account of the objectives, methods, results and significance of the matter. The structured abstract for an Original Research article should consist of six paragraphs labelled Background, Objectives, Method, Results, Conclusion and Contribution.

- Background: *Why do we care about the problem?* State the context and purpose of the study. (What practical, scientific or theoretical gap is your research filling?)
- Objectives: *What problem are you trying to solve*? What is the scope of your work (e.g. is it a generalised approach or for a specific situation)? Be careful not to use too much jargon.
- Method: *How did you go about solving or making progress on the problem*? State how the study was performed and which statistical tests were used. (What did you actually do to

get the results?) Clearly express the basic design of the study; name or briefly describe the basic methodology used without going into excessive detail. Be sure to indicate the key techniques used.

- Results: *What is the answer*? Present the main findings (that is, as a result of completing the procedure or study, state what you have learnt, invented or created). Identify trends, relative changes or differences in answers to questions.

- Conclusion: *What are the implications of your answer*? Briefly summarise any potential implications. (What are the larger implications of your findings, especially for the problem or gap identified in your motivation?)

- Contribution: What key insights into the research results and its future function are revealed? How do these insights link to the focus and scope of the journal? It should be a concise statement of the primary contribution of the manuscript; and how it fits within the scope of the journal.

Do not cite references and do not use abbreviations excessively in the abstract.

Introduction: The introduction must contain your argument for the social and scientific value of the study, as well as the aim and objectives:

- Social value: The first part of the introduction should make a clear and logical argument for the importance or relevance of the study. Your argument should be supported by the use of evidence from the literature.

- Scientific value: The second part of the introduction should make a clear and logical argument for the originality of the study. This should include a summary of what is already known about the research question or specific topic and should clarify the knowledge gap that this study will address. Your argument should be supported by the use of evidence from the literature.

- Conceptual framework: In some research articles it will also be important to describe the underlying theoretical basis for the research and how these theories are linked together in a conceptual framework. The theoretical evidence used to construct the conceptual framework should be referenced from the literature.

- Aim and objectives: The introduction should conclude with a clear summary of the aim and objectives of this study.

Research methods and design: This must address the following:

- Study design: An outline of the type of study design.

- Setting: A description of the setting for the study; for example, the type of community from which the participants came or the nature of the health system and services in which the study is conducted.

- Study population and sampling strategy: Describe the study population and any inclusion or exclusion criteria. Describe the intended sample size and your sample size calculation or justification. Describe the sampling strategy used. Describe in practical terms how this was implemented.

- Intervention (if appropriate): If there were intervention and comparison groups, describe the intervention in detail and what happened to the comparison groups.

- Data collection: Define the data collection tools that were used and their validity. Describe in practical terms how data were collected and any key issues involved, e.g. language barriers.

- Data analysis: Describe how data were captured, checked and cleaned. Describe the analysis process, for example, the statistical tests used or steps followed in qualitative data analysis.

- Ethical considerations: Approval must have been obtained for all studies from the author's institution or other relevant ethics committee and the institution’s name and permit numbers should be stated here.

Results: Present the results of your study in a logical sequence that addresses the aim and objectives of your study. Use tables and figures as required to present your findings. Use quotations as required to establish your interpretation of qualitative data. All units should conform to the **SI convention** and be abbreviated accordingly. Metric units and their international symbols are used throughout, as is the decimal point (not the decimal comma).

Discussion: The discussion section should address the following four elements:

- Key findings: Summarise the key findings without reiterating details of the results.
- Discussion of key findings: Explain how the key findings relate to previous research or to existing knowledge, practice or policy.
- Strengths and limitations: Describe the strengths and limitations of your methods and what the reader should take into account when interpreting your results.
- Implications or recommendations: State the implications of your study or recommendations for future research (questions that remain unanswered), policy or practice. Make sure that the recommendations flow directly from your findings.

Conclusion: Provide a brief conclusion that summarises the results and their meaning or significance in relation to each objective of the study.

Acknowledgements: Those who contributed to the work but do not meet our authorship criteria should be listed in the Acknowledgments with a description of the contribution. Authors are responsible for ensuring that anyone named in the Acknowledgments agrees to be named. Refer to the acknowledgement structure guide on our *Formatting Requirements* page.

Also provide the following, each under their own heading:

- Competing interests: This section should list specific competing interests associated with any of the authors. If authors declare that no competing interests exist, the article will include a statement to this effect: *The authors declare that they have no financial or personal relationship(s) that may have inappropriately influenced them in writing this article.* Read our **policy on competing interests**.
- Author contributions: All authors must meet the criteria for authorship as outlined in the **authorship** policy and **author contribution** statement policies.
- Funding: Provide information on funding if relevant
- Data availability: All research articles are encouraged to have a data availability statement.
- Disclaimer: A statement that the views expressed in the submitted article are his or her own and not an official position of the institution or funder.

References: Authors should provide direct references to original research sources whenever possible. References should not be used by authors, editors, or peer reviewers to promote self-interests. Refer to the journal referencing style downloadable on our *Formatting Requirements* page.

APPENDIX H: FULL TABLES OF RESULTS

APPENDIX - TABLE 1: DEMOGRAPHIC PROFILE OF OCCUPATIONAL THERAPISTS WHO PARTICIPATED IN STUDY (FULL TABLE)

Variable	Category	Frequency (n=65)	Percentage
Years of experience in public healthcare	1-5 years	25	38.5
	6-10 years	22	33.9
	over 10 years	18	27.7
Province	Gauteng	36	55.4
	KwaZulu Natal	8	12.3
	Western Cape	8	12.3
	Limpopo	5	7.7
	Mpumalanga	3	4.6
	Eastern Cape	2	3.1
	North West	2	3.1
	Free State	1	1.5
	Northern Cape	0	-
Type of public health facility	Tertiary (Academic) Hospital	26	40.0
	District hospital	21	32.3
	Central (Academic) Hospital	6	9.2
	Regional/ provincial hospital	5	7.7
	Other (SOE, specialised psychiatric or rehabilitation facility)	5	7.7
	Primary health care facility	2	3.1
Age range of service-users seen	0 years and above (full age range)	23	35.4
	0-12 years	10	15.4
	0-18 years	2	3.1
	13-18 years	3	4.6
	13 years and above	10	15.4
	19 years and above	14	21.5
	None selected	3	4.6
Conditions seen	Neurological disorders	51	78.5
	Orthopaedic conditions	37	56.9
	Learning disabilities	36	55.4
	Congenital disorder	33	50.8
	Psychiatric disorders	25	38.5
	Chronic illness	22	33.9
	Sensory integration difficulties	22	33.9
	Visual impairment	21	32.3
	Other (Burns, functional capacity evaluations and medicolegal cases)	5	7.7
Role in HCT	Working with SU's along the full child-to-adult age spectrum	33	50.8
	Referring to adult-oriented occupational therapy services	28	43.1

	Receiving SU's from child-oriented occupational therapy	18	27.7
	None selected	3	4.6

APPENDIX - TABLE 2: SOURCES OF PARTICIPANT UNDERSTANDING OF HCT (FULL TABLE)

Variable	Category	Frequency (n=52)	Percentage(%)
Source of knowledge underlying HCT practice	In-service experience	27	51.9
	Undergraduate training	8	15.4
	CEU/CPD programmes	4	7.7
	Publications	4	7.7
	Postgraduate training	2	3.9
	Other (newsletters)	3	5.8
	Not applicable (I do not feel I have any understanding of HCT)	17	32.7

APPENDIX - TABLE 3: CURRENT HCT PRACTICES OF OCCUPATIONAL THERAPISTS IN SOUTH AFRICAN PUBLIC HOSPITALS (FULL TABLE)

Variable	Category	Freq. (n=41)	Perc. (%)
Policies used to guide the HCT process	None	12	29.3
	Verbal/ written policy indicating age of transfer	17	41.5
	Written policy on process of HCT	7	17.1
	Written policy on HCT process, with input from youth and caregivers	1	2.4
	Other (no department to transfer to)	4	9.8
When is an SU deemed ready for transition?	At a stipulated age	27	66.0
	Subjectively determined by referring therapist (	6	14.6
	Objectively evaluated using a transition evaluation	1	2.4
	Objectively evaluated using a **standardised** transition evaluation	2	4.9
	Other	5	12.2
Planning and preparation for transition	There is no transition plan	17	41.5
	Referral done to adult-oriented therapist	11	26.8
	Goal-directed plan of care created (with/ without referral to new therapist)	3	7.3
	Goal-directed plan of care created **with SU and caregiver** (with/ without referral to new therapist)	5	12.2
	Other	5	12.2
Are expected changes in privacy and consent discussed with the child?	Never	14	34.2
	Sometimes	14	34.2
	Often	4	9.8
	Always	9	22.0
Collaboration between paediatric- and adult-	SU's records sent to new therapist	19	46.3
	SU's records, **and** report or summary sent to new therapist	5	12.2
	Transfer package sent to the new therapist (incl. therapy records, report/ summary, goals, action	2	4.9

oriented therapists	plans, transition readiness evaluations and legal documents)		
	A transfer package sent to the new therapist **and** transferring occupational therapist communicates directly with the new therapist	2	4.9
	No change in therapist occurs	9	22.0
	Other	4	9.8
How is feedback obtained on HCT process?	No formal process	27	65.9
	Informal verbal feedback sessions used to evaluate HCT process	10	24.4
	HCT feedback survey is used	0	0.0
	HCT feedback survey is used, **and** SU and caregivers involved in survey development and review	1	2.4
	Other	3	7.3
SU and caregiver involvement in reviewing HCT process (policies, guidelines, evaluations)	No involvement	26	63.4
	Some involvement	3	7.3
	Consistent involvement	2	4.9
	Consistent involvement; **and** SU's and caregivers involved in creating, planning, reviewing and disseminating HCT resources	5	12.2
	Other	5	12.2
Perceived effectiveness of current health care transition programme	Very effective	3	7.3
	Somewhat effective	12	29.3
	Minimally effective	12	29.3
	Not effective	14	34.2
Ways HCT practice can be improved (content analysis of open-ended responses)	Improve education/ training on HCT	19	46.3
	Develop policies and guidelines on HCT	10	24.4
	Improve communication between stakeholders	4	9.8
	Improve physical resources	3	7.3
	Improve measurement of transition outcomes	2	4.9
	Intersectoral collaboration	1	2.4
	Improve human resource capacity	1	2.4

APPENDIX I: SUBMISSION TO AFRICAN JOURNAL OF DISABILITY

Gmail

AJOD Submission 1413 - Confirmation and acknowledgement of receipt

1 message

aosis@ajod.org <aosis@ajod.org>
Reply-To: AOSIS Publishing <submissions@ajod.org>
To: Ms Ilhaam Hoosen <ilhaam.hoosen.ot@gmail.com>

****
Ref. No.: 1413
Manuscript title: Healthcare transition practices of occupational therapists in South African public hospitals
Journal: African Journal of Disability
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DEPARTMENT OF OCCUPATIONAL THERAPY

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Chapter 1 Introduction, Literature Review, and Methods

1.1. Introduction

1.1.1. Introduction to the study

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