Therapists' experiences in adopting technology as a therapeutic medium with children

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It all starts here ™

NORTH-WEST UNIVERSITY
YUNIBESITI YA BOKONE-BOPHIRIMA
NOORDWES-UNIVERSITEIT ®

Preface

MA in Psychology in article format

This thesis is presented in article format as indicated in rule A.5.4.2.7 of the North- West University, Potchefstroom Campus Yearbook. The article comprising this thesis is intended for submission to the *Journal of Child and Adolescent Mental Health*. Please note that the references provided in the article in Section B, are according to the author guidelines of the journal (provided in Appendix G), while the rest of the thesis is referenced according to the Harvard referencing style, as provided by North-West University's referencing manual.

Acknowledgements

It would have been an impossible task to have completed this Masters without the on-going support from the people I had surrounding me. Heart felt gratitude needs to be expressed to:

My husband, for his steadfast love, on-going support, fun and shouldering many despondent moments.

Ben and Nina for their understanding, patience, hugs and relaxing massages.

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Summary

Children, growing up in this digital era incorporate technology into play, communication and learning. Therapists working with children endeavour to use mediums with which children are familiar and thus need to make a decision whether to include technology in or exclude technology from their therapeutic environments. This is no easy decision, in the midst of negative publicity regarding the role technology plays in children‘s lives.

A deeper understanding of what encourages or discourages therapists from using technology as a therapeutic medium with children could guide practitioners in their decisions regarding the use of technology in therapy. The aim of this study was to explore and describe experiences of therapists using technology, as a therapeutic medium with children. A qualitative multiple case study design was used. Experiences were defined as the “active process" of reinterpreting the "physical, perceptual, affective and cognitive aspects" of being exposed to events to bring about a change in response options (McKnight & Sechrest, 2003:471). Data were collected by means of semi-structured interviews and visual data. Seven therapists participated in the research, selected by means of non-probability purposive sampling and snowball sampling. Collected data and reflective field notes were analysed thematically, using an inductive, interpretive approach, guided by a theoretical framework, the Theory of Reasoned Action (TRA).

Findings indicated that all participants were aware that children find technology appealing, but participants who were older or psychodynamically orientated were less inclined to incorporate technology as a therapeutic medium. Participants who were experimental by nature used technology as a therapeutic medium with some caution. Experimentally inclined participants who had received training in using technology used technology not only as a therapeutic medium, but also more confidently as a play medium. Participants were deterred mainly by the uncertainty of the therapeutic value of technology, the lack of ethical guidelines regulating the use of technology in therapy and the concern that technology may interfere with the therapeutic process.

Further research regarding parents' and child-clients' perspectives of using technology in therapy would perhaps reduce speculative perceptions. Research regarding therapists' values and perceptions of technology as a therapeutic medium could guide stakeholders in their development of training programs and necessary ethical guidelines.

Keywords: child, child therapist, child therapy, technology, Theory of Reasoned Action (TRA), therapeutic medium

Opsomming

Kinders wat in hierdie digitale era grootword inkorporeer tegnologie in spel, kommunikasie en leer. Terapeute wat met kinders werk poog om media te gebruik waarmee kinders bekend is en moet dus ’n besluit maak of hulle tegnologie wil insluit of uitsluit van hulle terapeutiese omgewings. Dit is nie ’n maklike besluit te midde van die negatiewe publisiteit oor die rol van tegnologie in kinders se lewens nie.

’n Dieper begrip van wat terapeute aanmoedig en ontmoedig van die gebruik van tegnologie as ’n terapeutiese medium met kinders kan praktisyns lei in hulle besluit hieroor. Die doel van die studie was om die ervarings van terapeute wat tegnologie gebruik as terapeutiese medium met kinders te ondersoek en te beskryf. ’n Kwalitatiewe, meervoudige gevallestudie-ontwerp is gebruik. Ervaring is gedefinieer as die aktiewe proses van herinterpretasie van die fisiese, perseptuele, affektiewe en kognitiewe aspekte van blootstelling aan gebeure om ’n verandering in respons-opsies teweeg te bring (McKnight & Sechrest, 2003:471). Data is ingesamel deur middel van semigestruktureerde onderhoude en uitbeeldingsnavorsing (demonstrasie). Sewe terapeute het deelgeneem in die navorsing. Hulle is geselekteer by wyse van doelgerigte nie-waarskynlikheid-steekproefneming en sneeubalsteekproefneming. Die ingesamelde data en reflektiewe veldnotas is tematies geanaliseer deur die gebruik van ’n induktiewe, interpretivistiese benadering, en aan die hand van die teoretiese raamwerk genaamd die Teorie van Beredeneerde Optrede (TBO).

Die bevindinge het aangedui dat alle deelnemers bewus was daarvan dat kinders tegnologie aantreklik vind, maar deelnemers wat ouer is of meer psigodinamies georiënteer is, was minder geneig om tegnologie as terapeutiese medium in te sluit. Deelnemers wat van nature meer neig na eksperimentering, het wel met versigtigheid tegnologie as terapeutiese medium gebruik. Eksperimenteel-geneigde deelnemers wat opleiding in tegnologie ontvang het, het dit nie net gebruik as terapeutiese medium nie, maar het dit ook met meer gemak gebruik as speelmedium. Deelnemers is grotendeels weerhou daarvan deur onsekerheid oor die terapeutiese waarde van tegnologie, die gebrek aan

etiese riglyne om die gebruik van tegnologie in terapie te reguleer en die kommer dat tegnologie kan inmeng met die terapeutiese proses.

Verdere navorsing oor ouers en kinder-kliënte se sienings oor die gebruik van tegnologie tydens terapie sal moontlik spekulatiewe persepsies verminder. Navorsing oor terapeute se waardes en persepsies met betrekking tot tegnologie as ’n terapeutiese medium kan rolspelers in die ontwikkeling van opleidingsprogramme rig en kan help met die daarstelling van die nodige etiese riglyne.

Sleutelwoorde: Kind, kinderterapeut, kinderterapie, tegnologie, Teorie van Beredeneerde Optrede (TBO), terapeutiese medium

Table of Contents

Preface ..... **i**
Acknowledgements ..... **ii**
Summary ..... **iii**
Opsomming ..... **v**
Permission to submit article ..... **xi**
Declaration by researcher ..... **xii**
Declaration by language editor ..... **xiii**

SECTION A:
PART I: ORIENTATION TO THE RESEARCH

1. Problem statement, research question, research aim and methodological considerations **1**
1.1 Problem statement and research question **1**
1.2 Research aim **4**
1.3 Concept definitions **4**
1.3.1 Experiences *4*
1.3.2 Therapist *5*
1.3.3 Technology *5*
1.3.4 Children *5*
1.4 Research methodology **5**
1.4.1 Research paradigm and design *5*
1.4.2 Literature study *7*
1.4.3 Empirical Investigation *7*
1.4.3.1 Participants 7
1.4.3.2 Research procedure 8
1.4.3.3 Data collection 9
1.4.3.4 Data analysis 10
1.4.3.5 Trustworthiness 10
1.4.4 *Ethical considerations* 12
1.5 Structure of the dissertation **13**

PART II: THEORETICAL FRAMEWORK AND LITERATURE STUDY

2.1 Orientation 14
2.2 Theory of reasoned action 14
2.3 Literature study on topics relevant to the research 15
2.3.1 Piaget's theory on cognitive development 15
2.3.2 Therapeutic practices with children 17
2.3.3 Play: declining or evolving? 18
2.3.4 Therapeutic mediums 20
2.3.5 Technology as a therapeutic medium 21
2.3.6 Attaining therapeutic goals using technology 22
2.4 Conclusion 23
References 24

SECTION B: ARTICLE

Abstract 33
Introduction 34
Theoretical orientation 35
Therapeutic approaches 35
The therapeutic relationship 36
Technology as a therapeutic medium 36
Method 37
Participants 37
Data collection 39
Data analysis 39
Results and Findings 40
Overview: Range and purpose of utilisation 40
Theme one: Technology effective as a therapeutic medium 42
Appeal 42
Building rapport, quickly 43
Achieving therapeutic goals 44
Theme two: Technology ineffective as a therapeutic medium 44
Theme three: Participants' characteristics and attitudes regarding the use of technology 45

Age *46*
Theoretical orientation *46*
Experimental attitude *47*
Attitudes regarding the use of technology *47*
Discussion **48**
Conclusion **50**
References **51**

SECTION C: CRITICAL REFLECTION

1. Introduction **56**
1.1 Research problem and aim of the study **56**
1.2 Evaluation of research methodology **56**
2. Additional findings **59**
2.1 Parental involvement **60**
2.2 Using technology ethically and safely **62**
3. Overview of the theoretical framework **63**
3.1 Theory of Reasoned Action **63**
3.2 How important is it for therapists to include technology in sessions as a therapeutic medium? **63**
3.3 How will technology impact on the outcome of therapy with children? **64**
3.4 How are therapists' subjective norms influenced by how other therapists view the use of technology as a therapeutic medium? **64**
3.5 How do therapists' experiences, perceptions and attitudes influence their intentions to use technology as a therapeutic medium? **65**
3.5.1 Experiences *65*
3.5.2 Perceptions *65*
3.5.3 Attitudes *66*
3.6 Why use technology instead of another medium in the therapeutic environment? **66**

3.7 **How do intentions translate into the behaviour of using technology as a therapeutic medium? 67**

3.8 Conclusion about TRA as the theoretical framework for the study.. 68

4. Reflection on the study 69

4.1 Strengths 69

4.2 Limitations 69

4.3 Relevance of the findings 70

4.4 Researcher's personal experience 70

5. Recommendations for research 72

6. Conclusion 73

References 74

INDEX OF TABLES

Table 1: Participant details 38

Table 2: Participants' experiences/opinions of the types and functions of technology 41

INDEX OF FIGURES

Figure 1: Participants' responses to an invitation to participate in the study 38

Figure 2: Twenty-Three Apps for the 21st Century Therapist 71

Figure 3: Caricature of the researcher 72

SECTION D: APPENDICES

Appendix A: Interview schedule 77

Appendix B: Example of comments clarifying codes 79

Appendix C: Mind map 91

Appendix D: CD containing data analysis audit (attached) 93

Appendix E: List of toys included in the playroom 94

Appendix F: Consent form 96

Appendix G: JCAMH Instructions to authors 99

Appendix H: Example of reflective field notes 100

Appendix I: Declaration of translation of abstract 102

Permission to submit article

I, supervisor of this study, declare that the article written by Deborah Jean Cotton reflects the research conducted by her on the subject. I hereby grant permission that she may submit this article for examination purposes and thereby confirm that it fulfils the requirements for the degree MA in Psychology.

Signature: C.A. Potgieter Date: 2014/11/14

C.A. Potgieter

Declaration by researcher

I, Deborah Jean Cotton, declare herewith that the dissertation entitled, Therapists' experiences in adopting technology as a therapeutic medium with children, which I herewith submit to the North- West University, Potchefstroom Campus, is my own work and that all references used or quoted are indicated and acknowledged.

Signature: DJ Cotton Date: 2014/11/14
D.J. Cotton

Declaration by language editor

Enquiries: Mrs PMJ Kearsey
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26 April 2013

Dear Sir/Madam

This letter serves to certify that I have conducted a full language edit of the MA (psychology) dissertation entitled "Therapists' experiences in adopting technology as a therapeutic medium with children", as per the request of Deborah Jean Cotton, student number: 2386 3579.

Sincerely,

Mrs P.M.J. Kearsey

14 November 2014

SECTION A

PART I: ORIENTATION TO THE RESEARCH

1. Problem statement, research question, research aim and methodological considerations

The aim of the study was to explore and describe therapists' experiences in adopting technology as a therapeutic medium with children. A qualitative descriptive approach was adopted and a multiple case study design was utilised to collect rich data and gain insight (Babbie, 2010:93, 296; Nieuwenhuis, 2007b:76) into therapists' experiences.

1.1 Problem statement and research question

The way children are playing is changing. Strasburger, Jordan and Donnerstein (2012:538) go as far as to say that reading books, playing and communicating face-to-face are being displaced by technology. Technology refers to any electronic devices such as Smart Phones, iPads/Tablets, computers and game consoles (e.g. Nintendo Wii, Sony Play Station, Sony Portable Play Station, X-Box) (Plowman & McPake, 2013:27). Research conducted over 10 years ago by Bertolini and Nissim (2002:307, 308) already observed children replacing "traditional games" with technological games. Statistics reveal a steady increase in the use of technology by children (Olson, Kutner & Warner, 2008:55) and an increase in time spent with technology, where children have been found to spend over 5 hours a day using technology (Roberts, Foehr & Rideout, 2010:37). This phenomenon, of children being surrounded by technology, is also true within South Africa (Bush, 2013:104).

Children currently in therapy are growing up in a world of technology (Plowman & McPake, 2013:27). Therapists, working with children, aim to use mediums with which children associate (Landreth, 1991:14) and mediums that allow the therapeutic process to unfold (Oaklander, 1988:194). The mediums are conventionally in line with traditional toys such as sand, paints, play dough, crayons, clay, dolls and cars (Geldard & Geldard, 2008:162). Technological mediums, which may offer children another channel of communication,

expression and invention, are not high on the list of mediums used, even though children are familiar with technology (Resnick, 2005:1).

Research has shown that technology has been integrated into therapy for the last twenty years, but therapists still hesitate to adopt it as an available play medium (Carper, McHugh & Barlow, 2011:87; Newman, 2004:142; Truby, 2011:85). Research by Bertolini and Nissim (2002:308) on using technology as a play medium shows that technology engages child clients, allows them to externalise their internal world and provides a platform for emotional expression. Resnick (2005:1, 13) suggests that technology should be viewed as a paintbrush, not a television, and therefore to be used as a medium for "playful learning, creative design and expression." Just as therapists use play dough, paper and paints as play mediums, technology can be made available as a creative, explorative, expressive medium that encourages contact and builds the therapeutic relationship.

Research done in South Africa focused on how technology is used in play therapy sessions and indicates that technology is mainly used for recording purposes (Truby, 2011:76, 104). The study by Truby (2011:66, 67) illustrates therapists' resistance towards adopting technology as a therapeutic medium, declaring that devices can be easily broken, are expensive and therapists feel inexperienced at using technology as a therapeutic medium. Truby's (2011:85) research participants had limited experiences of technology as a therapeutic medium, but expressed the opinion that technology could hamper the relationship and create a barrier if used during sessions.

Therapists working with children focus on the relationship as a central aspect to successful therapy (Corey, 2005:478). Contact is part of the therapeutic relationship and involves being "present" in the therapy (Oaklander, 2006:220). Therapeutic mediums, with which children associate, are used to make this contact and build the therapeutic relationship (Landreth, 1991:14). In contradiction to what Truby's (2011:84) research participants declared regarding resistance to using technology in sessions, Truby (2011:89) later argues that technology may in fact enhance contact, encourage the therapeutic relationship

and bridge the divide between child and therapist. Consequently, genuine contact and forming a relationship may even be difficult, with certain child clients, if technology is not available in the therapeutic setting.

Oaklander (2006:20, 22) emphasises the use of "creative, non-threatening ways" of making contact with children to enhance the therapeutic relationship. With technology being integrated into homes, playtime and academia in South Africa, there is a need to understand the adoption of, or resistance to, technology as a therapeutic medium.

Theorists such as Montano and Kasprzyk (2008:70, 80) suggest that attitudes and perceived social norms concerning a certain behaviour are directly linked to the intention of performing that behaviour. Using the theory of reasoned action (TRA) as a theoretical framework (Buti *et al.*, 2013:434; Montano & Kasprzyk, 2008:70), the researcher proposed to explore and describe therapists' experiences in the adoption of technology as a therapeutic medium. Experience is defined as the reinterpretation of what one feels, thinks, does and perceives after being exposed to events that produce a change in response options (McKnight & Sechrest, 2003:469, 471). Louw *et al.* (2012:3) suggest that when there is a positive attitude towards the response options, the reinterpretation of the experience is seen in a more positive light. TRA highlights the link between attitudes and perceptions and the intention of performing certain behaviour. Describing actual experiences, which includes feelings, thoughts, actions and perceptions of therapists who use technology in sessions, may contribute to the discussion surrounding the adoption of technology as a therapeutic medium.

The research question therefore was: What are therapists' experiences regarding adopting technology as a therapeutic medium with children?
The following sub-questions guided the interview process:

- What experiences encourage therapists to adopt technology as a therapeutic medium with children?
- What experiences discourage therapists from adopting technology as a therapeutic medium with children?

1.2 Research aim

The aim of this study was to qualitatively explore and describe therapists' experiences in adopting technology as a therapeutic medium, with children. Attitudes and perceived social norms would hopefully emerge from the data and provide a deeper understanding of these experiences.

1.3 Concept definitions

1.3.1 Experiences

The American Psychological Association (APA) defines *experience* as "1. a conscious event: an event that is lived through, or undergone, as opposed to one that is imagined or thought about. 2. the present contents of consciousness 3. events that result in learning" (APA dictionary of psychology, 2007:354).

One overarching definition of experience is hard to come by as there are various definitions (Kivlighan *et al*., 1998:27). According to McKnight and Sechrest (2003:469, 471), the term has been misused by researchers who fail to sufficiently define it. The meaning of experience is assumed to be linked to competency and exposure but of more interest is the "active process" of reinterpreting the "physical, perceptual, affective and cognitive aspects" of being exposed to events to bring about a change in response options. Louw *et al.* (2012:3) postulate that the reinterpretation of the experience is seen in a more positive light when there is a positive attitude towards the response options.

In this study, experience was explored as an intersubjective construct instead of merely a subjective or objective concept (Jackson cited by Hollan, 2012:40; Throop, 2009:554), as the experience of the use of technology was described by therapists who were using technology **with** children. The therapists' subjectivity emerged during data collection since their thoughts and emotions – which obviously coloured their experiences – could have been different, even if their actions (here, using technology) were similar (Hollan, 2012:43). As described above, investigating the experiences of therapists using technology with children explored their own thoughts (attitudes and perspectives) regarding their actual use of technology with children.

1.3.2 Therapist

Therapist referred to “a person registered under the Health Professions Act 1974 (Act No. 56 of 1974) as a psychologist or registered counsellor” as established by the Professional Board of Psychology (Government Notice, 2010:3).

1.3.3 Technology

Technology referred to any electronic device such as Smart Phones, iPads/Tablets, computers and game consoles (for example, Nintendo Wii, Sony Play Station, Sony Portable Play Station, X-Box) (Plowman & McPake, 2013:27).

1.3.4 Children

The term *children* denoted boys and girls 18 years of age and under. However, since therapeutic mediums may be used differently during adolescence (11 – 18 years) and middle childhood (7 – 11 years) (Berk, 2013:253), these categories were used, where appropriate, within the study to highlight this differentiation.

1.4 Research methodology

1.4.1 Research paradigm and design

The researcher used qualitative descriptive research, appropriate for gaining insight and understanding (Babbie, 2010:93, 296). A qualitative ontology describes multiple realities which are subjective and constructed through human interaction (Nieuwenhuis, 2007a:54). In line with the post-modernist view of ontology (‘the nature of reality”), the focus is to search for and describe that which is closest to the truth, pertaining to that which is being researched, instead of searching for one “absolute truth” (Nieuwenhuis, 2007a:55, 64). As described in the definition of experience, the researcher collected data to describe and explore subjective and intersubjective experiences of therapists using technology with children. Meaning is derived from contact, relationships with others and the subjective sense made by these experiences (Nieuwenhuis, 2007a:54). Therapists’ opinions (thoughts) provided insight into their interpretations of (that is to say, the meanings they ascribed to) their experiences of using technology with children.

Epistemology stems from the ontological stance on multiple realities and therefore explores how these multiple realities are to be discovered. An interpretivist (subjectively co-created) epistemology was therefore used to explore the subjective truths (Nieuwenhuis, 2007a:55, 60) and gain deeper knowledge about therapists' experiences of using technology as a therapeutic medium. Contemplating their interactions with their clients lead them to describe their subjective and intersubjective experiences. The therapists' experiences of using technology with children were seen each within his/her own framework and psychological approach.

The ontology and epistemology guided the research design, which in this study was a multiple case study. Yin (2009:18) describes a case study as "an empirical inquiry that investigates a contemporary phenomenon, in-depth within its real-life context, especially when the boundaries between phenomenon and context are not clearly evident". Case studies allow researchers to broaden their understanding and extract the meaning that participants (here, therapists) attach to certain phenomena (here, the use of technology with children) (Nieuwenhuis, 2007b:75). A case study can be used when the researcher is trying to describe "how" or "why" a "social phenomenon works" (Yin, 2009:4). In this study, answering these types of questions allowed the researcher to understand and describe how therapists experience their use of technology with children and why technology as a therapeutic medium does or does not work in a therapeutic environment. Being a multiple case study design, the researcher collected comprehensive data from multiple sources, within the participants' own natural environments, their therapy rooms (De Vos *et al.*, 2011:8; Yin, 2014:239). Detailed descriptions were produced by collecting data from a small number of therapists and counsellors, in Durban and its surrounding suburbs.

1.4.2 Literature study

A literature study commenced with sourcing research articles on therapists' experiences of using technology in therapy, with children, as a therapeutic medium. Since play is often the language children use in therapy, literature regarding play was sourced in books, articles and magazines. Articles were located using Google scholar and EbscoHost on children's play incorporating technology and how play has changed. Articles on the theory of reasoned action (TRA) were reviewed as this theory provided the theoretical framework regarding the adoption of new behaviour (here, the use of technology). Further literature regarding the definition of experience was explored providing a link between experiences and TRA. Literature outlining the interpretive qualitative methodology was incorporated and utilised to guide the study. The internet was the source of relevant information, in line with the technological nature of this study. The researcher made use of email, blogs and websites to communicate with psychologists about their use of technology in therapy.

1.4.3 Empirical Investigation

1.4.3.1 Participants

Participants were selected using non-probability purposive sampling to access available therapists, which was in line with the qualitative, exploratory and descriptive nature of the study (Babbie, 2010:193). Prospective participants were selected based on the following inclusion criteria:

- currently counselling children under 18 years of age,
- currently using technology or previously having used technology as a therapeutic medium,
- practicing in Durban or its surrounding suburbs, and
- available and willing to participate in face-to-face interviews.

The researcher initiated the sampling process with counsellors from the researcher's registered counsellors' group but had difficulty finding therapists that would participate and that used technology therapeutically. Snowball sampling (Babbie, 2010:193; Nieuwenhuis, 2007b:80) accessed other therapists, not known to the researcher, through referrals by the attending participants and yet other participants were found on websites. The criterion

about therapists having used technology resulted in many nil responses, severely limiting the number of therapists included in the sample. Guest *et al.* (2006:76, 77) suggest that six to twelve participants are a sufficient number of participants to satisfy a descriptive qualitative study's objectives, especially when the sample is fairly homogenous, as was the sample in this study. The researcher interviewed as many therapists as possible in Durban and in the surrounding suburbs that were willing to participate and who met all the inclusion criteria.

1.4.3.2 Research procedure

On finalising the research question and title, a proposal was developed and once accepted by North West University, it was utilised to spearhead the research process. A literature study was conducted to gain background information to the study, explore what has been researched previously on technology in therapy and to gain knowledge about the main concepts (Babbie, 2010:506). After conducting a pilot interview and analysing the influence of the researcher on the generation of the data, the guiding interview questions (Appendix A) were restructured. Seven participants were secured and interviews were conducted and recorded using a Go-Pro camera. The interviews were transcribed, verbatim, on a laptop. After perusing the data several times, thematic analysis of the data was used to guide the analysis process. The data were coded by assigning a label (phrase/term) to meaningful text and creating a code to later identify important sections within the data. Comments were written in the margin of hard copies of the data, regarding the researcher's observations of therapists and therapists' demonstrations of their use of technology, which aided in further clarification of the codes (Appendix B). Mind maps (Appendix C) and familiarity with the data allowed the researcher to make sense of the coded data and find themes and categories which ultimately were presented in article format. The data analysis is contained on a CD, provided as Appendix D.

1.4.3.3 Data collection

A combination of methods was used to collect data, namely interviews, visual data and reflective field notes. Once off, face-to-face interviews were initiated at each participant's practice or place of preference (Greeff, 2011:361, 348). An interview-schedule with semi-structured, open-ended questions (Appendix A) was utilised to explore experiences in adopting technology as a therapeutic medium with children. The interview was conversational, where rapport was developed and participants were encouraged to discuss certain topics (Babbie, 2010:318, 320). Participants narrated their experiences that encouraged and discouraged them from using technology in sessions and were asked to demonstrate how they used technology, as a therapeutic medium. Demonstration is an example of a visual data collection method (Mitchell *et al.,* 2011:20), where the researcher asked participants to show how the technology was used in sessions. These demonstrations were video recorded, during the interviews, with consent from participants (Babbie, 2010:324). Reflective field notes written after each interview were kept by the researcher, to add to the trustworthiness of the data collected (Nieuwenhuis, 2007b:85-86). The researcher kept reflective notes based on observations (Schurink *et al.*, 2011, 406) made during each interview of the participants' therapeutic environment, the connection between researcher and participant, and the researchers' thoughts and assumptions.

Examining phenomena in qualitative research is likened to crystals with many facets, growing and changing (Richardson, cited by Nieuwenhuis, 2007b:81). Qualitative researchers seek to achieve a nuanced understanding of socially constructed realities that emerge from the data, created in a distinct way by each participant. In this study, data were collected from various sources using in-depth interviews, visual data and reflective field notes (Nieuwenhuis, 2007b:84-88). The researcher is aware that experiences of therapists regarding the use of technology as a therapeutic medium cannot be measured. However, by describing and reporting on what was understood by these experiences, the reader will be enabled to identify the same faceted themes that the researcher identified from the data set (Nieuwenhuis, 2007b:81).

1.4.3.4 Data analysis

Collected data were consolidated and coded in an inductive, fluid manner (Nieuwenhuis, 2007c:107), using concept mapping (Babbie, 2010:405). The researcher explored the data set by reading and rereading all the transcripts, focusing on the research question and writing additional reflective field notes (Schurink *et al*., 2011:406). Descriptions unfolded from the various data sources as the researcher highlighted and noted good and bad experiences as experiences possibly encouraging and discouraging therapists to use technology as a therapeutic medium. An inductive analysis process, based on the interpretive paradigm (Nieuwenhuis, 2007a:37), enabled the researcher to identify the multiple realities inherent in the data, based on the various viewpoints held by the participants and not on assumptions made by the researcher. The researcher identified the themes and categories, and subsequently interpreted and discussed the findings with reference to the research literature (Braun & Clarke, 2006:79) and the theoretical framework (the theory of reasoned action - TRA) selected to underpin the study.

1.4.3.5 Trustworthiness

In qualitative research, the researcher has the responsibility to ensure the research process is valid and reliable by focusing on trustworthiness (Nieuwenhuis, 2007b:80), by observing the following criteria set by Lincoln and Guba (cited by Schurink *et al*., 2011:420) during data collection:

- Credibility

Data are credible if the researcher manages to accurately present the participants' views (Schurink *et al*., 2011:420). In this study, in-depth descriptions regarding participants' experiences of using technology as a therapeutic medium were gathered by using conversational, open-ended interview questions. Interviews were recorded and transcribed verbatim, with data being coded directly from transcriptions. The data gathered were further verified to information about the participants on their websites. Data were collected from multiple sources in the form of (interviews, observations, demonstrations, reflective field notes) and from multiple participants (Fouché & Schurink, 2011:321).

- Transferability

The idea of generalising research outcomes in qualitative research studies to another setting or population is not seen in a positive light. However, collecting data from various sources and in different ways adds to the trustworthiness of the data collected (Schurink *et al*., 2011:420) and makes it possible to apply the findings to comparable situations. Nieuwenhuis (2007c:115) highlights understanding participants' "experiences, attitudes and perspectives" as the purpose of qualitative research rather than being able to "generalise findings". Data, in this study, were collected from multiple sources and compared to reflective field notes kept by the researcher, and demonstrations of participants' use of technology were recorded. The patterns of participants' experiences were explored to substantiate these experiences.

- Dependability

In line with the interpretive paradigm, reality is socially constructed and ever changing and results cannot be perfectly replicated. Keeping a record of the changes and the process of the study improves a study's dependability or reliability (Schurink *et al*., 2011:420, 421). A paper trail documenting the logical flow of the research process was kept in the form of emails, electronic documents and records of all communication. Observations about the interviews were noted and reflective field notes were kept during the data analysis phase to document emerging truths.

- Confirmability

The concept of confirmability explores whether the researcher was objective, did not misinterpret the data and could provide evidence of the process from data collection to reported results (Schurink *et al*., 2011:421). During the research process, the researcher was aware of her subjective opinion and position, in herself being a therapist using technology in therapy with children, and she therefore tried to control for any bias by keeping researcher's reflective field notes (Nieuwenhuis, 2007b:84-86), transcribing the interviews verbatim and keeping records of the research process.

- Authenticity

Creswell (2013:256,372) suggests that the study should reflect “honesty” and the results of the study should adequately represent the participants’ views and opinions. The researcher ensured that the participants were respected and were encouraged to portray their true opinions about their experiences of using technology with children by observing the ethical considerations as detailed below. Participants’ apparent realities that emerged from the data were reported on in the results, thus being fair to participants and presenting the data to the reader in an honest manner (Ebersöhn *et al.*, 2007:134).

1.4.4 Ethical considerations

With ethical clearance obtained under the ethical code, NWU-00060-12-A, the ethical measures of the study were as follows:

Before the research commenced, the researcher informed each participant about the nature of the proposed study, explained what would be requested and the amount of time that would be required of them. Questions or concerns were addressed and consent forms (Appendix F) were completed before the interviews took place (Babbie, 2010:66).

Participants’ rights to confidentiality were explained and respected by excluding personal identifiers in the data collection phase and in the written report, by using meaningful codes.

The researcher ensured that the participants’ rights to refuse inclusion were observed by allowing them to withdraw from the study at any time (Fox & Bayat, 2007:148).

Data collected were safeguarded in a locked up filing cabinet, in the researcher’s home. Video footage excluded faces and was kept in the filing cabinet and will be stored at NWU for a period of five years. Data included in the study excluded personal identifiers.

The researcher tried to ensure that no participant was harmed in any way be it overtly or covertly (Babbie, 2010:65-66) which included avoiding deceiving the participants in any way. The researcher avoided manipulating the data or the participants to sway the results in any direction. The topic of research is not sensitive in nature, so the risk to participants was minimal, but personal opinions remained anonymous.

In line with the principle of beneficence (Brinkmann & Kvale, 2008:267), once the interview was concluded, the researcher provided therapists with meaningful findings on using technology as a therapeutic medium. Focusing on fairness, all participants were treated as equal (Wassenaar, 2006:68) by getting consent, being considerate of their available time, being attentive during the interviews and providing feedback. The researcher observed objectivity and bracketed her own perceptions and opinions about using technology as a therapeutic medium to uncover trustworthy knowledge (Brinkmann & Kvale, 2008:275). The researcher could only answer certain questions asked by the participants, once the interview had been concluded, as one of the sections required answers about perceptions of social norms which could be tainted by the researcher's knowledge of the literature and information from previous interviews. Transgressions such as plagiarism, fabricating data and false referencing were avoided during report writing (Babbie, 2010:524).

1.5 Structure of the dissertation

This section, Part 1 of Section A, examined the research problem, methodology and literature providing background pertaining to the study. Part 2 of Section A will outline the theoretical framework and contextualise the study with a literature study. Section B will present a report of the research in article format, to be submitted for possible publication in *The Journal of Child and Adolescent Mental Health.* The final Section C concludes the study with an overview and critical reflection on the research process, discussion of the strengths and limitations of the research, relevance of the study and suggestions for further research.

PART II: THEORETICAL FRAMEWORK AND LITERATURE STUDY

2.1 Orientation

The theoretical framework (in this study, the theory of reasoned action, TRA) has guided the process of data collection and analysis and will enable the researcher to formulate and answer the "how" and "why" questions when interpreting the findings. The study focused on therapists' experiences, which were defined as the reinterpretation of perceptions, feelings and thoughts after being exposed to events (McKnight & Sechrest, 2003:469, 471). The therapists' experiences were ultimately described and understood by using TRA, which links attitudes and perceptions (discovered in experiences) to understand the adoption of new behaviour (Montano & Kasprzyk, 2008:70, 80).

A literature study has placed the study in context by reviewing previous research and acknowledging different perspectives (Babbie, 2010:506) regarding the use of technology as a therapeutic medium with children. After briefly mentioning Piaget's theory of cognitive development and the progress of therapeutic practices with children, the digital world in which children live and how play has morphed over the ages were explored. Finally, the inclusion of technology in children's play and goals for using technology in therapy as a therapeutic medium were surveyed. Limited research was available regarding experiences of South African therapists using technology with children, even though a wealth of information shows that technology is increasingly incorporated in all spheres of life (Aymard, 2002; Olson *et al.*, 2008; Plowman, 2013; Roberts *et al.*, 2010).

2.2 Theory of reasoned action

TRA outlines the link between attitudes and behaviour (Ajzen & Fishbein, 1977:888) and how attitudes and behaviour are in turn linked to the adoption of new behaviour (Buti *et al.*, 2013:434; Montano & Kasprzyk, 2008:70). Theorists such as Montano and Kasprzyk (2008:70, 80) suggest that attitudes and perceived social norms concerning a certain behaviour are directly linked to the intention of performing that behaviour. The intention to adopt new behaviour in turn impacts whether the behaviour is introduced (Buti *et al.,* 2013:434). In this

study, the new behaviour was the use of technology as a therapeutic medium with children. Ceranoglu (2010:236) suggests that more research based on therapists' attitudes about the use of technology in therapy is needed. Attitudes and social norms were explored during the interview process by exploring therapists' experiences of using the new behaviour. Therapists' attitudes and social norms would hopefully give insight into their intentions and perceptions and incidentally their adoption of technology as a therapeutic medium. To apply TRA to the use of technology as a therapeutic medium, it was necessary to look at answering the following questions:

- How important is it for therapists to include technology in sessions as a therapeutic medium?
- How will technology impact on the outcome of therapy with children?
- How are therapists' subjective norms influenced by how other therapists view the use of technology as a therapeutic medium?
- How do the above attitudes and subjective norms influence therapists' intentions to use technology as a therapeutic medium?
- Why use technology instead of another medium in the therapeutic environment?
- How do intentions translate into the behaviour of using technology as a therapeutic medium?

Describing actual experiences of therapists who use technology in sessions could, it was argued, contribute to the discussion surrounding the adoption of technology as a therapeutic medium.

2.3 Literature study on topics relevant to the research

2.3.1 Piaget's theory on cognitive development

It may be helpful for therapists working with children to keep children's cognitive development and children's ability to learn from interacting with elements in their environments in mind (Hearron & Hildebrand, 2009:62). Piaget's cognitive development theory still holds relevance in describing how children's cognitive development influences the way they think and play. Piaget's stage wise theory

suggests that as children mature, their thinking becomes more advanced and the way they play and the mediums with which they play change (Berk, 2013:225). Piaget and Inhelder (cited by Mishra, 2014:2), already in 1941, presented the four stages of cognitive development as the sensorimotor, pre-operational, concrete operational and formal operational stages. Not all children reach the different stages at the same age, but it is thought that the stages are achieved in the same order (Piaget cited by Mishra, 2014:2).

During the sensorimotor stage, 0 – 2 years, children experiment by using their senses and their motor coordination, to help develop their thinking. There is much trial and error, reflexivity and repetitive action in the sensorimotor areas for children to start building knowledge about themselves within their environment (Berk, 2013:228; Mishra, 2014:2).

Children aged 2 – 7 years are, according to Piaget (cited by Berk, 2013:239), in the preoperational stage where they start to make sense of symbolic activity such as pretend play. Play in turn, allows children to practice such activity and develop cognitively. Language development is pronounced, but development is limited by “egocentrism” and a lack of concrete operations (Mishra, 2014:2).

Children aged 7 – 11 years, are in the concrete operational stage where thought becomes “more logical, flexible, and organised”, much like the way adults reason (Berk, 2013:249). The Piagetian psychological meaning of concrete operations refers to how children need to physically carry out an activity before they can do it mentally (Mishra, 2014:2). Children in the concrete operational stage need concrete information or things (such as toys representing reality) to be able to think in a logical and organised way (Berk, 2013:252).

During adolescence (11 - 18), children are increasingly able to reason in an abstract way. Children start to solve problems without having experienced them before and can see things from another perspective, thus starting to become less egocentric and more mature in their thought processes (Mishra, 2014:2). Being aware of children’s cognitive development helps therapists to utilise age

appropriate mediums and practices that will enhance the therapeutic relationship and hopefully attain the desired therapeutic goals.

2.3.2 Therapeutic practices with children.

Reviewing the development of therapeutic practices with children, it is evident that children and adults are counselled in a very different manner but that therapists use similar methods underpinned by the various psychological approaches. Therapists amend their therapeutic practices with children by taking children's cognitive developmental levels into consideration, using mediums that will effectively facilitate their contact with their child-clients and will create a therapeutic environment that allows change (Geldard & Geldard, 2008:5, 25).

A brief overview of a few key psychological approaches traces the contributions to therapeutic practices with children:

Psychoanalysts developed foundational concepts regarding counselling children by shifting the focus of therapy from talk therapy with techniques such as free-association that tapped into the unconscious and dream analysis (Corey, 2005:66), to encouraging and analysing not only communication, but also children's play (Geldard & Geldard, 2008:28).

Humanistic/existentialist approaches have contributed to guiding therapists who work with children since the 1940's. The importance of the relationship between child and therapist is highlighted where children are the focus of therapeutic interventions. Children are encouraged to solve concerns within a trusting relationship with a therapist (Geldard & Geldard, 2008:34, 35).

The cognitive behaviourists challenge clients' irrational beliefs, emotions and thoughts and guide them towards more rational beliefs, emotions and thoughts. Similar aims are formulated when counselling children but are applied in a more age appropriate manner, where therapists may use various mediums/techniques (books/e-books, drawing/paint on an iPad, "imaginary journey") to help children to challenge and replace irrational beliefs (Geldard & Geldard, 2008:38, 170).

Geldard and Geldard (2008:9, 43, 67) suggest an integrative approach (Sequentially Planned Integrative Counselling for Children – SPICC) when counselling children. The most important aim in the SPICC model is to create a safe space for children to "tell their story", by using age appropriate mediums within a genuine, non-judgemental relationship. The various approaches used in the SPICC model are: Client-centred Psychotherapy, Gestalt Therapy, Narrative Therapy, Cognitive Behaviour Therapy and Behaviour Therapy (Geldard & Geldard, 2008:67).

Regardless of the approach used, the success of therapy relies on the relationship between therapist and child (Landreth, 2012:9). Oaklander (2006:20) states that "nothing happens without at least a thread of a relationship". For the therapeutic relationship to build, the therapist needs to find a way to relate to children. Children's play cannot be analysed, their behaviour changed or their problems solved without the therapist relating to the child. Landreth (2012:9) highlights that children (especially before 12 years old) cannot relate to an adult in an abstract world with words but are in the concrete stage where "children communicate through play" and use toys instead of words.

If therapists want to make contact with children, this needs to be done therefore by accessing children's concrete worlds (Landreth, 2012:1), using play as their "medium of communication" (Landreth, 2012:9) and toys as mediums with which children can express themselves (Landreth, 2012:12). Therapists working with children use play as their *modus operandi.* It enables and encourages non-verbal and verbal expression (Blom, 2004:19-20). Play provides a way for children to process their problems and "share their feelings" (Ceranoglu, 2010:234) and therefore can be used effectively in therapy.

2.3.3 Play: declining or evolving?

Play is a vital part of children's lives (Kelly-Vance & Ryalls, 2004:549); especially free play (play undirected by adults) and outdoor play. Play has been said to increase concentration and attention and provides opportunities to socialise,

express emotions and enhance motor skills (Kalb *et al.*, 2003:26-28). Gray (2011:443) states that “children are designed to play” and he shows concern as both free play and outdoor play have declined since the 1980's. Gray (2011:447) links the decline in free play (due to displacement by technology) to his perceived decrease in children's mental health, but in opposition Resnick and Rosenbaum (2013:165) explain that free play using technology, such as tinkering, has been found to encourage creativity, emotional expression and independence.

As the world increasingly incorporates technology into politics and businesses, it is also integrating it into play at school and at home (Aymard, 2002:12). Children are incorporating technology into their play with electronic devices such as iPads, touch screens, iPods, play stations, X-boxes, Wii consoles, Leapfrogs, laptops and smart phones (Plowman, 2013:135). Children are spending increasing amounts of time playing with technology, almost as much time as they spend sleeping (Olson *et al.,* 2008; Roberts *et al.,* 2010). This sounds like an alarming amount of time spent with technology, but children learn or model their technological know-how from parents often unbeknown to the adults around them (Ploughman & McPake, 2013:3). Technology seems to get blamed for the reduction in play (Gray, 2011:446), but playing with technology is still play and is said to have benefits similar to the advantages of play without technology (Olson *et al*., 2008:58-59). Many hours playing the piano are seen as dedication but many hours playing with technology are seen as an addiction (Olson, Kutner & Beresin*,* 2007:3).

There is much controversy about the use of technology in play. If the use of technology is monitored and supervised by parents, technological play can be beneficial (Ploughman & McPake, 2013:6). Olson *et al*., (2008:69) show that adolescent boys use age appropriate violent video games in much the same way as rough and tumble play and that these games, even within the controversy of its use, can be used to express emotions and to socialise with peers. Children can use technology for undirected play such as doodling, painting, creating interest boards and writing stories (Sawyer *et al.*, 2012).

Technology has also been incorporated into outdoor play with interactive playgrounds (Delden, 2012:335), interactive trampolines (Karoff *et al.*, 2012:209) and exercise games like Wii and X-Box Kinect (Hatch, 2011:13). Children express a preference for outdoor play but free play is restrained by adults for safety reasons and children are often directed towards electronic educational games (Gray, 2011:446). Plowman (2013:136) emphasises finding a balance between play with and without technology. It may be concluded that, perhaps instead of play decreasing, play has evolved.

2.3.4 Therapeutic mediums

Research has highlighted the importance of the availability of different categories of toys and materials in the therapeutic playroom (Ray *et al.*, 2013:56). Before considering the use of technology as a therapeutic medium, it is important to review overall how mediums are considered to have therapeutic value. Geldard and Geldard (2008:164) emphasise that the therapeutic mediums chosen need to suit the individual child, enable the therapist to make contact with the child and for children to “tell their story”. The lists of toys/mediums to be included in the playroom (see Appendix E for an example) are precise and each item is included due to its therapeutic value (Geldard & Geldard, 2008:161-163; Landreth, 2012:144). Play mediums and toys should be available to children from the "nurturing, family, aggressive, scary, pretend and fantasy” categories, to allow for expression through the exploration of various available toys from each category (Ray *et al.*, 2013:56). Researchers are aware however that the toys children use today are not the same that they have used in the past. Ray *et al.* (213:56) suggest that further research is needed to explore how toys have changed and how toys which are included in the playroom to enhance the therapeutic experience, need to change too.

Technology is not featured in the lists of suggested mediums referred to above and Landreth (2012:157) states that “mechanical and electronic toys or electronic games are not appropriate for play therapy”. However the Association for Play Therapy (APT, 2009:20) is aware that technology is being used in play therapy and has a section describing the safe use of technology during sessions

and once more suggests that therapists should “recognise, acknowledge and utilise the therapeutic powers of play”. Brezinka (cited by Goldstein, 2012:23) observes that “the play therapist’s toy chest today includes traditional toys and games, dolls, interactive toys and *digital games*”.

The value of play has come under some disrepute, with Lillard *et al.* (2013:3) suggesting that play is not as important to children’s development and well-being as previously thought. Weisberg *et al.* (2013:36, 38) refute the above by stating that development through learning does occur when children play. Goldstein (2012:23) states that play has the power to improve “emotional well-being; reducing anxiety, depression, aggression, and sleep problems”. In a similar way as the value of play is currently being questioned, the value of certain mediums, such as using technology as a therapeutic medium, is being questioned. Perhaps as therapists choose a certain approach under which to counsel children, therapists will choose whether to use play as a therapeutic practice with children and decide which mediums are in-line with their psychological approaches and their personal preferences.

2.3.5 Technology as a therapeutic medium

Oaklander (2006:3) comments that in the 28 years prior to the writing of her book one thing that has changed in play therapy, is the advances in technology, but that children’s needs and finding tools that meet those needs still remain. Therapists involved in play therapy first and foremost need to understand how children play and how to interact in a playful way with children (Oaklander, 2006:31) and then consider how to incorporate technology as a therapeutic medium for children.

Children currently in therapy are growing up in a world of technology (Plowman & McPake, 2013:27) and Ceranoglu (2010:235) states that technology helps children to feel understood. Before therapists use technology in therapy, they need to assess what type of technology could be used and consider the goals of using technology, the age appropriateness and the relevance (Ceranoglu, 2010:236). Aymard (2002:12) suggests that therapists see technology as a medium for work but children see it as a medium for play. Technological

mediums should be displayed as toys in the playroom and not on a desk as a work tool. Technology is used by child clients in the same way as they use traditional play mediums such as sand, dolls, clay, stories and games (Rubin, 2009:1).

Kepner and Thompson (cited by Aymard, 2002:12) report that 68% of therapists questioned in their research would use technology in therapy yet said they needed training but lacked the time and money. However, shareware is freely available with applications (apps) such as Hourcade's app for use on multi-touch tables available on openautismsoftware.org. A Power point presentation highlighting the use of apps for therapy has been presented by Sawyer, Sloan and Willis (2012) and YouTube boasts hour long presentations on using an iPad as a therapeutic medium.

The APT (2009:20) has guidelines to guide play therapists in the use of technology in sessions and the Entertainment Software Rating Board (www.esrb.org) guides therapists when deciding which games or what types of technology to use. However on searching on the website of the Health Professions Council of South Africa (HPCSA), no guidelines regarding therapists' use of technology in South Africa are apparent. Exploring South African therapists' experiences and attitudes of using technology with children and disseminating the findings may provide valuable information to therapists considering incorporating technology as a therapeutic medium.

2.3.6 Attaining therapeutic goals using technology

The use of technology in therapy achieves not only the fundamental goals, such as making contact (Aymard, 2002:15) and building the therapeutic relationship (Ceranoglu, 2010:235), but also the essential goals of therapy with children. Goals such as telling their story, dealing with difficult emotions, addressing irrational thoughts/beliefs, feeling empowered and adapting to the real world, could be achieved.

Success in using technology in therapy was cited back in 1984 by Allen (cited in Aymard, 2002:12), who described how technology was engaging and improving

children's “self-concept and sense of mastery”. Incorporating technology in therapy can provide opportunities for clients to process internal conflict; understand, identify and express emotions, and build rapport (Aymard, 2002:17; Ceranoglu, 2010:233). Just as parents read scary stories and offer support to their children, therapists can work through worries, fears and emotional responses elicited during video game play (Bertolini & Nissim, 2002:317, 323).

Research on the use of smart tables (large tablets the size of a coffee table) suggests that technology can allow children to tell their story as it encourages creativity, fantasy play and storytelling and provides unique play opportunities (Pykhtina *et al.*, 2012:2, 3). Lego© Therapy prescribes the successful use of Lego© (even technologically enhanced Lego©) as a therapeutic medium on the grounds that when children have a “natural interest” in something, it promotes “learning and behaviour change” (LeGoff, 2004:558). Technology may aid therapists in assessing “cognitive skills, affect, impulse regulation, resistance and transference” (Ceranoglu, 2010:235-236). The above discussion highlights the diverse application of using technology in therapy with children to achieve various therapeutic goals.

2.4 Conclusion

Part 2 oriented the study by discussing TRA, the theoretical framework that guided data collection and data analysis. A literature study outlined Piaget’s cognitive development theory and went on to describe a few relevant therapeutic practices with children. Lastly, literature was presented that highlighted the change in children’s play, mediums used in therapy and how therapists could possibly include technology as a therapeutic medium.

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SECTION B

ARTICLE

Using technology in therapy with children: therapists' perspectives

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Abstract

Objective: The study aimed to explore and describe therapists' experiences in adopting technology as a therapeutic medium with children, addressing the lack of research regarding the therapeutic use of technology in South Africa.
Method: A qualitative case study design was utilised and data were collected from seven therapists, using semi-structured interviews, visual data (demonstrations) and reflective field notes. A thematic data analysis was executed.
Results: Even though participants' experiences indicated technology's effectiveness in building rapport more quickly than traditional toys, encouraging emotional expression and engaging child-clients in therapy, participants expressed caution in using technology. An antiquated view of technology as a work medium prevailed, with older or psychodynamically orientated participants favouring talk therapy. Participants with an experimental attitude explored using technology for psycho-education, relaxation, building trust and encouraging communication. An experimental attitude coupled with training in using technology therapeutically appeared to trump both age and theoretical orientation, resulting in technology being used as a *play medium*. Overall, uncertainty regarding the therapeutic value of technology and lack of ethical regulations deterred participants from readily using technology in therapy.
Conclusion: Training and formulation of ethical regulations seem imperative to alleviate doubts and empower therapists to use technology as a therapeutic medium.

Keywords: child, child therapist, child therapy, technology, Theory of Reasoned Action (TRA), therapeutic medium

Using technology in therapy with children: therapists' perspectives

Introduction

Therapists have been questioning the use of technology in therapy with children, since the 1980's (Newman 2004). Ceranoglu (2010a) reviewed the use of technology with children, in psychotherapy, over a 24-year period and concludes that even though technology in therapy has increased children's cooperation in, and enthusiasm for therapy, published evidence of its effectiveness is limited. The debate to use technology in therapy with children still continues (Villani, Olson and Jellinek 2005). Granic, Lobel and Engels (2014) ponder over therapists' resistance towards the use of technology as a therapeutic medium, in view of the facts that children engage with it daily and research has documented positive effects of its use for learning and well-being.

Children's use of technology is on the increase for communication (Rideout, Foehr and Roberts 2010), learning (Villani *et al.* 2005) and play (Olson, Kutner and Warner 2008). There is an escalating trend in virtual play (Goldstein 2013) with children in America spending over five hours a day using technology (Rideout *et al.* 2010). Children born into an environment filled with technology have actually been labelled "digital natives" (Prensky 2001:1), becoming computer literate at an early age (Evans 2012). Plowman and McPake (2013:29) argue however that "digital natives" is an unsuitable label and that familiarity with technology develops due to the availability of technology and modelling of its use by adults. The phenomenon of children's increasing engagement with technology is also true within South Africa. Statistics published by Price Waterhouse Cooper (cited in Smith 2013) revealed that video gaming in South Africa is a R2.2 billion industry.

Research on therapists adopting technology as a therapeutic medium with children does not reveal a similar upwards trend (Granic *et al.* 2014; Villani *et al.* 2005). Granic *et al.* (2014) infer that the resistance towards using technology in therapy is partly fuelled by negative publicity. The increase in the use of technology, by children, is causing contention (Plowman, McPake and Stephen 2010a). Concerns exist about play with technology becoming an addiction or

displacing play of a concrete or physical nature (Rivera 2009) rather than being a healthy pastime (Plowman, Stephen and McPake 2010b). Gray (2011) postulates that the decline in outdoor play and free play (due to displacement by technology) is linked to a decrease in children's mental health. Olson *et al.* (2008) argue that play using technology is still play and has benefits similar to the advantages of play without technology. Plowman, Stephen and McPake (2010b:4) acknowledge that "there are choices to be made about the role of technologies in children's lives", but still think that play with technology can be beneficial if monitored and supervised (Plowman and McPake 2013).

Even as the value of play itself is being contested by researchers and academia (Lillard *et al.* 2013, Weisberg, Hirsh-Pasek and Golinkoff 2013), the debate regarding the use of technology as a therapeutic medium will continue. The aim of this study was to qualitatively explore and describe therapists' experiences in adopting technology as a therapeutic medium with children. A theoretical orientation, prior to describing the research method and findings, provides the context of the study.

Theoretical orientation

Therapeutic approaches

Therapists working with children generally align their therapeutic practices in accordance with children's cognitive developmental levels (Geldard and Geldard 2008). Psychoanalysts developed foundational concepts regarding the counselling of children by shifting the focus of therapy from talk therapy (Corey 2005) to encouraging and analysing not only communication, but also children's play (Geldard and Geldard 2008). Humanistic/existentialist approaches highlight child-focused interventions and encourage children to solve concerns within a trusting relationship with a therapist (Oaklander 2006). Cognitive behaviourists challenge child-clients' irrational beliefs, emotions and thoughts and guide them towards more rational beliefs, emotions and thoughts (Corey 2005) using various age-appropriate mediums/techniques (books/e-books, drawing/paint in hard copy/on an iPad, imaginary journey) (Geldard and Geldard 2008). Geldard and Geldard (2008) propose Sequentially Planned Integrative Counselling for

Children (SPICC), integrating Client-centred Psychotherapy, Gestalt Therapy, Narrative Therapy, Cognitive Behaviour Therapy and Behaviour Therapy within their model. The most important aim in the SPICC model is to create a safe space for children to achieve therapeutic change, by using age-appropriate mediums within a genuine, non-judgemental relationship (Geldard and Geldard 2008).

The therapeutic relationship

Regardless of the approach used, the success of therapy relies on the relationship between therapist and child (Landreth 2012). Oaklander (2006:20) emphasises that “nothing happens without at least a thread of a relationship”, so it is vital for the therapist to find a way to relate to the child-client. This could be done by accessing children’s concrete worlds, using play as their “medium of communication” and toys as mediums of expression (Landreth 2012:9), since play encourages non-verbal and verbal expression (Blom 2004) and enables children to share their feelings (Ceranoglu 2010b).

Technology as a therapeutic medium

Therapists working with children need to understand how children play and how to interact with them in a playful way (Oaklander 2006). Each child is different and toy preferences in the therapy room vary (Ray *et al.* 2013). Even though children’s play is changing with technology being more readily available (Olson *et al.* 2008), the question might be whether technology can find a place side-by-side with traditional toys instead of technology replacing toys in a therapy room. Some of the published benefits of technology as a therapeutic medium are: processing internal conflict; understanding, identifying and expressing emotions; building rapport (Aymard 2002, Ceranoglu 2010b); and dealing with “unfinished business” (Rosegrant 2012:236). Rubin (2009) suggests that when technology is used therapeutically, child-clients’ needs are met in the same way as when they use traditional play therapy toys. Goldstein (2012:30) argues: “Regardless of whether the toy contains a microchip or not, play nourishes development on every level: cognitive, emotional, physical and social".

Method

Utilising a multiple case study design (Yin 2009), the qualitative descriptive study (Babbie 2010) explored experiences of therapists (psychologists and/or registered counsellors) using technology with children. Experiences were defined as the "active process" of reinterpreting the "physical, perceptual, affective and cognitive aspects" of being exposed to events to bring about a change in response options (McKnight and Sechrest 2003:471). Data collected, highlighted not only the participants' experiences but also their attitudes. A link exists between attitudes and the adoption of new behaviour, described by the Theory of Reasoned Action (Ajzen and Fishbein 1977). Attitudes represent one's "evaluation of the entity in question" (Ajzen and Fishbein 1977:889), here, the use of technology in therapy.

Participants

Participants were selected using non-probability, purposive sampling based on the following inclusion criteria, to access therapists

- currently counselling children under 18 years of age,
- using or previously having used technology as a therapeutic medium,
- practicing in Durban or its surrounding suburbs, and
- willing and available to be interviewed.

The researcher initiated the sampling process with counsellors from her Registered Counsellors' group but the criterion about the use of technology resulted in many nil responses. Snowball sampling (Babbie 2010, Nieuwenhuis 2007b) accessed some additional therapists through referrals by participants and yet other potential participants were found on websites. Figure 1 shows the number of participants who were contacted to participate in the research and illustrates their respective responses.

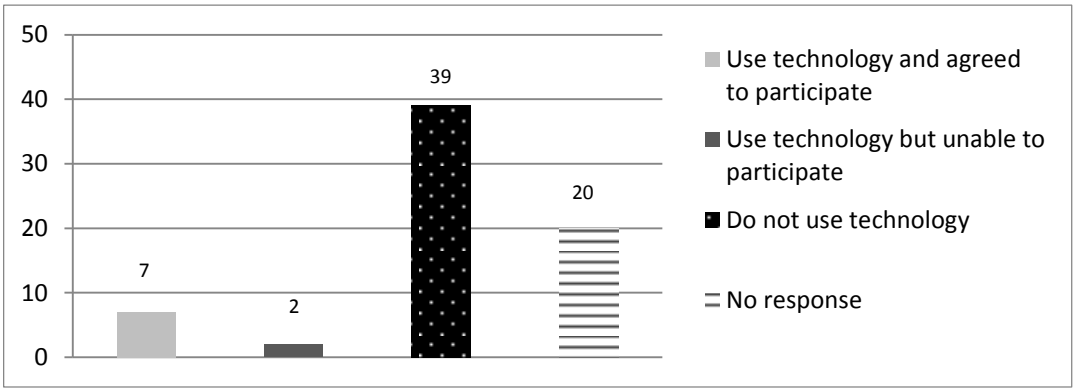

Figure 1: Participants' responses to an invitation to participate in the study

Figure 1 shows that, even when discounting those who did not respond to the request, considerably more therapists (39) declared that they did not use technology than the number signifying that they did (9). Of the 68 therapists approached, only seven finally agreed to participate in the study. However, Guest, Bunce and Johnson (2006) suggest that six to twelve participants are a sufficient number to satisfy the objectives of a descriptive qualitative study, especially when the sample is fairly homogenous, as in this study. Table 1 summarises the participants' personal details.

Table 1: Participant Details

Participant*	Category of Registration	Focus/Theoretical orientation	Age	Gender
1RC	Registered counsellor	Trauma	26	Male
2RC	Registered counsellor	Trauma	52	Female
3EdP	Educational psychologist	Eclectic	38	Female
4EdP	Educational psychologist	CBT**/Eclectic	64	Female
5ClP	Clinical psychologist	Psychodynamic	36	Male
6ClP	Clinical psychologist	Behaviourist/Narrative	56	Female
7CoP	Counselling psychologist	Eclectic/Systemic	37	Female

* RC: Registered Counsellor EdP: Educational Psychologist
ClP: Clinical Psychologist CoP: Counselling Psychologist
**CBT: Cognitive Behavioural Therapy

Table 1 shows a fairly even distribution of four professional categories, with each of three pairs (excepting 7CoP) furthermore virtually representing two professional generations. Participants adhered to assorted theoretical orientations. Although inconclusive due to the small sample size, the sample might suggest that professional category, age and theoretical orientation are none delimiters to the use of technology. The predominantly female sample (5:2) suggests a demographic of a higher number of female therapists counselling children.

Data collection

Adhering closely to the ethical requirements of confidentiality, privacy, voluntary and informed participation and avoidance of harm or risk, data were collected by using interviews, visual data and reflective notes. Semi-structured, individual interviews were conducted at each participant's practice or place of preference (Greeff 2011) to explore his/her experiences in adopting technology as a therapeutic medium with children. The interviews were conversational to develop rapport (Babbie 2010). Participants narrated their experiences that encouraged and discouraged them from using technology in therapeutic sessions. They were also asked to demonstrate how they used technology as a therapeutic medium (visual data collection - Mitchell *et al.* 2011). The interviews and demonstrations were video-recorded, with the participants' consent (Babbie 2010). The researcher kept reflective notes, including observations, to add to the trustworthiness of the data collected (Nieuwenhuis 2007b). The data were transcribed verbatim from the video-recordings.

Data analysis

The researcher explored the data sources by reading and rereading all the transcripts, focusing on the research question (Schurink, Fouché and De Vos 2011). Descriptions unfolded as experiences encouraging and discouraging therapists to use technology as a therapeutic medium were highlighted and noted. Themes and categories were listed, based on the various viewpoints held by the participants. An inductive analysis process, based on the interpretive paradigm (Nieuwenhuis 2007a), and concept mapping (Babbie 2010) thus enabled the researcher to identify the multiple realities inherent in the data.

Finally, the findings were contemplated with reference to the research literature (Braun and Clarke 2006) and the Theory of Reasoned Action (Ajzen and Fishbein 1977).

In reporting the results of the research in the section below, some discussion will already be incorporated at the thematic level due to space constraints.

Results and findings

Overview: Range and purpose of utilisation

Participants mostly described experiences using cell phones, personal computers, laptops and iPads as therapeutic mediums in therapy with children, rather than using particular programs or games. The cautious use of technology appears in line with how adults generally use technology, as a work medium (Aymard 2002) and with participants' limited experience of technology as a play medium. In addition to describing their experiences as requested, participants tended to express many opinions not always directly substantiated by their experiences, which seemed rather to reflect their attitudes concerning the use of technology in therapy with children. For instance, technology was not regarded appropriate even for all clients contending with a similar challenge (for example ADHD), requiring careful consideration of the client's frame of reference regarding technology (for example feelings of familiarity, interest or intimidation) and the goal for using technology:

> "*I think the use of technology in therapy is quite specific to the type of child and their frame of reference."* (7CoP)

> "*I make sure the game I'm using has therapeutic value as it's really not okay for them to come in and sit and play mindlessly on the iPad."* (6ClP)

Alders *et al.* (2011) express related concerns, stating that therapists using technology are obligated to respect child-clients' capabilities and rights and to use technology in an ethical manner.

Table 2 summarises participants' experiences and opinions regarding the types of technology used and the functions for which they used technology.

Table 2: Participants' experiences/opinions of the types and functions of technology

Participant	Experience/Opinion	Hardware	Programs	Functions	Concerns addressed	Age Range
1RC	Experience	Screen/Sensors	Neurofeedback/Biofeedback	Brain training, awareness of changes	ADHD, anxiety,	6 - Adolescence
	Experience	Laptop computer	Space game, car puzzle game	Reward system, building rapport (quickly)	depression	
	Experience	Laptop computer	Readers for Leaders	Assessing		
	Experience	iPhone	Hangman & word games	Building rapport, playfulness/fun		
2RC	Opinion	Talking Monkey		Reciprocity, communication	Trauma	4 - 5
	Opinion	iPad	e-Karan	Meditations		Adolescence
3EdP	Experience	Laptop computer	You-tube clips	Meditations, relaxation,	ADHD, Asperger's,	4 - 8
				social skills, self-esteem	anxiety	
	Opinion	Play Station	Sing Star Game	Rapport, communication	Autism	
4EdP	Experience	Screen/Sensors	Neurofeedback	Brain training for concentration	ADD/ADHD	6 - Adolescence
5ClP	Experience	Screen/Sensors	Neurofeedback/Biofeedback	Brain training, awareness of changes	ADHD	Adolescence
	Experience	iPad	Neurofeedback	Brain training, awareness of changes		Adolescence
	Experience	Pulse-ometer	Biofeedback	Physiological measurement/Hulk analogy	Bi-polar disorder	Little boy
6ClP	Experience	Laptop computer	Google	Strengthening sense of self, building rapport,	Various psychological	9
				mastering tasks, understanding behaviour	disorders, e.g. mood	
	Experience	Laptop computer	E-mail	Contact	disorders & schizophrenia;	Adolescence
	Experience	Cell phone	Whats app/BBM	Extending therapy/comfort	neurological impairments	Adolescence
	Experience	iPad	Angry Birds game	Anger management		5-7 (esp boys)
	Experience	iPad	Minecraft game	Family dynamics		5-7 (esp boys)
7CoP	Experience	Laptop computer	You-tube clips	Social skills, psycho-education, empathy	Aspergers	9 - 13
	Experience	Laptop computer	You-tube clips	Awareness, learning different perspectives	Bullying	9 - 13
	Experience	Cell phone	Music	Emotional expression, building rapport	Unsure	12 - 13
	Experience	Cell phone	Blackberry Messenger (BBM)	Social skills, rapport	Aspergers	Unsure

It appears evident from Table 2 that participants tended to use mediums with which they were familiar in daily use, in therapy with children of all ages. Participants' category of registration did not appear to influence the type of technology used. Three participants (1RC, 4EdP, 5ClP) used mainly Neurofeedback. Only two participants (1RC and 6ClP) used technology as a play medium (6ClP had received training in using technology in therapy). As published (Villani *et al. 2005,* Hourcade, Bullock-Rest and Hansen 2011*),* the participants used technology mainly with clients facing challenges, such as ADHD, Asperger's, autism and anxiety.

Three main themes, with elaborating sub-themes, emerged from the data, describing participants' experiences and opinions about using technology in therapy with children: technology effective as a therapeutic medium with characteristics, technology ineffective as a therapeutic medium and attitudes apparently related to their use of technology in therapy with children.

Theme One: Technology effective as a therapeutic medium

This theme was unpacked to reveal three sub-themes.

Appeal

Participants commented repeatedly on how strongly children are drawn to technology, calling to mind Rosegrant's (2012) observation that, when clients come alive when a medium such as technology is introduced, it may indicate its suitability as a therapeutic medium. Participants recounted how child-clients found technology exciting and interesting, it held their attention and worked well as a reward:

> *"This sullen girl just comes alive, she just twigs on and is able to teach the therapist something."*(1RC)

> *"… so to come to my office and play Angry Birds for almost an hour is fantastic but the therapy is still happening because we are talking. He just wants to get back here."*(6ClP)

Alternatively, participants noted discouraging experiences when refusing to use technology, such as: clients' refusal to continue sessions; clamming up if technology was unavailable or withdrawing:

> "*If I don't let them play with my computer or my phone they sort of…'What are you hiding?!' and they sort of clam up*. *I learnt that lesson the first time I said 'No'. They completely kept quiet."* (1RC)

However, 6ClP said she used this seemingly negative aspect constructively, as a behavioural indicator, that creates awareness of how important technology is to the client and possibly how he/she behaves at home.

Participants declared that child-clients enjoyed assessments more when involving technology and found it gratifying when adults showed an interest in their technological interests. *"Youngsters are driven by technology"* (6ClP), there was indeed a need to *"evolve with these kids"* (3EdP).

Building rapport quickly

Participants observed that using technology built a trusting relationship much more quickly than without technology, confirming Ceranoglu's (2010a) experiences, and therefore less time was spent in therapy overall:

> "*If you get them into that world* (playing games on the computer)*, it cuts the (*therapy*) time completely.*" (1RC)

Hull (2009) remarks how playing video games with child-clients noticeably reduces their <u>apprehension</u> (researcher's emphasis) to therapy itself, yet warns in a personal email (2014) that they can get too immersed in a game not requiring communication, and therefore suggests using 2-player games.

Child-clients see the therapist as a friend, an adult allowing and playing with technology:

> "*I saw how it* (connecting with clients using cell phones) *made a shift in therapy… and increased the element of trust.*" (6ClP)

Alders *et al.* (2011) remarked how cell phones can be used cathartically, as also found by two participants (6ClP and 7CoP) when using WhatsApp Messenger and Blackberry Messenger to connect with adolescent clients, who then disclosed personal information and expressed emotions in the form of chats and music:

> "*…she couldn't explain her feelings…she wanted to show me and wanted me to hear her song, how she connected with that song. So in terms of the therapeutic relationship, that was very beneficial."* (7CoP)

> *"When they were feeling very, very down, they could send a message and explain the feeling. Almost like a dumping ground."* (6ClP)

Achieving therapeutic goals

Specific goals, as outlined by Ceranoglu (2010b), were attained using technology: developing rapport (as presented above), mastering tasks, building confidence, expressing emotions, providing choices and enhancing playfulness:

> "*When they arrive, they feel scared, but they can choose from hundreds of games and are teaching me how to play these games and it builds their confidence*." (1RC)

Allowing child-clients, often more "*computer savvy" (6ClP)* than the participant, to demonstrate something using technology made them feel important and enabled mastering of tasks:

> "*I didn't know anything about this and now that he showed me* (on Google), *he was amazed that I was showing an interest.*" (6ClP)

3EdP created awareness and encouraged empathy by discussing and showing child-clients YouTube clips on bullying and stealing. 7CoP used cell phones successfully to express emotions, encourage and develop social interaction and guide clients in building healthy friendships outside of therapy, corroborating Morris and Aguilera's (2012) research on using cell phones as therapeutic tools. Participants 1RC, 5ClP and 4EdP had had success using Neurofeedback with ADHD clients, reporting improved academics, social skills and ability to focus:

> *"Kids came for Neurofeedback and it made such a difference… the one kid got DUX. She was ADD.*" (4EdP)

Theme 2: Technology ineffective as a therapeutic medium

Similar to the resistant attitudes of psychologists concerning computer-based psychological treatment (CBPT) (Carper, McHugh and Barlow 2011), participants' reservations about using technology in therapy with children varied in intensity. On the most positive side, participants articulated that technology is not equally effective for every client and may even be well received by one, with ADHD for example, but not by another:

> "…*she* (child-client with ADHD) *was not interested at all."* (3EdP)

"…*to play mindlessly on technology is where they* (children with ADHD) *are at. You want to give them an alternative story, another narrative.*" (6ClP)

Doubts in the middle field concerned issues of virtuality/reality. It was argued that playing with technology may actually distract the child-client from the real issues and that technology-based mediums lacked sensory elements and could not be used to actually develop communication skills or encourage reciprocity. This is in contradiction to research on software developed to enhance the social skills of children with Autistic Spectrum Disorder, "emphasising collaboration, coordination, creativity, compromising one's interests with the interests of others, and understanding emotions" (Hourcade *et al*. 2011:1).

If dealing with anger issues, for example, some participants were of the opinion that the child needed to be free to express the emotion in real terms and without fear of an electronic device being damaged. Olson (2010:184) defends the counter-position, arguing soundly that age-appropriate video games with violent content "were often used to vent anger and relieve stress".

Most negatively, participants were even unsure if it was at all ethical to use technology as a play medium, indeed similar to Rubin's (2009) warning that therapists should explore safe and ethical ways to use technology in therapy and in communications with clients. In closing, a sceptical note was sounded:

"*Aren't we just buying into something that the world is selling and wants us to buy into*?" (5ClP)

Theme 3: Participants' characteristics and attitudes regarding the use of technology

The Theory of Reasoned Action, used as the framework to guide data analysis, outlines the link between attitudes and behaviour (Ajzen and Fishbein 1977) and how these influence the adoption of new behaviour (Buti *et al*. 2013). Findings indeed suggest that participants' characteristics and attitudes influenced their experiences in using technology therapeutically.

Age

Participants of all ages tended to agree that older therapists would not use technology, saying they seemed scared to experiment with new mediums:

> "*It's quite forward thinking to use technology and I do see people being afraid and a bit unsure. Especially with older therapists…I don't think they would embrace it at all.*" (7CoP)

> "*He has his methodology and he is comfortable using it.*" (3EdP)

> "*Technology is for you young people*." (4EdP)

In this vein, Rosegrant (2012:231) states categorically, "It's not that technology is new, it's that psychoanalysts are old." However, participants who had qualified more recently, although being older, were more likely to use technology than younger participants who had been practicing for many years already:

> *"I actually find it* (technology) *quite exciting."* (6ClP, 56 years)

Theoretical orientation

Strong opinions emerged that therapists' theoretical orientation would impact their adoption of technology. Three participants suggested that psychodynamic psychologists would not use technology as it was not in line with their approach:

> *"Psychodynamic psychologists would just not use it (*technology*). It is very intrusive."* (6ClP)

Participant 5ClP, psychodynamic in approach, fairly young (36) and male (according to literature, more likely to use technology than females), was against using technology other than Neurofeedback and Biofeedback:

> *"You come to therapy and it's about talking. There is an obsession to be on this technology…technology takes away the real connection."* (5ClP)

Experimental attitude

Participants who are experimental by nature seemed more inclined to use technology in therapy, but training seemed to compensate sufficiently for such lack:

> "*It really helps to have kids…, so you know what games work…I am really just experimental and it just happens by using it (*technology*) and trying it."* (3EdP)

> "*… just Googling…I just need to find things that would work. I haven't had any training."* (3EdP)

> "*I could see* (after training in the use of technology) *that there was definite merit in it*." (6ClP)

Whereas the research literature has not been found to suggest an experimental attitude in professionals using technology for therapeutic purposes, Participant 6ClP's conviction finds explanation in Carper *et al*.'s (2011) view that for CBPT to be adopted into therapy, therapists need to observe it being used or see its efficacy for themselves.

Attitudes regarding the use of technology

There was a strong perception that other therapists were not using technology in sessions with children, but this did not deter participants from continuing their own use of technology, thus questioning Ceranoglu's (2010b) concerns that others' perceptions could dissuade therapists from using technology:

> *"I mean I do (*use technology*), but many other therapists can't stand it."* (6ClP)

> *"…taking a guess, I would say no (*about other therapists using technology*), but I can't do that." (3EdP)*

Participants were mindful of the attitudes of other adults such as parents towards technology, but

"… *it (*using technology*) must have therapeutic value… parents are paying over R500.00 for a session*." (6ClP)

Overall, parental attitudes were however perceived to be positive:

"*They (*Power Point and YouTube clips in parenting feedback sessions*) really worked quite well and I found that very useful. They (*parents*) identify with it and relate to it*." 7CoP

The obverse was however also found. Participant 5ClP's positive perception of parents' attitudes *("parents would welcome anything that works")* was not enough to encourage him to use technology in therapy*:*

"The relationship with the therapist is a real connection rather than trying to win over the patient with technology." (5ClP)

Discussion

Exploring therapists' experiences of using technology therapeutically resulted in a small sample of only seven participants, out of 68 therapists approached. Confusion in what was perceived as "using technology in therapy" may have contributed to an inflated negative response by potential participants. Perhaps this confusion about the therapeutic use of technology has also contributed to the lack of publications about therapists' experiences, as noted by Ceranoglu (2010a). Or is it truly as it appears to be, that technology is not readily being used as a therapeutic medium? Be that as it may, the findings of this study cannot be generalised due to the small, although fairly homogenous, sample, and the deeply rooted contextual considerations of qualitative, multiple case study research.

Although the findings overall revealed few experiences of technology as a *play medium* and it was perceived that psychodynamic psychologists would not use technology, participants' experimental nature appeared to trump age and theoretical orientation in encouraging the cautious, experimental use of technology, as a *therapeutic* medium with children. Technology was declared to engage children in therapy, enhance the therapeutic relationship and facilitate emotional expression, thus confirming important points in Ceranoglu's (2010a)

review of the use of technology in therapy. Despite awareness of the need to keep up with children's interests in technology, participants exercised caution, being mindful of using technology therapeutically. Some worried about it "just being play" while others perceived it to be more suitable as a play medium with younger children and favoured talk therapy over technology with adolescents. Research however contradicts this opinion, strongly supporting the use of technology with adolescents (Hull, 2009, Rosegrant 2012).

From participants' experiences and the literature, it appears that technology appeals to child-clients (Olson 2010), develops rapport more quickly than traditional toys (Ceranoglu 2010a) and achieves certain therapeutic goals (Aymard 2002), most importantly, change. As Oaklander (2006) emphasises, trust and the therapeutic relationship are fundamentals when working with children, if change is to occur. In light of the usefulness of technology, Newman (2004) and Granic *et al*. (2014) question the resistance to include technology in therapy. A similar resistant stance was taken in this study where participants doubted the therapeutic and ethical use of technology, comparable to findings described by Alders *et al*. (2011). Concerns suggested that using technology was a deviant goal, interfering with the therapeutic process, as also cautioned by Ceranoglu (2010b), and replacing the therapist's role in the trusting relationship. Participants, however, aptly described technology as an "*adjunct tool*" to be used, *with other play mediums* and not to replace toys, therapeutic practices or therapists, as also concluded by Granic *et al.* (2014). As the debate continues, the decision to use or exclude technology from therapy weighs heavily, not only on therapists' attitudes towards technology but also on whether or not technology is in line with *the therapists' values* (Carper *et al.* 2011), a concept that seems to have been largely neglected in this study. Experiences denoted actions, thoughts, emotions and opinions but values, regrettably not explored in this study, may also influence the intention to use technology.

The Theory of Reasoned Action (Ajzen and Fishbein 1977) was utilised to contemplate the link between attitudes and the adoption of a new behaviour, here the use of technology as a therapeutic medium. Negative attitudes regarding the use of technology such as: "*I'm too old … I'm too psychodynamic*

… I am not very comfortable using technology … what would parents say if they knew their child was using technology in therapy?" were enough to dissuade some participants about using technology as a therapeutic medium and may well have been one reason why so many therapists, approached to participate in the study, declined, stating that they did not use technology in therapy. Participants' positive attitudes and perceived social norms such as: "*Children are driven, excited by and familiar with technology … it's their world … there's a need to evolve with them*", seemed to influence their intentions of using technology, especially when the participants were experimental by nature or had received training in using technology therapeutically. Carper *et al.'s* (2011:93) suggestion that *"*observability" could translate into technology being adopted as a therapeutic medium is perhaps reflected in the influence of training on the attitude towards using technology in therapy, as suggested in this study.

Instead of the closed question, whether technology should be included or excluded from the therapeutic environment, Rosegrant (2012:230) suggests asking what technology means to the child-client, and how it can be used to allow emotional expression, and concludes: "Refusing technologically altered realities in therapy, positions us in power struggles about what the therapy can be."

Conclusion

The inclusion criteria for participants in the study resulted in a small sample, admittedly not representing the South African therapist population, but nevertheless balanced in terms of spanning four professional categories representing a younger and older generation of professionals. Being a qualitative and descriptive study based on data in various forms, the findings cannot be generalised, although thick descriptions of experiences and attitudes were obtained. Exploring therapists' experiences within their own work environments and using open-ended questions allowed honest, thought provoking descriptions to emerge. Experiences highlighted the therapeutic applications of technology and suggested that an experimental nature and training in the therapeutic use of technology can overcome apprehension or

resistance. The ethical regulations of using technology need to be addressed, at a national level, to ensure technology is incorporated into therapy in a safe, ethical manner. The findings could guide therapists in their decision to use or exclude technology. Interest in using technology therapeutically exists, but in-depth experiences of using technology in South Africa, as a therapeutic medium are lacking. Aymard (2002) suggested, 12 years ago, that present day therapists need to acknowledge this new digital language being spoken by their child-clients and concluded: “Those who value the role of technology in counselling children are a new breed of therapists.”

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SECTION C: CRITICAL REFLECTION

1. Introduction

Section C provides an overview and critical evaluation of the study, as presented in Section A and B. A summary of the research problem and an evaluation of the research methodology describe how the aim of the study was reached. Additional findings, excluded from Section B due to focus and space restrictions, are discussed and answers are considered regarding the applicability of the Theory of Reasoned Action (TRA) as the theoretical framework for this study. The overview culminates in discussing the strengths and limitations, relevance of the study and suggestions for further research.

1.1 Research problem and aim of the study

Children are increasingly incorporating technology into their play. Therapists working with children in this digital age, need to consider the change in the way children are playing and ensure that the mediums used in therapy are those with which children are familiar. The conventional array of toys (Appendix E) available to children in the therapeutic playroom is in line with traditional toys, but do not seem to take technological advances into consideration. Research has shown that technology has been used in therapy for the past 20 years, but therapists appear to continue to resist adopting technology into their therapy rooms as an available therapeutic medium. The aim of this study was to qualitatively explore and describe therapists' experiences in adopting technology as a therapeutic medium with children.

1.2 Evaluation of research methodology

Qualitative descriptive research was used to gain insight into therapists' experiences of using technology in therapy. A multiple case study design enabled the researcher to extract the meaning that seven participants attached to the phenomenon of using technology with children in therapy.

Participants were selected, initially using non-probability sampling. Due to many nil responses to the researcher's invitation to therapists to participate in the study, snowball sampling was however used to access other willing therapists

that fit the inclusion criteria. The criterion about therapists having used technology before had perhaps resulted in some confusion. One of the participants (7ClP) who agreed to an interview after receiving a second request, had for instance thought she would not be very helpful, stating that she did not use technology much. She however turned out to be the participant who was using technology the most. The sample comprised two male and five female therapists, ranging in age from 26-64, from four different professional categories (registered counsellors, educational psychologists, clinical psychologists and a counselling psychologist). Although the sample does not adequately represent the South African therapist population, it is fairly representative in spanning a range of ages and professional categories. The ratio of male to female participants is indicative of the male to female therapist population.

It was possible to generate detailed descriptions from collecting data in various forms. With the consent of the participants, a small, inconspicuous, Go-Pro camera was used to record the audio during data collection. Semi-structured interviews, using open-ended questions and a conversational manner, allowed participants to honestly discuss their use of technology. Visual data were collected from participants demonstrating their use of technology. Not all participants were however able to demonstrate their use of technology due to not having their hardware available or difficulties occurring with Wi-Fi. When this occurred, descriptions of the types of technology and the programs used were described, but the inability of some participants to demonstrate their use of technology was in itself relevant information. Reflective field notes, including observations, were written after each interview, to add to the trustworthiness of the data collected by collating what had been observed to what the participants had said regarding their experiences of using technology.

Once interviews were transcribed verbatim, data were coded in an inductive manner using concept mapping. The transcripts were read many times to thoroughly explore the data and themes and categories were identified using thematic analysis. The researcher used the Theory of Reasoned Action (TRA) to guide the data analysis process, assisting in selecting themes and categories

(looking for perceptions, social norms and attitudes) and to make sense of the findings as described below.

Although the findings from the study cannot be generalised, due to the small sample size, collecting data from various data sources and in various ways, has added to the trustworthiness of the data collected. Qualitative research, using a multiple case study design, was effective in exploring *subjective* and *intersubjective* realities (references to participants' experiences and perceptions as well as to their interaction with their clients) regarding therapists' use of technology as a therapeutic medium. The multiple case study design successfully sought answers to the "what" and "why" questions of participants' experiences of technology as a therapeutic medium. It further allowed the researcher to compare the various meanings attached to a practice (here, the use of technology with children) described by the various participants and how these meanings might translate into encouraging or discouraging that practice.

The semi-structured interview was a successful data collection method. Interviews were relaxed, encouraged rapport between the researcher and participant and permitted participants to share their experiences, attitudes and perceptions without rigidity or fear of judgement by a fellow therapist. During the interviews, the researcher observed objectivity and bracketed her own perceptions and opinions about using technology as a therapeutic medium to uncover trustworthy knowledge.

Using demonstrations of participants' use of technology to collect visual data did not prove to be wholly effective, as mentioned above. The consent form indicated that participants would be required to demonstrate their use of technology during the interview, but the researcher should have adequately prepared each participant by reiterating this requirement when arranging each interview. The added pressure of time limits during the interviews precluded some participants from demonstrating seemingly obvious practices, such as the use of YouTube and Google.

Ensuring the research process was valid and trustworthy was focused on by observing the criteria of credibility, transferability, dependability and

confirmability. Accurately representing the participants' views of their use of technology, by recording and transcribing the interviews verbatim, produced credible data. Data were collected in three forms, interviews, observations and demonstrations, and when participants were unable to demonstrate their use of technology, descriptions and explanations were sought. The small sample prohibits the findings from being generalised. However, the data could be compared as data in various forms were collected from participants representing varying disciplines and therapeutic perspectives, thereby making it possible to cautiously apply the findings to comparable situations. The researcher kept a careful paper trail in the form of emails, records of all communication and reflective field notes, documenting the research process and ensuring the dependability of the study. Lastly, the researcher ensured that the participants were able to portray their honest experiences of their use of technology by respecting the participants' views and creating a relaxed non-judgemental interviewing environment. Authenticity was further strengthened by following ethical guidelines as outlined in Section A, Part I.

2. Additional findings

The findings presented in article format in Section B highlighted the following main themes: technology effective as a therapeutic medium, technology ineffective as a therapeutic medium and participants' characteristics and attitudes regarding the use of technology. The discussion revealed that therapists' attitudes and characteristics, namely their experimental nature and their theoretical orientation, as well as having received training or not in using technology therapeutically, impacted their intentions to use or reject technology as a therapeutic medium.

Due to the space restrictions of the journal selected, findings regarding parental involvement and the safe use of technology, both important considerations in the therapeutic process, were not presented but certainly warrant noting.

2.1 Parental involvement

When working with children, therapists work closely with children's parents (also grand-parents and/or care-givers) and therefore the involvement of the adults in a child-client's environment needs to be considered. It was pointed out that, for therapy with child-clients, parents had to give consent and pay for the sessions, so their "*buy-in*" (5ClP) was important. If parents were not happy with technology being used in therapy, they had the power to discontinue the sessions. Carper *et al*. (2011:93) likewise caution that therapists should explore perceptions of child-clients and child-clients' parents concerning the use of technology in therapy, before using it as a medium in therapy.

Even if technology was not used during therapy, therapists working with children required knowledge about the technology with which children played, to understand children's use of technology at home and to assist parents in monitoring its use:

> "*I mean, how do I get to have narratives with them if I don't know about technology? I need to understand where children are at."* (6ClP)

This view is in agreement with Ceranoglu (2010:236), who cautions that child-clients' use of technology needs to be explored during the intake session with parents, "in both quantity (duration, frequency, etc.) and quality (content, online versus offline, and social aspects)" (author's parentheses).

Participant 1RC recalled a six year old child who was brought for counselling for anger management and 4EdP expressed that parents seemed ignorant about which games were appropriate according to their child's development:

> "*The parents complain about anger and say they need anger management but they are playing all these age restricted games. I suggested they stop the games as he seemed to act out what he was seeing*." (1RC)

> "*They* (parents) *give their kids the wrong games to play that are not right for their age. Parents don't know about child development and what is age appropriate*." (4EdP)

Participants' concerns affirm Plowman and McPake's (2013:27-31) comment that parents should provide children with a balance in available play mediums (including technology) and monitor the time spent with each medium. Parents are making technology available to children at home and children are surrounded by technology.

5ClP, who did not favour the use of technology in therapy with children, suggested:

> "*When working with kids, it* (therapy) *can be just as beneficial when working with the parents. You can help them to be better parents and help them to change things at home."* (5ClP)

7CoP expressed the success she had had with using technology with parents for psycho-education and feedback, as she was comfortable using it in this way and she was mindful of how it would be received:

> "*Referring parents to a website is quite useful in terms of parenting, like psycho-education. They can identify with that kind of technology, rather than giving them a hand-out… By showing parents YouTube clips of parents and children miscommunicating provides parents with insight into interactions with their own children and how they are being manipulated. Parents start to laugh as they identify with it and the situation is discussed and processed… I find it very useful with divorced parents as I communicate to both parents as a preferred method of communication and we all agree to 'reply all'*." (7CoP)

With increases in the availability of technology at home, parents may become increasingly open to therapy that uses alternate mediums, like technology. Whether technology is used *within* therapy or as a tool for communication, therapists working with children need to be knowledgeable about technology, to be able to inform and educate parents and child-clients about technological use (Ceranoglu, 2010:234).

2.2 Using technology ethically and safely

Concerns were voiced by participants about the lack of therapeutic and ethical guidelines to help therapists who want to use technology, safely, in therapy:

> "*But for me, it* (using technology in therapy) *would also be about it being ethical, and then the appropriateness and therapeutic value."* (7CoP)

> "*I would tell them to be careful as using a cell phone is not confidential. Someone else could read them. So this sometimes stopped them from sending messages."* (6ClP)

Alders *et al*. (2011:169) suggest that therapists using technology need to address ethical concerns and ensure clients' rights are respected. However, in this study, not all participants seemed concerned about the use of technology being ethical. Yet with a lack of ethical guidelines, therapists are left to make their own decisions about what they think is ethical. Weiss *et al*. (2011:327) show concern, declaring that the ethical use of technology in therapy needs to be regulated and not left to the whims or opinions of what individual therapists think is ethical. The HPCSA does not have guidelines for therapists in South Africa, but therapists wanting to use technology in therapy can refer to the British, Australian and American psychological associations, accessible on the World Wide Web, rather than relying on their own opinions. Various websites guiding adults in monitoring children's use of technology may be useful for therapists wanting to find out more about age appropriate games and applications and safe internet use, such as:

www.esrb.org (The Entertainment Software Rating Board - ESRB)

www.gamespot.com (video game reviews)

www.cybercrime.org (internet safety)

www.safesurf.com (internet safety)

www.commonsensemedia.org (movie ratings)

www.mediafamily.org (television programme ratings)

www.whattheyplay.com (game ratings)

www.getnetwise.org (internet safety, media ratings)

3. Overview of the theoretical framework

3.1 Theory of Reasoned Action

TRA outlines the link between attitudes and behaviour (Ajzen & Fishbein, 1977:888) and how attitudes and perceived social norms concerning a certain behaviour are in turn linked to the intention and finally the adoption of new behaviour (Buti *et al.*, 2013:434; Montano & Kasprzyk, 2008:70). Theorists such as Montano and Kasprzyk (2008:70, 80) suggest that attitudes and perceived social norms concerning a certain behaviour are directly linked to the intention of performing that behaviour. The intention to adopt new behaviour in turn impacts whether the behaviour is introduced (Buti *et al.,* 2013:434). The answers to the questions stated in Section A, are contemplated below, to make sense of the findings in light of TRA and to understand the link between attitudes, perceptions and behaviour.

3.2 How important is it for therapists to include technology in sessions as a therapeutic medium?

It did not seem important for participants to have had technology available for all children, with an attitude that other mediums were already attaining the therapeutic goals. From the fact that not all participants were able to demonstrate their use of technology as it was not accessible, it may safely be inferred that they do not always have technology at their therapy rooms. However, participants recalled various experiences that encouraged their use of technology and highlighted the importance of using technology therapeutically with certain child-clients, especially those with a technological frame-of-reference. Some participants expressed the thought that the *therapist* was more important than technology and that it was their role to make contact with their clients. However, those participants with actual experiences of using technology felt that the therapist's role was to guide, support and enhance the experience of

incorporating something of relevance, such as technology, to the child. If participants valued technology as a therapeutic medium, they were more likely to include it in their therapy rooms.

3.3 How will technology impact on the outcome of therapy with children?

Experiences describing the successful outcome of using technology positively impacted the intentions to continue using technology with children. Participant 6ClP for instance spoke about ‘amazing’ cognitive training apps (not Neurofeedback), that improve academic performance and alleviate difficulties such as sleeplessness. Using YouTube clips on issues such as bullying or stealing, where child-clients saw another's perspective and were guided towards empathetic responses was also found to be beneficial. Such sensations and images were said to last in the minds of child-clients and children were seen to apply them in real life. When participants were able to see that using technology attained therapeutic outcomes, they continued to use technology with child-clients.

3.4 How are therapists’ subjective norms influenced by how other therapists view the use of technology as a therapeutic medium?

Participants’ subjective norms did not seem to be have been influenced by other therapists’ views but they were mindful about what parents thought. Although every participant wanted to know whether other therapists were using technology (indicating that they were not sure), this did not appear to have influenced their own decisions to use or reject technology. The general perception was however that, besides using Neurofeedback, other therapists were not using technology and participants young and old tended to agree that neither older therapists nor psychodynamic therapists would use technology. This perceived social norm did not deter older therapists from using technology, but they were mindful of what parents generally thought about technology and were cautious with whom it was used. They were not sure what parents would think or say if they knew their children were exposed to even more time with technology, when a negative perception already existed regarding the use of

technology in children's lives. On the flip side, one participant suggested that parents would welcome anything that worked, as long as it had therapeutic value and positive outcomes.

3.5 How do therapists' experiences, perceptions and attitudes influence their intentions to use technology as a therapeutic medium?

3.5.1 Experiences

Participants' experiences guided them in knowing when and when not to use technology. It was emphasised that the use of technology needed to be client specific, just like other play mediums in the therapy room. Participants agreed that just because some children with Attention Deficit Hyperactivity Disorder (ADHD) related to technology, it did not mean they all did. A participant (3EdP) had tried to use a YouTube clip with a client who had ADHD but there had been no interest at all. Refusing to allow child clients to use technology when it was visible impacted negatively on sessions. One participant said, "*I have to let them use technology otherwise they will shut down if I don't*" (1RC). Another participant (6ClP) who had had a similar experience said she used this as a talking point, making the client aware of the importance of technology in his life. Experiences were recounted regarding the hardware itself, where technology was found to be unreliable or there were difficulties in accessing the internet. These apparently negative experiences did not seem to have deterred participants from their intention to use technology. It encouraged them to use it carefully, plan and creatively explore how important technology is to their child-clients.

3.5.2 Perceptions

Technology was perceived as a problem in real life. Negative perceptions about how technology is affecting society in general, were found to dissuade certain participants from planning to use technology in therapy. This is in line with literature (Ceranoglu, 2010:233) on how negative publicity regarding the connection between violent video games and problematic behaviour impacts perceptions and in turn negatively influences the intention to adopt technology in

therapy. Technology was linked by some participants to anger problems, where children, playing age restricted games, were thought to act out what they played or saw. Participant 5ClP thought that using technology, like cell phones, encouraged fickle relationships and technology became an obsession. 3EdP, grounding her perception in the negative publicity of children's use of technology, recalled a story of children in Hong Kong committing suicide due to their obsession with technology, but this was not enough to stop her plans to use technology in therapy. Participants however voiced concern about the opportunity cost of time with technology, perceiving that using technology robbed children of outside time and therapy using technology would add to the amount of hours spent using technology.

3.5.3 Attitudes

The attitude of doubt in the role and value of technology in therapy seemed to deter participants in their intention to use technology. Participants 4EdP and 5ClP were of the opinion that talk therapy would be more effective in helping clients than *"staring at a screen".* Some participants would not use technology with younger children or for children with ADHD and there was a general opinion that the client's frame of reference needed to be considered. The therapeutic value of including technology was met with some scepticism and participants were unsure if it was even ethical to include technology as a play medium. Although 'other therapists' were perceived to have used online assessments, participants 3EdP & 7CoP doubted the reliability and validity of on-line assessments. Participant 7CoP felt that training could reduce this doubting attitude and positively influence the intention to use technology in therapy.

3.6 Why use technology instead of another medium in the therapeutic environment?

Attitudes varied as to whether participants should rather use technology over other tools in therapy. Reasons expressing why participants rejected technology over other mediums are discussed, followed by reasons why participants chose to use technology. Participant 5ClP, psychodynamically oriented, was strongly

against the use of technology as a therapeutic medium, especially with adolescents. He insisted that therapy was about talking and it was the therapist's "*job*" to make the connection. Teens, and boys specifically, liked technology and could talk about technology but they did not have to bring technology into therapy to connect or be understood. He argued that talk was change and technology might just distract the client from the real issue, with the client just wanting to play games. Participant 7CoP felt that technology might be intimidating if the client was not used to using technology, as opposed to 1RC who noticed that child-clients were less anxious and more confident when they were allowed to use his iPhone or iPad as, even if they had never used it before, they "*just figured it out*". Participant 6ClP found technology to be exciting, engaging clients in therapy and speaking their language and thought it could be used to explore anything. She explained how one could Google absolutely anything or go onto websites, allowing the therapist into the child's world. 6ClP had had success using cell phones and iPads as therapeutic mediums and felt that therapists had to evolve with children in this day and age. 3EdP explained how she used relaxation exercises and YouTube clips saved as favourites, on her laptop. They were easily accessible, could cater for any age and the children were drawn to technology. Literature emphasises that it is not about an either/or mentality, but that technology is just another medium, among others, available for child-clients to use therapeutically. Participant 6ClP, who received training in using technology as a therapeutic medium, used technology most often and as a therapeutic play medium. This suggests that training, highlighting how technology can effectively attain therapeutic goals with children, strongly influences the use of technology in therapy.

3.7 How do intentions translate into the behaviour of using technology as a therapeutic medium?

Participants who had a positive attitude towards the use of technology and were experimental in nature were more confident in using technology in therapy, thus translating the intention into the adoption of technology as a therapeutic

medium. It seemed to come naturally to them to try using technology and they were actually not even aware of the extent to which they were using technology:

> "*I thought I didn't use tech but actually I do, there is an element of technology everywhere*." (7CoP)

Training in the use of technology was described by 6ClP as one of the reasons why she tried technology in therapy. Workshops with practical tips and suggestions of which programs to use in therapy appeared instrumental in encouraging participants to use technology as a therapeutic medium. Participants were also more likely to use technology in therapy after using it or seeing it being used with their own children or grandchildren. Participant 3EdP said that the internet was so amazing that one could search for age appropriate YouTube clips and just try them with clients and see if they worked. There was a strong perception, however, that technology would not be used for clinical situations or by therapists who were psychodynamically oriented. Participant 5ClP's (psychodynamically oriented) attitude was that technology would interfere with the therapeutic process in a clinical situation and it was not suitable for therapy. Participant 6ClP, who had previously operated within the psychodynamic frame, confirmed this perception when she stated that "…*it* (technology) *is very intrusive for psychodynamic psychologists*." This is not confirmed in all literature, with some psychodynamic psychologists readily using video games in therapy (Hull, 2009; Langlois, personal emails, 2014).

3.8 Conclusion about TRA as the theoretical framework for the study

In answering the questions above, it is evident that TRA effectively guided the data analysis process, encouraging the researcher to explore social norms, attitudes and perceptions as facets that colour the experiences of therapists using technology as a therapeutic medium with children. Experiences highlighted the therapeutic applications of technology and suggest that an experimental nature and training in the therapeutic use of technology can overcome apprehension or resistance. A negative perception of technology

seemed to dissuade some participants from intending to use technology in therapy.

4. Reflection on the study

4.1 Strengths

Exploring therapists' experiences within their own work environments and using open-ended questions allowed honest, thought provoking descriptions and views to emerge. While the findings cannot be generalised as the sample did not represent the South African therapist population, the sample did represent both young and old therapists from four professional psychological categories. Through rigorous data analysis, thick descriptions of experiences and attitudes were distilled from the data and these highlighted what encouraged and discouraged participants from using technology. Limited research is available in South Africa regarding the use of technology in therapy. Truby (2011:85-87) presented findings on the types of technology used in therapy, but her findings were based mainly on perceptions and attitudes. This study aimed to contribute to filling the gap in literature in South Africa and in the need for research in the therapeutic use of this pervasive medium, technology.

The study explored and described experiences, attitudes and perceptions of using technology in therapy. Using TRA as a theoretical framework enabled the researcher to understand how attitudes and perceptions can influence intentions and encourage or discourage the use of technology in therapy. Carper *et al*. (2011:94) suggest that using theories of adoption of behaviour can be helpful in understanding which population is more likely to adopt a new behaviour, as was indeed found in this study.

4.2 Limitations

The inclusion criterion of therapists currently using or having used technology in therapy, suspectedly precluded several potential participants from contributing to the study and resulted in a small sample. Within this small sample, as the interviews went on, participants however realised that they used technology more than they had originally thought. Another shortfall was that the amount of time available for the researcher to fully explore the therapists' use of technology

as a therapeutic medium was limited to a once-off interview. The participants' values concerning the use of technology in therapy with children were not explored. Since Carper *et al.* (2011:92) suggest that values are an important concept to explore when researching the adoption of new behaviours, this was unfortunate and should be pursued in further research. Member-checking and a follow up interview may also have contributed further to the trustworthiness of the data collected.

4.3 Relevance of the findings

Contrary to the general perception of participants, that psychologists are not using technology in therapy in South Africa, the findings indicate that technology *is* being used in therapy, albeit cautiously. It seems that the antiquated view of technology as a work medium will only change if therapists are experimental or receive training in the use of technology as a therapeutic medium. This study confirms the findings in literature that technology is appealing, engages child-clients in therapy, and allows child-clients to explore technology as a play medium. Oaklander (2006:31) emphasises playfulness as an important part of the therapeutic process, used to strengthen the child's sense of self. Playfulness encourages adolescents to regress to a child-like state and deal with unfinished business. Play in itself is cathartic. (Rosegrant, 2011:236-237). Therapists wanting to use mediums with which children are familiar, can use technology to make contact, encourage emotional expression, communication and playfulness. Most importantly, therapists can use technology to build a therapeutic relationship more quickly than with traditional toys.

4.4 Researcher's personal experience

It was necessary for the researcher to keep a strong hold on her assumptions as she actually started the research doubting the use of technology, never having used technology as a therapeutic medium, and favoured the idea that children need to play with real toys. The researcher struggled to find any therapists that would participate in the study and started to doubt the topic altogether. Hull (personal email, 2014) confirmed the researcher's frustrations in researching the use of technology in therapy. His research was based on using video games in

therapy with six adolescent boys but it took him ten years to persuade organisations to back his research. This negative perception of the use of technology has been evident since technology was first incorporated in therapy in the 1980's (Newman, 2004:142). The negative perception seems to dissuade therapists from taking part in research about technology and makes researching the use of technology in therapy quite difficult.

The researcher made contact with psychologists overseas to add to the literature on the use of technology. They were very encouraging and shared their current and past experiences of their own uses of technology in therapy. One such psychologist, Mike Langlois, who writes blogs about the use of technology in therapy, introduced the researcher to many applications used by psychologists for research and therapy (see Figure 2). One of the programs was Mendeley Desktop, a free download, which kept track of all the electronic documents used in this study.

Figure 2: Twenty-Three Apps for the 21st Century Therapist.

After communications with psychologists overseas, browsing YouTube clips and interviewing the participants about the use of technology, the researcher has started using technology with her own child-clients in therapy. As is voiced by participants, if one has not received training, the use of technology seems to be in-line with how one would use it as a work medium, as did the researcher when

starting to incorporate technology in therapy. As the researcher became more confident and realised how excited child-clients were to show her how they can operate technology, she became more experimental, being guided by child-clients. The researcher has used her laptop to generate ‘My life’ books with clients, using Pinterest to build up mood boards, strengthening their sense of self. The researcher’s niece, her own children, child-clients and YouTube have taught her how to use various apps, to improve communication skills, design caricatures (see Figure 3) and for meditations on an iPad.

Figure 3: Caricature of the researcher.

Cell phones have been used in sessions with child-clients to express emotions using music they want to share and to explore relationships issues using examples of chats on WhatsApp or BBM. The researcher has allowed child-clients to show her their favourite music videos on YouTube and share family pictures off their flash drives using PowerPoint presentations. The researcher is yet to use technology as a play medium but after contacting psychologists overseas who are using technology as a play medium and have shared their success stories with the researcher, she intends to start using technology as a play medium. This supports what was found in the study about an experimental nature, positive perception and positive attitude translating an intention into the behaviour of using technology. It seems however, that formal training is not necessary to be able to use technology in therapy, in a safe, ethical manner.

5. Recommendations for research

Further research regarding parents' and child-clients' perspectives of using technology in therapy would perhaps provide therapists with valuable knowledge and reduce speculative perceptions. Research, similar to the study described by Ray *et al.* (2013:50-51) on rating play mediums (Appendix E), could investigate technology as one of the items being rated. Findings could guide therapists, questioning the therapeutic value of technology in their decision to include technology in or exclude technology from therapy. Research regarding therapists' values, perceptions and the impact of training in using technology as a therapeutic medium could guide stakeholders in their development of training programs and necessary ethical guidelines.

6. Conclusion

Qualitative research was successful in exploring in-depth descriptions and gaining insight into experiences of therapists using technology with child-clients. Technology as a therapeutic medium is just that: a medium, to be used with child-clients, in the therapeutic environment. Findings in this study highlighted how an experimental attitude and access to training appeared to encourage the use of technology in therapy. If therapists are confident enough to experiment with technology, it can possibly be used as a therapeutic medium effectively by abiding by ethical guidelines such as those outlined by the Association for Play Therapy (2009:20), or therapists could use guidelines as for any medium used in therapy. The use of technology needs to be aligned with the therapists' values (Carper *et al*., 2011:92). If technology is not something that a therapist would naturally include, the therapist's awkwardness will be felt by the child-client during therapy (Aymard, 2002:27). The most important aspect in therapy is the therapeutic relationship (Oaklander, 2006:20). Change will occur if the therapeutic relationship is developed, engaging the child-client in therapy, using age appropriate mediums with which the child is familiar (Geldard & Geldard, 2006:5, 9). The value of the medium used lies in the "child's affinity" for that medium and the therapist's ability to us it creatively (Aymard, 2002:25).

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Appendix A: Interview schedule

Interview Schedule – Therapists' experiences of using technology as a therapeutic medium

Research question: What are therapists' experiences regarding adopting technology as a therapeutic medium with children. 1. I would like to understand your usual experience of using technology, in sessions, with children. - Can you tell me about a good experience that you have had using technology - What is your aim in using technology in sessions? - What is the usual outcome or result? - Could you perhaps show me an example of how you would use technology in sessions? - How do you integrate technology as part of the therapeutic	**Aim**: to explore and describe the good and bad experiences of adopting technology as a therapeutic medium, with children.	**Definition**: technology as a therapeutic medium means using technology as a toy or as a means to allow expression, communication or experimentation in sessions, the same way you would use paints, play dough, blocks.

process?		
Can you describe a bad experience you have had when using technology in sessions? - What went wrong? - How did you deal with it?		
(If not currently using technology), explain how you think technology could be used, in sessions with children? - What made you stop using technology in sessions with children?		
What do you think other therapists' attitudes or beliefs are towards using technology as a therapeutic medium? - Can you describe how you think/know they are using technology in sessions with children?		

Appendix B: Example of comments clarifying codes
7_M code was changed to 6ClP

Interview Schedule – Therapists' experiences of using technology as a therapeutic medium.

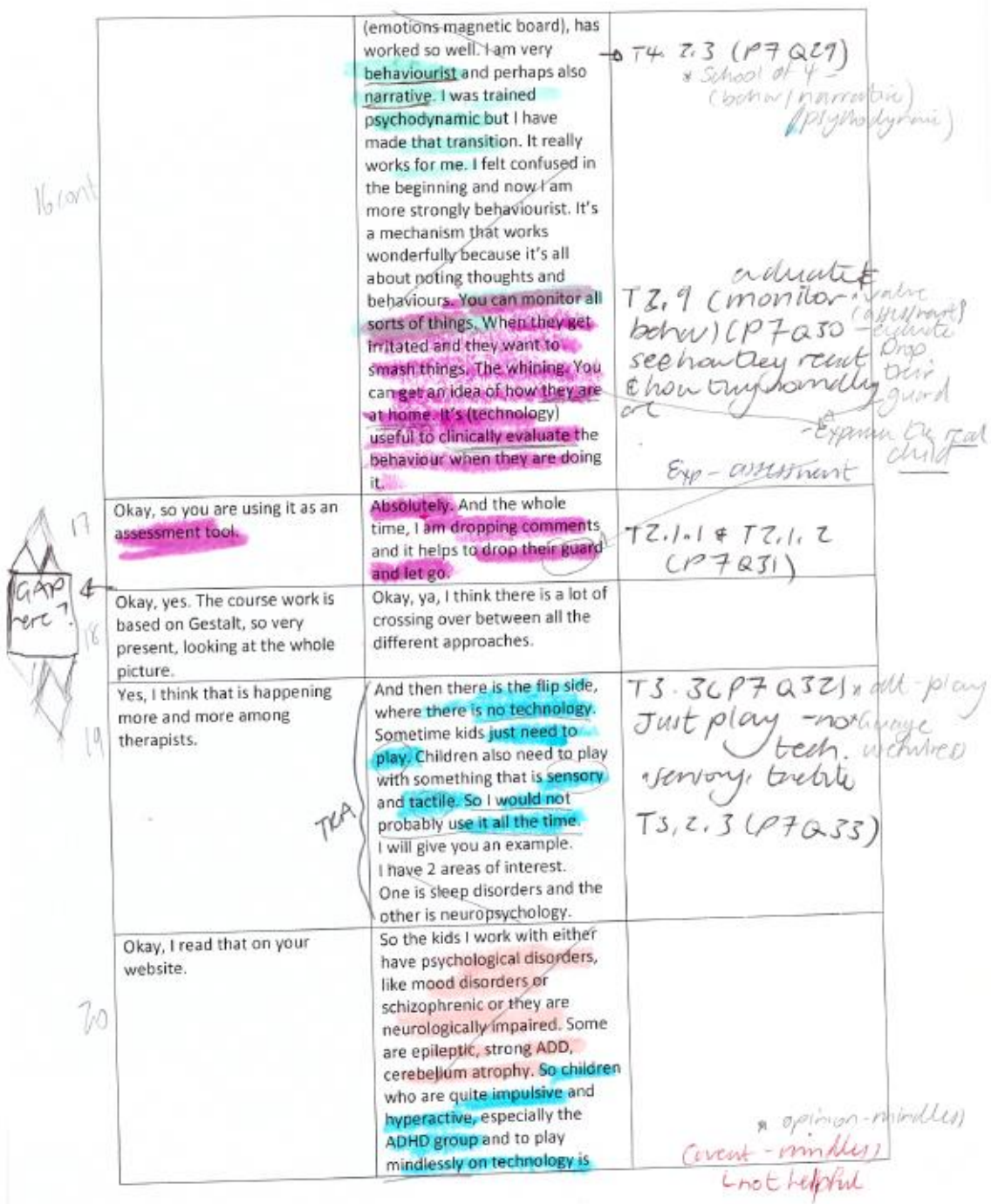
Interview 7_M

Research question: What are therapists' experiences regarding adopting technology as a therapeutic medium with children.	**Aim**: to explore and describe the good and bad experiences of adopting technology as a therapeutic medium, with children.	**Definition**: technology as a therapeutic medium means using technology as a toy or as a means to allow expression, communication or experimentation in sessions, the same way you would use paints, play dough, blocks.
Researcher	**Participant**	**Comments**
Hi, thanks for meeting with me. Is it okay for me to record the session with this Go-Pro?	What is the Go-Pro? Are you going to video me?	
No, it has video recording capabilities but I will face it away from you.	Oh that's so clever. My son-in-law uses something like that when he goes sky diving and he shows us all these crazy movies. Sorry, you might hear some munching.	
No, that's fine, thanks so much for your time, I know that is precious	It just had to be a lunch break.	
It's great. So the research that I am doing focuses on therapists' experiences using technology in sessions with children. So in the interview I just want to get your experiences of using technology in sessions.	Okay, very interesting. I remember from the email. That is why I hesitated to participate as I don't use it much but I have had some experiences. But I decided to participate when I saw it come around the second time. And this is for?	
It's for my research masters through NWU. It was supposed to be a play therapy masters but they have registered it at NWU as a research masters. So not exactly what I registered for but the course work has been worthwhile.	I was a student when the universities merged, so it was also experimental.	
The only problem is that I won't be registered as a psychologist.	That's okay. It's a foot in the door. It may help you to get into a psychology masters later.	
Yes I suppose that's true.	Yes, sure.	

So just to start, could you talk a little bit about any technology that you have used in sessions with children and perhaps how you have used it?	Mostly on my iPad, especially with boys – it's very useful.	
And age?	Well, maybe 5 – 7 year olds. It can be used as a door to get in. Just to get them talking. The one I use a lot is Angry Birds – with a difference. Because often they come to me because they are angry. Then we talk about the bird, is the bird really angry? Is the anger in the bird going to damage the other bird? So that's one little boy who had a massive anger problem, very moody and very technologically driven. So it works so well with him.	
So does he use technology a lot at home?	No, not really. But both his parents have iPads, so he just wants to play. So to come to my office and to be able to play Angry Birds for almost an hour is fantastic – but the therapy is still happening because we are talking. But he just wants to get back here. So I sometimes play Ludo or snakes and ladders, so whatever is going to appeal to the child. I definitely think that technology had its place in therapy. So the first thing I downloaded is Angry Birds and then the other one is something to do with building up islands. You can add to it and but barns and animals and chickens. So it's all about family and what they need to do to work together. So that's another experience I had. I thought this is very valuable.	
So how did you use this in	Again, it was about just letting	

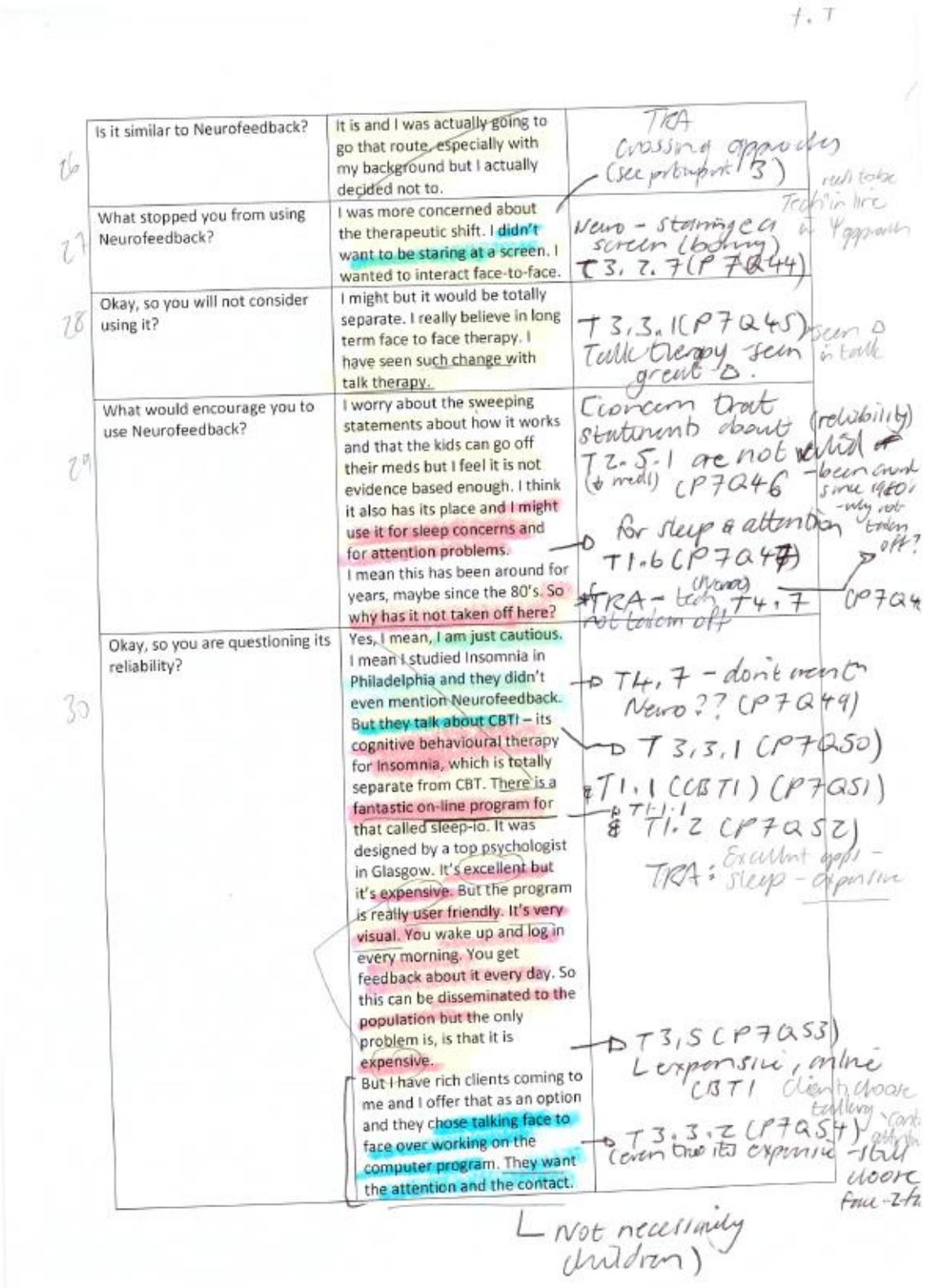
11 cont..	therapy?	them play and then getting them to reflect. You can't interrupt them because then they shout and say, you can't interrupt now; I just want to finish the round. So when they've finished, I say, I noticed when you had to build the nest and then you bought something in there. Then they will say, no, the dad needed something. So then I will reflect back, okay so that dad needed to add something to the home. So sometimes I have to observe and let them finish some rounds otherwise they get irritated. So I make sure what game I'm using has therapeutic value as it is really not okay for them to come in and sit and play mindlessly on the iPad and the parents are paying over R500.00 for a session. So I think on a broader spectrum, I am not sure if you have spoken to a lecturer in Pietermaritzburg but she did some research on technology and Bev Killian did a workshop with her.	T4.1.2 (P7 Q12) Projection/talking point T 3.1.4 (P7 Q13) & 3.2.1 (P7 Q13) T2.1.12 (P7 Q14) projection. T1.2 (P7 Q14) explanation T1.9 (P7 Q15) (therapist value) T4.5 & T4.2.1 (P8 Q16)
12	Okay, so did you do the workshop with them?	Yes. At that time everyone was saying, you can't use technology in sessions or use email blah de blah de blah. At one stage I had 2 teenage girls who started emailing me, I would say, here is my card and if you need to, you can phone me directly. So they would start to message me and they would send things on whats app. And the things they would send to me were not things that they would talk about in therapy. So I would just say that must be very hard	T4.2.1 (P8 Q17) "everyone" – T4.1.2 (P8 Q17) T1.2 (P8 Q18) T1.1 & T1.1.1 T2.1.2 & T2.2.4 (P8 Q19)

12		for you. Or message, okay, noted. I would not reply, besides that. I saw how it made a shift in therapy. So the debate we had at the workshop was, is technology useful or not? Some would say, it is intrusive, I don't stop getting messages, and the borderline patients would never stop messaging. But Debbie had great positive applications for technology which showed that this was an excellent medium to use. She was very convincing.	
13	So how long ago did you attend this workshop?	It was over 2 and a half years ago now.	
14	So what encouraged you to start using technology?	Well after the workshop, I could see that there was definite merit in it. For me it allowed me to extend the session and there was comfort in it. When they were feeling very, very down, they could send a message and explain the feeling. Almost like a dumping ground.	
15	Okay, so almost like a journal but directly to you.	Yes, and we would always talk about it the next week. I would also tell them to be careful as it's not confidential. Someone else could read them. So sometimes this stopped them from sending messages but it opened the door and broke the ice. The communication almost tested me and increased the element of trust. And also the fact that I was responding to them. I would never give them any therapy but would say, we will talk about it	
16	Okay, so you were cautious about how you responded.	Yes and the main thing is that they have been heard. So it has its place because youngsters are driven by technology these days. For example, that board	



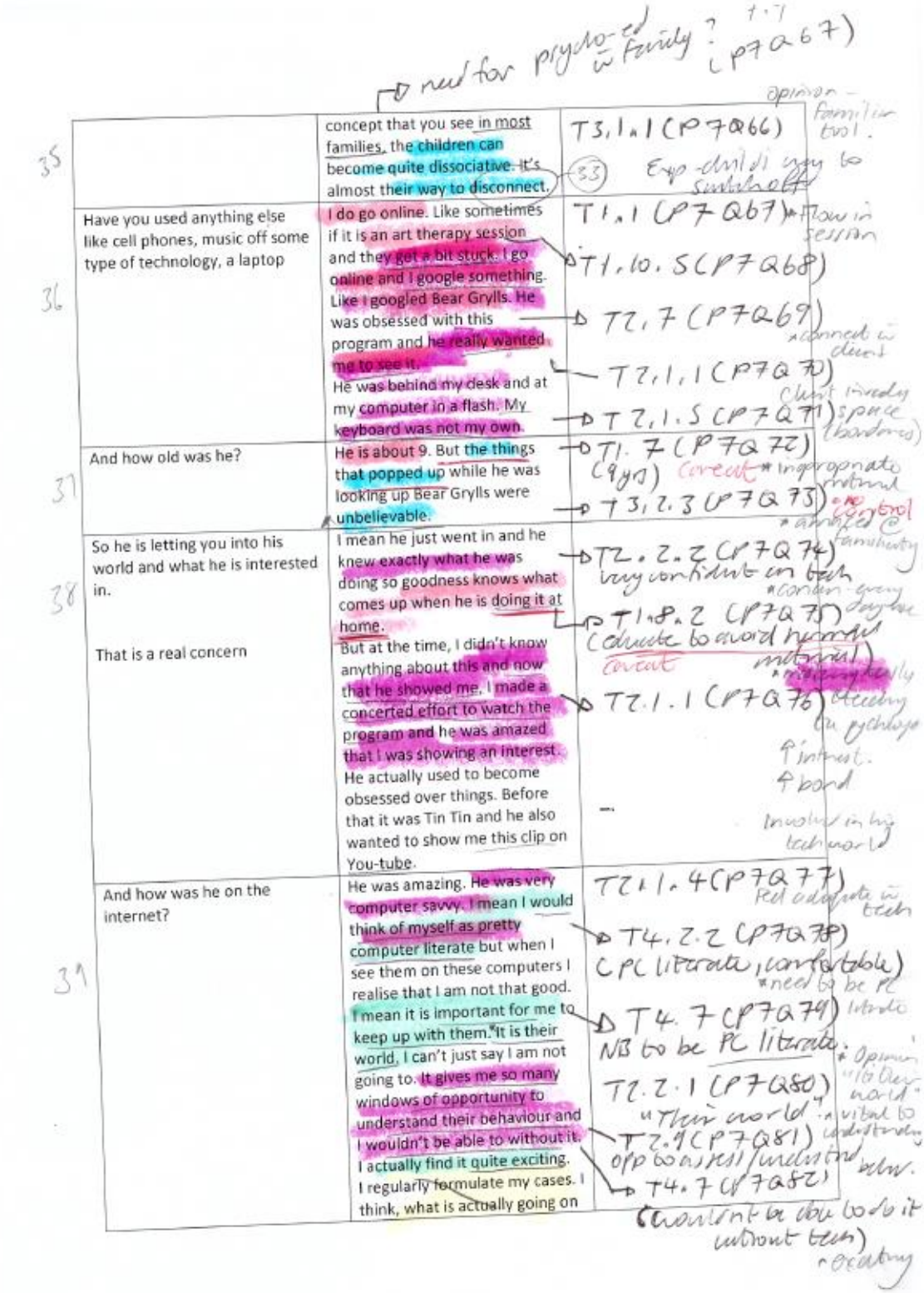
	(emotions magnetic board), has worked so well. I am very behaviourist and perhaps also narrative. I was trained psychodynamic but I have made that transition. It really works for me. I felt confused in the beginning and now I am more strongly behaviourist. It's a mechanism that works wonderfully because it's all about noting thoughts and behaviours. You can monitor all sorts of things. When they get irritated and they want to smash things. The whining. You can get an idea of how they are at home. It's (technology) useful to clinically evaluate the behaviour when they are doing it.	T4 2.3 (P7 Q29)
Okay, so you are using it as an assessment tool.	Absolutely. And the whole time, I am dropping comments and it helps to drop their guard and let go.	T2.1.1 & T2.1.2 (P7 Q31)
Okay, yes. The course work is based on Gestalt, so very present, looking at the whole picture.	Okay, ya, I think there is a lot of crossing over between all the different approaches.	
Yes, I think that is happening more and more among therapists.	And then there is the flip side, where there is no technology. Sometime kids just need to play. Children also need to play with something that is sensory and tactile. So I would not probably use it all the time. I will give you an example. I have 2 areas of interest. One is sleep disorders and the other is neuropsychology.	T3.3 (P7 Q32)
Okay, I read that on your website.	So the kids I work with either have psychological disorders, like mood disorders or schizophrenic or they are neurologically impaired. Some are epileptic, strong ADD, cerebellum atrophy. So children who are quite impulsive and hyperactive, especially the ADHD group and to play mindlessly on technology is	

	where they're at and you want to give them an alternative or an alternative story, another narrative. So this is where I would us non-directive play therapy. It's an adjunct tool. I use it carefully and I assess what is going on. So it definitely has its place but o us it carefully. If they become robotic and perseverative, I say ok that's enough, what are we going to do now? I have a lot of art therapy stuff and a pirate ship. And sand trays are so amazing. Those are 2 amazing tools.	
Yes, I use that a lot in Gestalt therapy.	So if one thinks about a sand tray tool on an iPad, that is what I am looking for. They have them in America.	
Yes, I have made contact with therapists overseas and they have amazing apps and experiences with technology. They have been so helpful as well.	That's great, You must contact Bev Killian, Lauren Snellham and Chantel Barker. And also Colleen.	
Yes, I emailed Colleen but id dint have a response. I think everyone is just so busy.	I will try and persuade her.	
Thanks. That has been the hardest part of this research trying to get participants.	Once you get your data, it will go much quicker. And going back to the apps, getting the right ones is probably the most difficult, especially with teenagers. I mean I use my board a lot and I draw pictures on them, you know like anxiety cycles. So I am sure that an app is available to make it more relevant for the teenagers.	
Okay	Part of my Neuro work is about cognitive rehabilitation or training and there are beautiful apps for that. I can't remember the name but it is basically a brain training program.	



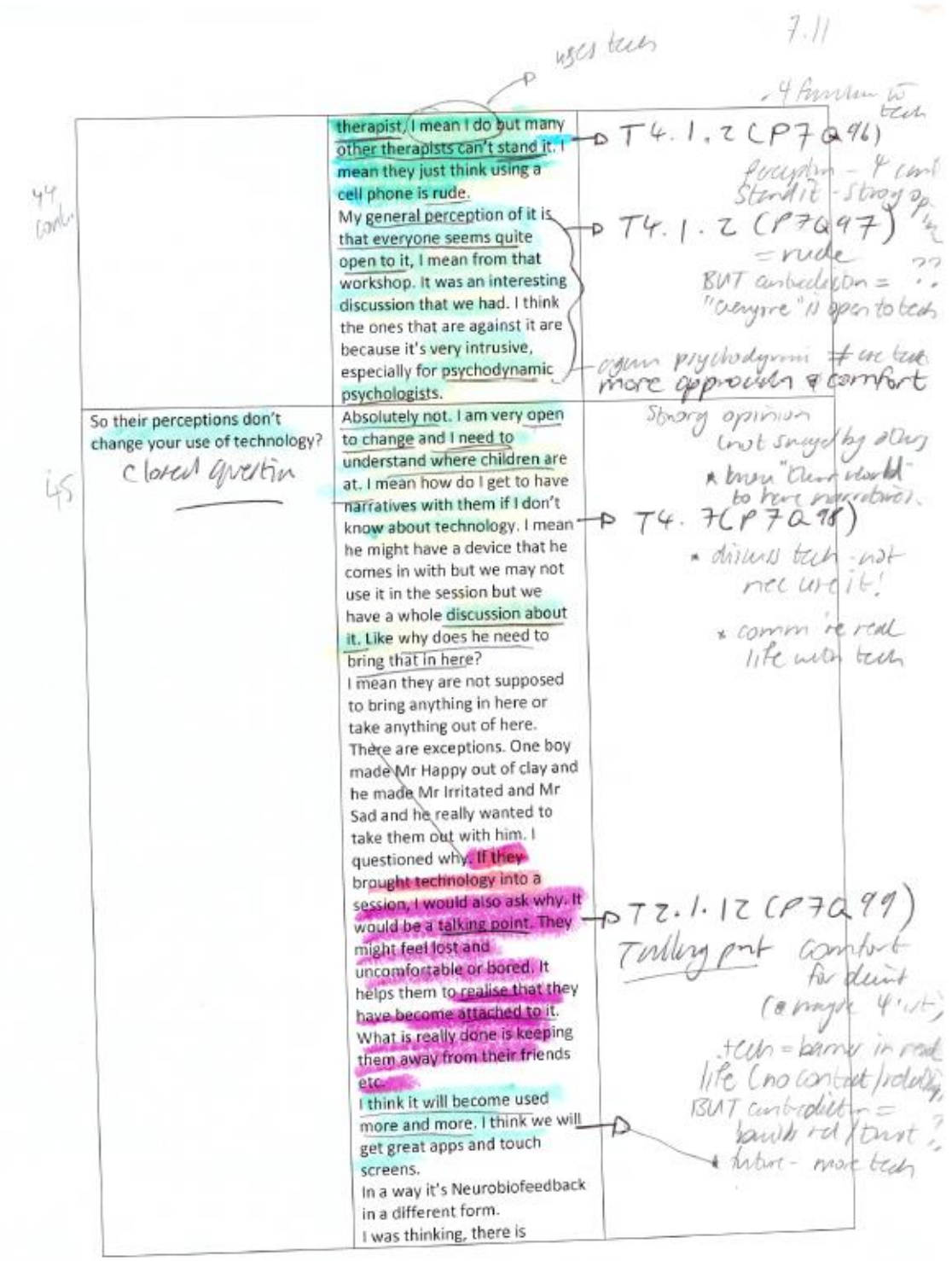
Is it similar to Neurofeedback?	It is and I was actually going to go that route, especially with my background but I actually decided not to.	TRA crossing approaches (see prompt 3)
What stopped you from using Neurofeedback?	I was more concerned about the therapeutic shift. I didn't want to be staring at a screen. I wanted to interact face-to-face.	Neuro - staring @ screen (boring) T3, 2, 7 (P7Q44)
Okay, so you will not consider using it?	I might but it would be totally separate. I really believe in long term face to face therapy. I have seen such change with talk therapy.	T3,3,1 (P7Q45) Talk therapy seen great D.
What would encourage you to use Neurofeedback?	I worry about the sweeping statements about how it works and that the kids can go off their meds but I feel it is not evidence based enough. I think it also has its place and I might use it for sleep concerns and for attention problems. I mean this has been around for years, maybe since the 80's. So why has it not taken off here?	Concern that statements about (reliability) T2.5.1 are not valid (& med) (P7Q46) for sleep & attention T1.6 (P7Q47) TRA - tech (Lyons) T4,7 not taken off (P7Q48)
Okay, so you are questioning its reliability?	Yes, I mean, I am just cautious. I mean I studied Insomnia in Philadelphia and they didn't even mention Neurofeedback. But they talk about CBTI – its cognitive behavioural therapy for Insomnia, which is totally separate from CBT. There is a fantastic on-line program for that called sleep-io. It was designed by a top psychologist in Glasgow. It's excellent but it's expensive. But the program is really user friendly. It's very visual. You wake up and log in every morning. You get feedback about it every day. So this can be disseminated to the population but the only problem is, is that it is expensive. But I have rich clients coming to me and I offer that as an option and they chose talking face to face over working on the computer program. They want the attention and the contact.	T4,7 - don't mention Neuro?? (P7Q49) T3,3,1 (P7Q50) & T1,1 (CBTI) (P7Q51) & T1.1.1 & T1.2 (P7Q52) TRA: Excellent apps - sleep - expensive T3,5 (P7Q53) Expensive, online CBTI T3.3.2 (P7Q54) (even though its expensive - still more face-to-face (not necessarily children)

31	There is something about contact in the therapeutic process. Even when a therapist uses technology in a session, the therapist is still there.	Absolutely, and you are attending to them on the iPad.	Exp - + Hilt + tech (relationship MS)
32	And have you have had any bad experiences when using technology?	Well, I would say frustration because it's too difficult or they can't get it. I had one boy who was a little cognitively impaired anyway and he saw the game on my iPad and he really wanted to play it. It had something to do with birds and building things and he got terribly frustrated and wanted to throw the iPad. I was like, be careful and I explained about not breaking anything in the room. So that was a bad experience and the other thing us that they just get mindlessly involved and I can't connect with them.	→ T3.2.1.5 (P7Q55) (however, this could be due to poor selection of app) L dev, cog ability? Exp - frustration for child. ∴ confine iPad → T3.5 (P7Q56) posturing (goes back to rules). → T3.1.4 (P7Q57) & T3.1.1 can't connect
33	How do you deal with that?	I just say that's enough but they don't like to stop. It's often a behavioural indicator, when they are irritated with me and they're bored and just want to play on the iPad. But even when I have had a bad experience, it has a therapeutic influence. We talk about it and I ask them about their reaction and if this is how they normally respond and they start talking. If they want to walk out or feel stuck I bring in something else.	→ T3.7.1 (P7Q58) (don't stop) → T2.9 (P7Q59) Exp - access behav → 2.1 AiYs process (communication negative) (P7Q60) ✗ T1.2 (P7Q61)
34	So they explore their own response and you make them more aware of that.	Yes. And if they want to walk out, they walk out.	
35	Okay, I suppose it's a choice.	Yes. It's a paradoxical approach which doesn't work with every child. But o guess it's what happens at home. It's almost an addiction and sometimes there is an OCD tendency and they almost want to take you out if you interrupt them. So it may be negative but therapeutically, it is very useful. Because it's a contemporary	→ indication of T2.9 behav @ home (P7Q62) ✗ 3.2.2 (P7Q63) (doesn't work in every client, T2.9 (P7Q64) Assessment VS T3.1.4 (P7Q65)



	concept that you see in most families, the children can become quite dissociative. It's almost their way to disconnect.	T3,1.1 (P7Q66) (33) Exp - child's way to switch off
Have you used anything else like cell phones, music off some type of technology, a laptop	I do go online. Like sometimes if it is an art therapy session and they get a bit stuck. I go online and I google something. Like I googled Bear Grylls. He was obsessed with this program and he really wanted me to see it. He was behind my desk and at my computer in a flash. My keyboard was not my own.	T1.1 (P7Q67) T1.10.5 (P7Q68) T2.7 (P7Q69) T2.1.1 (P7Q70) T2.1.5 (P7Q71)
And how old was he?	He is about 9. But the things that popped up while he was looking up Bear Grylls were unbelievable.	T1.7 (P7Q72) (9yrs) T3,2.3 (P7Q73)
So he is letting you into his world and what he is interested in. That is a real concern	I mean he just went in and he knew exactly what he was doing so goodness knows what comes up when he is doing it at home. But at the time, I didn't know anything about this and now that he showed me, I made a concerted effort to watch the program and he was amazed that I was showing an interest. He actually used to become obsessed over things. Before that it was Tin Tin and he also wanted to show me this clip on You-tube.	T2.2.2 (P7Q74) T1.8.2 (P7Q75) T2.1.1 (P7Q76)
And how was he on the internet?	He was amazing. He was very computer savvy. I mean I would think of myself as pretty computer literate but when I see them on these computers I realise that I am not that good. I mean it is important for me to keep up with them. It is their world, I can't just say I am not going to. It gives me so many windows of opportunity to understand their behaviour and I wouldn't be able to without it. I actually find it quite exciting. I regularly formulate my cases. I think, what is actually going on	T2.1.4 (P7Q77) T4.2.2 (P7Q78) T4.7 (P7Q79) T2.2.1 (P7Q80) T2.9 (P7Q81) T4.7 (P7Q82)

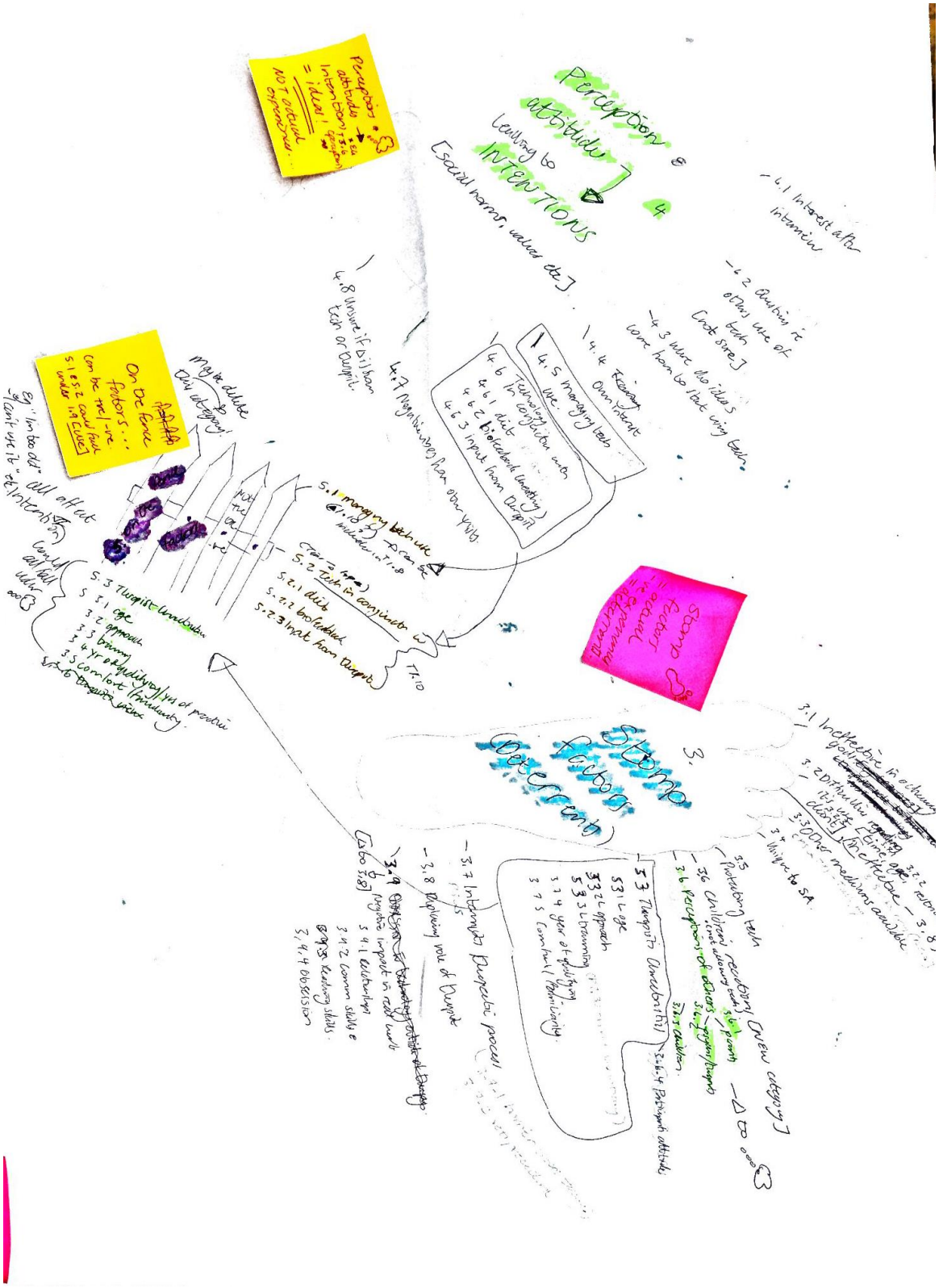
	here?	
Okay, so you put a lot of consideration into using technology?	Absolutely. I have to be able to connect with some type of emotion or like that little boy who likes Googling, we would discuss why it was important for him and what it did for him for him to show me the clip. And sometimes I will remove it completely, if I am dealing with communication problems and I am trying to develop social skills, we will look at the reality. While you have been on there, I have been really bored and I wonder if that is how your friends feel. We then look for something we can play together. And for that reason, I don't always bring my iPad, I leave it at home.	
And how do they react to that?	Well I explain that it's not here and it is what it is and they can get very upset but then I will go into another play technique to be able to get them to share and to develop reciprocity. I mean he just doesn't have it. People do come and play with him on his terms. If people don't like it, they must just go, he doesn't care. At school he is socially inept. I mean he is somewhere on the autistic spectrum, and there I think technology is just amazing. To be able to calm their world and process it.	
Yes, there is much research looking at using technology with autistic children.	Oh yes. Is there anything else? I see the time is getting on.	
Yes, it is almost 50 minutes and I said I shouldn't be longer than that.	If there is anything else please just call or email me, I don't mind answering at all.	
Oh, just one more question. How do think other therapists perceive the use of technology?	I think it depends on the mode of psychology. I mean psychodynamic psychologist would just not use it. They would us more free play. I think it would depend on the computer literacy of the	

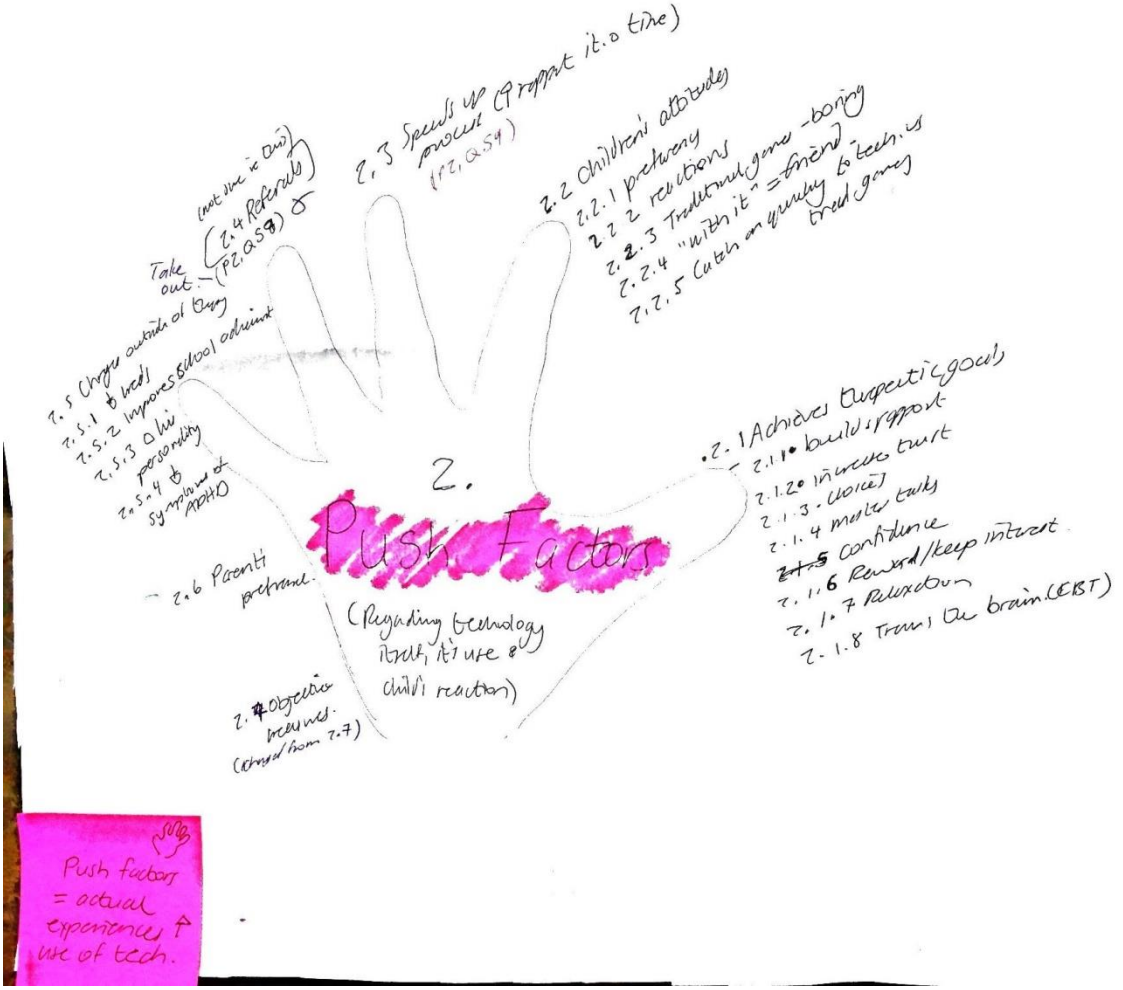

therapist, I mean I do but many other therapists can't stand it. I mean they just think using a cell phone is rude.
My general perception of it is that everyone seems quite open to it, I mean from that workshop. It was an interesting discussion that we had. I think the ones that are against it are because it's very intrusive, especially for psychodynamic psychologists.
So their perceptions don't change your use of technology?
Absolutely not. I am very open to change and I need to understand where children are at. I mean how do I get to have narratives with them if I don't know about technology. I mean he might have a device that he comes in with but we may not use it in the session but we have a whole discussion about it. Like why does he need to bring that in here?
I mean they are not supposed to bring anything in here or take anything out of here. There are exceptions. One boy made Mr Happy out of clay and he made Mr Irritated and Mr Sad and he really wanted to take them out with him. I questioned why. If they brought technology into a session, I would also ask why. It would be a talking point. They might feel lost and uncomfortable or bored. It helps them to realise that they have become attached to it. What is really done is keeping them away from their friends etc.
I think it will become used more and more. I think we will get great apps and touch screens.
In a way it's Neurobiofeedback in a different form.
I was thinking, there is

7.12

		someone else you can speak to about Neurofeedbaack. Here is the pamphlet.	
46	Thanks, I have seen some others who use Neurofeedback.	If you could just take down the number, I don't have another pamphlet.	
47	Okay, great, thank you.	No problem. Mmmm, all so fascinating.	TKA - Fascinating
48	Thank you so much for your time and valuable input.	It's a pleasure; It has been fruitful for me too.	* Bereitwind - enriched

Appendix C: Mind map


Perception & attitude leading to INTENTIONS
Perception & attitude = Intention (goal) = ideal, not actual experience
On the fence factors ... can be pre/-ve
Success factors
Barriers
Drivers
Perceptions of drivers
Perceptions of barriers
Perceptions of success factors
Perceptions of Owen category
Perceptions of Christian category
Perceptions of Participants attitude
Perceptions of Participants attitude
Perceptions of Participants attitude


2.
Push Factors
(Regarding technology
itself, its use &
child's reaction)
2.1 Achieves therapeutic goals
2.1.1 build rapport
2.1.2 increase trust
2.1.3 choice
2.1.4 more talk
2.1.5 confidence
2.1.6 Reward/keep interest
2.1.7 Relaxation
2.1.8 Trains the brain (CBT)
2.2 Children's attitudes
2.2.1 pre-theory
2.2.2 reactions
2.2.3 Traditional games - boring
2.2.4 "with it" = friend
2.2.5 Cards or gravity to tech. vs board games
2.3 Speeds up process (Prompt it. o time)
(PI2, Q54)
(not use it Qu)
(2.4 Referrals)
(PI2, Q58) ♂
Take out
2.5 Charges outside of therapy
2.5.1 ↓ bed
2.5.2 imposes school ethos
2.5.3 ↓ his personality
2.5.4 ↓ symptoms of ADHD
2.6 Parents preference
2.7 Objections heard (changed from 2.7)
Push factors = actual experiences / use of tech.

Appendix D: CD containing data analysis audit (attached)

Appendix E: List of toys included in the playroom

Table 1. Frequency of Use of Individual Toys and Toy Categories

Toy	Category	Freq.	Percentage %
Sandbox	Family/Nurturing	49	72.1
Sand tools	Family/Nurturing	37	54.4
Arts/Crafts	Expressive	33	48.5
Paint	Expressive	28	41.2
Water	Expressive	23	33.8
Kitchen	Family/Nurturing	22	32.4
Puppet theater	Pretend/Fantasy	22	32.4
Easel	Expressive	21	30.9
Bop bag	Aggressive/Scary	21	30.9
Hats	Pretend/Fantasy	17	25.0
Big aggressive animals	Aggressive/Scary	17	25.0
Dress-up clothes	Pretend/Fantasy	15	22.1
Sink	Family/Nurturing	15	22.1
Hammer	Aggressive/Scary	14	20.6
Dishes/Utensils	Family/Nurturing	14	20.6
Food	Family/Nurturing	14	20.6
Pots/Pans	Family/Nurturing	13	19.1
Doctor's kit	Pretend/Fantasy	12	17.6
Paper towels	Family/Nurturing	12	17.6
Building materials	Pretend/Fantasy	12	17.6
Big nonaggressive animals	Pretend/Fantasy	11	16.2
Small nonaggressive animals	Pretend/Fantasy	11	16.2
Log	Aggressive/Scary	11	16.2
Cash register/money	Pretend/Fantasy	11	16.2
Dart gun	Aggressive/Scary	11	16.2
Dollhouse	Family/Nurturing	11	16.2
Chalk	Expressive	9	13.2
Army soldiers	Aggressive/Scary	9	13.2
Foam bat	Pretend/Fantasy	9	13.2
Handcuffs	Aggressive/Scary	9	13.2
Chalkboard	Expressive	8	11.8
Drum	Expressive	8	11.8
Foam ball	Pretend/Fantasy	8	11.8
Bowling pins/ball	Pretend/Fantasy	8	11.8
Flashlight	Pretend/Fantasy	8	11.8
Nails	Aggressive/Scary	8	11.8
Stethoscope	Pretend/Fantasy	7	10.3
Bubbles	Expressive	7	10.3
Beanbag	Family/Nurturing	7	10.3
Popping head martian	Pretend/Fantasy	7	10.3
Work vehicles	Pretend/Fantasy	7	10.3
Xylophone	Expressive	7	10.3
Plastic sword	Aggressive/Scary	7	10.3
Ride-on car	Pretend/Fantasy	7	10.3
Magic wand	Pretend/Fantasy	6	8.8
Small aggressive animals	Aggressive/Scary	6	8.8
Nail remover	Aggressive/Scary	6	8.8
Play-Doh®	Expressive	6	8.8
Aggressive puppets	Aggressive/Scary	6	8.8
People puppets	Pretend/Fantasy	6	8.8
Trash can	Family/Nurturing	6	8.8
School bus	Pretend/Fantasy	6	8.8
Camera	Pretend/Fantasy	6	8.8
Machine gun	Aggressive/Scary	6	8.8
Pom-poms	Pretend/Fantasy	6	8.8
Goggles	Aggressive/Scary	5	7.4
Cleaning supplies	Family/Nurturing	5	7.4
Nonaggressive puppets	Pretend/Fantasy	5	7.4
Ring toss	Pretend/Fantasy	5	7.4
Dollhouse family	Family/Nurturing	5	7.4
Dollhouse furniture	Family/Nurturing	5	7.4

Table 1 (*continued*).

Toy	Category	Freq.	Percentage %
Flute	Expressive	5	7.4
Wall mirror	Pretend/Fantasy	4	5.9
Cell phone	Pretend/Fantasy	4	5.9
Home phone	Pretend/Fantasy	4	5.9
Plastic knife	Aggressive/Scary	4	5.9
Foam sword	Aggressive/Scary	4	5.9
Shields	Aggressive/Scary	4	5.9
Crown	Pretend/Fantasy	4	5.9
Eraser	Expressive	3	4.4
Baby doll	Family/Nurturing	3	4.4
Smock	Expressive	3	4.4
Army tanks	Aggressive/Scary	3	4.4
Barbie® dolls	Family/Nurturing	3	4.4
Cymbals	Expressive	3	4.4
Kaleidoscope	Pretend/Fantasy	3	4.4
Binoculars	Pretend/Fantasy	3	4.4
Ray gun	Aggressive/Scary	3	4.4
Eye patch	Pretend/Fantasy	3	4.4
Baby bottle	Family/Nurturing	3	4.4
Feather mask	Pretend/Fantasy	3	4.4
Animal mask	Pretend/Fantasy	2	2.9
Band-Aids®	Pretend/Fantasy	2	2.9
Race car	Pretend/Fantasy	2	2.9
Airplane	Pretend/Fantasy	2	2.9
Bells	Expressive	2	2.9
Maracas	Expressive	2	2.9
Compass	Pretend/Fantasy	2	2.9
Rope	Aggressive/Scary	2	2.9
Kleenex®	Family/Nurturing	2	2.9
Whistle	Expressive	2	2.9
Comb	Family/Nurturing	2	2.9
Dry-erase board	Expressive	2	2.9
School bus people	Family/Nurturing	2	2.9
Purse	Pretend/Fantasy	1	1.5
Jewelry	Pretend/Fantasy	1	1.5
Teddy bear	Family/Nurturing	1	1.5
Helicopter	Pretend/Fantasy	1	1.5
Harmonica	Expressive	1	1.5
Tambourine	Expressive	1	1.5
Magnet	Pretend/Fantasy	1	1.5
Zorro mask	Pretend/Fantasy	1	1.5
Pacifier	Family/Nurturing	1	1.5
Baby blanket	Family/Nurturing	1	1.5
Diaper	Family/Nurturing	1	1.5
Baby crib	Family/Nurturing	1	1.5
Plastic people	Family/Nurturing	1	1.5
Russian dolls	Pretend/Fantasy	1	1.5
Wooden iron	Family/Nurturing	0	0
Gumby®	Pretend/Fantasy	0	0
Ambulance	Pretend/Fantasy	0	0
Shopping basket	Pretend/Fantasy	0	0
Microphone	Pretend/Fantasy	0	0
	Family/Nurturing	63	92.6
	Aggressive/Scary	51	75.0
	Expressive	50	73.5
	Pretend/Fantasy	63	92.6

Appendix F: Consent form

NORTH WEST UNIVERSITY
CONSENT TO PARTICIPATE IN RESEARCH

Title of Study: Therapists' experiences in adopting technology as a therapeutic medium with children

You are asked to participate in a research study conducted by Deborah Cotton (PGCE, BPsych), from the Institute for Child, Youth and Family Studies at Huguenot College at NWU. The results of this study will be in fulfillment of a Research Masters in Play Therapy. You were selected as a possible participant in this study because of your experiences as a professional practitioner working with children, in Durban and surrounding suburbs, as a psychologist or counsellor.

1. PURPOSE OF THE STUDY

The research goal is to explore and describe your good and bad experiences of adopting technology as a therapeutic medium with children, in Durban and surrounding suburbs. Your input will contribute to the understanding of the use of technology as a therapeutic medium and to build on existing research that will aid other therapists in their technological endeavors with children.

2. PROCEDURES

If you volunteer to participate in this study, you will be asked you to do the following:

- Participate in an interview(s) to provide an in-depth description about adopting technology as a therapeutic medium with children
- The interview will be conducted on a one-on-one basis.
- The duration of the interview is estimated at 1 hour. Additional interview sessions might be arranged to clarify, follow-up or to obtain additional information.
- Demonstrate the use of technology by showing the researcher examples, during the interview session.
- All sessions will be video-taped (no faces), transcribed, and all data will be stored in a safe place only accessible by the researcher or for university audit purposes.
- Feedback will be provided to you before publication.

3. POTENTIAL RISKS AND DISCOMFORTS

The nature of the study involves an in-depth interview exploring adopting technology as a therapeutic medium with children This is not a sensitive topic of discussion, however, if any discomfort arises, the researcher will make herself available to address any queries, issues and provide the necessary support in form of recommendations, dialogue or referrals.
Your participation is voluntary and you may choose to withdraw at anytime during the study.

4. POTENTIAL BENEFITS TO SUBJECTS AND/OR TO SOCIETY

There are no immediate direct benefits expected from this research. However, the interview might create an interest regarding the use of technology in sessions. The researcher intends to use the findings to create awareness about the use of technology as a therapeutic medium.

5. PAYMENT FOR PARTICIPATION

You will not be paid for your participation in this study, nor will any fees be charged by the researcher.

6. CONFIDENTIALITY

Any information that is obtained in connection with this study and that can be identified with you will remain confidential and will be disclosed only with your permission. Confidentiality will be maintained by means of using pseudo-codes to ensure your anonymity. All data, such as documentation, audio and video recording will be kept confidential, labeled with pseudo-codes and stored in a locked cabinet in the researcher's private office. Selected material will be published in the research report at NWU.

7. PARTICIPATION AND WITHDRAWAL

Your participation is voluntary and you may withdraw at any time without consequences of any kind. You may also refuse to answer any questions you don't want to answer and still remain in the study. The investigator may withdraw you from this research if circumstances arise which warrant doing so. (refer to point 3).
Your signature indicates that you have agreed to participate. You will receive a copy of this consent form.

8. IDENTIFICATION OF INVESTIGATORS

If you have any questions or concerns about the research, please feel free to contact

Researcher: Deborah Cotton debbiec@onpsych.co.za

Supervisor: Colleen Potgieter cpotgieter@hc.sun.ac.za

9. RIGHTS OF RESEARCH SUBJECTS

You may withdraw your consent at any time and discontinue participation without penalty. You are not waiving any legal claims, rights or remedies because of your participation in this research study. If you have questions regarding your rights as a research subject, contact Dr CHM Bloem at 021 873 1181 Dr Retha Bloem head at the Institute for Child, Youth and Family studies at NWU.

SIGNATURE OF RESEARCH SUBJECT OR LEGAL REPRESENTATIVE

The information above was described to [*me/the subject/the participant]* by [*name of relevant person]* in [*Afrikaans/English/Xhosa/other]* and [*I am/the subject is/the participant is]* in command of this language or it was satisfactorily translated to [*me/him/her*]. [*I/the participant/the subject]* was given the opportunity to ask questions and these questions were answered to *[my/his/her]* satisfaction.

[I hereby consent voluntarily to participate in this study/I hereby consent that the subject/participant may participate in this study] I have been given a copy of this form.

_____

Appendix G: JCAMH Instructions to authors

JOURNAL OF CHILD & ADOLESCENT MENTAL HEALTH

Instructions to authors

Each issue of the Journal contains several different types of contribution: original research papers (including brief reports (<2 000 words)); review papers (to be limited to 4 000 words, unless by special arrangement); clinical perspectives; book reviews; and editorials. We welcome contributions for all of these sections of the Journal.

Editorial policy: Submission of a manuscript implies that the material has not previously been published, nor is being considered for publication elsewhere. Submission of a manuscript will be taken to imply transfer of copyright of the material to the publishers, NISC (Pty) Ltd. Contributions are accepted on the understanding that the authors have the authority for publication. Material accepted for publication in this journal may not be reprinted or published in translation without the express permission of the publishers, NISC. The Journal has a policy of anonymous peer review. Authors' names are withheld from referees, but it is their responsibility to ensure that any identifying material is removed from the manuscript. The Editor reserves the right to revise the final draft of the manuscript to conform to editorial requirements. Contributions must conform to the principles outlined in **Ethical considerations in research publication** available on the Journal's Instructions to Authors page at www.nisc.co.za/journals?id=4.

Manuscripts: Manuscripts should be submitted in English. They should be typewritten and double-spaced, with wide margins and saved in MSWord format. Manuscript submissions should be made online at the *Journal of Child & Adolescent Mental Health*, ScholarOne Manuscripts site (http://mc.manuscriptcentral.com/rcmh). New users should first create an account. Once a user is logged onto the site submissions should be made via the Author Centre.

Layout: A most recent issue of the *Journal of Child & Adolescent Mental Health* should be consulted for general layout and style.

Manuscript format: All pages must be numbered consecutively, including those containing the references, tables and figures. The typescript of manuscripts should be arranged as follows:

Title: This should be brief, sufficiently informative for retrieval by automatic searching techniques and should contain important keywords (preferably <10 words).

Author(s) and address(es) of author(s): The corresponding author must be indicated. The authors' respective addresses where the work was done must be indicated. An e-mail address, telephone number and fax number for the corresponding author must be provided.

Abstract: For data-based contributions, the abstract should be structured as follows: *Objective* — the primary purpose of the paper, *Method* — data source, subjects, design, measurements, data analysis, *Results* — key findings, and *Conclusions* — implications, future directions. For all other contributions (except editorials, letters and book reviews) the abstract must be a concise statement of the content of the paper. Abstracts must not exceed 200 words. It should summarise the information presented in the paper but should not include references.

Headings: Use sentence case for the title, and any headings in the manuscript. Format headings in the following style: **First Level heading**. ***Second level heading***. *Third level heading.*

Referencing:

References in text: References in running text should be quoted as follows: Louw and Mkize (1990), or (Louw 1990), or Louw (1990, 1991a, 1991b) or (Louw and Mkize 1992), or (Mkize 1990, Louw and Naidoo 1993). For up to three authors, all surnames should be cited the first time the reference occurs, e.g. Louw, Mkize and Naidoo (1990) or (Louw, Mkize and Naidoo 1990). Subsequent citations should use ***et al.***, e.g. Louw *et al.* (1990) or (Louw *et al.* 1990). For four or more authors, cite only the surname of the first author followed by *et al.* and the year, for the first and subsequent citations. Note, however, that all authors are listed in the Reference List. 'Unpublished observations' and 'personal communications' may be cited in the text, but not in the reference list. Manuscripts accepted, but not yet published, can be included as references followed by 'in press'.

Reference list: Full references should be given at the end of the article in alphabetical order, using double spacing. References to journals should include the authors' surnames and initials, the full title of the paper, the full name of the journal, the year of publication, the volume number, and inclusive page numbers. Titles of journals must not be abbreviated. References to books should include the authors' surnames and initials, the year of publication, the full title of the book, the place of publication, the publisher's name. References should be cited as per the examples below (refer to **Reference Exemplars for Authors: format and style considerations** available on the Journal's Instructions to Authors page at www.nisc.co.za/journals?id=4 for more examples):

Haynie DL. 2000. *The peer group revisited: a network approach for understanding adolescent delinquency*. PhD thesis, Pennsylvania State University, Pennsylvania, USA.

Louw J. 1990a. Comorbidity of conduct and anxiety disorders. *Southern African Journal of Child and Adolescent Psychiatry* 5: 43–51.

Louw J, Mkize AC, Naidoo DH. 1990. Cultural disorders. In: Isaacs S (ed.), *Psychiatric disorders in South African children*. Cape Town: Juta & Co. pp 84–96.

McRoy RG, Grotevant HD, White KL. 1988. *Openness in adoption: new practices, new issues*. New York: Praeger Publishers.

PRB (Population Reference Bureau). 2002. Untitled fact sheet. Available at http://www.prb.org/content/navigationMenu/Other_reports /2000–2002/sheet1.html [accessed 22 February 2002].

Tables and figures: Each table and figure must be numbered with Arabic numerals and must be accompanied by an appropriate stand-alone caption. Tables and figures must be formatted to fit the page vertically with a printed width of 140 mm. Tables may include up to five horizontal lines but no vertical lines. Figures must not repeat data presented in the text or tables. Authors must ensure that their figures conform to the style of the journal. Pay particular attention to line thickness, font and figure proportions, taking into account the Journal's printed page size. Costs of redrawing figures may be charged. Please refer to **Figure Guidelines for Authors: format, style and technical considerations** available from the Journal's Instructions to Authors webpage at www.nisc.co.za/journals?id=4. For digital photographs or scanned images the resolution should be at least 300 dpi for colour or greyscale artwork and a minimum of 600 dpi for black line drawings. These can be saved (in order of preference) in PSD, JPEG, PDF or EPS format. Graphs, charts or maps can be saved in AI, PDF or EPS format. MS Office files (Word, Powerpoint, Excel) are also acceptable but DO NOT EMBED Excel graphs or Powerpoint slides in a MS Word document, rather send the original Excel or Powerpoint files. More detailed technical information is given in **Figure Guidelines for Authors**.

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Appendix H: Example of reflective field notes

Reflections: Interview 6ClP

I was excited to have another interview as it has been so difficult to get therapists to commit. After the interview she admitted that the first time she saw my email, she ignored it and thought she doesn't have much to offer. Then on seeing it a second time she reconsidered as she knew how hard it was for her when she did her research. I understand too that an hour of her time is expensive. She agreed to meet me in her lunch hour and she wanted to meet at a restaurant and I was so afraid to ask her to have it at the office but assured her that she could still have lunch while we spoke and agreed to meet at her practice.

M was friendly and accommodating and I was waiting in the waiting room for her and she had an unpleasant client complaining about her paying system. It was a little awkward but she did not seem too flustered. We chatted a little but I did not want to waste her time.

The interview seemed to flow well but she used some words that I did not understand which made me feel inferior. Not sure if this was intentional. She also mentioned how I would not be able to practice as I am not a psychologist but I did not feel like getting into the politics of the registered counsellor's qualification. She sat at her desk (her laptop was closed in front of her) and her counselling room doubles as her playroom. There was a magnetic white board with emotions magnets on it, board games on the floor, in a pile, a pirate ship on a small plastic table with pirates, treasure chest and gold. There was a small container of toys next to the board games and she had brightly coloured pictures of different emotions on her wall. She also had some comfortable couches next to her desk. The office was inviting but she seemed a little rushed and spoke quickly. I was worried about getting as much data as I could as she only had an hour and I feel I could have explored some of her answers more fully but I felt under pressure.

As we spoke she started to remember all the different times she had used technology but seemed to check if this is what I was looking for. This made me wonder about how therapists that I had interviewed before her could have kept back valuable information if they thought I would think that they did not know what they were doing, as though they were using technology in the ‘wrong’ way. It’s funny because I don’t use technology in sessions and I have learnt so much from the interviews and I feel more comfortable to use technology in sessions knowing what I know now. I feel that the information from other therapists in South Africa has been just as beneficial as reading all the articles about how it is used overseas.

M was keen for me to interview her colleague (who did not reply to any of my emails and they are not available on the phone). She also gave me numbers of 2 other potential participants (I had no joy with these leads).

Appendix I: Declaration of translation of abstract

cum laude
language practitioners

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DECLARATION OF TRANSLATION OF ABSTRACT

I, Christina Maria Etrecia Terblanche, hereby declare that I translated the abstract to the study entitled:

Therapists' experiences in adopting technology as a therapeutic medium with children

for Deborah J. Cotton for the purposes of submission as a postgraduate study.

Regards,

CME Terblanche

Cum Laude Language Practitioners (CC)

SATI reg nr: 1001066

PEG registered