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CAN A PRE-GRADUATE INTERPROFESSIONAL EDUCATION PROGRAM RESULT IN TRANSFORMATIVE LEARNING AND MAINTENANCE OF PERCEIVED INTERPROFESSIONAL COMPETENCIES IN THE WORKPLACE?

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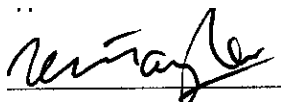
DECLARATION

I certify that this thesis does not incorporate without acknowledgment any material previously submitted for a degree or diploma in any university; and that to the best of my knowledge and belief it does not contain any material previously published or written by another person except where due reference is made in the text.



Signed Dr Ben Taylor

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ABSTRACT

A pre-graduate interprofessional program (the Get Ready program), which was dedicated to students' transition to become health professions was piloted for students from five different health disciplines during their last year of pre-graduate study in New South Wales (NSW) by the Health Education and Training Institute (HETI) and other partners in November 2011. The pilot showed positive short-term outcomes in six interprofessional competencies measuring teamwork, scope of roles, interprofessional communication, interpersonal conflict resolution, patient/client-centred practice and collaborative leadership. Following the pilot Get Ready program, HETI further developed it for use across NSW. All Local Health Districts (LHDs) were offered a training and resource package to implement the program locally. The overall aim of the program is the active promotion and development of patient-centred, team-based care across NSW Health. Since 2011, ten courses have been completed successfully across eight NSW LHDs and Special Health Networks (SHNs), with over 200 pre-graduate students involved.

The aim of this study was to assess whether interprofessional competencies that were taught during the Get Ready program in the pre-graduate stage of training can be maintained over time once the students are in clinical practice. For example, can attitudes, beliefs, and behaviours towards interprofessional learning and collaborative practice be sustained? We also aimed to evaluate the impact of real life workplace experiences of interprofessional collaborative practice (IPCP) on the participants, and to determine whether these have led to further transformative learning in these domains.

This is a follow-up study using a mixed methods design with both a validated quantitative interprofessional learning assessment tool and a qualitative component. The quantitative tools used included the Interprofessional Socialisation and Valuing Scale (ISVS) (King, Shaw, Orchard & Miller, 2010) and an on-line survey. The qualitative component consisted of focused telephone interviews to build a deeper understanding of the Get Ready participants' experiences. The study was informed by Mezirow's transformative learning theory (Mezirow, 1981) and aimed to develop a better understanding of participants' experiences regarding translation of interprofessional learning into practice.

The study demonstrated high initial mean ISVS scores for both medical and non-medical participants. The scores showed a modest decline over time but still remained relatively high overall after time in the workforce. The main themes to arise from a thematic analysis were: reflection; breaking down barriers to IPCP; reassessing assumptions; transfer of learning to practice; and improvements in patient care. Recommendations from this research include undertaking further longitudinal studies involving greater numbers of participants, which look into the various workplace factors that influence postgraduate IPCP, other than pre-graduate IPE.

LIST OF TABLES AND FIGURES

GLOSSARY OF ACRONYMS

CBA	Controlled Before and After
CETI	Clinical Education & Training Institute
CIHC	Canadian Interprofessional Health Collaborative
EOI	Expression of Interest
HETI	Health Education and Training Institute
IOM	Institute of Medicine
IP	Interprofessional
IPE	Interprofessional Education
IPCP	Interprofessional Collaborative Practice
IPQ	Interprofessional Questionnaire
ISVS	Interprofessional Socialisation and Valuing Scale
LHD	Local Health District
MDT	Multidisciplinary Team
NCIPE	National Centre for Interprofessional Practice and Education
RCT	Randomised Control Trial
SBREC	Social and Behavioural Research Ethics Committee
SHN	Specialty Health Networks
SWSLHD	South Western Sydney Local Health District
UWE	University of Western England
ViTA	Meaning ‘life’
WHO	World Health Organisation

CHAPTER 1 – INTRODUCTION

This chapter will provide a brief outline of the context for this study and its overall aims. It will introduce the Get Ready program, from which data was derived for this study and clarify definitions of the concepts used throughout this thesis related to interprofessional education and practice.

The Get Ready program is a pre-graduate interprofessional dedicated transition program still being run for students in NSW during their last year of study at university. As such, the term 'pre-graduate' in this thesis refers to the period of time in the final year of study at university, shortly before graduation, and is used interchangeably with the term 'pre-qualification'. In 2011 The NSW Health Education and Training Institute: HETI (then the Clinical Education & Training Institute, CETI) along with St Vincent's and Mater Health Service and their University partners (University of New South Wales – St Vincent's Clinical School, The University of Sydney, The Australian Catholic University and the University of Tasmania, School of Nursing and Midwifery) developed the Get Ready program. The Get Ready program was piloted with students from nursing, medicine, social work, speech therapy and occupational therapy at St Vincent's Hospital, Sydney in November 2011. The pilot study showed positive short-term outcomes in six interprofessional competencies that were measured. These were teamwork, scope of roles, interprofessional communication, interpersonal conflict resolution, patient-centred practice and collaborative leadership. Following the pilot Get Ready program, HETI further developed it for use across NSW, and all Local Health Districts (LHDs) were offered a training and resource package to implement the program locally. The overall aim of the program was the active promotion and development of patient-centred, team-based care across NSW health. Since 2011, there have been ten courses run across eight NSW LHDs and SHNs, with over 200 pre-graduate students involved in the Get Ready program.

According to the Centre for the Advancement of Interprofessional Education (CAIPE) ,interprofessional education (IPE) occurs "When two or more professions learn with, from and about each other in order to improve collaboration and quality of care" (CAIPE, 2002). There is increasing recognition that IPE can help prepare health professional students to become collaborative practice–ready practitioners who are able to work effectively within interprofessional healthcare teams (WHO, 2010).

This is because IPE activities focus on learning and developing interprofessional competencies. The Canadian Interprofessional Health Collaborative (CIHC, 2010, p.24) defines competency as “a complex know act that encompasses the ongoing development of an integrated set of knowledge, skills, attitudes, and judgments enabling one to effectively perform the activities required in a given occupation or function to the standards expected in knowing how to be in various and complex environments and situations”. Interprofessional competencies are core skills, attitudes, values and behaviours that are common to all health care professionals and include but are not restricted to, interprofessional communication, patient/client/family/community-centred care, role clarification, team functioning, collaborative and interprofessional conflict resolution (CIHC, 2012).

The aim of IPE, therefore, is to foster improved interprofessional collaborative practice (IPCP). This involves, “a group of health providers from different professions who engage in planned, interdependent collaboration in the provision of coordinated and integrated care” (Drinka, 1996, p. 434). The ultimate goal from IPCP is improved patient health outcomes. Despite the recognition that core research gaps remain, the Interprofessional Curriculum Renewal Consortium, Australia (2014, p.10) sought to develop and coordinate IPE in Australia. Thee final recommendations included, “building a nationally coordinated approach to building an IPE curriculum” and “incorporating interprofessional learning outcomes into the accreditation standards of all Australian health professions”.

Within this context, the aim of this study is to assess whether interprofessional competencies taught in the pre-graduate stage of training, including what was learned in the Get Ready program, can be maintained once the students have graduated and are in clinical practice. Specifically, can attitudes, beliefs and behaviours towards interprofessional learning and collaborative practice be sustained?

The study also aims to evaluate the impact of real life workplace experience of IPCP on the participants and to assess if this can lead to further transformative learning in these domains. Therefore, one of the main questions to be answered by this study is, can a pre-graduate interprofessional educational program lead to maintenance of interprofessional competencies once the student is in the workplace.

CHAPTER 2 – LITERATURE REVIEW

This chapter will examine the IPE literature in more detail, in order to identify current gaps in the research and also review theories to explore how IPE can lead towards IPCP.

2.1 IPE AND RELATIONSHIP WITH IPCP

The aim of IPE is to foster better interprofessional collaborative practice and therefore improve patient health outcomes (Drinka, 1996; D'Amour & Oandasan, 2005; Sargeant, 2009; Cartwright, Franklin & Forman, 2015). The World Health Organisation (WHO, 2010, p. 18), state that, "after 50 years of enquiry there is sufficient evidence that IPE enables effective collaborative practice which in turn optimises health services, strengthens health systems and improves health outcomes".

It has been widely assumed that pre-qualification IPE will simply and automatically lead to improved interprofessional working in the postgraduate domain, however, there is little evidence to support this assumption (Barr, Koppel, Reeves, Hammick & Freeth, 2005). It is important that, with any IPE initiative, sustainability can be demonstrated and that the evidence base for how undergraduate IPE competencies can be sustained once in the workplace is built upon (Humphries et al., 2004).

Little is known about the processes that transform interprofessional knowledge, attitudes and beliefs at an undergraduate level into improved interprofessional collaborative practice in the workplace, and why some IPE approaches are more effective than others (Lapkin, Levett-Jones & Gilligan, 2013). Previous studies on IPE have often not used theoretical frameworks on which to base their evidence or findings. One of the criticisms of the IPE studies reviewed in the recent Institute of Medicine (IOM) report, *Measuring the Impact of Interprofessional Education on Collaborative Practice and Patient Outcomes* (IOM, 2015, p.81) included that it was, "not clear whether evidence based principles were applied to the design and implementation of the IPE interventions". The IOM report (2015, p.81) recommended that core principles applied to IPE should, "include ensuring adequate incorporation of effective theoretical foundations".

2.2 THEORETICAL BASIS FOR IPE

There remains a lack of theoretical understanding of how the social and experiential domains that underpin IPE interact (Craddock, O'Halloran, Borthwick & McPherson, 2006). The recent Australian national audit of IPE (Curriculum Renewal for Interprofessional Education In Health, 2014, p. 48) recognised that, "the need for further theoretical development to inform IPE curriculum design is increasingly noted as a matter requiring attention".

Adult learning theory has evolved considerably since Knowles (1980, p.43) first formulated the term 'andragogy', defined as, "the art and science of helping adults learn". This theory is based on a series of assumptions including the assumption that adult learners are self-directed and teachers are there to facilitate active learning by stimulating an internally driven motivation to learn. IPE, however, still cannot be fully explained by this model since it is more than just an, "incremental approach to building knowledge" (Craddock et al., 2006, p. 230).

It has also been suggested that addressing this research gap from a social-constructivist perspective may allow educators to develop IPE curricula that facilitate students to enhance their learning by allowing them to "construct meaning" from the IPE learning activities, based on their pre-existing knowledge and experiences (Lawn, 2015). Craddock et al (2006, p.1) critically reviewed the IPE literature and offered various educational theories that could be linked to IPE, including adult learning theory, experiential learning theory, reflective practitioner theory, team learning theory and other bio-psychological theories. They concluded that, "more explicit consideration of educational theory is required in the development of new (IPE) interventions". Some of these epistemological theories will now be discussed, particularly in how they relate to IPE.

Experiential learning theory

Kolb's experiential learning theory (Kolb, 1984) has been used to inform some IPE initiatives; particularly those that are work or unit-based or use simulation-based teaching methods (Donovan, Hutchison & Kelly 2003; Kerr, Mole & Bradley, 2003). This theory (Kolb, 1984) is based on a step-wise cycle involving four independent stages, the learner has a concrete experience, that leads to reflective observation, then abstract conceptualization and finally active experimentation leading back to step one.

Many adult learning theories do no not address one of the main features of IPE, that of "learning with, from and about each other" (CAIPE, 2002). IPE is, therefore, based partly on experiential learning in that it relies on the interaction between different health professionals (Sargeant, 2009).

Reflective practitioner theory

Critical reflection and critical self-reflection, where previously held assumptions, beliefs and values are reassessed, are essential for learning to take place (Sargeant, 2009). This process of critical self-reflection is not automatic, even amongst adult learners, and may require facilitation by the educator. Donald Schön's model of The Reflective Practitioner (1983) introduces concepts such as 'reflection on action' and 'reflection in-action'. Reflection-in-action (or reflection in practice) can be described as the ability of a practitioner to 'think on their feet' and to critically respond during an experience. Reflection-on-action (or reflection on practice) occurs after the experience where a practitioner analyses their reaction to a situation and explores the reasons for and the consequences of their actions. This theory has been used to guide a number of IPE programs in the United Kingdom (Goosey & Barr, 2002), however, reflective practice is seen as a desired outcome of most undergraduate curricula, and is not specific to IPE.

Transformative Learning Theory

It seems, therefore, that IPE currently lacks a single binding theoretical paradigm, however, there appears to be even less known about the processes that lead from translation of IPE into practice, and how it might result in enhanced IPCP. In their unpublished report '*A research agenda for interprofessional education research opportunities at Flinders University*' (2014, p. 7), the ViTA IPE project working group of Flinders University questioned, "what are the processes that take students from what I know to who I am?" They suggested that this research gap asking how IPE translates from learning to practice (the bridge) should be explored further.

Mezirow's transformative learning theory may offer a conceptual framework (Mezirow, 1995) for how this bridge is formed. This adult education theory presents ways in which adult learners achieve deep learning by making meaning of their lives based in the context in which learning occurs, and how they formulate different frames of reference which challenge previously held assumptions based on every day experiences (Mezirow, 2003).

The everyday workplace that junior health professionals are exposed to provides a rich environment for examining the IPE learning processes that occur. Mezirow (1981) described ten steps that occur for transformation to take place. Many of these will be discussed at various stages in this thesis where they relate to the Get Ready program and its outcomes.

The ten steps are as follows: 1) a disorientating dilemma; 2) self-examination; 3) critical assessment of personally internalised role assumptions and a sense of alienation from traditional social experiences; 4) relating one's discontent to similar experiences of others; 5) exploring options for new ways of acting, 6) building confidence and self-confidence in new roles; 7) planning a course of action; 8) acquiring knowledge and skills for implementing one's plans; 9) provisional efforts to try new roles and to assess feedback; and 10) a reintegration into society on the basis of conditions dictated to by the new perspective (Mezirow 1981, p.7).

Mezirow (1997) also suggested transformations come about in one of four ways: 1) elaborating existing frames of references; 2) learning new frames of reference; 3) transforming points of view; and 4) transforming habits of mind.

Based on this theory, it is believed that ongoing learning will differ among students as they enter the workplace and have different interprofessional experiences. Sargeant (2009, p. 182) explored the theoretical underpinnings for IPE, including transformative learning theory, and described transformative learning in this context as, "not just tinkering around the edges". He argued that IPE teaches more than just superficial knowledge or clinical skills, that it also has the ability to challenge previously held assumptions and stereotypes and change how health professionals see themselves and value other members of the healthcare team (Sargeant, 2009). These IPE competencies have been defined by the Canadian Interprofessional Health Collaborative (CIHC, 2010, p. 9) as, "the understanding of knowledge, clinical, technical, and communications skills, and the ability to problem solve through the use of clinical judgement". Specifically, the CIHC (2010) lists the following as core IPE competencies: role clarification, team functioning, addressing interprofessional conflict, and collaborative leadership.

2.3 LONGITUDINAL IPE STUDIES

Many studies focusing on undergraduates have shown that IPE can lead to improved knowledge, skills or attitudes of students in various interprofessional domains (Reeves et al., 2002; McNair, Stone, Sims & Curtis, 2005; Cartwright et al., 2015).

However, unlike traditional uniprofessional curricula, the content of IPE focuses not just on knowledge or clinical skills but also on other interprofessional competencies, as described above (CIHC, 2010).

Studies indicate that support for IPE may also vary between different professions (Curran, Sharpe, Flynn & Button, 2010), with different work experience (Pollard, Miers & Gilchrist, 2004), prior higher education qualifications, and with age (Pollard & Miers, 2008). However, many of these studies focus on short-term undergraduate educational initiatives, for example, before and after studies (Ruebling et al., 2014; Delunas et al., 2014; Kerr et al., 2003, Cartwright et al., 2015). The few longitudinal studies (Carpenter et al., 1996; Curran et al., 2010; Pollard et al., 2004; Pollard, Miers, & Gilchrist, 2005; Pollard, Miers, Gilchrist & Sayers, 2006; Coster et al., 2008; McFadyen, Webster, Maclaren & O'Neill, 2010; Pollard, Miers & Rickaby, 2012; Kururi et al., 2014) have generally shown mixed results. For example, one study by Carpenter et al., (1996) on a shared learning program for final year social work and medical students showed that, although overall attitudes towards the other professions improved, students' attitudes towards IPE itself worsened.

Curran et al. (2010) evaluated the longitudinal effect of an IPE curriculum on undergraduate health students' attitudes towards IPE and teamwork. The study involved the evaluation of a whole new IPE curriculum for undergraduate medical, nursing, pharmacy and social work students at the Memorial University of Newfoundland, Canada. It was a time series study design over three years using repeat measurements with both quantitative IPE assessment tools and qualitative questionnaires completed before, one year post and two years post introduction of the new curriculum. The main finding was that introduction of a longitudinal IPE curriculum did not change students' attitudes towards interprofessional teamwork or IPE, however, they did not attempt to explain why this was so. There were also significant differences between the professions, with medical students showing the lowest mean scores. Interestingly, Curran et al., (2010, p.50) proposed that this difference could be explained by "IPE overload" in the medical students, since they participated in more IPE than any of the other groups.

This was due to the fact that the IPE modules were compulsory for the medical students but voluntary for the others. This suggests that too much IPE or possibly making the IPE curriculum compulsory for the medical students may have had a negative effect.

Very few studies have followed health and social care students from pre-qualification level through graduation and into the workplace itself to assess if attitudes towards IPE and collaborative practice in are maintained or transformed. In contrast to postgraduate IPE, there remains a lack of evidence showing how undergraduate IPE can improve IPCP and almost no evidence showing improvements in patient care or service delivery (Zwarenstein, Reeves & Perrier, 2005; Pollard, Miers, & Rickaby, 2012). Some have suggested that this lack of evidence should not lead to the assumption that undergraduate IPE is ineffective (Zwarenstein et al., 2005). It may partly reflect that fact that the effect of undergraduate IPE on health outcomes and service delivery is difficult to demonstrate given the many confounding variables and methodological challenges of designing such studies. These challenges include a long and variable duration of time from undergraduate education to practice and the random allocation of postgraduate students to different units all with different collaborative work practices.

Reeves & Freeth (2002) implemented a four-week undergraduate interprofessional training ward for senior pre-graduate students that included students from nursing, physiotherapy, occupational therapy and medicine and then interviewed the same individuals one year later as qualified health practitioners. They found that the IP training ward was viewed as a positive experience in general and helped prepare the participants at the start of their professional practice. The authors stated “offering students who are near to qualification a clinically relevant, interprofessional placement can provide them with helpful experiences of collaboration which they can draw upon in the early part of their clinical careers” (Reeves & Freeth. 2002, p. 50).

Pollard and Miers (2008) followed up a cohort of separate students in an interprofessional curriculum and uniprofessional curriculum at various stages during their course: on entry, during the course and at nine to twelve months post qualification. Between qualification and practice the interprofessional cohort sustained and often developed more positive attitudes towards collaborative working (communication & teamwork and interprofessional relationships) but actually grew more critical of IPE itself. Pollard et al., (2012) argue that pre-qualification IPE has influenced their perspective of interprofessional issues post-

qualification but as this is a purely quantitative study do not attempt to describe how or see what else may have influenced the participants attitudes post qualification.

Pollard et al., (2012) followed up a small selection of the same students from the interprofessional (IP) group that had been practicing for between one to two years and compared them with a group of students from the uniprofessional curriculum who had been practicing for between five to six years. They also found that pre-graduate IPE could help prepare students for IPCP, which in turn may have a positive effect on service delivery (Pollard et al., 2012).

In general, however, there remains a paucity of studies evaluating the effects of pre-graduate IPE programs on the practice of postgraduate health professionals. Humphries & Hean (2004, p. 27) pointed out that there remains a "need to commission longitudinal impact studies designed on sound theoretical principles" and that, "following cohorts of students over time into practice is fundamental". They further conclude that it is important to assess how the attitudes/behaviours and knowledge learned in the pre-qualification stage convert to good IPCP, post qualification.

2.4 QUANTITATIVE TOOLS FOR MEASURING IPE

As described above, IPE and IPCP are now recognized as vitally important in modern healthcare by various leading health bodies worldwide, such as the WHO (2010) and the Australian Office for Learning and Teaching (Interprofessional Curriculum Renewal Consortium, Australia, 2014). There have also been increasing numbers of IPE programs worldwide, which has led to a growing number of quantitative tools in the IPE literature designed to evaluate IPE programs.

The CIHC performed a comprehensive literature review and published an inventory of quantitative tools measuring IPE in 2012 (CIHC, 2012). It is not exhaustive but lists a total of 128 separate tools from 136 articles. Many of these tools have been custom-designed to meet the needs of local programs and have been used as a one-off to evaluate outcomes after an intervention.

The authors admit that they, "did not appraise the tools for quality, psychometric rigor, ease of use, or applicability", (CIHC, 2012, p.8) because these were too hard to determine from the studies.

In one meta analysis of IPE tools (Gillan, Lovricks, Waalpern, Wiljer & Harnett, 2011) which looked at 163 articles and reviewed 33 relevant tools, only 21% were used on more than one occasion and the validity and reliability of most were not established.

As such, most authors have concluded that there is no gold standard tool available for assessing learning outcomes from IPE, but most sort the tools based on Barr's (2005) six-level learner outcome hierarchy, which was based on the Kirkpatrick's (1967) four-level typology. This is outlined in *Table* 1 below.

Table 1: Typology for outcomes of IPE (Barr et al., 2000)

Level 1: Reaction Learners' views on the learning experience and its interprofessional nature
Level 2a: Modification of attitudes/perceptions Changes in reciprocal attitudes or perceptions between participant groups. Changes in perception or attitude towards the value or use of team approaches to caring for a specific client group
Level 2b: Acquisition of knowledge/skills Including knowledge and skills linked to interprofessional collaboration
Level 3: Behavioural change Identifies individuals' transfer of interprofessional learning to their practice setting and changed professional practice
Level 4a: Changes in organisational practice Wider changes in the organisation and delivery of care
Level 4b: Benefits to patients/clients, families and communities Improvements in health or well-being of patients/clients, families and communities

The majority of the tools listed by CIHC measure learner outcomes at level 1 or 2a; that is, a learner's attitudes about other disciplines or about working with other professions or knowledge/skill acquisition; whereas, there is a lack of tools which assess outcomes at an organisational or patient/client or community level (CIHC, 2012).

A recent paper (Oates & Davidson, 2015) sought to critically appraise the tools available in the pre-qualification IPE literature.

One hundred and forty instruments were initially identified using a mixture of sources including the CIHC. Certain tools were excluded if they did not meet strict inclusion criteria such as reporting on how to the tool was developed or the psychometric testing of the instrument. Only nine individual IPE tools were selected from the pool of instruments and then critically appraised, looking at factors such as validity evidence (test content and internal structure) and reliability. Out of the nine instruments assessed, only the Interprofessional Socialization and Valuing Scale (ISVS) tool (King et al., 2010) was deemed to meet the standards relating to instrument development. Five instruments partially met the standards, and three did not meet the standards at all. Unlike many other IPE tools, the authors also state the ISVS tool has the benefit of measuring IPE outcomes across multiple levels, including levels 2a, 2b and 3.

The National Centre for Interprofessional Practice and Education (NCIPE) have collated a list of 26 peer-reviewed interprofessional practice and education measurement instruments, although they do not endorse any particular tool. The ISVS tool (King et al., 2010) used in this study appears on both the CIHC and NCIPE instrument list.

2.5 SUMMARY

In summary, IPE lacks a single binding theoretical paradigm and the processes that lead from undergraduate IPE to effective postgraduate collaborative interprofessional practice are complex and remain poorly understood. Transformative learning theory may offer some insight into the ‘bridge’, and therefore, the study investigator’s intention was to explore its use to inform this research and that of future studies.

CHAPTER 3 – METHODOLOGY

3.1 INTRODUCTION

The study was designed to follow-up graduates of the Get Ready program using a mixed method approach composed of three parts: (1) an online survey; (2) a validated quantitative interprofessional learning assessment tool; and (3) a qualitative component using structured telephone interviews. This study design was both sequential and transformative (Creswell, 2003) in order to align each component with a theoretical perspective, in this case Mezirow's transformative learning (Mezirow,1981) theory, as applied to IPE and IPCP. The interview questions used were developed using Mezirow's transformative learning theory ten steps as a framework (Mezirow 1981, p.7). For example themes included, self-examination, reassessment of previously held beliefs on traditional roles, reassessment of individuals' professional identity, acquiring knowledge and skills to allow the implementation of new roles and reintegrating these new beliefs into practice (see Appendix 5). Quantitative data was collected and briefly analysed first. The qualitative data was then collected and the results of both were integrated in the interpretation phase of the study.

3.2 STUDY PERSPECTIVE

The research questions for this project arose out of the perceived gaps in the understanding of IPE that came out of the literature review, particularly in regards to how health students transform what they learned during undergraduate IPE and put it into practice in order to achieve effective IPCP. There is a need to explore what processes allow the bridge from learning to practice to occur but also whether there are potential barriers that prevent the process of transfer to practice from occurring.

The questions to be answered by this study were:

1.Can students who undertake a pre-graduate IPE program maintain the interprofessional knowledge, skills & attitudes learned in the course after a period of time of less than two years in the clinical environment? (i.e. maintenance of perceived interprofessional competencies once in the workplace).

2. Are they able to use or utilise their perceived interprofessional competencies they learned in the course as newly graduated health professionals in the workforce? If so how? (i.e. transfer of learning to their practice setting). If not what were the barriers?

3. Did the students' unique experiences in the work place to date help transform their understanding of collaborative practice? If so, how? (i.e. impact of interprofessional collaborative practice experience on students).

The overarching aim of this study is to provide a better understanding of whether pre-graduate IPE can have not only a sustained but also a transformative impact on the interprofessional competencies of health professionals once they are in the workplace. The qualitative component of this project will align with Mezirow's transformative learning theory to further explore the transformation of IPE theory to practice for junior health professionals.

3.3 RESEARCH CONTEXT

3.3.1 Background to the IPE intervention: The *Get Ready program*

The final report of the special commission of inquiry acute care services in NSW public hospital (Garling, 2008, p.354) recommended that HETI adopt the guiding principle that clinical education and training be undertaken in a 'multi-disciplinary environment that emphasises interdisciplinary team-based patient-centred care', and that 'the why and wherefore of this reform needs to be taught in the undergraduate and early clinical training years.

Following this, NSW Health LHDs and SHNs actively promoted the development of patient-centred, team-based care with an emphasis on interprofessional practice, teamwork, communication and collaboration. As such, in 2011 HETI (then CETI) undertook an initiative called the '*Right Start: Transition to Work in Health*' as a dedicated transition program aimed at all NSW students during their last year of pre-graduate study. The target audience was taken from a wide range of clinical disciplines including medical, nursing, midwifery and allied health students across NSW. Expressions of interest were called for the development of a program designed specifically for final year health professional students around the time of graduation.

One of the outcomes of this expression of interest (EOI) was the development of Get Ready program by St Vincent's and Mater Health (along with their university partners).

Following the success of the Get Ready pilot program that year, HETI further developed the program for use across NSW. The original resources were adapted and enhanced and then offered to all LHDs and SHNs between 2012 and 2015 along with a Train-the-Trainer program run centrally. In 2013, HETI also conducted this facilitator training for LHDs/SHNs committing to the program and offering financial support and resources to assist in its delivery and to help with three aspects of the program: 1) a full day facilitator training day in Sydney (including travel costs and accommodation; 2) back-fill for local co-facilitators (allied health, nursing, medical) to plan, implement and evaluate the program; and 3) program costs (lecture fees, consumables, printing, food/beverages).

HETI also supported LHDs/SHNs with core and adaptable program materials for facilitators and participants including DVDs, facilitator train-the-trainer guides and scenario resources, facilitator guides, generic participant manuals with guidance to localise these resources, evaluation tools and support, ongoing support and advice for local facilitators and advice to tailor simulation activities to local context.

Following the piloting and evaluation of Get Ready HETI intended to further review the module and initiate negotiations with the tertiary sector to incorporate the program with its interprofessional education emphasis into the relevant curricula. Between 2011 and 2014 there were 10 separate Get Ready programs run as at least once in the following eight LHDs/SHNs (and at some sites twice): St Vincent's and Mater Health Sydney, Mid North Coast, North Coast, Central Coast, North Sydney, Nepean Blue Mountains, South Western Sydney (SWSLHD) and Murrumbidgee. A total of 237 final year pre-graduate students from eight different professions (nursing, medicine, social work, speech pathology, occupational therapy, physiotherapy, dietetics and radiography) from eleven different universities completed the pre-graduate program.

Table 2: Get Ready programs run in NSW

LHD/SHN	No. Courses run	No students
St Vincent's	2	98
Central Coast	1	14
North Sydney	1	10
Mid N Coast	1	17
North Coast	1	23
Murrumbidgee	1	10
Nepean Blue Mts	1	17
SWSLHD	2	48
	10	**237**

With the recommendations of the Garling Report (2009) in mind the content of the Get Ready program was based on the competency framework from the Canadian Interprofessional Health Collaborative (CIHC, 2010). The CIHC framework provided an integrated approach to describing the competencies that provide a dynamic and flexible foundation for interprofessional learning and practice. The framework embodies many of the core ideas expressed in other competencies documents, and its authors had made it internationally available for use by others (CIHC, 2010). The CIHC comprises four interdependent competency domains which are underpinned and supported by two others: 1) Role clarification; 2) Team functioning; 3) Addressing interprofessional conflict; 4) Collaborative leadership; 5) Supported by interprofessional communication and 6) patient-centred care (see Figure 1).

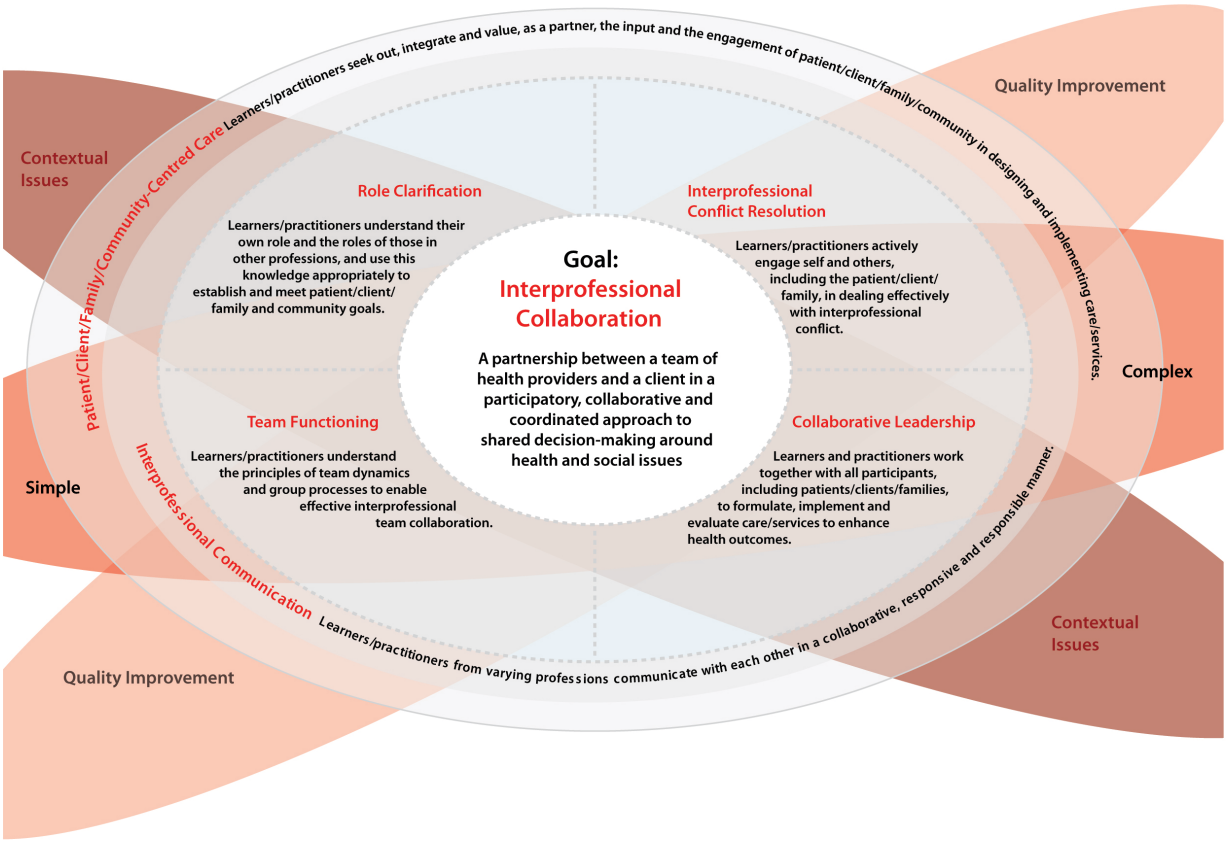

Figure 1: The National Competency Framework (Source: CIHC, 2010, page 11)

3.3.2 Content and Delivery of the Get Ready Program

The program was designed to be delivered to final year pre-qualification students and to be embedded in the students' final clinical placement. This is so the students could put into practice some of the interprofessional skills and competencies they were learning in the course in real life clinical situations. The aim was to help encourage reflective practice by setting aside dedicated sessions where the students could reflect on the course but also their own work experiences during their placement.

The Get Ready program was originally developed as a five-day experiential course using multi-modal methods of instruction and learning. There was an emphasis on active learning methods such as role-plays, patient-client team-based simulations, skills modelling, and team-based tasks but the program also included DVDs and a number of didactic lectures. The program was designed to be flexible and could be tailored to local needs, however, the core content and teaching materials that were used remained the same, including the evaluation tools.

It was delivered on site at each of the LHD/SHNs by local program facilitators from a mix of allied health, nursing & midwifery and medical disciplines to ensure an interprofessional approach and to help role model best practice by local interprofessional education champions. The simulation activities in particularly were, in most cases developed locally and adapted to meet local education needs.

3.4 PARTICIPANTS

The participants involved in the project were junior healthcare professionals who had graduated from university and had completed the Get Ready program in NSW as pre-qualification students. There was a mixture of medical, nursing and allied health professionals consisting of physiotherapy, occupational therapy, speech pathology and social work who had graduated and been in the workplace for between four and sixteen months. The majority were still working in the health professions but one participant was employed in a non-health related profession and one was currently unemployed. All the participants had completed the Get Ready program in NSW between 2012 and 2014 as final year students, and had given written consent to be followed up for a study such as this, giving their university or personal emails as a method of correspondence.

3.5 PROCEDURES

Prior to commencing the data collection phase of the project, ethics approval was sought from and granted by the Social and Behavioural Research Ethics Committee (SBREC) of Flinders University, which deemed it to be a 'Low or Negligible Risk' research project. The application required the lead researcher to submit a national ethics application form, a low or negligible risk assessment application form, the study protocol, a participant consent form, a participant information sheet and the research collection tools. The low risk sub-committee of the SBREC then granted final ethics approval on 26th February 2015 with the project number 6774.

With the help of the original HETI program lead for the Get Ready program and secondary supervisor, Ms. Marie Heydon, and after gaining consent from the then Chief Executive of HETI, Ms. Heather Gray, local program leads for all the LHDs/SHNs were identified and contacted by email requesting the following pieces of raw data shown in *Table 3.*

Table 3: Raw data requested from Get Ready program leads

Dates and location of all local Get Ready programs
Study numbers and names of the students so they could be matched up the scores (then de-identified)
Student demographics including age, sex and health profession (medical, nursing and each allied health profession)
Post course ISVS scores (Interprofessional Socialization and Valuing Scale)
Personal email addresses that the students gave after the original Get Ready program
Consent form giving consent to be contacted for follow-up studies such as this.

Out of eight LHD/SHNs that have run the Get Ready program, six responded by providing raw data from their courses. Out of these six, four provided contact emails for the participants and out of these only one course centre (SWSLHD) was able to provide a full data set for their participants. The information from this data was collated and entered onto an Excel spreadsheet, collating the names (later de-identified), ISVS scores and email addresses. Essentially a convenience sample was collated which comprised of 80 students from four different Get Ready programs out of the original 237 participants. These were students who had complete data sets and email addresses that allowed them to be contacted and included in the initial phase of the study. These 80 students had completed the Get Ready program sometime between November 2012 and November 2014 before going on to graduate. They had therefore been in the workforce for a variable amount of time before being contacted for this study, ranging for between three months and 27 months.

3.5.1 Recruitment and Ethical issues

An initial email and then two email reminders (see Appendix 1) were sent over a period of six weeks in March/April 2015 to these 80 now graduated health professionals. The email included a participant information sheet (see Appendix 4), a link to the on-line survey (see Appendix 2) and the ISVS tool (see Appendix 3). Ethics approval was granted from the Social and Behavioural Research Ethics Committee (SBREC) of Flinders University, which deemed it to be a 'Low or Negligible Risk' research project. Care was taken to ensure that participants were treated equitably and respect, including securing informed consent and maintaining anonymity and confidentiality. All the participants who were contacted for this study had previously given their email addresses and provided written consent to be contacted for follow up studies, such at this. Consent for completing the on-line survey was deemed to have occurred by the participant completing and returning the on-line survey.

Participants were asked to identify themselves on the initial survey so that the data could be matched with the ISVS data from the original Get Ready program. The combined data was then re-deidentified, all participants were given a new study number, and their names were removed to ensure confidentiality. The email also invited participants to consent to the telephone interview by signing and returning a written consent form, which was attached to the email. Only those participants who provided informed consent for this stage of the research were then also contacted for the telephone interviews.

Once the audio recordings of the telephone interviews once transcribed they were deleted and all data was kept electronically in a password-encrypted file on a single laptop computer in a secure office, ensuring the lead researcher had exclusive access to this information. All original Get Ready and follow up ISVS hard copies were securely destroyed. Any remaining data will be kept in a securely locked filing cabinet within the office of the lead researcher for a period of seven years from the date of submission of the project or if published, from the date of publication and then destroyed.

3.5.2 On-line survey and demographics

An electronic survey was designed, using Survey Monkey (Copyright © 1999-2016 Survey Monkey) in order to obtain further information summarised in *Table 4.*

Table 4: Types of questions asked in survey

Participant demographics (age, gender)
Professional and employment details (profession, years in the workforce, current employment status, current practice setting)
Views on the importance of pre-graduate IPE
Views on how important Get Ready was for helping them achieve IPCP in the workplace
Views on the importance of postgraduate IPE
Details on how established postgraduate IPE is in their practice

See Appendix 2 for a full list of the questions

3.5.3 Quantitative component – ISVS: Interprofessional Socialization and Valuing Scale tool (ISVS © King, Shaw, Orchard & Miller, January 2008)

The ISVS tool was chosen prior to this research study by HETI and the original developers of the Get Ready program to evaluate the program. It was used by local educators to assess the educational outcomes from their own Get Ready programs and in each case was completed by student participants before the start of and immediately after completion of the program. In this study only the ISVS scores collected immediately after the Get Ready program were collated for each student. The same participants were then asked to repeat the ISVS, resulting in a series of matched ISVS scores for each individual (post Get Ready/pre-graduate ISVS score and then a current ISVS score). This allowed direct comparisons to be made in terms of IPCP and self-perceived competencies at the pre-graduate level and then again as junior health professionals after a short period of the time in the workplace. The ISVS tool was uploaded onto Survey Monkey (Copyright © 1999-2016 Survey Monkey) and followed the on-line electronic survey.

The ISVS itself is a quantitative self-measurement tool that assesses participants' perceived interprofessional competencies and can be used to measure outcomes across different domains looking at students' scores pre and post an IPE course or workshop (King et al., 2010). It should be noted that the ISVS is not an objective measurement of interprofessional competency but assesses **self-perceived** abilities in interprofessional beliefs, attitudes and behaviours. The ISVS was designed to also measure the degree to which transformative learning takes place and as such the authors advocate its use for this. It was felt it would be a useful tool to measure the degree to which post-Get Ready junior health professionals self-perceived ability to work with others, value in working with others, and comfort in working with others was influenced after a period of time in the workplace.

In further detail, the ISVS is a 24-item tool that has a seven-point Likert scale used to assess the extent of shift towards collaborative care in health care settings with each item rated with either a 7= to a very great extent; 6= to a great extent; 5= To a fairly great extent; 4= To a moderate extent; 3 = To a small extent; 2 = To a very small extent or 1 = Not at all. The tool has three subscales: **Ability** to work with others (nine items), **Value** in working with others (nine items), and **Comfort** in working with others (six items). The tool has a strong factor structure and a high degree of internal consistency with Cronbach's alpha coefficients ranging from 0.79 – 0.89 across the three subscales.

Similar Cronbach alpha scores have been found in other studies where ISVS has been used to measure outcomes of an educational initiative (O'Brien, McCallin & Bassett, 2013); or used to measure students progress before and after an educational program (Cartwright et al., 2015). Please see Appendix 3 for the full ISVS tool.

3.5.4 Telephone Interviews

The semi-structured telephone interview questions were designed to examine the students' unique transformative learning experiences in the workplace. The telephone interview consisted of 10 questions and was designed to last around 30 to 40 minutes. It aimed to determine if participants remembered what they learned in the Get Ready program, the extent to which the Get Ready program helped prepare them for real life clinical practice and what impact the Get Ready program has on their current interprofessional practice. Where possible participants were asked to provide specific examples of what they had learned from the Get Ready program and how they applied it to clinical practice. Examples given included interpersonal conflict resolution in action or experiences to date that had helped to transform their understanding of IPCP and how this had occurred. A full list of the telephone questions can be found in Appendix 5.

3.5.5 Sample size

The on-line survey and quantitative component of the project relied on an initial non-randomised convenience sample of 80 students attained by collating data from various LHD sources as described to produce complete data sets for students who had completed the Get Ready program. Out of these, a non-probability sampling technique of self-selection was utilised as participants were emailed and invited to take part, firstly in the on-line survey and ISVS tool and then again for the telephone interview. Ideally a randomised sampling method would have been used. However, this would not have been possible due to the relatively small initial sample size resulting from the difficulty in collating raw data from multiple different study sites, long data collection period of two years and the relatively low response rate. Hence, one limitation was that the sampling size could not be predetermined and was dependent upon those willing to participate. The other potential risk in this technique is that the results may have been biased due to the possibility that those who chose to participate in the study may have had strong opinions or feelings either way regarding IPE, which may have varied from those who decided not to participate or who could not be contacted.

After receiving expert statistical advice, the non-medical professions were grouped together into one combined group for the statistical analysis of the ISVS scores, since the number of participants was low with some of the non-medical groups being made up of only one or two participants (physiotherapy, speech therapy and social work). The grouping resulted in two final groups with similar numbers for comparison in the statistical analysis, nine from medicine and eight from non-medical professions. It is acknowledged that this may have limited the accuracy of the results given the 'non-medicine' group was assumed to be a homogenous group. In fact, the 'non-medicine' group was made up of four different health professions with likely very different view points on IPE and IPCP, hence this group may not have represented the individual professions that it was made up of.

3.6 THEMATIC ANALYSIS OF QUALITATIVE DATA

Thematic analysis of the qualitative data from the telephone transcripts was undertaken using both deductive and inductive methods (Vaismoradi et al., 2013). This method was chosen as it allowed the researcher looked for patterns and common themes, which related to the Mezirow's transformational learning theory and the research questions being asked in this study. It also allowed themes to be based on a new and independent interpretation of the raw data. An open coding approach was then adopted using a three level analysis:

Level 1: Noting and Thinking

Data was read multiple times to achieve a good general understanding of the transcripts and then each interview transcript was read word by word to derive multiple statements summarising individual sentences using descriptive terms that captured the essence of each statement.

Level 2: Sorting and Categorising

These summary statements were then closely analysed looking for common themes including those related to transformative learning, then sorted and categorised into a list of 10 general themes. The transcripts and how the data was categorised into level one and two themes were also sent to the lead supervisor for correlation.

Level 3: Coding/final categories

All transcripts were then re-read and analysed again with these themes in mind, resulting in the categories being refined into a smaller group of five codes/themes, some relating to transformative learning, others derived inductively from the raw data.

As the amount of data collected was small, it was decided to complete the process manually rather than use a software program like NVivo (© QSR International Pty Ltd). A limitation of this study is that no member checking was done, as interviewees were not given the opportunity to review the researcher's interpretation of the data, since this was deemed to be logistically too difficult.

3.7 SUMMARY

In summary, this project used a sequential, transformative, mixed methods design comprising of an on-line survey/questionnaire, a validated quantitative assessment tool (ISVS) and a semi-structured telephone interview. This allowed all components of the study to align with the same theoretical paradigm, Mezirow's transformative learning theory.

CHAPTER 4 – RESULTS

In this chapter, demographic information about the study sample is presented first, followed by attitudinal results from the on-line survey. Following this the quantitative results and trends from the paired ISVS scores are presented with statistical analysis of these paired ISVS scores. Finally, the findings of the detailed thematic analysis of the telephone interviews are revealed.

4.1 QUANTITATIVE

4.1.1 On-line Survey

Of the 80 people who were initially emailed inviting them to take part in the study, 18 people responded by completing the on-line survey. This represents a response rate of 22.5%, which is marginally lower than the required response rate of 25% under 'liberal conditions' for this sample size recommended by Nulty (2008). It should be noted, however, that this sample represents a non-randomised convenience sample and not a randomised sample, which the formula for the recommended response rate is based upon (Nulty, 2008).

Demographics

There were 15 female participants and three male participants. This is representative of the whole cohort of the original Get Ready participants with an overall female: male ratio of 1:5. The gender ratio breakdown of individual specialties for nursing was similar to national trends with approximately 90% of nurses being women (Australian Bureau of Statistics, 2013). This was not the case for medicine where 2/3 of the doctors in this study were female compared with the national average where 43% of GPs and around one third (34%) of specialists were women (Australian Bureau of Statistics, 2013). The participants' ages ranged from 21 to 56 years with an average (mean) age of 26.38 years.

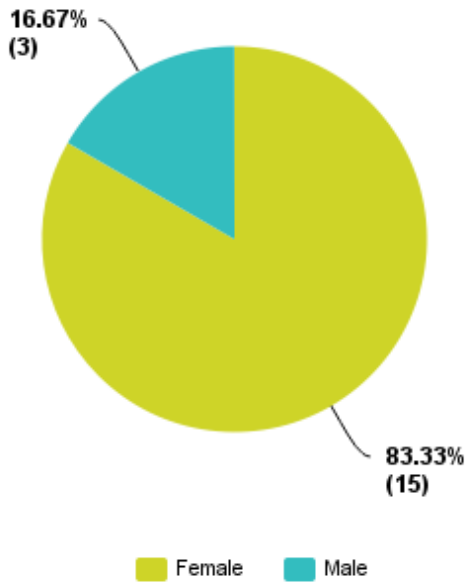

Figure 2: Sex of Participants

Health Profession

The 18 participants were from a diverse range of health disciplines representing five different health professions: nine from medicine (50%), four from nursing (22.2%), two from physiotherapy (11.1%), two from social work (11.1%) and one from speech therapy (5.5%). This higher ratio of medical students to nursing students is different to that found by the national audit of The Interprofessional Curriculum Renewal Consortium, Australia (2013, p. 44), which reported nursing students as the largest group involved in undergraduate IPE activities (over two-thirds) followed by medical students (60% of activities).

The numbers of students involved in this study resulted in two similar sized groups for the quantitative analysis composing of nine from medicine and nine when nursing and the allied health professions were combined. Although there were dieticians, pharmacists and radiographers represented in the original Get Ready student cohort, none of these professions were represented in this final study group.

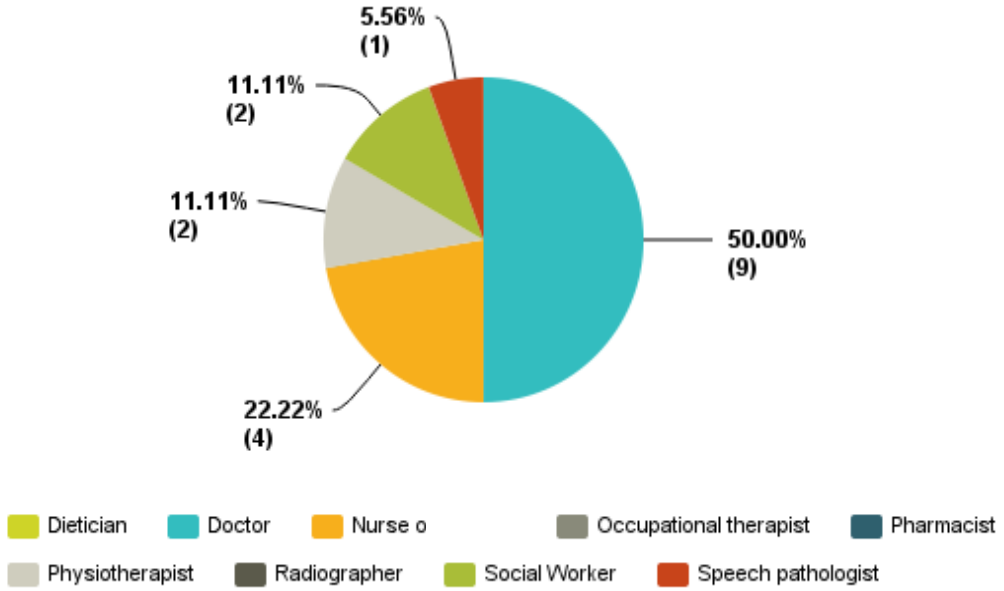

Figure 3: Type of health profession

Employment status

The majority of the participants were currently employed in full-time roles as health professionals (83.3%).

One participant was employed part-time in their health profession, one was employed in a non-health related profession, in this case, a social worker working in a secretarial role but looking for work as a social worker, and one physiotherapist was currently unemployed but looking for employment. These results are slightly lower than rates of graduate employment in health-related professions reported elsewhere, such as a large NSW-based university, The University of Technology, Sydney (UTS), which reports a rate of graduate employment (full time and part time) of 98% (UTS. Australian Graduate Survey, 2015).

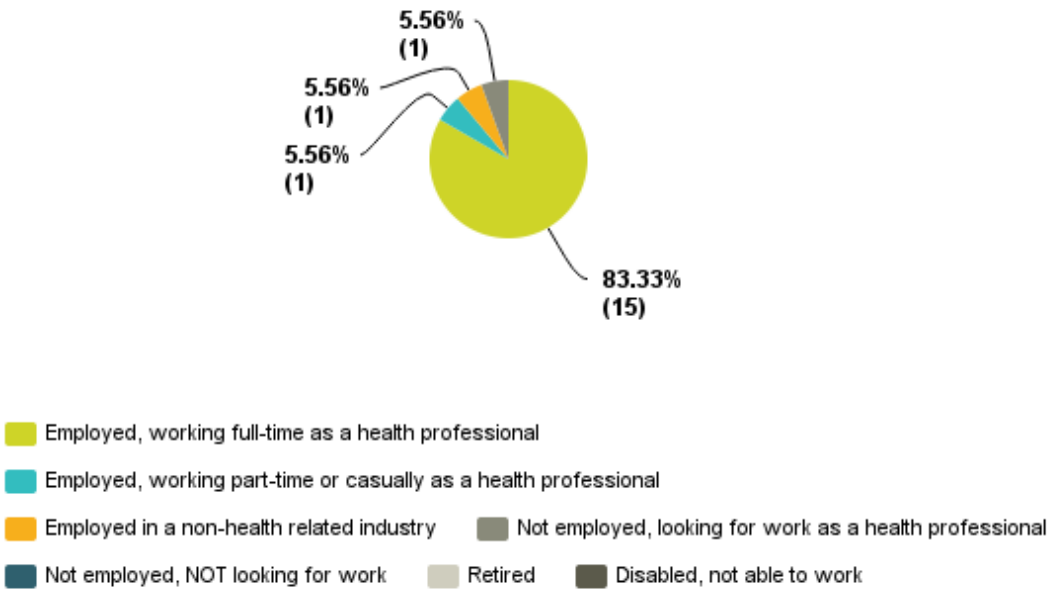

Figure 4: Employment status

Current practice setting

The majority of the participants (77.8%) were working in a hospital setting, one physiotherapist was working in the community, one nurse was working for a not for profit organisation, and one social worker was working in private industry.

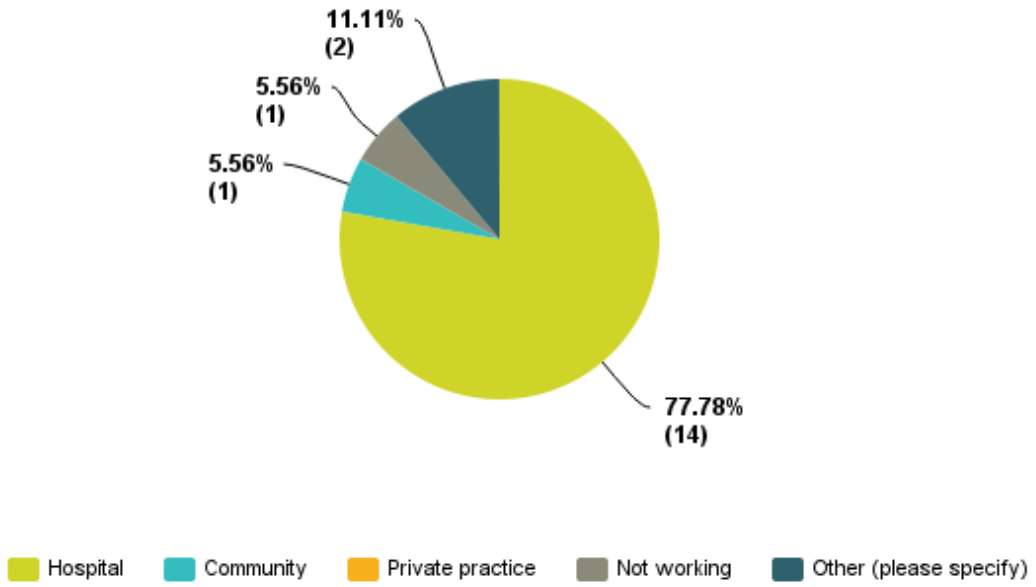

Figure 5: Current practice setting

Highest Level of Education

As expected, given the fact that all the participants had graduated in a health profession from an Australian University all the participants had a minimum level of education to a Bachelor Degree level (72.2%, n=13) with five participants (27.7%, n=5) also having attained a Masters degree or PhD.

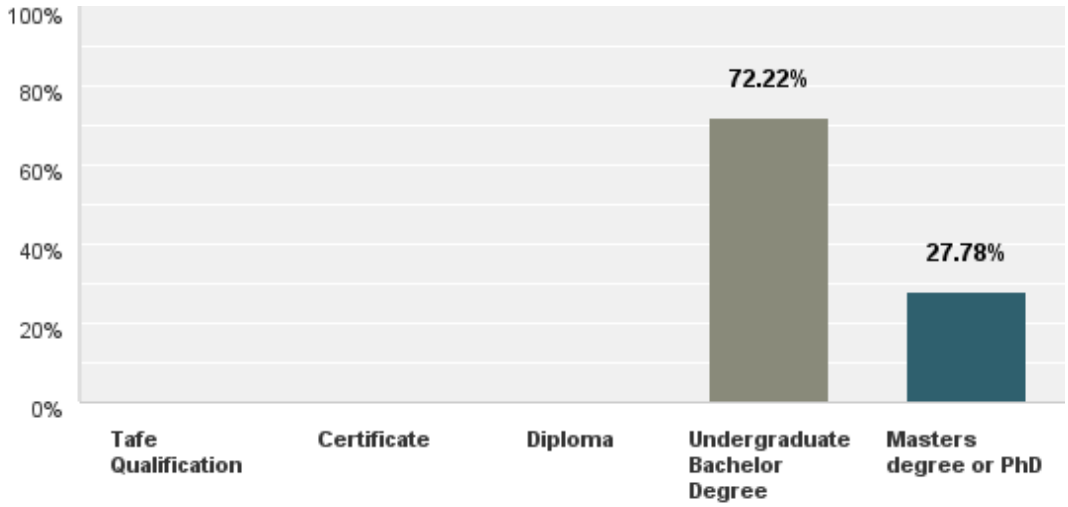

Figure 6: Highest level of education

Years of Clinical Experience

The participants had a range of length of clinical experience since graduating, ranging from three months to twenty-seven months, with an average length of clinical experience of 9.4 months.

Current work as part of an interprofessional healthcare team

The majority of participants (83.3%) identified as working in an interprofessional healthcare team, in line with the goals of NSW health (NSW Health, 2015) who state that “Multidisciplinary team care is a key feature of the.. NSW Health service model of care”.

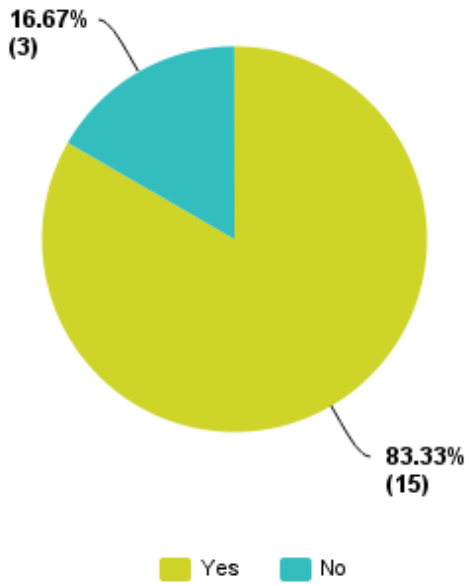

Figure 7: Work as part of an interprofessional healthcare team

4.1.2 Attitudinal Results

Importance of *pre-graduate* interprofessional education in helping to build future collaborative working relationships as junior health professionals

One hundred per cent (n= 18) of the participants reported that they thought pre-graduate IPE, in general, was either very important or important. This is consistent with studies that have shown that undergraduate IPE helped students prepare for IPCP (Pollard et al., 2012; Reeves et al., 2002).

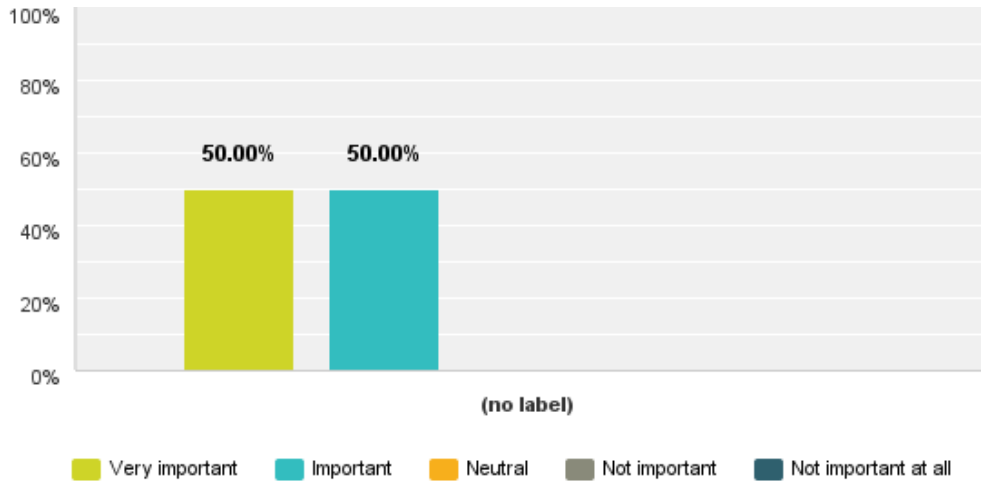

Figure 8: Importance of pre-graduate IPE

Importance of the Get Ready pre-graduate program in helping to prepare you for interprofessional collaborative practice as a junior health professional

The majority of participants (77.78%, n= 14) reported that the Get Ready program was either very important or important in helping to prepare them for IPCP. Four participants (22.2%) reported a neutral response, with no participants reporting it as not important.

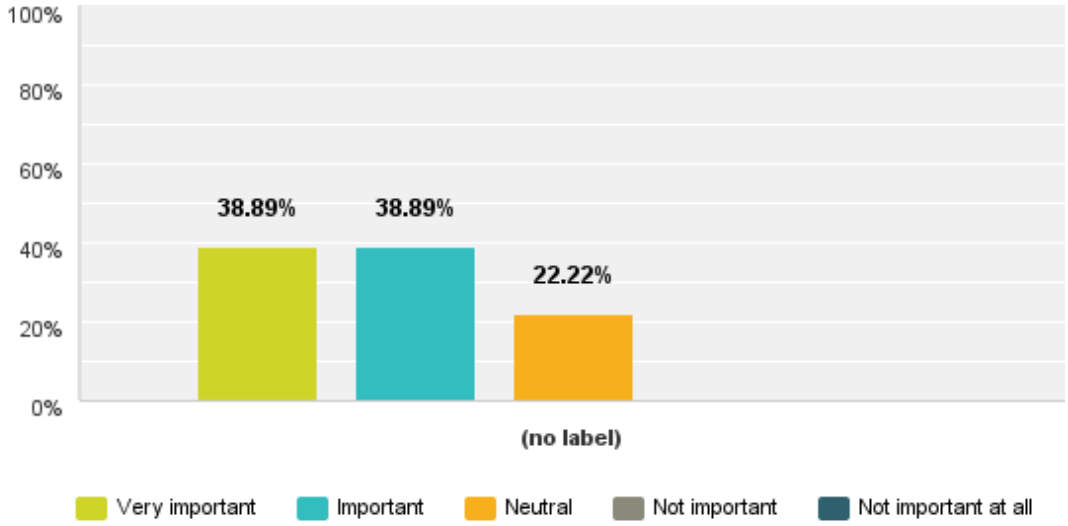

Figure 9: Importance of Get Ready in helping prepare for IPCP

Importance of the knowledge and skills learned in the Get Ready program to maintain effective interprofessional collaborative practice currently as a working junior health professional

Seventeen out of the 18 participants (94.4%) reported that the knowledge and skills learned in the Get Ready program was either very important or important in helping them to maintain effective IPCP as junior health professionals.

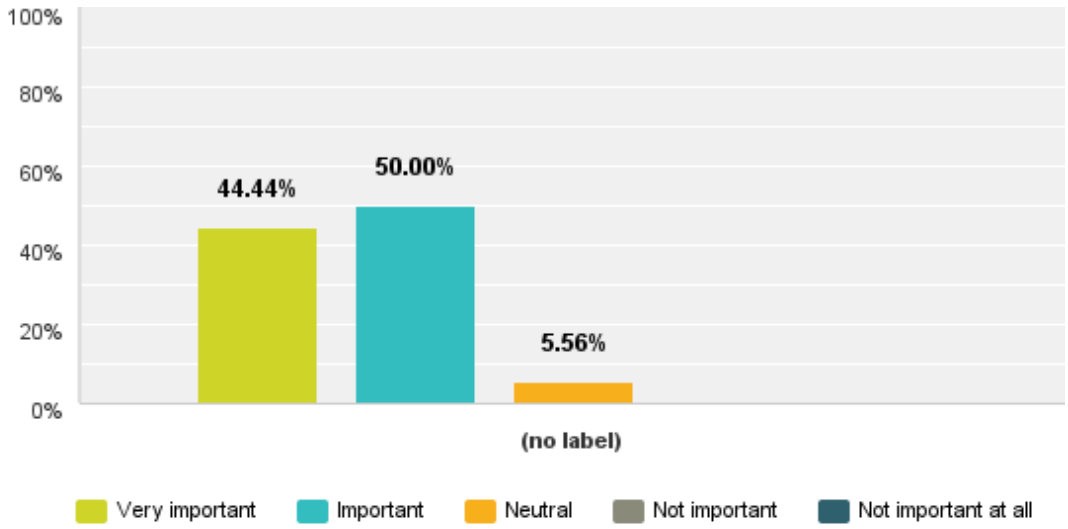

Figure 10: Importance of Get Ready in helping maintain effective IPCP

Importance of *postgraduate* interprofessional education for helping to maintain ongoing collaborative working relationships as junior health professionals

The majority of participants (94.4%, n=17) reported that postgraduate IPE was either very important or important in helping to maintain ongoing collaborative working relationships as junior health professionals. This indicated that the content of the program was relevant to current collaborative practice, in line with The Interprofessional Curriculum Renewal Consortium, Australia (2013, p.13) which, in their national audit, stated that "interprofessional practice (IPP) is…. essential to the development of safe, effective and sustainable health services, and IPE to building an IPP capable workforce".

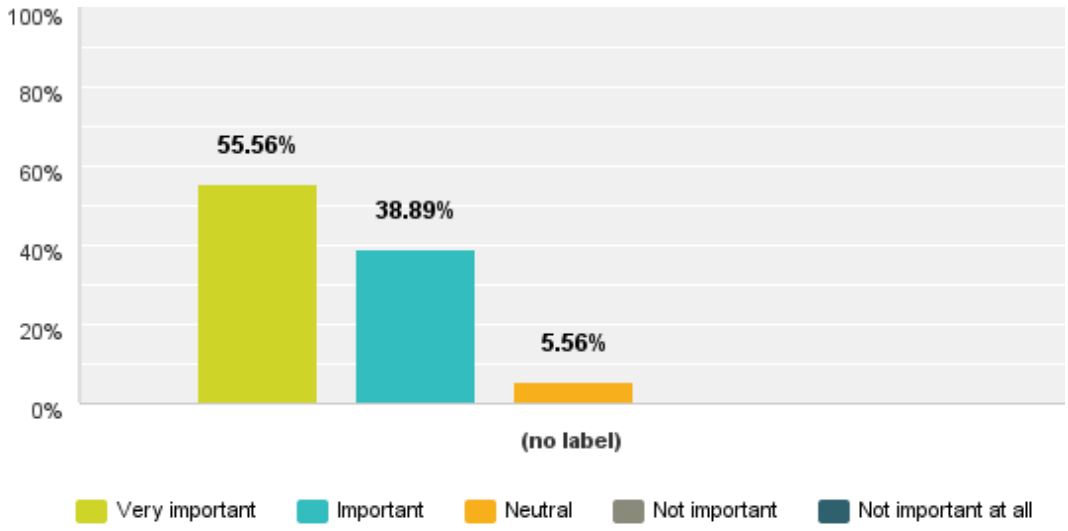

Figure 11: Importance of postgraduate IPE to maintain ongoing collaborative relationships

How established is *postgraduate* interprofessional education in current place of practice/placement/team

There were mixed results reported with six participants (33.3%) reporting that IPE was established in their work place and five participants (27.8%) reporting that they were either rarely or never involved in postgraduate IPE. Therefore, just over a third of the respondents worked in an environment that offered postgraduate IPE. This is similar to results from The Interprofessional Curriculum Renewal Consortium, Australia (2013, p.42) which in their national audit reported that out of the 70 IPE activities studied, only 20/70 (28.6%) were offered to postgraduate participants, commonly in combination with undergraduate students.

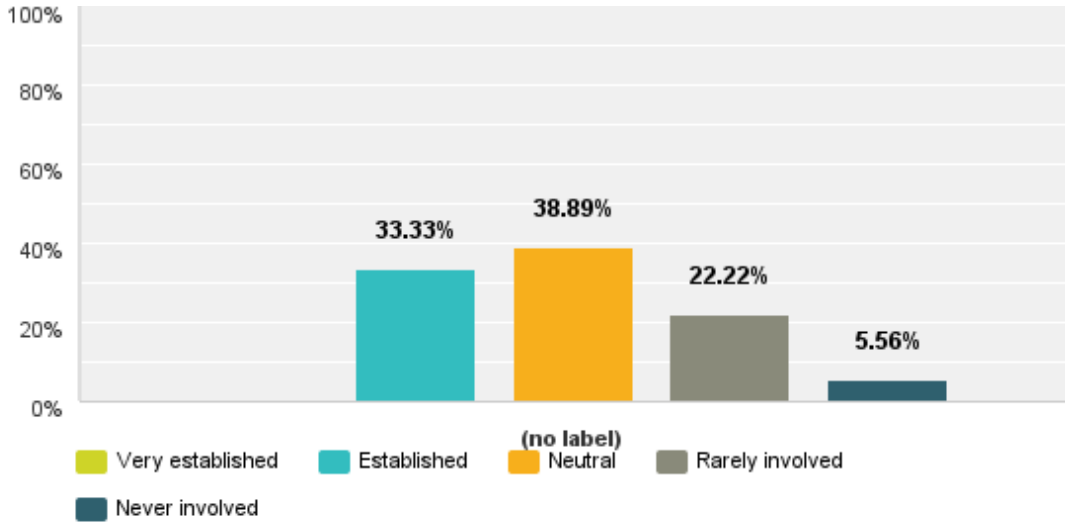

Figure 12: Level of establishment of postgraduate IPE in current placement

How many hours of interprofessional education do you estimate have you been involved in *since* graduation?

The majority of participants (94.4%) reported being involved in less than 40 hours of IPE since graduation, despite an average time since graduation of 9.4 months. The national audit report of the Interprofessional Curriculum Renewal Consortium, Australia (2013) did not report on total numbers of hours of IPE delivered (either pre- or post-gradate) but out of the 70 IPE activities studied most (55.7%) offered the IPE activity as a single discrete IPE activity and less than half offered it as ongoing IPE within a course/module.

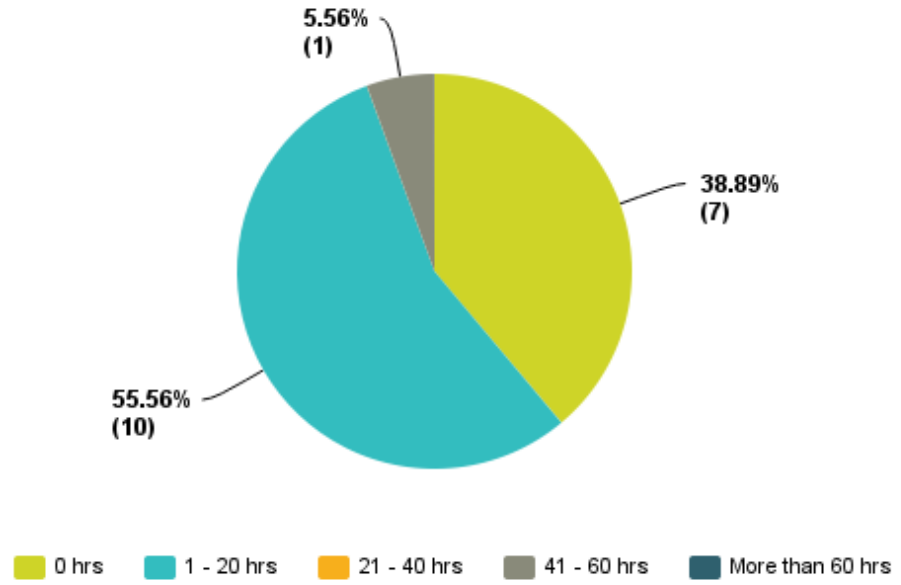

Figure 13: Estimated number of hours of IPE since graduation

4.1.3 ISVS Results

A pre and post-test design was undertaken to compare matched data for the participants' ISVS scores immediately post the Get Ready program (time zero) and the follow up postgraduate score in clinical practice as part of this study (time one).

ISVS subscales and score

As described earlier the ISVS score is composed of three subscales made up of a total of 24 question items. For ease of use the title of each subscale was shortened and named: *'Ability', 'Value' and 'Comfort'.*

- **Scale One: ABILITY** (self-perceived ability to work with others) comprising of nine items
- **Scale Two: VALUE** (self perceived value in working with others) comprising of nine items
- **SCALE Three: COMFORT** (self perceived comfort in working with others) comprising of six items

Each item in the tool has a seven point Likert scale with each item rated with either a 7= to a very great extent; 6= to a great extent; 5= To a fairly great extent; 4= To a moderate extent; 3 = To a small extent; 2 = To a very small extent or 1 = Not et all. This means the maximum mean score for each scale is seven and the minimum is one with the higher the mean scores for each subscale representing higher levels of self-perceived ability, value and comfort towards collaborative care in health care settings. Please see Appendix 3 for the full ISVS tool.

Pre-analysis

The ISVS scores from one of the participants, a speech therapist, could not be used as an incomplete ISVS questionnaire was returned resulting in a total of 17 matched pairs of scores used in the final analysis, n = 17. Since the numbers of participants overall was low and with some groups having only one or two participants (speech therapy, social work and physiotherapy), it was decided to amalgamate the participants from the non-medical professions of nursing and all the allied health professions for the quantitative analysis. This resulted in two groups with almost equal numbers for comparison, nine from medicine and eight from the combined nursing/allied health group.

Hence the final analysis compared medicine with nursing/allied health using pre and post work experience scores labelled as time zero and time one. Therefore, by adjusting the number of professions from five to two, this may lead to a potential lack of direct comparability between the quite diverse ‘non-medical’ professions such as nursing and physiotherapy. This is one of the major limitations of the quantitative analysis.

Statistical analysis

For the statistical analysis the nursing/allied health group were labelled as 'non-medicine' and the other group as 'medicine'. Since the two sets of ISVS scores were dependent, meaning there was a relationship between the individuals in one sample compared to the other, and the study involved non-randomised data with small sample sizes, a two-tailed, paired *t*-test was chosen to compare the data. Two-tailed, paired *t*-tests were conducted to examine the pre-graduate (time zero) and postgraduate (time one) mean differences for each of the three sub-scales of the ISVS; self perceived **ability** to work with others; self-perceived **value** in working with others; and self-perceived **comfort** in working with others.

The mean ISVS scores for each subscale for the medicine and non-medicine groups are listed in *Table* 5. The results show high initial mean ISVS scores across all three subscales for both the medicine and non-medicine group. For both the medicine and non-medicine group, however there was a decline in ISVS scores over time (from time zero to time one) across all three subscales.

The initial mean scores at time zero for the non-medicine group were all higher than the corresponding scores in each individual subscale compared to the medicine group. The difference between the two groups was least pronounced with self-perceived comfort in working with others, with the mean ISVS score for this subscale showing similar results for both groups. The higher ISVS scores shown by the non-medicine group for the ability and value subscales was maintained over time, however, at follow up the non-medicine group showed a lower score for the comfort subscale at time one compared to the medicine group (4.71 v 4.83).

Table 5: Mean ISVS scores for each subscale (time 0 and time 1)

PROFESSION	ABILITY		VALUE		COMFORT	
	TIME 0	TIME 1	TIME 0	TIME 1	TIME 0	TIME 1
MEDICINE	6.04	5.51	6.22	5.68	5.50	4.83
NON MEDICINE	6.75	6.22	6.78	6.42	5.81	4.71

Table 6 shows the mean change in ISVS scores (from time zero to time one) for each of the subscales for the medicine and non-medicine group. For the medicine group, the mean score for 'ability' decreased by 0.53, for 'value' the score decreased by 0.54 and for 'comfort' it decreased by 0.67. The non-medicine group showed a similar decrease in mean scores by 0.53, 0.36 and 1.1 correspondingly. The greatest drop in score for both groups was for comfort in working with others (0.67 for medicine and 1.1 for non-medicine). These decreases in the mean ISVS scores for each of the subscales can be seen graphically in figure 14 (ability), figure 15 (value) and figure 16 (comfort) below.

Table 6: Mean change across subscales of the ISVS after a period of time in the workforce

PROFESSION	CHANGE IN ABILITY	CHANGE IN VALUE	CHANGE IN COMFORT
MEDICINE	- 0.53	- 0.54	- 0.67
NON-MEDICINE	- 0.53	- 0.36	- 1.1

Table 7 shows the results of the two-tailed paired sample *t*-test. The change in mean ISVS scores for the non-medicine group reached significance ($p < 0.05$) in all three subscales; however, the change in mean ISVS score only reached significance for the 'value' subscale in the medicine group.

Table 7: Results of two-tailed paired t-test

		Paired Differences						
					95% Confidence Interval of the Difference			
		Mean	Std. Deviation	Std. Error Mean	Lower	Upper	*t*	Sig. (2-tailed)
NON-MED	ABILITY (T0, T1)	**- 0.52778**	0.40172	0.14203	0.19193	0.86362	3.716	**0.007**
	VALUE (T0, T1)	**- 0.36111**	0.42725	0.15105	0.00392	0.71830	2.391	**0.048**
	COMFORT (T0, T1)	**- 1.10417**	0.47088	0.16648	0.71050	1.49783	6.632	**0.001**
MED	ABILITY (T0, T1)	**- 0.53086**	0.75109	0.25036	-0.04647	1.10820	2.120	**0.067**
	VALUE (T0, T1)	**- 0.54321**	0.49205	0.16402	0.16499	0.92143	3.312	**0.011**
	COMFORT (T0, T1)	**- 0.66667**	0.92796	0.30932	-0.04663	1.37996	2.155	**0.063**

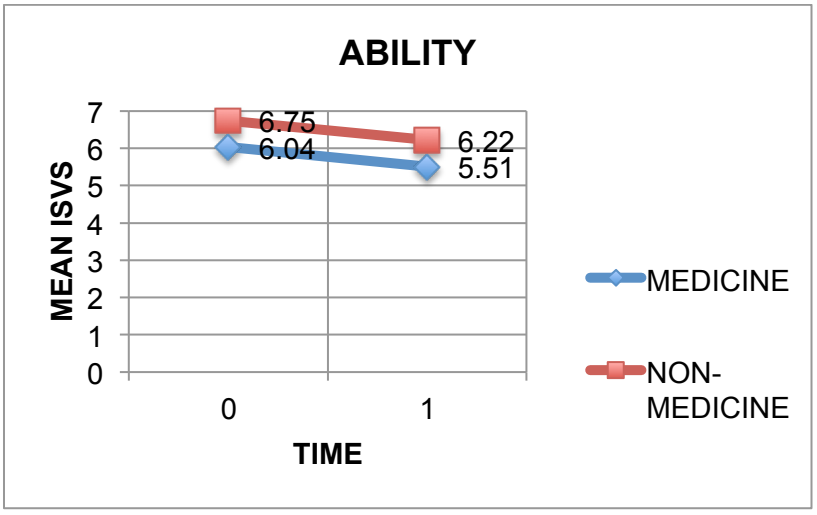

Figure 14: Change in mean ISVS scores for Ability

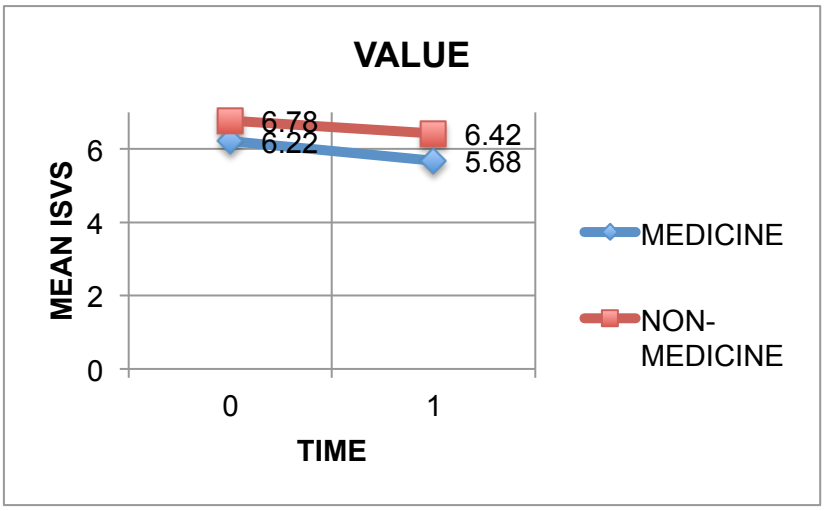

Figure 15: Change in mean ISVS scores for Value

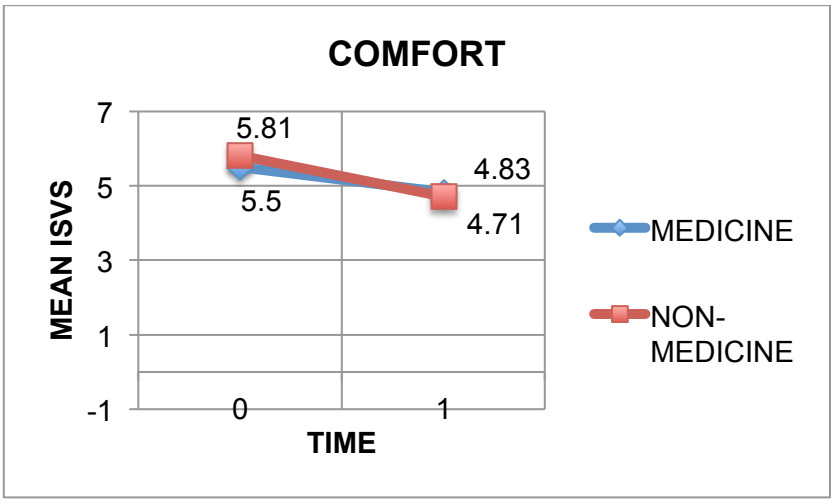

Figure 16: Change in mean ISVS scores for Comfort

4.2 QUALITATIVE

4.2.1 Telephone interviews

Of the 18 people who responded to the on-line survey, five junior health professionals consented to be contacted via telephone. This group consisted of two doctors, two nurses and one social worker. The lead researcher then conducted semi-structured telephone interviews on separate occasions. There were 10 interview questions and the interviews lasted between 19 to 39 minutes in length. Each interview was audio-recorded and then transcribed verbatim by a professional transcription service. Please see Appendix 5 for the full list of the questions.

4.2.2 Findings and Discussion

The five final themes constructed by the researcher are shown in table 8 below.

Table 8: Themes

1.	**REFLECTION**	Reflection of self and in and on practice as a result of Get Ready program
2.	**BREAKING DOWN BARRIERS TO IPCP**	Improved understanding of roles, interprofessional communication, forming interpersonal relationships. Ongoing barriers such as time pressure
3.	**REASSESSING ASSUMPTIONS**	Reassessing previously held assumptions about other professions and about own profession/self, roles responsibilities, and professional identity
4.	**TRANSFER OF LEARNING TO PRACTICE**	Using the knowledge/skills learned in Get Ready in clinical practice
5.	**IMPROVEMENT IN PATIENT OUTCOMES/CARE**	As a result of application of knowledge /skills learned in Get Ready and therefore improved IPCP

Each theme will now be discussed and illustrated using quotes from the participants in the study.

Theme One: Reflection

This first theme was chosen as it aligned with both Mezirow's transformative learning theory (Mezirow, 1981) and the critical self-reflection he described in the process of transformation. As Craddock et al. stated (2006, p.231), "transformative learning is a route to the development of critical reflection on assimilated epistemic assumptions and critical dialectical judgement to validate new assumptions". The author believed that the participants' experiences in the Get Ready program and real-life experiences as working junior health professionals would lead to a reflection of the participants learning but also a deeper self –reflection of their own professional roles and identities. The process of the telephone interviews allowed facilitated discussions that led to both discussions involving self-reflection and both reflection-in-practice, on the Get Ready program and the skills learned, and on practice as a junior health professional (Schön,1983).

During the telephone interviews the researcher attempted to guide the participants in order to facilitate critical reflection of their experiences, however, all the participants demonstrated a sound ability to be self-reflective in keeping with a recent study (Pollard et al., 2012, p. 359), which showed that junior health practitioners who graduated from an IP curriculum "demonstrated reflective skills and were particularly aware of the importance of reflection in collaborative working".

One doctor described how in practice he would reflect upon what a speech pathologist had taught him during the Get Ready program:

> *During those times at the start of my medical terms, I would reflect, because actually my understanding of speech path [sic] was still very basic but I knew that during the Get Ready program the speech pathologist gave us a very good run down and summary. And during those periods I thought back as to what she taught us. (DOCTOR)*

Another doctor commented upon how the course allowed her to interact with nursing and allied health students but reflected that only when she was working did she really respect the roles of these practitioners:

> *I reflected probably shortly after the course. I thought that it was good that the course showed me what the roles of the nurses and the occupational therapists are in the clinical setting. However, I think that shortly after the course I didn't sort of respect how important these roles were but I did when I was actually working. (DOCTOR)*

It seemed that once in the clinical environment she critically reassessed her personally held role assumptions in line with Mezirow's theory. This is similar to findings from Pollard et al., study (2013), which found that the majority of respondents reported that an understanding of other health professionals' roles was important and contributed to effective IPCP.

A nurse reflected upon using some of the communication strategies Get Ready taught in her job. The nurse demonstrated reflection 'in' and 'on' practice, which allowed her to be able to transfer what she has learned into her clinical practice, in line with Schön's reflective practitioner theory (Schön, 1983):

> *I have reflected a lot about what I learned on the Get Ready program. So there's been a couple of communication things that when I have looked back from the course, that I have used what we learnt in my everyday practice, especially right at the beginning when I was still getting to know everyone and before you start building up relationships of people per se, and I just found so many of those communication, the practical exercises that we did during the course so helpful for the first couple of months, and they're still helpful now. (NURSE)*

Another nurse discussed reflecting on the Get Ready simulation scenarios in her work:

> *They were a little bit confronting actually, because I hadn't experienced those issues before. I've been a stay at home mum and it was actually a really good thing to prepare you to go okay, maybe I didn't do so great on the scenarios on the course at the time. What would I do better? They made you go and reflect and that's what I did. When I went in to work I was thinking okay, what am I going to do if this happens or if that happens? How am I going to speak? How am I going to act? So I think it opened my eyes towards being probably more reflective in advance. In the nursing program we get a chance to reflect a bit with our study days, but they're not that often, so you do need to use it a lot in the work, in practice. (NURSE)*

This statement provides further evidence that the Get Ready course encouraged the participants to reflect on what they had learned and maybe even become more reflective practitioners in general. The same nurse went on the reflect upon how Get Ready emphasised how important collaboration and teamwork are in healthcare due to being involved in the scenarios and how the simulation scenarios helped to contextualise the theory she had been taught at university:

> *I think the fact that you actually went in with scenarios and talked to each other, it made me realise even how more important it is to have that collaboration and that team work. I already knew it was important, but a lot of it's just theory. When you go through university you can be told that a lot of it is important, you can understand it at an academic level, yes, it's important.*

But unless you're in a scenario, those team scenarios we did, then you realise oh, so it's not all on me. Particularly as a nurse, it's like, well what do I do? Well you talk to the doctor, or whatever. So I think it just strengthened my understanding of how important teamwork is. (NURSE)

Another nurse critically reflected upon hers and a senior nursing colleague's reflection upon a hard day at work:

… she talked to me about her reflection on the day and it was exactly similar to my reflection except mine was based on thinking it was due to my lack of experience. And she was just like, it was just a shocking day. We did really well. Don't worry about it. (NURSE)

This demonstrates that this participants, and likely others may participate in conversations with their mentors or supervisors, who are then able to give feedback, often needed to facilitate reflection. Indeed, feedback, is one way to help facilitate abstract conceptualisation, one of the key steps in Kolb's experiential learning cycle theory (Kolb, 1984).

Theme Two: Breaking down barriers to IPCP

Barriers to achieving IPE and interprofessional collaborative practice (IPCP) include, the strength of competing individual professional identities, sets of values, and cultures (Ginsburg & Tregunno, 2005). Examples that came out of the interviews to how these barriers to IPCP were tackled include, developing a better understanding of roles, interprofessional communication, establishing positive attitudes about own profession, developing respect for others skills and knowledge, and forming interpersonal relationships with team members.

One doctor explained how learning what the allied health team member roles were on the course helped him to communicate with them later on the ward:

Get Ready was a very, very good opportunity to learn what the roles and responsibilities of the different team members were and also the best way to interact with them. I'm not sure if you know how it is on a ward, but often the interaction is sometimes not very good, to be honest with you. And mainly from the doctor's point of view in the sense that we don't ever talk with allied health. It's always the nurses that pick up this patient needs a referral to OT or physio or whatever it is and they make the referral. And we just see the note saying patient fine from physio perspective, patient fine from social work perspective, or whatever it was. What I got from the Get Ready program was, and this is I think the one advantage for me is that I now understood their role, when to call them and how best to communicate with them. Because you sort of have to understand what their role is and what their responsibilities are before you can speak to them. (DOCTOR)

This doctor firstly mentions the current state of teamwork in healthcare suggesting that it could be better, thus giving an insight to the present situation in hospitals and how teamwork is often suboptimal. He infers he now has an appreciation for what each profession is contributing to the care of patients as a result of the Get Ready program. He seems to realise that until you know the roles and responsibilities of others, and perhaps appreciate them, you can't communicate effectively with them. This highlights that one of the barriers to interaction between health care practitioners, may simply be due in part to not understanding other team members' roles and responsibilities.

However, some participants also gave communication difficulties as an ongoing barrier to achieving IPCP. This was often due to competing responsibilities of different staff members and time pressures leading to a lack of time for interprofessional communication. For example, a nurse made the following comments about difficulties in communicating with the doctors on her ward:

> *The doctors just breezed in and out because they had other hospitals they had to get to that day with other ward rounds. It felt quite rushed and if you had to contact someone to ask for clarification there was every chance that they'd already left the hospital and the paging system wouldn't work and you would have to go through the computers and find their mobile number and it was quite a long drawn-out painful process if you did have to ask for any kind of clarification. (NURSE)*

A different doctor commented on the time pressure during MDT (multidisciplinary team) meetings:

> *Unlike in the Get Ready program in real life its not as easy, we just don't have 30 minutes to sit down and discuss every patient where every team member speaks up about a patient. There's too much time pressure. (DOCTOR)*

Interestingly, another doctor had the opposite view and saw the time pressure of his clinical environment as a catalyst for effective IPCP. He felt that when the clinical team was busy and time pressured, that this helped to focus the team's common goals and could actually lead to more efficient IPCP.

> *I have a sort of more realistic understanding in the sense that, interprofessional collaborative practice doesn't often occur in the sort of quiet, non-pressured environment. It more often occurs in sort of, in a pressured environment when you haven't got much time to do it and you're trying to get, everyone has a specific aim in mind with very little time to achieve that goal in that meeting. So it hasn't changed the aims of it, but I just understand the context of it much better, that everyone is very, very goal directed. (DOCTOR)*

A social worker, recalled how being the only social worker in her group during the Get Ready program was not a barrier to her learning, but also pointed out some of the barriers to IPCP in the workplace such as the imbedded hierarchical structures that discourage interprofessional collaboration:

> *I was the only social worker there but it was actually quite helpful because a lot of the students there actually hadn't learnt anything social work related and they were learning, we were learning from each other and I was teaching them, I don't know, we kind of fed off each other's energy and we learnt from each other. I think that was the most helpful thing, because going into a hospital and from my previous experience, I found most doctors and nurses are quite high in the hierarchy and social workers are quite low. This program really opened my eyes to what I was about to step into for the next four months. (SOCIAL WORKER)*

This participant clearly felt that the Get Ready program had given her realistic expectations of what to expect at work and helped to prepare her for working life in the clinical environment, fulfilling one of the main objectives of the Get Ready as a 'workplace readiness' program.

Theme Three: Reassessing assumptions

Mezirow (1981, p.7) proposed that perspective transformation, or transformative learning, leads to a change in the learner's frame of reference and can only occur after the following initial steps: a "disorientating dilemma" and a "critical assessment of personally internalised role assumptions" i.e. reassessing assumptions. This disorientating dilemma is described as an uncomfortable or traumatic experience that catalyses the transformative process. During the Get Ready program there were specific learning events, such as the role-plays and simulated patient encounters that seem to have acted as disorientating dilemmas for the learners. The facilitators tried to actively challenge the learner's pre-conceived values, perceptions and assumptions about themselves, their professional identity and roles and their previous assumptions about other professions. There were also examples given in the interviews of how the first few years of clinical practice for the junior health professionals interviewed also may have been a "fertile ground for transformation" to occur (Berger 2004, p. 342).

One doctor discussed his reassessment of the usefulness of the MDT meeting after the Get Ready program:

As a doctor, the Get Ready program was the only time that I was that ever taught what the purpose and role of an MDT is. I mean, apart from that you're just told there's an MDT meeting and you should attend. And often the registrars are told to attend and they tell us they're going to, but they still don't. Because they're busy and they don't view it as important, it's viewed as a waste of time by many people actually. One of the things that sticks in my mind as a learning point from the course was the MDT meeting role-play. I get a lot from MDT meetings now and with a better understanding of what everyone's role is. (DOCTOR)

Thus this doctor discusses the MDT meeting role play during the Get Ready program in a way that could be interpreted as a possible 'disorientating dilemma', leading to him reassessing his previous assumptions of its usefulness, contrary to his registrar's potentially ongoing negative views about MDT meetings.

Another doctor described how the course gave her a new perspective and a new level of respect for the role of other team members, especially nurses in patient care:

It highlighted to me the importance of the other health professionals in giving good care, especially the nurses. One of the nurses in my group on the course was very caring and very in touch with the patient. She showed me that nurses don't just give medications. They're there for the patient when the doctors leave. It happens in ED and on the ward as well, they have to sort of clean up the mess a bit. I now have more respect for the way the other health professionals contribute to the overall care of the patient and making sure the patients get discharged safely. (DOCTOR)

Again this shows that the Get Ready program led to this particular doctor reflecting upon her previously held assumptions regarding the role of nurses in patient care. Before the Get Ready program may have had a narrow view regarding nursing roles, with medication administration possibly seen as one of their only roles. After the Get Ready program she seems to have critically reassessed these assumptions and changed her views, giving patient advocacy as one example of the varied and important role nurses play within the healthcare team.

A different nurse described how, prior to the course she only thought she would be interacting with the doctors and had not taken into consideration the important relationship between nurses and allied health:

I really only thought of my role as associated with doctors. Obviously with patients too, but talking with, communication within the workforce with doctors. But dealing with the physios and OTs who I see them every day at work and talk to them nearly every single day. And I think that was actually really excellent to prepare me for that and to realise what their role is and that probably was the most helpful thing. (NURSE)

Thus, this reinforces that the view that the Get Ready program may have helped to alter the participant's perspectives regarding the role of the other team members and how they believed they may have gone on to interact with them in the workplace.

The course and her early experiences at work led another nurse to reflect upon her previously held views of doctors and how her experiences may have changed her perception of the medical profession:

> *I was really impressed with how willing everybody was to communicate with everyone. I hadn't really thought of the doctors being particularly vulnerable or scared and I can see that they're basically the same as everyone else. I can see that even more now with interns doing their rotation. A lot of times senior nurses take the time to help them out with the way we do things on the ward. So I think all of us about to be going in to the workforce together at the same time was actually a really valuable thing, because even though we had different specialties, we were all on the same footing with experience wise. So I think we could all relate to each other in that regard. (NURSE)*

This nurse clearly describes a transforming point of view (Mezirow, 1997). Her overall perception of doctors as a profession had changed, demonstrating one of the main ways in which IPE can lead to a reassessment of assumptions, which is by learning "with, from and about each other" (CAIPE, 2002).

Theme Four: Transfer of learning to practice

The final steps of transformative learning that Mezirow described are, acquiring knowledge and skills for implementing plans based on a learner's new frame of reference, initial efforts to try new roles and reassess these/gain feedback, and reintegration into society (for example, the workplace) under these conditions with this new perspective. Some of the unanswered questions regarding IPE include, what is the bridge that influences the translation of learning to practice and what are the processes that take a learner from 'what I now know to who I am'?

Many of the participants described specific events where they were able to use and integrate the interprofessional knowledge, skills and values they learned in the Get Ready program in their daily practice as a junior health professional.

Beyond this on a deeper level, some described how integrating this new set of values and beliefs led them to alter their frames of reference regarding their own professional identity and those of the other health professions.

One doctor commented how he now gets more out of the MDT meetings on his unit and could contribute to the discussions more due to the experience he gained during the MDT role plays he participated in during the Get Ready program. He had acquired new knowledge and skills that allowed him to practice new roles within the MDT meetings:

> *It's much easier to sit through an MDT meeting now because if you understand what your role is there's so much discussion and everyone's asking questions. (DOCTOR)*

The same doctor described how on his ward the knowledge and understanding of the role of the physiotherapist he gained during Get Ready allowed him to interact more effectively and expedite discharges for his patients. Thus, the Get Ready program allowed him to build self-confidence and competence in new roles and relationships as Mezirow described (Mezirow, 1981, p.7):

> *It was in neurosurgery up on the ward. I use that knowledge quite a bit now dealing with the physios. Just knowing the sort of the different mobility categories at times I've been able to expedite patient discharges. For example - I know that the physio's going to come and see this patient, I already know what they want to know. So I would have already rung the nursing home and asked them to fax over information about their mobility and aids because I know the physio will want them to know that. (DOCTOR)*

One of the social workers made the following comments:

> *I took that away with me- it actually helped me communicate better within a team while I was doing my work placement. So even though at first I found it a little bit daunting and a little bit difficult to try and understand what was going on, it actually helped me for the rest of my work placement. It was also to do with working in a multidisciplinary team. It helped with that, because my work placement was in a professional healthcare setting, it actually helped me learn and have experience of working within a multidisciplinary team. (SOCIAL WORKER)*

This demonstrates that the Get Ready course provided the social worker with skills, in this case communication skills, that she was able to transfer into her daily practice and use during her placements. One of the nurses commented on how the course helped prepare her to communicate with the other members of her team, something she has to do regularly in practice. She again reflects on how she has been able to integrate the communication skills she learned into the Get ready course into her everyday practice:

> *So there's been a couple of communication things that I have looked back from the course. I have used what we learnt in the course in my everyday practice, especially right at the beginning when I was still getting to know everyone and before you start building up relationships of people per se,*

and I just found so many of those practical communication exercises, like communicating over the telephone, that we did during the course so helpful for the first couple of months, and they're still helpful now. (NURSE)

A different nurse described the realisation regarding how much interaction there was in practice with the doctors, thus altering her existing frame of reference (Mezirow, 1997) regarding the doctors and changing her previously held assumptions:

I'm in stroke/neuro where we do regular team meetings. So you get to go in and you say who your patients are, then the doctors have their say, all the allied health team are also there. So I think it probably helped me feel a bit more confident going in regarding that. I communicate just about all day basically with all the different areas - it's probably a lot more communication with doctors than I realised there would be. (NURSE)

She later went on to self-reflect on how, even after graduation it takes some time working to sort out one's own professional identity, in her case as a nurse and how feedback from senior staff members may allow this to develop:

As in my own personal thing because I've had really good feedback, that's actually really helped. I want to be a good nurse. I want to be a hard worker. I want to be a nurse that learns. But it's really hard to assess yourself. But I've been lucky. I've been on a ward where I've had lots of feedback and lots of really positive feedback. And I think that's actually really important. When you're a junior nurse, it's probably hard to really gauge how you're going. (NURSE)

This provides another example of the important role of feedback as one of the final steps of the transformation process that Mezirow described i.e. "provisional efforts to try new roles and to assess feedback" (Mezirow, 1981, p.7).

Theme Five: Improvement in patient outcomes/care

Although there is no actual evidence that the Get Ready program or the transformations in the junior health professionals that may have occurred in their early clinical practice directly led to improved patient care, there were a number of statements made during the interviews which alluded to this. Pollard et al.'s study (2013, p. 359) reported that 83% of respondents described how IPCP had a positive effect on "service delivery". This included improved outcomes through preventing unnecessary admissions and enhanced discharge planning through "enhanced information exchange and service coordination" (Pollard et al., 2012, p. 359).

The participants in this study also reported practice and service delivery improvements through similar mechanisms, primarily through improved interprofessional communication. One of the main potential improvements in patient care that was commented on was safe discharge planning and reduced patient length of stay. A doctor commented that having a better understanding of the roles of the allied health professionals led to him anticipating the need for reviews on the stroke unit prior to discharge:

> *So you call a speech path, and now that I know that you need the speech path to clear this patient before they can eat or go home. (DOCTOR)*

He said that this *'absolutely'* led to reduced length of stays for these patients and alluded to his knowledge of where other health professionals fit into the discharge process. Another doctor reinforced this idea of improved discharge planning as a result of improved IPCP commenting that:

> *… after doing the course I have more respect for the way the other health professionals contribute to the overall care of the patient and you know and making sure the patients get discharged safely. (DOCTOR)*

This is similar to findings from the postgraduate IPE literature with some studies, such as Strasser et al. (2008) and Banki et al. (2003) showing a reduced length of stay and improved discharge planning as a result of an interprofessional or team training initiative.

A social worker made a similar comment about discharge planning with the medical staff:

> *You explain yourself clearly and then that way that'll help teamwork and they'll understand what needs to be done and then that way the discharge will happen a lot sooner and the patient will get what they need. (SOCIAL WORKER)*

Thus she alluded to how improved interprofessional communication may lead to a better understanding of the needs of the patient, enhanced patient-centred care and as a result more efficient discharge planning and reduced lengths of stay. The possibility of reduced readmission rates, and patient-centred care as a result of improved IPCP, was also touched upon by another doctor on a urology ward who commented that:

> *… interdisciplinary collaboration is a lot better as there is less time pressure. And I think every patient that comes in gets, you know, the full treatment. They leave much happier, all of their issues are addressed. And you notice that just by the amount of readmission our patients get in our time. Hardly any of them get readmitted until it's time for their next procedure, or whenever it is. (DOCTOR)*

Although these improvements in patient care cannot be directly attributed to the Get Ready program or IPCP in general there were many examples given which suggested the possibility that improved interprofessional communication, and effective IPCP had led to more efficient and streamlined discharge planning and possibly reduced lengths of stay, reduced readmission rates and enhanced patient centred care. This is in line with findings from Pollard et al. (2012, p. 360) who found that the junior health professionals in their study also gave similar examples where “good interprofessional work enhanced service delivery”.

4.3 SUMMARY

In summary this chapter has looked at the quantitative and qualitative results of the on-line survey, quantitative results and trends from the paired ISVS scores, statistical analysis of these paired ISVS scores and a thematic analysis of the telephone interviews. It found mixed results. The results showed high initial mean ISVS scores for all three subscales for both the medicine and non-medicine group immediately after the Get Ready program, which is unsurprising. However, in both groups there was a slight decline in ISVS scores over time across all three subscales from pre-graduation to practice, which was most marked in the comfort with working with others subscale. This is similar to other studies, which have shown sustained scores in some attitudes, beliefs and behaviours towards IPE and IPCP but a decline in others over time from university to practice (Pollard & Miers, 2008; Curran et al., 2010).

The thematic analysis produced rich data, which helped to elaborate on the quantitative findings and revealed positive attitudes towards both pre-graduate IPE and the Get Ready program specifically. It also suggested that the interprofessional competencies, learned initially during the Get Ready program and then developed in their initial placements, might have influenced the participants in their ability to achieve IPCP in their daily work. These findings indicate that both the IPE program and practical experience in the workplace had produced reflective practitioners, may have assisted in breaking down some barriers to IPCP and led some to reassess previously held assumptions regarding IPCP and other professions. The participants also expressed a perception that service delivery within their units or place of work may have been improved through enhanced interprofessional communication and IPCP.

CHAPTER 5 – DISCUSSION AND CONCLUSIONS

5.1 INTRODUCTION

This chapter will summarise the research, including the aims of the project, the research questions it aimed to answer, the methods used, the main results and their implications, and the strengths and limitations of the study, and will finally draw a number of conclusions.

The overarching aim of this study was to provide a better understanding of whether pre-graduate IPE can have not just a sustained but transformative impact on the inter-professional competencies of health professionals once in the workplace. This project was necessary due to the current lack of evidence in the IPE literature around this subject with limited longitudinal studies following health professionals into the workplace after a pre-qualifying IPE initiative (Reeves et al., 2002; Humphries et al., 2004; Pollard, 2008; Pollard et al., 2012). Pollard and Miers (2008, p. 400) stated that: “evaluation of IPE should include longitudinal multi-method studies, particularly those following individuals through pre-qualifying education out into practice”.

This was a follow-up study that used a purposive sample of students from five different health and social sciences professions who had all previously completed a five-day interprofessional educational initiative immediately prior to graduation, the Get Ready program, at various locations around NSW between 2012 and 2014. The participants were followed up after a period of time of between three months and twenty-seven months working as junior health professionals, in order to better understand the bridge or transition from IPE into practice and how pre-graduate IPE can influence postgraduate IPCP.

IPE lacks a single binding theoretical paradigm and the processes that lead from undergraduate IPE to effective postgraduate interprofessional collaborative practice remain unproven and poorly understood. (Pollard et al., 2012). The researcher used Mezirow’s transformative learning theory (Mezirow, 1981) to inform this research project and its epistemological aims as it provided the best basis from which to explain these processes such as “learning from experience, critical reflection and personal development” (Sargeant, 2009, p. 182).

5.2 DISCUSSION

5.2.1 Demographics

There was a good spread of health professions representing five different specialties although dieticians, pharmacists and radiographers were all involved in the Get Ready program but not represented in the final study sample. There was also a higher proportion of medical to nursing students in this study than found previously in other IPE initiatives (National Audit of The Interprofessional Curriculum Renewal Consortium, Australia 2013).

5.2.2 ISVS

The ISVS results showed high initial mean scores across all three subscales (self-perceived ability in working with others, self-perceived value in working with others, and self-perceived comfort in working with others) for both the medicine and 'non-medicine' group. The non-medicine group was made up of the individual professions of nursing, physiotherapy, social work and speech pathology. The initial mean starting scores for the non-medicine group were all greater than the corresponding scores in each individual subscale compared with the medicine group. This difference between the two groups was least pronounced with self-perceived comfort in working with others, with the mean ISVS score for this subscale showing similar results for both groups. There have been similar findings from other studies showing interprofessional differences in relation to IPE suggesting that a student's profession can affect their attitude towards an IPE initiative (Morrison, Boohan, Moutray & Jenkins, 2004; Tunstall-Pedoe ,Rink & Hilton, 2003). Curran et al., 2010 also found significantly lower mean satisfaction scores for IPE amongst medical students compared with the other professions, across the whole period of the three-year study which they attributed to "IPE overload" in this group (p. 50) suggesting that there is an ideal level of exposure to IPE for undergraduates, with too much or too little leading to negative outcomes.

In this study, in both the medicine and non-medicine group, there was also a trend towards a slight decline in ISVS scores over time in the workplace across all three subscales, self-perceived ability in working with others, self-perceived value in working with others and self-perceived comfort in working with others. However, only the change in ISVS scores for the three subscales for the non-medicine group and those for the 'value' subscale in the medicine group reached statistical significance.

The trend towards a decline in 'comfort' subscale scores is surprising, since the author expected that the reverse would occur with students becoming more comfortable working in healthcare teams over time post-graduation, after gaining team-based clinical experience in the workplace. Overall, however, the follow up mean ISVS scores in each subscale were still uniformly greater than four out of seven, indicating that although levels of ability, value and especially comfort degraded over time they remained at least moderately positive.

It is difficult to make direct comparisons to other similar quantitative IPE studies as the studies have all used a variety of different IPE assessment tools other than the ISVS (CIHC, 2012), with each tool made up of a different set of components. Pollard and Miers (2008), for example, used their own validated UWE Interprofessional Questionnaire (IPQ) (Pollard et al., 2004; 2005) made up of four alternative self-assessment sub-scales (communication and teamwork scale, interprofessional learning scale, interprofessional interaction scale, and interprofessional relationship scale) which they tested on an interprofessional cohort and a uniprofessional control group at graduation and again once in practice. They found that between qualification and after nine to twelve months in practice the interprofessional group's perceptions of IPE became more negative on the interprofessional learning scale, however, they sustained positive attitudes towards IP teamwork, IP relationships and IP interactions (Pollard et al., 2004). It is surprising that Pollard et al. (2004) explain their finding of the IP cohort growing more critical of IPE by concluding that "an individual's perceptions of their own educational experiences are inadequate as an evaluative measure of interprofessional learning initiatives" (Pollard & Miers, 2008, p. 399). This is interesting as the authors own UWE IPQ tool (Pollard et al., 2004; 2005), the ISVS tool used in this study (King et al., 2010) and most of the quantitative IPE tools in the literature (Canadian Interprofessional Health Collaborative, 2012) rely on self-reported measurement of interprofessional competencies. Also, despite similarly positive results in two out of three subscales from students from the uniprofessional curricula control group, Pollard and Miers (2008) state that "practitioners in multi-professional working environments have benefited from pre-qualifying IPE experiences " (p.411) and conclude that their "study reinforces the argument for including IPE in pre-qualifying curricula" (p.399). Pollard and Miers (2008) also do not attempt to explain how any real-life postgraduate interprofessional experiences and interactions during the participants nine to twelve months in practice may have influenced the follow-up results or transformed the participants' views.

Curran et al. (2010) used two separate IPE assessment tools in their longitudinal time series design study, the Attitudes Towards Interprofessional Health Care Teams Scale and the Attitudes Towards Interprofessional Education Scale, which was based on the Readiness for Interprofessional Learning Instrument developed by Parsell and Bligh (1999). They found that the introduction of a full IPE curriculum across a three year period lead to very little overall change in the students' attitudes towards interprofessional teamwork or IPE as a result of bringing in an IPE curriculum.

5.2.3 Telephone Interview

The opinions of the telephone interviewees were valuable in helping to gain a more detailed understanding of the perceived benefits of the Get Ready program. This method helped the participants to elaborate on how, as junior health professionals, they were able to apply the knowledge and skills developed during the course in the clinical environment. As discussed previously, this "bridge" between university and clinical practice remains poorly understood and questions remain in the literature such as "what are the processes that take students from what I know to who I am" (Flinders University, ViTA IPE working group, 2014, p. 7). The telephone interviews revealed a number of themes, many of which aligned well to Mezirow's transformative learning theory (Mezirow, 1981), which will now be summarised in turn. Overall the participants felt that the Get Ready program was valuable and helped them prepare for life as a junior health professional. They were also able to give numerous examples of when and how they were able to apply the interprofessional competencies, initially developed during the Get Ready program, in the workplace setting.

Reflection

The participants demonstrated effective self-reflection skills and were able to reflect both in practice and on practice as a junior health professional (Schön, 1983). The participants' experiences during the Get Ready program and real-life experiences in practice, working junior health professionals, led to a reflection on the participants' learning but also a deeper self–reflection of their own professional roles and identities. This is in keeping with a recent study (Pollard et al., 2012), which showed that junior health practitioners who graduated from an IP curriculum "demonstrated reflective skills and were particularly aware of the importance of reflection in collaborative working" (p. 359). Reflection, therefore, has the potential to transform learning by "promoting autonomous learning that aims to develop students' understanding and critical thinking skills " (Hinett, 2002, p.5).

Reflective practice in turn has the potential to enhance collaborative working by developing practitioners who are able to critically evaluate their own strengths and weaknesses, for example, reflecting on an event where there was interpersonal conflict at work. Reflection allows the practitioner to reflect how and why this occurred, and also may help them to develop a strategy to resolve or prevent interprofessional conflict in the future.

Breaking down barriers to IPCP

Grant and Pinocchio (1995) divided potential barriers to IPCP into: 1) organisational barriers, for example, hierarchical administrative and educational systems that discourage IPCP; 2) barriers at a team level, for example, a lack of training in IPC; 3) barriers faced by individual team members, for example, divided loyalties between the interprofessional team and the individual's own profession; and, 4) barriers for more independent providers, for example, discomfort with allowing others from different professions to be involved in clinical decisions. The participants described a number of barriers to effective IPCP in the workplace with the most frequently reported being time pressure. A lack of time to facilitate effective interprofessional communication as a result of the multiple competing responsibilities of a junior health professional was perceived to lead to poor IPCP. Multiple examples were given though of how these barriers to IPCP were tackled, many occurring as a result of the interprofessional skills and attitudes fostered during the Get Ready program. These included, developing a better understanding of team members' roles, enhanced interprofessional communication, establishing positive attitudes about other professions, developing respect for other team members' skills and knowledge, and forming positive professional interpersonal relationships built on mutual respect. These are similar interprofessional skills to those competencies advocated by the CIHC, in their competency framework (CIHC, 2010).

Reassessing assumptions

The comments made by participants in the current study did provide clues that suggested they had undertaken a transformative learning process (Mezirow,1981). For example, there was evidence of a change in the participants' perceptions of other team members as a result of a "disorientating dilemma" (Mezirow, 1981, p.7) that occurred during the Get Ready program. A specific example given was the simulated patient case scenarios, which some students found quite confronting.

Other examples were taken from workplace settings where a reassessment of previously held assumptions, particularly regarding the importance of the roles of other professions in providing effective patient care seemed to have occurred. Participants reported on "disorientating dilemmas" both during the Get Ready program and at work (Meizrow, 1981, p.7), which often led to self-reflection and may have changed previously held attitudes towards other health professionals. A few participants gave an example of where they sought feedback from supervisors or mentors regarding their views, which also helped to cement their new perspective. In some circumstances, these dilemmas catalysed a change in the perception of their own profession and professional identity. Multiple examples were given of how participants were able to "reintegrate" these freshly held beliefs and perspectives into their daily work "on the basis of conditions dictated to by the new perspective" (Meizrow, 1981, p.7), leading to enhanced IPCP and enhanced service delivery.

Transfer of learning to practice

The final steps of transformative learning that Mezirow described are, "acquiring knowledge and skills for implementing plans based on a learner's new frame of reference, initial efforts to try new roles and reassess these/gain feedback, and reintegration into society under these conditions with this new perspective" (Mezirow, 1981, p.7). This study revealed that the participants acquired new knowledge and skills during the Get Ready program, which as working junior health professionals helped them to maintain effective interprofessional collaborative practice and to maintain ongoing collaborative working relationships with other health professionals. Many gave specific examples of events where they were able to apply the interprofessional competencies they learned in the Get Ready program in their daily practice as a junior health professional and integrate these skills into their own skills portfolio. This finding demonstrates the importance of pre-qualifying IPE. A recent study, in the midwifery setting has suggested, however, that it is the collaborative culture of the student's clinical placement before and after graduation and the degree to which in promotes IPE, rather than the IPE taught in the classroom setting that has the greatest effect on the sustainability of IP competencies after qualification (Murray-Davis, Marshall & Gordon, 2011). The findings of this study suggest that both pre-qualification IPE and ongoing regular post-graduation IPE may be just as important for maintaining IP competencies and effective IPCP in the workplace.

Murray-Davis et al., (2011) also found that there was limited ongoing support in the clinical setting to provide IPE activities and a lack of champions to promote IPE concluding that there remained a need for organisational change to promote IPE in midwifery practice. This research revealed similar findings, with the majority of participants working in a setting where IPE was not greatly established. Most participants had not been involved with a significant amount of IPE since graduation, this is despite their understanding of the importance of postgraduate IPE to help maintain ongoing collaborative working relationships as junior health professionals.

Improvement in Healthcare Outcomes

The ultimate aim for many interprofessional educational initiatives in healthcare is to demonstrate outcomes at the higher levels of Barr's learner outcome hierarchy, that is, Level 4a (changes in organisational practice) and Level 4b (benefits to patients/clients, families and communities). However, these outcomes are also the most complex and difficult to measure. The number of studies that link IPE with changes in organisational practice and patient outcomes is growing, however, "methodological limitations continue to confound interpretation and generalization of the results" (IOM report, 2015, p.78).

A recent Cochrane review update reviewed the current literature around interprofessional education and its effects on professional practice and healthcare outcomes (Reeves, Perrier, Goldman, Freeth & Zwarenstein, 2013). Out of a total of 8194 articles on postgraduate interprofessional education identified, published between 1999 and 2011, only 15 articles whose methodology met their strict criteria were included in the final review (Reeves et al., 2003, p. 2). Although there were some positive outcomes reported the authors concluded that, "due to the small number of studies and the heterogeneity of interventions and outcome measures, it is not possible to draw generalisable inferences about the key elements of IPE and its effectiveness". With this is mind, this study did suggest that IPE and effective IPCP can lead to modest but important improvements in interprofessional communication leading indirectly to more patient-centred care and improved service delivery and processes such as discharge planning, reduced hospital lengths of stay and reduced readmission rates. This reflects the findings of a similar longitudinal follow-up study by Pollard et al. (2012, p. 355), which revealed that once in the workplace the participants in an undergraduate IPE curriculum were able to practice effective "interprofessional work" which lead to enhanced service delivery.

5.3 SIGNIFICANCE AND CONTRIBUTION

This study has contributed to the growing body of evidence supporting undergraduate IPE by providing further insight into how even a relatively short undergraduate IPE initiative, in this case just delivered as a one off program immediately prior to graduation (pre-graduation), can influence the interprofessional skills, attitudes and behaviours concerning IPCP in the workplace post graduation. This study also helps to inform local and state wide interprofessional educators when designing future undergraduate IPE initiatives and may provide some insight into how to achieve sustainable outcomes, and ultimately effective IPCP from undergraduate IPE that goes beyond the classroom into the workplace.

5.4 STRENGTHS

Strengths of this study include the use of a mixed methods study design incorporating both quantitative and qualitative methods to assess the impact of the Get Ready program. Some have argued that, although randomised control trials (RCT) are the “gold standard” way (IOM, 2015, p. 78) to evaluate an intervention such as a new drug in clinical research, they may not be the right fit for educational research. Firstly RCT’s and controlled before-and-after (CBA) studies in education are technically difficult given that matched control groups are harder to achieve with the heterogeneity of the clinical practice settings and the IPE intervention itself (both content and quality), small numbers involved, and the difficulty in blinding investigators (Sullivan, 2011). Secondly, RCT and CBA studies alone may not show the full picture and a combination of these types of studies with rigorous qualitative research may be needed to demonstrate exactly why and how IPE may leads to changes in practice and patient outcomes. Indeed as per the IOM report on continuing medical education (IOM, 2010, p. 39) states, “while the controlled trial methods may produce quantifiable end points, they do not fully explain whether outcomes occur as a result of participation on continuing education, thus a variety of research methods may be necessary”.

Therefore, in order to best answer the study questions this follow up study used a mixed methods approach made of three parts: (1) an on-line survey; (2) a validated quantitative interprofessional learning assessment tool, the ISVS; and, (3) a qualitative component using a structured telephone interview. This study used a sequential, transformative, mixed methods design (Creswell, 2003), which was chosen because it allowed alignment of all components with a perspective, in this case Mezirow’s transformative learning theory (Mezirow, 1981), as applied to IPE and IPCP.

Quantitative data consisting of both participant demographics and repeat ISVS scores were collected and briefly analysed first. Then the qualitative data was collected and the results of both were integrated in the interpretation phase. Thematic analysis of the telephone transcripts was undertaken using both deductive and inductive methods (Vaismoradi, Turunen & Bondas, 2013). This method was chosen because it allowed the researcher to look for patterns and common themes which related to the Mezirow's transformational learning theory and the research questions being asked; but this method also allowed themes to be based on a new and independent interpretation of the raw data. Previous reports have criticised IPE research for not designing studies with a solid theoretical base (Craddock et al., 2006; Curriculum Renewal for Interprofessional Education In Health, 2014; IOM, 2015). Mezirow's transformative learning theory (Mezirow, 1981) offered a strong theoretical basis to inform this study and has been previously suggested as a potentially useful theoretical underpinning for IPE (Sargeant, 2009).

The quantitative component used of a validated IPE assessment tool, the ISVS. As argued by King et al. (2010, p. 77), the ISVS is specifically "designed to measure the degree to which transformative learning takes place". It is also not a single study tool and has been validated in a number of other studies where it has also been used to show a change in attitudes, beliefs and behaviours around IPE before and after an educational initiative (King et al., 2010; O'Brien et al., 2013; Cartwright et al., 2015). The tool has a strong factor structure and a high degree of internal consistency with high Cronbachs' alpha coefficients across the three subscales (King et al., 2010; O'Brien et al., 2013; Cartwright et al., 2015). A recent review of pre-qualification IPE tools (Oates et al., 2015) identified the ISVS as the highest standard tool in terms of validity evidence (test content and internal structure) and reliability. Other strengths of the study include the use of matched pairs for the ISVS scores, allowing a direct comparison of participants' beliefs, behaviours and attitudes towards IPE immediately before graduation and after a period of time in the work place.

This qualitative component of the study used a sequential, transformative, mixed methods design (Creswell, 2003), which allowed alignment of all components with a theoretical perspective, in this case Mezirow's transformative learning theory (Mezirow, 1981).

5.5 LIMITATIONS

Sample size and response rates

The main limitation in interpreting the results of this study is the small sample size, which therefore limits the generalisability of results and comparison with other IPE programs in other contexts. This was due to multiple reasons. Firstly, there were difficulties in collecting all the original data from the various LHD's Get Ready programs. The Get Ready program had first been delivered up to four years prior to the start of this research and much of the original raw data had not been collated or transcribed electronically from the original paper ISVS questionnaires. Some of the course centres had not kept their raw data or did not respond to requests to share their data. Out of ten course centres and the original 237 participants in the Get Ready programs, the researcher was only able to obtain the complete data sets for 80 participants from four course centres. This included the post ISVS scores and the contact email addresses to enable the participants to be contacted. Hence, this resulted in a convenience sample of 80 people who were initially emailed inviting them to take part in the study. Many of the email addresses given at the end of the Get Ready programs were the participants' student email addresses from university, which may have not been in use at the time of this study. It would be advantageous therefore for any future studies to ensure that private email addresses are collected from participants, if they are willing to provide them, as these are more likely to be maintained and checked post graduation. Out of this group of 80 only 18 people responded by completing the on-line survey, representing a response rate of 22.5%, but five of these did consent to also take part in the telephone interview. These five represented a mix of three different professions (medicine, nursing and social work) and while they may not represent the views of all the participants, the interviews provided thick and rich data for the study and contributed to finding out more about the why and how IPE may transfer into practice.

Sampling bias

This study used a non-randomised convenience sample of 18 participants based on purposive sampling of the original Get Ready student cohort; hence, sampling bias could have been introduced. Sampling bias in the results may be caused by a number of ways such as the small sample size not representing the larger Get Ready student population as a whole.

There may be bias from potential systematic differences between the non-responders and the 18 survey responders with the responders potentially having extremes of views on IPE and IPCP, which may have motivated them to answer the survey and may not reflect the Get Ready cohort as a whole. The participants who consented to take part in the telephone interviews again may have had particularly strong views, which did not reflect the Get Ready cohort as a whole, leading to bias. There were also a larger number of medical students in the final sample than any other professional group representing 50% of the group (nine participants), with nursing being the second largest group with four participants. This is not representative of the larger convenience sample of 80 participants where nursing was the largest group with 33/80 participants (41.3%) and only 26/80 (32.5%) were from the medical profession, the remainder being a mix of allied health professionals. It is possible that the medical participants had quite different opinions than the other groups based on experiences in the workplace post-graduation than the nurses or allied health professionals that biased the outcome of the results. Previous IPE research has shown that students from different professional groups to differ in terms of their attitudes both towards IPE over time (Curran et al., 2010).

Quantitative data

The way that the quantitative data was grouped prior to statistical analysis may have limited the accuracy of the results. Firstly the sample size not large enough to perform any cross-validation analysis. One of the social worker's ISVS scores was not used in the final analysis, as they did not provide a complete list of answers to the post Get Ready ISVS. The ISVS tool (King, 2010) itself has important limitations in that is relies on self reported measurements of ability to work with others, value on working with others and comfort in working with others rather than an objective independent measurement. Also, although the ISVS was "deemed to meet the standards relating to instrument development" (Oates et al., p. 389) in a recent review of IPE tools, the authors note that many IPE measurement tools, including ISVS, are subject to relative error due to the self-reported nature of most tools. Unlike some tools, King et al. did not report on the "standard error of measurement" (Oates et al., p. 392) of the ISVS tool. Forming two groups for the statistical analysis may have limited the accuracy of the results in that the 'non-medicine' group was assumed to be a homogenous group. In fact the 'non-medicine' group was made up of four different health professions with likely very different view points on IPE and IPCP, hence this group may not have represented the individual professions it was made up of.

Follow up time

The time between the students' Get Ready program pre-graduation and the follow up ISVS score and interviews was not consistent and varied widely between the individual participants ranging from three months to twenty-seven months. This variation in time based in the workplace and, therefore, experience with IPCP and exposure to postgraduate IPE may have influenced the perceptions of the participants and possibly the outcome of both the ISVS scores and telephone interviews.

Qualitative data

A limitation of the qualitative analysis includes the fact that no member checking occurred. None of the participants were given the opportunity to review their own transcripts, which meant they could not confirm the accuracy of the transcribed accounts. Also the lead researcher was primarily responsible for the process of open coding with the primary supervisor performing independent coding of only three of the five transcripts to ensure consistency. As this was not done for all of the transcripts it is possible that the opinion of the lead researcher may have biased the coding process and consensus may not have been reached if the other two transcripts had also undergone independent coding.

Intervention itself – the Get Ready program

The intervention being studied, Get Ready was a five-day program, which, compared to many other IPE studies was relatively brief and may have limited any impact it had on the participants as newly qualified health professionals. For example, Curran et al. (2010) evaluated the impact of a new IPE curriculum, which included blended learning, combining e-learning and small group discussions delivered to students over three years. Over the last decade work by Katherine Pollard in the UK has followed students from various health and social care professions at the University of the West of England at commencement of their university course, during their second year of study, at qualification and after various periods of time in the workplace (Pollard et al., 2004; Pollard et al., 2005; Pollard et al., 2006; Pollard & Miers 2008; Pollard et al., 2013). Their intervention was a new three-year interprofessional curriculum, which consisted of compulsory IPE modules in each year throughout each of the health and social sciences curriculum with specific interprofessional outcomes that were assessed each year.

Lack of control Group

This study did not include a control group of junior health professionals at a similar stage of their training but who had not gone through the Get Ready program. This would have allowed a direct comparison of students who had done the course and those who had not. Kathryn Pollard's multi-study longitudinal research, for example, compared students on a new interprofessional program with students on the traditional uniprofessional program. (Pollard et al., 2004; Pollard et al., 2005; Pollard et al., 2006; Pollard & Miers 2008; Pollard et al., 2013). However, it has been noted that there are methodological difficulties in most IPE research in achieving this such as there is often an inability to control for the multiple differences between the two groups and obvious difficulties in blinding the participants and study operators (IOM, 2015). For this reason Pollard and Miers. (2008, p 411) concluded that the uniprofessional cohort in their study "cannot be regarded as a control group….given the many and complex factors influencing individuals' educational and practice experiences".

5.6 RECOMMENDATIONS FOR FUTURE RESEARCH

There remains a need for further longitudinal studies involving greater numbers of students, involved in a variety of undergraduate IPE initiatives, which follow health professional students from university, through to the workplace to address the insufficient numbers that limit this study. Important questions still remain such as "what are the processes that take students from what I know to who I am?" (Flinders University ViTA IPE project, 2014, p.7) and how IPE translates from learning to practice. This "bridge" from university to the workplace could be explored further. As per Humphries et al. (2004, p. 27) there remains a "need to commission longitudinal impact studies designed on sound theoretical principles…that follow cohorts of students over time into practice". Whilst this study found that pre-qualifying IPE assisted junior health professionals to build on their IPCP competencies, further studies are needed to assess how the knowledge, skills, attitudes and behaviours learned in the pre-qualification stage convert to effective IPCP post qualification.

Any future research could also look into the many and varying factors that influence postgraduate IPCP, other than pre-graduate IPE, something that was touched on in the survey and qualitative component of this study. Murray-Davis et al. (2012, p. 295) identified the workplace environment as having an important influence on how junior health professionals "apply IPE theory acquired during pre-qualification years".

Factors that influence post-graduation IPCP include both potential barriers and facilitators to IPE including, organisational factors, content and availability of ongoing postgraduate IPE including postgraduate IPE educators, links between university courses and clinical placements and inclusion of specific IPE competencies in junior health professional curricula. (Murray-Davis et al., 2012).

Finally, any similar future studies should, where possible, include formal interviews with the developers of the original educational intervention or program being studied, in order to enhance understanding of the theory behind the program development and to better inform the study design.

5.7 CONCLUSION

The main aim of this study was to assess whether interprofessional competencies taught in the pre-graduate stage of training can be maintained once the students have graduated and are in clinical practice. The participants in this study reported that the Get Ready program helped prepare them for IPCP as junior health professionals; they found the skills and knowledge useful and were able to apply and build on the competencies learned in the workplace setting.

This study suggests that the IP skills and positive attitudes, beliefs and behaviours towards interprofessional learning and collaborative practice that are developed after a pre-graduate IPE initiative, like the Get Ready program can be sustained once in the workplace but some aspects may degrade slowly over time. This decline in some interprofessional skills, attitudes or behaviours may be influenced by a variety of other factors.

Similar results have been found from other studies where certain interprofessional competencies have been maintained and others, such as attitudes towards IPE itself and perceptions of quality of IP interactions, have declined over time in the workplace, suggesting other workplace factors may play a role (Carpenter et al., 1996; Coster et al., 2008; Curran et al., 2010; Pollard & Miers, 2008; Pollard et al., 2012; Murray-Davis et al., 2012).

The causes for this decline in interprofessional skills, attitudes and behaviours are likely to be multi-factorial but it is postulated that IPE competencies may decline over time similarly to other clinical skills. There is a significant body of evidence in the literature showing that clinical and procedural skills can decline over time, following a curve, with a steeper decline initially and a more gradual decline as time passes over the next six to eighteen months (Ali, Adam, Pierre, Bedaysie, Josa & Winn, 2001; Freed, Abraham & Brzoznowski , 2007; Perez et al., 2013). There are many factors that influence the time taken between a skill being learned and when it is lost and this may vary between both the skill and between individuals.

Studies have shown that an important factor influencing clinical skills maintenance is the deliberate practice of these skills with skill retention dropping off quickly unless a skill is practiced on a regular basis (Kaye & Mancini, 1986; Anthonypillai F, 1992; Onadera et al., 2013). The participants in this study revealed that since graduation their exposure to regular IPE was limited. A majority of participants reporting being involved in less than 40 hours of IPE since graduation, despite an average time since graduation of 9.4 months and only a third of the participants had worked in an environment that offered postgraduate IPE. This is similar to results from The Interprofessional Curriculum Renewal Consortium, Australia (2013), which reported that only 28% of IPE initiatives were offered to postgraduate participants, usually in combination with undergraduate students. A possible explanation, therefore, for the decline in the participants' ability, value and particularly comfort in working with others may have been the limited ability of participants to deliberately practice IPE competencies with other professional groups during IPE activities post-graduation. Reflective practice was found to be pivotal to the integration of IPCP competencies by participants in this study, which highlights the benefit of including reflection in work-based IPE activities.

Interprofessional education (IPE) requires specific planned learning activities and only occurs "when two or more professions learn with, from and about each other in order improve collaboration and quality of care" (CAIPE, 2002). Simply working alongside other professionals does not therefore fulfil this definition. This study is unique when compared to other longitudinal studies (Carpenter et al., 1996; Coster et al., 2008; Curran et al., 2010; Pollard & Miers, 2008; Pollard et al., 2012; Murray-Davis et al., 2012) in that it also assessed the participants' exposure to post-graduation IPE.

Indeed, Pollard et al (2012, p. 360) stated that their, “failure to inquire about post-qualifying IPE, due to a narrow focus on pre-qualifying education” was a limitation of their study. This study also evaluated the impact of real life workplace experiences on the participants’ interprofessional collaborative practice and demonstrated that these can lead to further transformative learning in these domains. It seems that the workplace is an ongoing “fertile ground for transformation” (Berger, 2004 p. 342) and various factors, other than pre-graduation IPE can significantly, either positively or negatively, influence the transition from student to junior health professionals.

IPCP post-graduation may be influenced by a number of factors such as, the type of clinical placement, whether it is a collaborative environment, interprofessional role modelling by senior staff and supervisors, professional socialisation, links between university courses and clinical placements and inclusion of specific IPE competencies in junior health professional curricula (Murray-Davis et al., 2011; Pollard et al., 2012). The participants in this study also gave many examples of workplace factors, both positive, such as collaborative interactions with other professionals, and negative such as time pressure, which influenced their IPCP post-graduation.

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APPENDICES

APPENDIX 1

Email sent to participants

Can a pre-graduate interprofessional educational program lead to transformative learning and maintenance of interprofessional competencies in the workplace? A follow -up study to assess the impact of the *Get Ready! Program* on working health professionals

Dear Health Care Provider

I am writing to you to ask for your participation in an important educational research study. This study constitutes the major research project for my Masters in Clinical Education with Flinders University. It has ethics approval from the Social and Behavioural Research Ethics Committee of Flinders University

I am inviting you as a previous participant from the ***Get Ready! Program*** – (a pre-graduate interprofessional workplace readiness program) that you attended between 2011–2014, and at the time gave your consent to be followed up via personal email.

You have been invited because your opinion, feedback and contribution will assist in establishing evidence for interprofessional education for future undergraduate healthcare students. Participation in this study is entirely voluntary. *The study will involve 2 parts and participants may choose to only be involved in the first part if they wish.*

Part 1: On-line questionnaire (10-15 mins)

- Consists of an on-line Interprofessional Socialisation and Valuing Scale (ISVS) questionnaire and a brief open-ended questionnaire
- Return of this questionnaire will be taken to assume that consent has been given for this part.

Part 2: Focused telephone interview (approx. 20 mins)

- A selection of students from each specialty who give their consent will be contacted for a brief structured telephone interview

- You will be contacted on the telephone number you provide
- Written consent will be required to allow us to contact you for this interview
- The interview will be recorded only if the participant gives additional consent for this

All data will be de-identified and stored securely. Any audio files will be deleted once transcribed.
There will be no consequences to you professionally if you choose not to participate.
For further information please see the attached participant information sheet attached to this email.

I would be very grateful if you could please complete the on-line questionnaire by……date.
If you are interested and able to participate in part 2 (i.e. the telephone interview) please sign, scan and return the attached participant consent form to me and provide a suitable telephone number that I can contact you on.

Please feel free to contact the lead researcher Dr Ben Taylor on 0434221884 or email ben.taylor@sswahs.nsw.gov.au if you have any questions about this research study.
Thank you in advance for your participation.

Yours Sincerely,

Dr Ben Taylor
MBChB, FACEM, FCEM, Grad Cert Clin Ed (Sim)
Masters in clinical education student, Flinders University
Conjoint Senior Lecturer UNSW
Simulation Educator, Ingham Institute Clinical Skills and Simulation Centre
Emergency Staff Specialist
Liverpool Hospital
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Locked Bag 7103
Liverpool NSW 1871
Ben.taylor@sswahs.nsw.gov.au

APPENDIX 2

On-line survey

1. What is your name? (first and surname)**** NB This survey will be completely de-identified and a study number assigned once returned***

2. Have you consented to or are you planning to consent to part 2 of this study i.e. : the Telephone interview. Please note part 2 of this study is also entirely voluntary. You may choose to only be involved in part 1 of this study if you prefer (i.e. just complete the on-line survey

3. What is your gender?

4. What is your age in years?

5. Which of the following categories best describes your current employment status?

6. Which of the following best describes your main place of work?

7. What is the highest level of education you have completed?

8. What type of health professional are you mainly working as?

9. How many months/years of practice experience do you have ? (since achieving license to practice)

10. Do you currently work as part of an interprofessional healthcare team?

11. How many months/ years have you worked as part of an interprofessional healthcare team?

12. How important do you think PRE-GRADUATE inter professional education is for helping to build future collaborative working relationships as junior

13. Specifically - How important do you think the Get Ready pre-graduate program was in helping to prepare you for interprofessional collaborative practice as a junior health professional?

14. How important are the knowledge and skills you learned in the Get Ready program for you to maintain effective interprofessional collaborative practice NOW as a working junior health professional ?

15. How important do you think POSTGRADUATE inter professional education is for helping to maintain ongoing collaborative working relationships as junior health professionals?

16. How established is POSTGRADUATE interprofessional education in your current place of practice/placement/team?

17. How many hours of interprofessional education do you estimate have you been involved in SINCE graduation. ?

APPENDIX 3

ISVS tool (© King, Shaw, Orchard & Miller, January 2008)

Interprofessional Socialisation and Valuing Scale (ISVS)

(ISVS © King, Shaw & Orchard, January 2008)

This questionnaire is designed to help you explore your perceptions of what you have learned about working with professionals from other disciplines. Please complete the following questionnaire based on your own views of your experiences.

Please indicate the degree to which you hold each of these **beliefs, behaviours, and attitudes** that are described.

You are asked to consider **where you are now**

You are asked to respond to each statement using a 7-point scale with 1 meaning 'Not at All' and 7 meaning 'To a Very Great Extent'. Please respond by circling the **one** number that you feel best fits with your experience. If you feel the statement doesn't apply to you, please circle the zero (0) value.

The answers that you provide within this questionnaire are used for quality improvement and research purposes and your responses will be then de-identified so they are completely **anonymous**.

QUESTIONNAIRE **At this point in time, based on my participation in interprofessional education activities and/or clinical practice ...**	To a Very Great Extent	To a Great Extent	To a Fairly Great Extent	To a Moderate Extent	To a Small Extent	To a Very Small Extent	Not at All	Not Applicable
1. I feel confident in taking on different roles in a team (i.e. leader, participant)	7	6	5	4	3	2	1	0
2. I am comfortable debating issues within a team	7	6	5	4	3	2	1	0
3. I value open and honest communication with team members	7	6	5	4	3	2	1	0
4. I am able to listen to other members on a team	7	6	5	4	3	2	1	0

At this point in time, based on my participation in interprofessional education activities and/or clinical practice ...	To a Very Great Extent	To a Great Extent	To a Fairly Great Extent	To a Moderate Extent	To a Small Extent	To a Very Small Extent	Not at All	Not Applicable
5. I have gained a better understanding of my own approach to care within an interprofessional team	7	6	5	4	3	2	1	0
6. I believe that interprofessional practice is <u>not</u> a waste of time	7	6	5	4	3	2	1	0
7. I am able to share and exchange ideas in a team discussion	7	6	5	4	3	2	1	0
8. I feel comfortable being the leader in a team situation	7	6	5	4	3	2	1	0
9. I feel comfortable in speaking out within the team when others are not keeping the best interests of the client in mind	7	6	5	4	3	2	1	0
10. I see myself as preferring to work on an interprofessional team	7	6	5	4	3	2	1	0
11. I believe that interprofessional practice will give me the desire to remain in my profession	7	6	5	4	3	2	1	0

At this point in time, based on my participation in interprofessional education activities and/or clinical practice ...	To a Very Great Extent	To a Great Extent	To a Fairly Great Extent	To a Moderate Extent	To a Small Extent	To a Very Small Extent	Not at All	Not Applicable
12. I have gained an enhanced awareness of roles of other professionals on a team	7	6	5	4	3	2	1	0
13. I have an appreciation for the importance of having the client and family as members of a team	7	6	5	4	3	2	1	0
14. I feel comfortable in being accountable for the responsibilities I have taken on	7	6	5	4	3	2	1	0
15. I feel comfortable engaging in shared decision-making with clients	7	6	5	4	3	2	1	0
16. I feel comfortable in accepting responsibility delegated to me within a team	7	6	5	4	3	2	1	0
17. I have gained a better understanding of the clients' involvement in decision-making around their care	7	6	5	4	3	2	1	0
18. I feel comfortable clarifying misconceptions with other members of the team around the role of someone in my profession	7	6	5	4	3	2	1	0
19. I have a gained greater appreciation of the importance of a team approach	7	6	5	4	3	2	1	0
20. I feel able to act as a fully collaborative member of the team	7	6	5	4	3	2	1	0

At this point in time, based on my participation in interprofessional education activities and/or clinical practice ...	To a Very Great Extent	To a Great Extent	To a Fairly Great Extent	To a Moderate Extent	To a Small Extent	To a Very Small Extent	Not at All	Not Applicable
21. I feel comfortable initiating discussions about sharing responsibility for client care	7	6	5	4	3	2	1	0
22. I believe that interprofessional practice is **difficult** to implement	7	6	5	4	3	2	1	0
23. I have gained more realistic expectations of other professionals on a team	7	6	5	4	3	2	1	0
24. I have gained an appreciation for the benefits in interprofessional teamwork	7	6	5	4	3	2	1	0

APPENDIX 4

Participant Information Sheet

Participant Information Sheet

Social and Behavioural Research Ethics Committee *(Project number 6774)*

Title	**Can a pre-graduate interprofessional educational program lead to transformative learning and maintenance of interprofessional competencies in the workplace? A follow up study to assess the impact of the Get Ready! program on working health professionals**.
Short Title	**Follow up study to assess the impact of the Get Ready! program on working health professionals**
Protocol Number	Protocol version 1.3
Project Sponsor	N/A
Location	Australia wide

Research Team

Principal Researcher	**Dr Ben Taylor**
Primary Supervisor	Ms Lyn Gum
Secondary Supervisor	A/Prof Sharon Lawn
Tertiary Supervisor	Ms Marie Heydon

Part 1 What does my participation involve?

1 Introduction

You are invited to take part in this research project, which is called 'Can a pre-graduate interprofessional educational program lead to transformative learning and maintenance of interprofessional competencies in the workplace? A follow up study to assess the impact of the Get Ready! program on working health professionals'.

I am inviting you as a previous participant from the ***HETI Get Ready! Program*** – (a pre-graduate workplace readiness program) that you attended between 2011–2014, and at the time gave your consent to be followed up via personal email for future research studies.

You have been invited because your opinion, feedback and contribution will assist in establishing evidence for interprofessional education for undergraduate healthcare students.

This Participant Information Sheet/Consent Form tells you about the research project. It explains the processes involved with taking part. Knowing what is involved will help you decide if you want to take part in the research.

Please read this information carefully. Ask questions about anything that you don't understand or want to know more about. Before deciding whether or not to take part, you might want to talk about it with a relative, friend or local health worker.

Participation in this research is voluntary. If you don't wish to take part, you don't have to.

If you decide you want to take part in this research project, you will be asked to complete and return one on-line questionnaire and if you give additional written consent for part 2 of the research project you may be contacted via telephone to give a brief telephone interview.

By signing the Part 2 consent form you are telling us that you:

• Understand what you have read
• Consent to take part in part 2 of the research project (ie the telephone interview)
• Consent to be called on a number that you provide by the lead researcher only for a single approx.20 minute telephone interview

Please note part 2 of this study is also entirely voluntary. You may choose to only be involved in part 1 of this study if you prefer (ie complete the on-line questionnaire)

You will be given a copy of this Participant Information Sheet to keep.

2 What is the purpose of this research?

In 2011 The NSW Health Education and Training Institute: HETI (then CETI) along with St Vincent's and Mater Health (along with their University partners) developed the Get Ready! program. It is a pre-graduate interprofessional dedicated transition program for students during their last year of pre-graduate study.

Following the success of the pilot Get Ready! Program HETI further developed it for use across NSW and all LHDs were offered a training and resource package to implement it locally

Since 2011 there have been 9 courses run across 7 NSW Local Health Districts and over 200 pre-graduate students involved in the Get Ready program.

The aim of this study is to assess whether interprofessional competencies taught in the pre-graduate stage of training can be maintained once the students are in clinical practice ie can attitudes/beliefs/behaviours towards interprofessional learning and collaborative practice be sustained. We also aim to evaluate the impact of real life workplace experiences of inter-professional collaborative practice on the participants and if these can lead to further transformative learning in these domains.

3 What does participation in this research involve?

There are 2 parts to this research project – you may choose to only be involved in part 1 if you wish.

Part 1 – Brief online questionnaire – ISVS and demographics (approx. 10 mins)

You will them be asked to complete and return one on-line questionnaire – the Interprofessional Socialisation and Valuing Scale (ISVS) . This is the same type of questionnaire that you completed before and after the get original Ready! Program. This evaluation is expected to take approx. 10 minutes to complete. Consent for this part is assumed if this questionnaire is returned.

All returned completed questionnaires will then be de-identified and all information will remain confidential.

Part 2 – Telephone interview (approx. 20 mins)

Your participation in this part of the research requires you to firstly sign, scan and return a consent form (Part 2 consent form). This gives your consent to be contacted via telephone on the number you provide by the lead researcher only for a single telephone interview. If you give specific additional consent the interview will be digitally recorded, otherwise no recording will occur and only notes will be taken.

All data will be de-identified and stored securely. Any audio files will be deleted once transcribed

Note only a selection of students from all disciplines who give consent will be contacted via telephone to ensure all disciplines are represented.

Any data you provide will be DE-identified – including your name, personal details and also your place of practice/work so that your organisation cannot be identified. Therefore, there will be no direct relationship between taking part in the research and your organisation.

This research project has been designed to make sure the researchers interpret the results in a fair and appropriate way and avoids researchers or participants jumping to conclusions.

There are no costs associated with participating in this research project, nor will you be paid.

4 Do I have to take part in this research project?

Participation in any research project is voluntary. If you do not wish to take part, you do not have to. If you decide to take part and later change your mind, you are free to withdraw from the project at any stage.

Your decision whether to take part or not to take part, or to take part and then withdraw, will not affect your relationship with professional staff or supervisors or your relationship with your hospital, Local Health District, NSW health or other health service.

5 What are the possible benefits of taking part?

We cannot guarantee or promise that you will receive any benefits from this research; however, possible benefits may include the development of greater support for interprofessional education programs to be delivered to undergraduate healthcare students.

6 What are the possible risks and disadvantages of taking part?

This project has been deemed low risk. There are no significant potential or actual risks expected to occur as a result of taking part in this project. **Any data you provide will be de-identified – this includes your name, personal details and also your place of practice/work so that yourself and your organisation cannot be identified.**

7 What if I withdraw from this research project?

If you do consent to participate, you may withdraw at any time. If you decide to withdraw from the project, please notify Dr Ben Taylor via email in writing before you withdraw.

If you decide to leave the research project, the researchers will not collect additional personal information from you, although personal information already collected will be retained to ensure that the results of the research project can be measured properly and to comply with law. You should be aware that data collected up to the time you withdraw will form part of the research project results. If you do not want your data to be included, you must tell the researchers when you withdraw from the research project.

8 Could this research project be stopped unexpectedly?

This research project may be stopped unexpectedly for a variety of reasons. These may include reasons such as unforeseen illness or changes to the requirements of this research project.

9 What happens when the research project ends?

The information collected as part of this research project will be used to complete a project report, which constitutes the major research project for the lead researcher's Masters in Clinical Education with Flinders University. A summary of the results of the research project is expected to be available from February 2016 on request by contacting Dr Ben Taylor in writing via email.

Part 2 How is the research project being conducted?

10 What will happen to information about me?

The data collected in this project will be re-identifiable (coded) with each participant being allocated a participant number in order to compare immediate post-Get ready questionnaires and current questionnaires.

Confidentiality will be ensured with all information being stored in a locked filing cabinet in the lead researcher's office. The lead researcher Ben Taylor will have exclusive access to this information. The data will be stored for a period of five years from either the date of submission of the report to Flinders University or if published, from the date of publication and will then be destroyed.

The other members of the research team will only have access to the de-identified data and audio transcripts once they have been coded and study numbers allocated. They will not have access to the audio files themselves.

By signing the consent form you consent to the research team collecting and using personal information about you for the research project. Any information obtained in connection with this research project that can identify you will remain confidential. This will be achieved by the record of participant number allocation will be stored within a locked filing cabinet in the researcher's office with the lead researcher Ben Taylor having exclusive access to this cabinet. Your information will only be used for the purpose of this research project and it will only be disclosed with your permission, except as required by law.
The personal information that the research team collect and use is the information collected from the two questionnaires +/- the telephone interview.

It is anticipated that the results of this research project will be published and/or presented in a variety of forums. In any publication and/or presentation, information will be provided in such a way that you cannot be identified, except with your express permission. Confidentiality will be achieved by only de-identified information being utilised.

In accordance with relevant Australian and/or New South Wales privacy and other relevant laws, you have the right to request access to the information about you that is collected and stored by the research team. You also have the right to request that any information with which you disagree be corrected. Please inform the research team member named at the end of this document if you would like to access your information.

Any information obtained for the purpose of this research project that can identify you will be treated as confidential and securely stored. It will be disclosed only with your permission, or as required by law.

11 Who is on the research team?

Principal Researcher	**Dr Ben Taylor**, MBChB, FACEM, Masters in Clinical Education student Flinders University
Primary Supervisor	**Ms Lyn Gum** RM, RN, Master of Nursing (Education), Adjunct Lecturer Rural Clinical School of Medicine, Flinders University
Secondary Supervisor	**A/Prof Sharon Lawn** B, DipEd, MSW, PhD, Flinders Human Behaviour & Health Research Unit
Tertiary Supervisor	**Ms Marie Heydon** MSW, Dip Management, Senior Workforce and Development Consultant, Centre for Education and Workforce Development, NSW Health

12 Compensation

This study is deemed as low risk. However, if you suffer any distress or psychological injury as a result of this research project, you should contact the primary supervisor Lyn Gum on 8586 1000 as soon as possible. You will be assisted with arranging appropriate treatment and support.

13 Who is organising and funding the research?

This research project is being conducted by Dr Ben Taylor and constitutes the major research project for his Masters in Clinical Education with Flinders University. There is no funding allocated for this research other than funding for consumables.

14 Who has reviewed the research project?

All research in Australia involving humans is reviewed by an independent group of people called a Human Research Ethics Committee (HREC).
The ethical aspects of this research project have been approved by the Social and Behavioural Research Ethics Committee of Flinders University. This project will be carried out according to the *National Statement on Ethical Conduct in Human Research (2007)*. This statement has been developed to protect the interests of people who agree to participate in human research studies.

15 Further information and who to contact

The person you may need to contact will depend on the nature of your query. If you want any further information concerning this project or if you have any problems which may be related to your involvement in the project, you can contact the lead researcher Dr Ben Taylor on 0434221884 or the primary supervisor Lyn Gum on 8586 1000.

16. Complaints contact person

This study has been approved by the Social and Behavioural Research Ethics Committee of Flinders University. *(Project number INSERT PROJECT No. here following approval)*. Any person with concerns or complaints about the conduct of this study should contact *Executive Officer of the Committee can be contacted by telephone on 8201 3116, by fax on 8201 2035 or by email human.researchethics@flinders.edu.au*

Thank you for taking the time to consider this study.

IF YOU WISH TO TAKE PART IN PART 1 PLEASE COMPLETE THE ATTACHED QUESTIONNAIRE AS SOON AS POSSIBLE

IF YOU WISH TO ALSO TAKE PART IN PART 2 PLEASE SIGN, SCAN AND RETURN THE ATTACHED CONSENT FORM AS SSON AS POSSIBLE.

This information sheet is for you to keep.

APPENDIX 5

Telephone Interview Questions

Q1. Have you at any stage reflected upon what you learned in the Get Ready program you took part in on … x month/year? If so could you tell me about it? (ever thought about it at all?) (warm up question – to get talking about it and if thought about/used since)

Q2. Can you tell me what you learned in the Get Ready program?
(maintenance of knowledge over time)

Q3 What particularly sticks in your mind?
(try and get them to give specific examples)

Q4. Do you feel the Get Ready program helped prepare you in any way for working life as a junior health professional?
If so, how? If not, why not?

Q5. Have your experiences in the workplace to date changed your understanding of what interprofessional collaborative practice is? If so how?
(be prepared to explain what ICP is)

Q6. Have you had any opportunity to apply the interprofessional skills taught in the Get Ready course in your practice? If so how?
(try and get them to give examples (can give conflict resolution or leadership as an example)

If not, can you explain the reason for this?
(E.g. no opportunities, not useful etc.)

Q7 Was there any particular element of the course or event during the course that changed your beliefs around interprofessional collaborative practice?
If so how? If not, can you explain the reason for this?

(might not be able to remember such a moment – try and get them to remember back to the course)

Q8. Have there been any barriers in your work place to achieving effective interprofessional collaborative practice?
(e.g. no formal IPE teaching, systems issues ???egg separate ward rounds)

If so do you mind explaining why ? and whether any steps have been taken to overcome those barriers?

Q9. Have your real life experiences of being a junior health professional changed the way you value other health professionals in the team since graduating? If so how?

Q 10. Tell me about how your experiences as a junior health professional changed the way you perceive yourself and possibly your own professional identity?