Exploring first year health sciences students' perceptions and experiences of teamwork: An introduction to interprofessional education

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DECLARATION

I, Adibah Hendricks, hereby declare that the work on which this dissertation/thesis is based is my original work (except where acknowledgements indicate otherwise) and that neither the whole work nor any part of it has been, is being, or is to be submitted for another degree in this or any other university.

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[1] An ongoing charity that perpetually gives until eternity.

ABSTRACT

Teamwork has become an important goal of contemporary healthcare. Therefore, one of the objectives of educating health professionals is to impart teamwork skills. While teamwork skills have become widely acknowledged as important for health sciences education (HSE), teamwork pedagogy within the ambit of interprofessional education within HSE is contested in the literature. The need to trouble the meaning of concepts within the interprofessional field to understand its nature and process in different contexts has been highlighted and remains an area in which further research is needed.

Understanding the point of view of students can help educators, curriculum planners and evaluators make optimal use of their opportunities and resources within HSE. Thus, the present study sought to explore students' perceptions and experiences of teamwork within a HSE context with a view to contributing to this resource base.

Implicit in the study context is the occurrence of first year health sciences students coming into contact with each other in a mixed professions course "Becoming a health professional" (BHP). A theory about social interaction, contact theory, postulates that when individuals from different groups have opportunities to come together under certain conditions, positive social outcomes may result. On the contrary, contact between distinct groups could also bring about adverse effects. In this study different groups referred to students registered for different health professional degree programmes. Based on the proviso that teamwork can be associated with positive, functional interactions between people, which of contact theory's suppositions were experienced by the students in this study was explored.

Since teamwork is innately a social activity which is experienced in relation to others, one of the assumptions underpinning this study was that students' perspectives of teamwork may be co-constructed. Thus, the study was positioned within an interpretivist paradigm in which reality is subjective but also co-constructed by individuals, including participants and researchers. Using a qualitative design, this exploratory study offers insight into first year students' perspectives of teamwork within the undergraduate mixed professions course BHP. The primary data production method was focus group discussion and data were evaluated

using thematic analysis. The thematic analysis yielded three broad themes: the ***purpose*** of teamwork in BHP; the ***persons*** involved in teamwork; and the ***process*** of teamwork in BHP.

The findings of this study revealed that students had a comprehensive perception of what teamwork entails in their educational context, although their experiences of teamwork varied. These perspectives have been linked in concrete ways to the literature reviewed in this study and its theoretical framework. Thus, the findings were used to generate a heuristic for teamwork learning for health sciences students. The impact of this study is that students' perspectives of teamwork may be useful to the future design and delivery of entry level interprofessional courses aiming to instil teamwork skills. The underlying rhetoric of this thesis is that students are capable of contributing to their own learning, and the present findings manifested in one such contribution, the development of a pedagogical tool for teamwork.

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LIST OF ABBREVIATIONS USED

CAIPE	Centre for the advancement of interprofessional education
CCWG	Curriculum Change Working Group
BP	Becoming a professional
BHP	Becoming a health professional
FHS	Faculty of Health Sciences
FGD	Focus group discussion
HSE	Health sciences education
IHP	Integrated Health Professional
IOM	Institute of Medicine
IPE	Interprofessional Education
MPE	Multiprofessional education
PHC	Primary Healthcare
UCT	University of Cape Town
WHO	World Health Organisation

Chapter 1: Locating the study

Introduction

Irrespective of the fields in which health professionals work or practice, they are almost always coming into contact with others in their daily endeavours. Thus, in addition to the skills required for each of the healthcare professions, knowing how to interact effectively with others is embedded in this type of work. Imparting such interactive skills is thus crucial in the education and training of students in the various health professions. This suite of interactive skills is commonly packaged as 'teamwork skills' and has become increasingly topical in interprofessional education (IPE) within health sciences education (HSE).

The study upon which this thesis expounds was concerned with teamwork amongst entry level health sciences students. In particular, this study explored how first year students at a South African university perceive and experience teamwork within an undergraduate course. The intention of this exploratory research was to foreground student perspectives; thus, an open-ended approach was taken to the qualitative methodology applied in this study.

Background & study context

Teamwork in health sciences education (HSE)

Teamwork in HSE can be understood within a worldwide shift from profession specific pedagogies with little integration, to more integrated curricula involving co-operative activities among students from different health professions (Paradis & Reeves, 2013). Earlier compartmentalised approaches to HSE have been identified as mismatched to the broader context in which healthcare is delivered. This context has been described as complex and multifaceted, requiring collaboration between a number of health professionals (Frenk et al., 2010, Paradis & Reeves, 2013, Thistlethwaite, 2008).

HSE curricula must support students coming together to work as a team and prepare them to meet the demands of the complex nature of interprofessional healthcare (Dow et al., 2013, Frenk et al., 2010). Although having effective teamwork skills is now widely

accepted as an essential part of delivering holistic healthcare, there is a need for health professionals to be more formally trained in teamwork (Earnest, Williams & Aagaard, 2017, Leggat, 2007, McComb & Hebdon, 2013). According to Leggat (2007) teamwork skills are often learned 'on the job' rather than in the formal curriculum of health professional students. Practice-based or 'on the job' teamwork learning has been deemed to be ineffective due to high patient mortality rates associated with poor teamworking amongst health professionals (Earnest, Williams & Aagaard, 2017).

An area of formal curricula concerned with imparting teamwork skills in HSE is interprofessional education (IPE). Although the most frequently cited objective for IPE is to grow teamwork skills, and despite widespread implementation of IPE programs in universities throughout the world, IPE's potential is not always fully realised thus its most commonly cited goal of developing teamwork skills is not always achieved (Hean & Dickinson, 2005, Thistlethwaite, 2012). This shortfall has been ascribed to a lack of theoretical elaboration and application in the interprofessional field (Reeves & Hean, 2013).

The IPE literatures' frequent focus on describing programmes and what the outcomes of such programmes were means that the array of underlying factors at play in interprofessional relations have been largely unscrutinised (Baker et al, 2011). According to Mickan & Rodger (2005) the academic scrutiny of teamwork in healthcare has been traditionally positivist; and Reeves et al. (2011) argue that the concepts of team, and concomitantly teamwork, have become 'fit for all' terms in many contexts including HSE. Thus, there is scope to unpack conceptions of teamwork within real-world HSE contexts, particularly shared learning programmes.

A transforming curriculum within a transforming university

Universities and schools worldwide, including the University of Cape Town (UCT), have recognized the need to implement educational activities which facilitate more contact and collaborative activities within the education and training of their health professional students (Hartman et al., 2012, Paradis & Reeves, 2013). The Faculty of Health Sciences (FHS) at UCT embarked on a transformation journey in the mid-nineties following the

demise of apartheid in South Africa (Hartman, 2009). "*Despite being a very traditional school*" UCT's then 'medical school' inevitably had to move toward transformation of its long-established curriculum; not only to keep up with international trends in HSE but also to reflect the needs of a new, post-apartheid South Africa (Gibbs, 2004:565, Hartman, 2009).

In its shift to increased pedagogical integration, UCT introduced a transformed curriculum within its FHS in 2002 (Hartman et al., 2012). This new curriculum was underpinned by the post-apartheid South African government's health policy of primary healthcare (PHC). "*PHC means health for all as a fundamental human right… for those who fall ill or are disabled… it also means prevention and health promotion for the population at risk*" (Hartman et al., 2012:477). Thus the PHC approach calls for a range of health professionals involved in various aspects of healthcare to work together towards 'health for all'. PHC was implemented in a bid to redress the inequities of the previous dispensation's fragmented policies which continue to affect the health status of South African communities decades later. At UCT FHS the principles of PHC as well as the global move toward the integrated education of students from different health professions were driving factors informing the transformation of the faculty's health sciences curricula (ibid).

Although tangible curricular changes toward transformation were made in the early 2000s, later student uprisings against the curriculum highlighted the urgency of continuing the transformation journey which began at the turn of the century. According to the university's transformation report of 2017, since 2015 UCT *"continued to grapple with student protest, signalling that the transformation project require*[d] *scope and depth… to… create a campus… where… students… feel included and can flourish"* (University of CapeTown, 2017:4). Student protests brought to the fore that students were engaged and interacting with the curriculum and communicating a desire to be heard. The "#MustFall" movement[2] began in 2015 with the #RhodesMustFall campaign,

[2] Student activist groups with different agendas from universities across South Africa mobilised together under the #FeesMustFall campaign which resulted in a descent towards violent uprisings at universities across the country including UCT (Mangcu, 2017).

organised by UCT students, which fought to have the statue of Cecil John Rhodes, an arch imperialist and symbol of South Africa's colonial past, removed from the university campus (Hodes, 2017). Although ostensibly about the removal of a statue, the students' protests also called for decolonisation of the curriculum. While this complex movement was not explicitly addressed in this study, its discourse around curriculum transformation is implicit in the study rationale since teamwork among different health sciences students is a learning objective of the PHC-led transforming curriculum.

Study context: within the transformed curriculum

The context for this study is the undergraduate mixed professions course "Becoming a Health Professional" (BHP). Together with its antecedent "Becoming a professional" (BP), BHP forms part of the FHS transformed curriculum introduced in 2002. BP (semester 1) and BHP (semester 2) are compulsory for all first-year students registered for different degree programmes in the FHS. The health professions represented in BP and BHP are audiology, medicine, occupational therapy, physiotherapy and speech and language pathology. These courses involve small group learning where a mix of students from each of the professions come together for formal academic interaction through various learning activities (Olckers et al., 2006). The overall learning outcomes for BP and BHP include having a "*working knowledge of how people interact and what facilitates good interpersonal skills between individuals and groups*" as well as beginning to "*value the contribution of different health professionals*" in a healthcare team (Olckers et al., 2006:251).

These learning outcomes for BP and BHP both promote the idea of teamwork, however this study focused on the second semester course (BHP) in which the need for students to work together in teams features more prominently. The purpose of this exploratory study was to explore what students' perceptions of teamwork were; and how students experienced coming together for team-based learning activities in BHP.

Researcher positionality

As Henning, Van Rensburg & Smit (2004:19) note, the "*role of the researcher as co-creator of meaning*" is an important feature of the interpretivist paradigm within which this study is situated. Thus, part of the study context is my positionality as a researcher. Having worked as a facilitator on both courses (BP and BHP) I observed the dynamics among students in my BP and BHP groups through the lens of my own academic socialisation and areas of interest. Having a background in psychology, organisational psychology and human resource management, the interaction between students triggered my curiosity about the nature of these interactions. In my summation, there seemed to be a synergistic energy between the students in the BP and BHP groups I facilitated. These anecdotal insights and experiences were the impetus to explore how students perceive teamwork; and if and how they experience teamwork in the BHP context. Being reflexive and continuously aware of my bias throughout the duration of the research was an important consideration due to my prior experience of working as a BHP facilitator.

Concluding comments

Researcher positionality is an important consideration in interpretivist research since a researcher *"makes meaning from her engagement in the project…* [and] *will present as findings… what she has interpreted to be the meaning of the data. This does not mean that the voices of the setting are lost",* however (Henning, Van Rensburg & Smit, 2004:7). Thus, this chapter offered an overview of the study context, and also considered my role as the researcher. The following chapter presents the literature reviewed in this study, further locates the study in its fields of scholarship, and begins to set the scene for the development of the ensuing thesis.

Chapter 2: Literature review & conceptual framework

Introduction and chapter overview

The function of a literature review is to justify new research in a chosen focus area and identify an opportunity to add to the body of literature in one or more fields (Samuel, 2017). Expressed most simply the phenomenon researched in this study is 'teamwork'. More specifically, undergraduate health sciences students' perspectives of teamwork. Thus, the present research draws on three fields of study and the subjectively selected section of literature is organised conceptually into 3 parts[3]:

1. Teamwork
2. Training health professionals for teamwork through interprofessional education (IPE)
3. Students' perspectives of teamwork and IPE.

The primary theory within the theoretical framework used in this study is contact theory. Since this theory has been used in other studies in IPE (one of the fields in which this study is located) the theoretical framework and literature review in this thesis are inextricably linked. Contact theory is discussed in the theoretical framework in chapter 3 and relevant literature is reviewed in the theoretical discussion of that chapter as well.

The concepts of teamwork and IPE are explained in the literature review as part of the conceptual framework of the study. The discussion of concepts is "*about key constructs within the available literature*" and can be combined with a literature review since both address the exploration of what is known about a phenomenon (Samuel, 2017:16).

Literature search strategy

Literature searches were conducted both independently and with the assistance of librarians at the FHS library. The electronic databases Academic Search Premier, Africa-

[3] The notion that literature has been subjectively selected is an indication of the interpretivist paradigm of this study which will be discussed in chapter 4.

Wide Information, CINAHL, MEDLINE and PsycARTICLES were searched via EBSCOHost. PubMed, Scopus and Google Scholar were also searched. Combinations of terms such as "multiprofessional education" "interprofessional education", "teamwork", "first year" "students", "health sciences" as well as "contact theory" were used. Related terms for "first year" including "entry level", "undergraduate" and "pre-registration" were also used. The terms "interdisciplinary" and "multidisciplinary" were excluded to differentiate the conceptual difference between "discipline" and "profession". Reference lists of pertinent journal articles found were also perused for relevant literature.

Teamwork

Organisational theory is the framework in which the study of teamwork originates. Towards the mid 20th century research in industrial settings began generating findings that supported the structure of work into team-based formats. It was found that social interaction and communication between people working together produced better results than the traditional division of labour format (Swanepoel et al., 1998). Teamwork is thus the product of interaction between a group of individuals which form a team (Salas et al., 2015). A 'team' can be defined as *"a small number of people with complementary skills who are committed to a common purpose, set of performance goals, and approach for which they hold themselves mutually accountable"* (Katzenbach & Smith, 2005:165).

Operationalising teamwork

Definitions of teamwork in the literature remain divergent (Sullivan et al., 2016). Salas, Sims & Burke (2005:590-591) contend that "*no one has been able to clearly define exactly*" what teamwork is despite decades of extensive research. They argue that this research endeavour has mass produced a complex array of components that are required for teamwork to happen. While the literature does agree that teamwork requires a set of competencies that team members must possess in order to function synergistically (Salas, Sims & Burke, 2005); researchers do not agree on what these competencies are (Aguado et al., 2014). Salas et al. (2015) provides a synthesis of

literature which spans several decades, summarising what they consider the key aspects of teamwork. Their *"Heuristic of the Critical Considerations of Teamwork"* includes cooperation, coordination, cognition, conflict, coaching and communication which occurs within teams to ensure that individual team members are motivated to work together; and have the skills needed to produce desired results. The heuristic also addresses conditions which influence teamwork such as culture, context and group composition (Salas et al., 2015:602). It is mentioned here as an overview of the gist of how teamwork has been conceptualised and defined in the literature.

Salas et al. (2015:602) use of a 'heuristic' is motivated by their assertion that "*the numerous attempts to define and consolidate teamwork*" in the literature "*results in more questions than answers and does not necessarily*" provide guidelines as to ***how*** to do effective teamwork. From this stance the heuristic "*serves as an evidenced-based tool*" for the diagnosis and development of teams (Salas et al., 2015:615). This pragmatic approach is conducive to this study's educational context and is discussed further in chapter 5.

Operationalising teamwork in healthcare delivery

One characteristic of teamwork is that the tasks involved usually cannot be done by one individual, and thus relies on the specific contributions of each of its members. In the healthcare context the task of treating a patient also often relies on interprofessional teamwork (Lerner, Magrane & Friedman, 2009). The need for effective teamwork in healthcare settings is widely acknowledged in the literature (Hughes et al., 2016, Leggat, 2007, McComb & Hebdon, 2013); however there is no consensus definition for teamwork in this context. To assertively define teamwork in an interpretivist study which aims to explore what teamwork is or means within a particular context seems counterintuitive. Notwithstanding, a working definition is adopted as a reference point. Lerner, Magrane & Friedman (2009) define teamwork in health-related contexts as the ability of individuals to work together and communicate effectively in order to achieve a coordinated, collective action.

As mentioned, the literature on teamwork in healthcare lacks a widely used conceptual definition. According to Xyrichis (2020:2), in the interprofessional field "[c]*onfusion over terminology remains a concern"* and conceptualisations of 'teamwork' are largely borrowed from other research traditions such as organisational psychology (Xyrichis & Ream, 2008). Writers have however, contextualised ideas and concepts of teamwork from other fields into the healthcare context (Mickan & Rodger, 2005, Sullivan et al., 2016).

Mickan & Rodger (2005) argued that the academic scrutiny of teamwork in healthcare has been traditionally positivist and took a constructivist approach to exploring what teamwork means to health professionals. Mickan & Rodger (2005:360) used a mixed methods methodology in their constructivist study "*to gain a deeper understanding of what constitutes effective teamwork, from the perspectives of health care practitioners*"[4] in order to "*progressively build a theoretical model… which had utility in health care organisations*". Using an interpretivist framework, they developed the 'Healthy Teams Model' which identified 6 characteristics of teamwork derived from the experiences of health professionals working in different health related team contexts. These characteristics of effective healthcare teams include: a well-defined purpose, common goals specified in measurable terms, adequate leadership, good communication, group cohesion, and mutual respect among team members.

Sullivan et al. (2016) highlights several team principles from the corporate field which can be applied to primary care contexts. An example is the concept of "*leader inclusiveness*" where the actions and speech of a team leader encourages other team members to offer their different contributions. Health professionals in leadership roles should create an open environment *"empowering all team members to participate in planning and decision making"* (Sullivan et al., 2016:452). This principle is pertinent to healthcare which is fraught with historical hierarchies that *"need to change to foster mutual respect, share*(d) *responsibility",* interprofessional engagement and shared commitment to patient safety (Sullivan et al., 2016:453).

[4] *n=241*

The nature of healthcare teams

Healthcare teams have particular characteristics which are unique to the context in which they practice, and which have bearing on the ability to work effectively as a team. Some of these features include:

1) Low stability over time and short lifespans (Hughes et al., 2016).

   Healthcare teams are often formed in response to a patient's unique needs on a case by case basis. Interprofessional teams are formed re-actively during patient care as cases unfold, and so teams may change formation or dissolve quickly. Since teams develop over time, this temporal variability possibly inhibits the potential for relationship building (Thistlethwaite & Dallest, 2014).

2) High team member differentiation with high task interdependence in interprofessional teams (Hughes et al., 2016).

   With the growing number of health-related professions including specialities within these professions, interprofessional collaborative practice has become exponentially more complex. The complexity of the range of expertise of a mix of professionals and disciplines together in healthcare teams may compromise patient safety if communication and team cohesion are low (Sullivan et al., 2016). Incorporating multiprofessional (such as obstetric nurses working with obstetric physicians) and multidisciplinary (such as obstetric physicians working with paediatric physicians) expertise in the same team requires high level communication and problem-solving skills to navigate the tendency for miscommunications. Different professions have traditionally been and are currently still largely independently trained; resulting in profession-specific ways of thinking and doing (Hughes et al., 2016).

3) High skill differentiation between team members.

Healthcare team members are often sole representatives of their profession and/or discipline trained and registered to practice in their respective roles. This means that team members cannot 'stand in' for each other or make up for a missing link in the chain of care. Thus, *"mutual support and backup behaviour"* typically encouraged in teams are not relevant to interprofessional healthcare (Hughes et al., 2016:1268).

4) Hierarchical team structure.

The chain of care provided by health professional teams are often characterised by a chain of command which is universal and deeply entrenched. Physicians are often the automatic team leaders at the top of the chain regardless of whether it is appropriate in a given situation (Sullivan et al., 2016). According to Burch (2014) doctors usually occupy a dominant position in traditional models of healthcare with greater decision-making power and this leads to ineffective communication between members of the healthcare team.

These characteristics also apply to BHP groups which are temporally unstable (groups of students work together for one semester only); differentiated (students represent diverse professional groups each with its own subculture)[5] and there is a sense of hierarchy between students from the different professions (HSSC, 2018)[6]. These points are potentially problematic for teamwork and require that healthcare teams are specifically trained to deal with issues unique to the contexts in which they practice. The implication is that health professional education must respond to these unique needs by tailoring the preparation of health professional students for the realities of interprofessional teamwork and collaborative practice (Hughes et al., 2016).

[5] Students are also differentiated in terms of demographics, socio-economic backgrounds and culture among other markers of difference, however this study was delimited to differences in terms of professional degree programmes only.

[6] A report by the faculty's Health Sciences Students Council in 2018 revealed that students experienced marginalisation in the faculty by virtue of the professional degree programmes they were registered for.

Educating health professionals for teamwork

The need for growing teamwork competencies in health professionals has been highlighted as an important goal of HSE. Traditional profession-specific approaches to training health professionals have been identified as inappropriate to support teamwork. Thus, institutions worldwide have recognized a need to implement educational activities which facilitate collaborative activities (Paradis & Reeves, 2013). Interprofessional education between students from different professional programmes is seen to promote future collaborative practice (Freeth et al., 2005) and teamwork skills can be seen as part of the foundation for collaborative practice.

Interprofessional education

The seminal paper by Frenk et al. (2010:1944) states that "*actual practice in increasingly complex health settings is based on teams. The more the educational experience includes competencies for that type of work, the better health professionals will be equipped to adapt to the teamwork that is imperative of good practice*". Interprofessional education (IPE), is the branch of HSE concerned with teaching teamwork, with teamwork skills being its most commonly cited goal (Earnest, Williams & Aagaard, 2017).

Multiprofessional education (MPE) is the conceptual and historical antecedent of IPE. The World Health Organisation (WHO) defined MPE in 1998 as "*the process by which a group of students (or workers) from the health-related occupations with different occupational backgrounds learn together during certain periods of their education, with interaction as an important goal, to collaborate in providing promotive, preventive, curative, rehabilitative and other health related services"* (WHO, 1988:6). A guide to IPE published by the United Kingdom Centre for the Advancement of Interprofessional Education (CAIPE) defines IPE as occurring when "*members of two or more professions learn with, from and about each other to improve collaboration and the quality of care"* (Barr & Low, 2013:4). Earlier publications by CAIPE in 1997 and 2006, as cited in Hammick, Olckers & Campion-Smith (2010:7), bear the same wording "*with from and about each other to improve collaboration and the quality of care*".

Harden (2000) describes the integration of curricular activities in HSE as a continuum of steps along a ladder of integration from complete fragmentation or isolation to full immersion or trans-disciplinary integration. The seventh step on the integration ladder describes a complementary curriculum. Harden (2000) refers to this step as "correlation" where curricula consist mostly of profession or discipline specific courses with the addition of an integrated session which brings together topics of common concern to each profession. At UCT's FHS the semester courses BP and BHP are such integrated sessions in year one for all health sciences students registered in the faculty. The learning activities within these courses focus on a common thread of professionalism; and aim to instil essential skills required to function effectively as a healthcare worker and member of a healthcare team.

These overarching competences include interpersonal skills such as communication and interviewing skills; and intrapersonal skills such as reflexivity. The concept of an 'Integrated health professional' (IHP) is a key theme in both courses. An IHP is a health professional who is knowledgeable in their profession, empathic towards others and reflective of their own practice. The IHP is an inclusive identity to which students from each of the professional programmes are encouraged to reflect upon and work towards in their weekly sessions (Olckers, Gibbs & Duncan, 2007, Olckers et al., 2006).

Competing terminologies in the interprofessional field

Paradis and Reeves (2013) and others (Dimoliatis & Rofft, 2007; Hammick, Olckers & Campion-Smith, 2010) refer to the semantic confusion that has been a feature of the IPE field for the past few decades. The literature has generally used terms such as interprofessional education, interdisciplinary education, interprofessional learning, interdisciplinary learning, multiprofessional education, multidisciplinary learning and so forth interchangeably. This conundrum of competing terms where academics use 'inter' and 'multi' together with 'professional' or 'disciplinary' in *"seemingly endless permutations"* (Barr, 2005:31), as well as synonymously in the same paper (Thistlethwaite, 2012), has confounded literature in this field.

According to Hammick, Olckers & Campion-Smith (2010) early publications by the WHO used the term 'multiprofessional education', but the WHO has since reviewed its use of this term in 2008 and throughout subsequent works referred to 'interprofessional education' (Hammick, Olckers & Campion-Smith, 2010). According to Hammick et al. (2007) what sets IPE and MPE apart is that the former requires an interactive component with the potential for collaboration whereas the latter is associated with parallel learning.

The literature shows that between 1970 and 2010 the term 'interprofessional education' has been used more frequently since 2000 (Paradis & Reeves, 2013). Although 'interprofessional' is more widely used, other terms including 'multiprofessional' are often used interchangeably in the same paper (Thistlethwaite, 2012). Despite this interchangeable use, the prefixes 'multi' and 'inter' are conceptually different. The Oxford dictionary (1990) defines 'inter' as '*between*' or '*among*' and '*mutually*' and '*reciprocally*' whereas 'multi' is defined as '*many*' or '*more than one'*. Reeves et al. (2011) argues that the varied use of terminology is in part due to poor conceptualisations of work in the interprofessional field, and in part due to the blurred conceptual lines between concepts. The complexity of overlapping, interrelated definitions highlights the need for more robust use of theory to clarify meanings in the field (Reeves et al., 2011).

The terms 'interprofessional teamwork' and 'collaborative practice' have also been used in the literature. Reeves, Xyrichis & Zwarenstein (2018) define interprofessional teamwork as a *"form of practice"* encompassing some core elements of teamwork and interprofessional working *"including (but not restricted to): shared team identity, clarity, interdependence, integration, and shared responsibility."* The WHO (2010:13) define collaborative practice as occurring *"when multiple health workers from different professional backgrounds provide comprehensive services by working with patients, their families, carers and communities to deliver the highest quality of care across settings"*. This definition by the WHO does not specifically mention teamworking between multiple health workers but notes that a health professional who is ready for collaborative practice "*has learned how to work in an interprofessional team and is*

competent to do so" (WHO, 2010:7). Since BHP students are still in the process of 'becoming' health professionals I differentiated the more inclusive concept of 'teamwork' from 'interprofessional teamwork' and 'collaborative practice' in this thesis. I reiterate that the phenomenon of study was 'teamwork' within a HSE context rather than 'interprofessional teamwork' or 'collaborative practice', the latter assumed to be more within the ambit of clinical work and thus beyond the scope of possibility for the first-year students in this study. These assumptions are revisited in chapter 6.

Positioning this study in relation to competing terminologies

The aim of this study was to explore the meaning of teamwork (an interactive process) from the perspective of students in the multiprofessional course BHP. The need to address the conceptual disparity is necessary since the concept of teamwork is implicit in the definition of interprofessional rather than multiprofessional education. BP and BHP are historically rooted in multiprofessional education where, as the prefix implies, students from more than one profession are learning together but in parallel. One of the assumptions underlying the conceptualisation of this study is that students in BHP were not just learning side by side but are interacting with each other in some way(s). A further assumption was that the interaction between multi professional students may have amounted to teamwork. This assumption is revisited later in relation to the study findings in chapters 5 and 6.

Motivation for the use of the term IPE

The publication footprint for BP and BHP (Duncan et al., 2006, Mayers et al., 2006, Olckers, Gibbs & Duncan, 2007, Olckers et al., 2006) uses the term multiprofessional and this is a research conversation the present thesis joins. Although Brydges (2010) argues that the multiple use of terminologies in HSE discourse has resulted in academics engaging in parallel conversations rather than interacting in shared research conversations, I opted to use the term 'interprofessional' in the title of this thesis. This choice denotes my primary assumption in the conceptualisation of this study; namely that BHP is more congruent with the conceptual definition of 'interprofessional' hence the exploration of 'teamwork'. Notwithstanding, I continued to engage with these

terminologies and one of the (initially unintended) outcomes of this research journey has been attempting to contribute to the conceptual clarity of MPE and IPE as it pertains to BHP.

The vast evidence base for IPE includes, to name a few: evaluating the effectiveness of IPE programmes (Carpenter & Dickinson, 2016, Guraya & Barr, 2018); students' perceptions and experiences of IPE programmes as part of university evaluations (Kloppers et al., 2015, Mahler et al., 2018, van Wyk & de Beer, 2017); measuring the effect of IPE on changes in students' knowledge, attitudes or skills in interprofessional contexts (Gustafsson et al., 2016, Michalec et al., 2017); and faculties reporting on their experiences of implementing shared learning programmes (Treadwell & Havenga, 2013, Waggie & Laattoe, 2014). The rhetoric of literature reviewed in this study is that health professional students at various levels of their education; and practitioners at various stages of clinical experience have been interacting in different ways, but crucially they have been ***'inter'-acting***. This theme of '*inter*' as '*between*' or '*among*' and '*mutually*' and '*reciprocally*' is at the core of the premise of this thesis.

It is noteworthy that two contemporaneous master's theses reporting on IPE at two separate South Africa universities excluded UCT's 'multiprofessional' courses BP and BHP from its reviews of shared learning programmes in the South African context. Butler (2016) focused on the experiences of senior health sciences students in a non-credit bearing IPE module consisting of 4 sessions over 7 weeks. "*The main outcome of the IPE module was to enable students to work collaboratively among healthcare professionals by working in healthcare teams consisting of different healthcare professions*" (Butler, 2016:87). This outcome is similar to that of BHP which is also a shared learning programme, however Butler (2016:1) reports that only two other South African universities (not including UCT) have "*incorporated some form of IPE into their health sciences programmes*".

The thesis by van Wyk (2016) reports on teamwork abilities in final year health and rehabilitation sciences students after exposure to an IPE programme. Van Wyk (2016: 24) writes that "(s)*tudies of interprofessional education in the South African context are*

limited. The two articles written by Waggie and Laattoe[6] and Treadwell and Havenga[30] focused on the development and implementation of interprofessional education but the settings differ greatly. After "*reading literature relating to IPE intensely*", van Wyk (2016:13) concludes that no further literature could be found *"in a similar South African setting".*

As Butler (2016) and van Wyk (2016) point out, there is scope for more local IPE studies in South Africa, however the omission of UCT's "*form of IPE*" from these theses' literature reviews raise some questions:

- Have the articles in the publication footprint for BP and BHP been excluded because these researchers' search strategies did not include the term 'multiprofessional' and therefore these articles (Duncan et al., 2006, Mayers et al., 2006, Olckers, Gibbs & Duncan, 2007, Olckers et al., 2006) were not found?
- Were these articles, all of which are about some aspect of shared learning in a South African HSE context, deemed irrelevant and deliberately excluded because of the descriptor 'multiprofessional'?
- Have the articles been inadvertently excluded as a result of the challenges of "*scoping the literature*" of "*inter-/multiprofessionalism in health care*" due to numerous combinations of possible search terms in this field (Dimoliatis & Roff, 2007:275)?
- Alternatively, these articles could have been excluded based on their year of publication, each being more than 10 years out of date.

Notwithstanding the possibilities of exclusion, I argue that while the aforementioned publications concerning BP and BHP were relevant at their time of publication, an updated account of "(n)*ot just another multiprofessional course*" (Duncan et al., 2006, Mayers et al., 2006) is timely. Thus, this study hopes to renew a research interest in BP and BHP as discussed in chapter 6.

Timing and tribalism in health sciences education

A debate in the field is when to introduce IPE. Some say it must be introduced later in the curriculum since senior students are able to grasp their own professional identities and the scope of practice of other health professionals (Barr & Gray, 2013). The other end of this debate argues that IPE must be introduced early in the curriculum since early exposure may counter the influence of profession-specific socialisation or tribalism (Volmink, 2018). First year students are an often neglected group in the literature due to the pervasive rationale that entry level students lack a professional role identity (Honan et al., 2015) and lack clinical knowledge and experience of their own and other professions.

BP and BHP are introduced in year one for health sciences students at UCT FHS with the intention of starting students off on an even footing as they begin their development into health professionals (Olckers et al., 2006). This intention would appear to be problematic however in light of a recent report by the UCT FHS Health Sciences Students' Council (HSSC). The report raised issues about hierarchy and discrimination experienced by students in the faculty (HSSC, 2018). The report indicates that this is experienced as early as the first year of study in the health sciences programmes and implies that some students begin their studies with existing ideas about the value of each of the health professions.

Hean et al. (2006) found that first year health sciences students entered their university studies with a firm set of stereotypes about the health professions, impacting on the potential to work as a team. Peeters et al. (2017) reports on a team-based IPE course for first year students which, like BHP, formed part of the compulsory curriculum. According to Peeters et al. (2017) students entered the course with stereotyped, preconceived ideas of the health professions, however they showed greater knowledge and regard of the professions after the course. Word clouds (at the end of the course) depicted a greater number of responses to some of the professional roles which arguably demonstrated a broadening understanding. Similarly, other professions were described in narrower terms and this narrowing was ascribed to increased understanding of the precise parameters of those professions (Peeters et al., 2017).

Can interprofessional education respond to the challenges of teamwork training?

Interest in teamwork in healthcare is not new. However in recent years there has been a renewed focus on team-related functioning in healthcare. This resurgence followed a landmark report by the American-based Institute of Medicine (IOM) which revealed high patient mortality rates resulting from preventable medical errors due to poor communications and ineffective teamwork among health professionals (Earnest, Williams & Aagaard, 2017, Kohn, Corrigan & Donaldson, 2000, Mosser & Begun, 2014). Leggat (2007) notes that teamwork skills are often learned 'on the job' but learning to work together on the job has been deemed insufficient. The IOM report published in 2000 recommends that teamwork training ought to be based on the proviso "*train in teams those who are expected to work in teams*" (Kohn, Corrigan & Donaldson, 2000:173).

As stated previously the settings in which health professionals work is increasingly complex and teamwork skills are necessary in contexts where the holistic treatment of patients often require care from many health professionals. According to Frenk et al. (2010) health professionals' education curricula are still mostly outdated resulting in poor teamwork; producing graduates who feel unprepared for the demands of their complex working environments (Salvatori, Berry & Eva, 2007). Instead health professionals' education must prepare students to meet the demands of the complexities of interprofessional healthcare (Dow et al., 2013) by supporting teamwork (Frenk et al., 2010).

A review of interprofessional education for entry level students[7] found that teamwork or collaboration skills was the leading positive learning outcome reported and increased role understanding of other professions was the second most frequently reported (Kent & Keating, 2015). Most of the studies in this review involved students volunteering in community-based clinics initiated to *"address gaps in community healthcare".* According

[7] The review included students at undergraduate level. The year level of students was not explicitly stated in all the studies included in the review however three of the studies mentioned that first year students were included.

to Kent & Keating (2015:1229) entry level students participating in *"interprofessional primary care placements are feasible and have the potential to offer a useful service for underserved communities".*

Clinical placements are usually planned to run over a few weeks and these frequent rotations may thwart opportunities to practice teamwork skills meaningfully (Thistlethwaite & Dallest, 2014). As alluded to in the previous discussion on the nature of healthcare teams however, this does not preclude the usefulness of clinical placements for team training. Instead it foregrounds that clinical placements offer opportunities to practice teamwork skills in a context which mimics the real-world nature of healthcare teams, that is, that they are usually short-lived and unstable over time in response to patients' needs.

Hughes et al. (2016) meta-analysis of team training in healthcare (in the form of IPE for health professional students) found that *"healthcare team training is effective under a variety of conditions regardless of the training strategy, team composition (interprofessional/interdisciplinary), sample type (students/clinicians) … suggesting that practitioners should not restrict the implementation of team training to specific clinical contexts"* (Hughes et al., 2016:1291). The desired outcomes of team training were found to be similar for both students and clinical practitioners. The meta-analysis further showed that trainees' (including students and clinical practitioners) reactions to team-training did not predict learning, but that learning predicted the transfer of teamwork skills to real-world clinical contexts (Hughes et al., 2016). This long-term impact of IPE on future collaborative practice and patient care, notes Reeves, Palaganas & Zierler (2017), continues to be overlooked in the literature and ought to be addressed in future research.

Teamwork pedagogy

Earnest, Williams & Aagaard (2017:1378) propose that *"pedagogical approaches to teamwork training* (is) *based on the presence of two key learning factors: interdependent work and explicit training in teamwork".* The table below depicts these writers' three

level framework of pedagogical approaches which they contend represents staggered levels of team learning.

Table 1: Earnest, Williams & Aagaard (2017) three level pedagogical framework of team training

Level of team learning	*Presence of interdependent work*	*Presence of explicit training in teamwork*
Level 1: minimal team learning such as traditional small group facilitated tutorials, projects or tasks	×	×
Level 2: implicit team learning such as problem-based learning (PBL) and team-based learning (TBL)	√	×
Level 3: explicit team learning such as clinical simulation	√	√

Although evidence shows that both PBL and TBL offer potential benefits to the development of teamwork behaviours, Earnest, Williams & Aagaard (2017) argue that both widely used methods do not traditionally include explicit team training such as specific instructions on how to behave in team-related roles (e.g. as leader); how to practice teamwork behaviours (such as good communication and problem-solving); or what to do to improve team functioning (such as encouraging mutual support). According to Earnest, Williams & Aagaard (2017) this level three team training approach is encapsulated in methods such as clinical simulation where students work together in a clinical care event in which both clinical skills as well as teamwork skills can be practiced. This method however is potentially resource-steep and less expensive formats such as PBL and TBL, with the right mix of interdependent work by students and clear teamwork training, can also present opportunities for explicit team learning (ibid)[8].

[8] Some of the participants in this study would have been exposed to working together in PBL in addition to BHP in the curriculum. The influence of PBL is deliberately excluded however since only one of the five professions in this study participates in PBL at UCT, and the focus of this study is teamwork among more than one profession.

The concept of teamwork in healthcare must constantly be reviewed as increasing *"efforts are made to transition to team-based care in the primary care setting"* highlighting the need to *"continuously assess the value of teamwork and opportunities for improvement"* (Sullivan et al., 2016:462). This also applies to UCT FHS as it navigates its pedagogical transformation journey of implementing the premise of PHC, which includes interprofessional teamwork, throughout the scope of curricula in the faculty.

Year level of study and students' perspectives of teamwork

As alluded to previously IPE is largely the field in which the study of teamwork in HSE resides (Reeves et al., 2011). The scope of literature includes student attitudes, perceptions and experiences of interprofessional teamwork (Aase, Hansen & Aase, 2014, Curran et al., 2010, Mellor, Cottrell & Moran, 2013). Many studies concerned with teamwork in IPE were conducted in clinical settings involving senior students (Aase, Hansen & Aase, 2014, Balasooriya et al., 2013, Morphet et al., 2014, Reising et al., 2017); while less attention is paid to students at entry level. A systematic review of IPE in entry level students by Kent & Keating (2015) indicated that only 3 out of 26 studies included first year students. This gap however is not attributable to a lack of IPE programmes involving entry level students (DeMatteo & Reeves, 2013, Mahler et al., 2018, Peeters et al., 2017, Rosenfield, Oandasan & Reeves, 2011) but rather a greater prevalence of IPE programmes implemented in clinical settings which tend to be in the later years of study.

Mellor, Cottrell and Moran (2013) investigated undergraduate student perspectives of a clinical, ward-based IPE programme. They found that students had positive learning experiences with regard to communication and teamwork. The study reported that students recognised the importance of effective communication skills in the interprofessional context and grew to value each member of the team's contribution to their learning activities. If one of the professions were absent, the group felt disadvantaged having gained a deeper understanding of the role of each profession in delivering healthcare (Mellor, Cottrell & Moran, 2013).

Visser et al. (2017) conducted a systematic review of IPE literature to identify what factors students perceived as having promoted or inhibited IPE in clinical settings. They found that stereotypes about the professions and gaps in role understanding were barriers to IPE for undergraduate students while teamwork training acted as a facilitator by increasing motivation to participate in IPE programmes. Phase of study was found to be an indicator of readiness for IPE where younger students (between the ages of 18 and 24) were found to gain increased knowledge and appreciation of teamworking.

The theme of stereotyped roles in deeply entrenched hierarchical cultures emerged in a qualitative study of first year students' perceptions of interprofessional learning. Students witnessed historical power hierarchies manifested in the early stages of their educational experiences and these were identified as barriers to collaborating as a team (Honan et al., 2015). Students highlighted the irony of being placed in clinical settings to learn IPE but where teams of practitioners in these environments do not demonstrate the ideals of collaboration. Thus, the study corroborates the argument that IPE may actively promote negative stereotyping where there is a lack of congruence between the stated goals of the IPE programme and students' actual experiences in clinical placements (Pollard, 2008). Early manifestations of hierarchical power structures were also reported by DeMatteo & Reeves (2013) who explored first year health sciences students' experiences of interprofessional learning.

According to Engel, Prentice & Taplay (2016) IPE ought to focus on social interaction between individuals. These writers argue that learning about each other allows for socially constructed norms, especially power hierarchies, to be challenged. Thus, mutual learning about each other may allow for patterns of interaction between students which challenge existing power structures (Engel, Prentice & Taplay, 2016). While this argument may be interpreted as idealistic, "*learning about each other*" was identified as a theme in a longitudinal case study of a first year IPE programme (Mahler et al., 2018).

Mahler et al. (2018) focussed on health sciences students' experiences of IPE and found that at this initial stage, through learning about each other, students saw the value of

interprofessional learning for the future as well as their present studies. Teamwork related themes however did not feature strongly in this study and according to the authors "*team functioning was not quite the topic*" of the data production method. These writers note that curriculum content up to the point of data collection had been "*theoretical*" rather than practical (Mahler et al., 2018:6). What is implied here is that the curriculum content influenced the scope of student learning in this study.

UCT's Curriculum Change Framework, a document drafted by UCT's Curriculum Change Working Group[9] (CCWG) refers to the curriculum contestation by UCT students as essentially a struggle for power since curricula are mechanisms "*through which to claim and perform power*" (CCWG, 2018: 45). A literature review of trends in IPE programmes between 2005 and 2010 found that the design team for the IPE programmes in the 83 included studies did not solely consist of faculty members (Abu-Rish et al., 2012). In 20% of the papers in this review, students as well as patients and their families were co-developers of educational activities. While instigating co-development of curricula between faculty and students was not on the explicit agenda of this study, students were able to contribute to the contemporary curriculum conversation by communicating their perspectives of teamwork, and this has been part of the rationale for the study.

Locating the purpose of this study in relation to the literature reviewed

According to Engel, Prentice & Taplay (2016) few interprofessional studies involving entry level students have looked at students' experiences of interacting with others, their perceptions of the other professions; or the relationships between students from the various professions.

The review of literature presented here shows that there is scope to study entry level students in non-clinical settings, particularly in South African contexts. The literature further highlights the need to continuously contextualise the scope and meaning of

[9] A task team set up by the university leadership during the student-led protests of 2016 *"to facilitate dialogue across the university… in order to shape strategies for meaningful curriculum change"* (CCWG, 2018: 4).

teamwork in different healthcare related contexts (Sullivan et al., 2016). This has implications for HSE in terms of ensuring that students can be "*provided with a comprehensive insight into the various elements of interprofessional practice*" (Reeves, Xyrichis & Zwarenstein, 2018:3) in their respective contexts.

One of the intended outcomes of this study was to offer insight into students' perspectives to potentially inform the future design and delivery of BHP. Although UCT FHS "*chose participation, inclusivity and social justice*" in its transformation vision (Hartman et al, 2012: 477) the protests at universities throughout South Africa, including UCT in 2015 and 2016, highlight the urgency for change that goes beyond a socio-economic or demographic agenda. Curriculum transformation ought to challenge the use of "*traditional epistemologies, theories,* (and) *methodologies*" and involve students as rightful participants in the change process (CCWG, 2018).

Concluding comments

This chapter discussed my understanding of teamwork in relation to the literature included in the preceding review and reflects the interpretivist paradigm within which the thesis is written. Teamwork has been extensively studied in many spaces including HSE; however, constructions of teamwork remain varied in the literature. The notion that truth is many is consistent with interpretivism thus this study contributes an understanding of teamwork which is unique to the research context and study population rather than attempt to create a normative definition of teamwork.

An inherent characteristic of teams is that a number of individuals are brought together each with their own unique attributes and skills. Even where teams consist of individuals who are similar in some ways, there will be some degree of difference between them. This notion of distinctiveness highlights that in order to engage in teamwork, individuals ought to be able to work with both differences and similarities to achieve desired outcomes. In health professional teams, hierarchical structures present strongly, potentially impacting teamwork in healthcare settings. These ideas are developed further in the following chapter.

Chapter 3: Theoretical framework

Introduction to the theoretical framework

Research which has practical implications such as research in education may not always require the development of formal theorising, however a theoretical framework is usually necessary to outline the assumptions, beliefs, expectations and theories which underlie a research project (Casanave & Li, 2015, Leshem & Trafford, 2007). While the theoretical framework was less influential in the conceptualisation and design of this study, its explicit use comes through in the analysis of data and the interpretation of findings which is discussed in chapter 5. Concepts and the relationships between concepts used in a study must be adequately explained and this is part of the brief of a theoretical framework (Samuel, 2017). Reeves, Palaganas & Zierler (2017) confirm the need to use theoretical frameworks, which has been lacking in IPE research, and this in turn contributes to the maturation and robustness of the field.

This study offers a contextualised understanding of teamwork for first year students in UCT FHS but woven into this knowledge is my interpretive role as the researcher. How researchers interpret things is rooted in their own contexts and experiences (Oltmann & Boughey, 2012). Thus, in this study the concept of teamwork was conceptualised subjectively, influenced by my experiences of facilitating BHP groups of students exhibiting what I believed (at the time) to be teamwork[10]. In other words, how I chose to define teamwork from the competing options in the literature was shaped by what I believed teamwork to be (Samuel, 2017). The use of "I" throughout this thesis is deliberate to denote my presence in the research and demonstrates the interpretivist positioning of the study. This is in contrast to the positivist tradition of writing in the passive and its concomitant values of 'objectivity' and the absence of human effect (Oltmann & Boughey, 2012) which interpretivism departs from.

According to Oltmann & Boughey (2012) researchers must acknowledge the fallibility of their own knowledge as well as the knowledge of others. Thus, definitions of concepts

[10] I worked as a BP/BHP facilitator in 2008, 2012 and 2013 during which time I began thinking about potential research ideas and drafting concept papers.

are not absolute but instead are *"abstract ideas based on phenomena in reality"* (Casanave & Li, *2015:107).* From this epistemological point of view three related theories will now be addressed. Contact theory is central to the present theoretical framework and will thus be discussed in some detail while social identity theory and social representations theory will be briefly described.

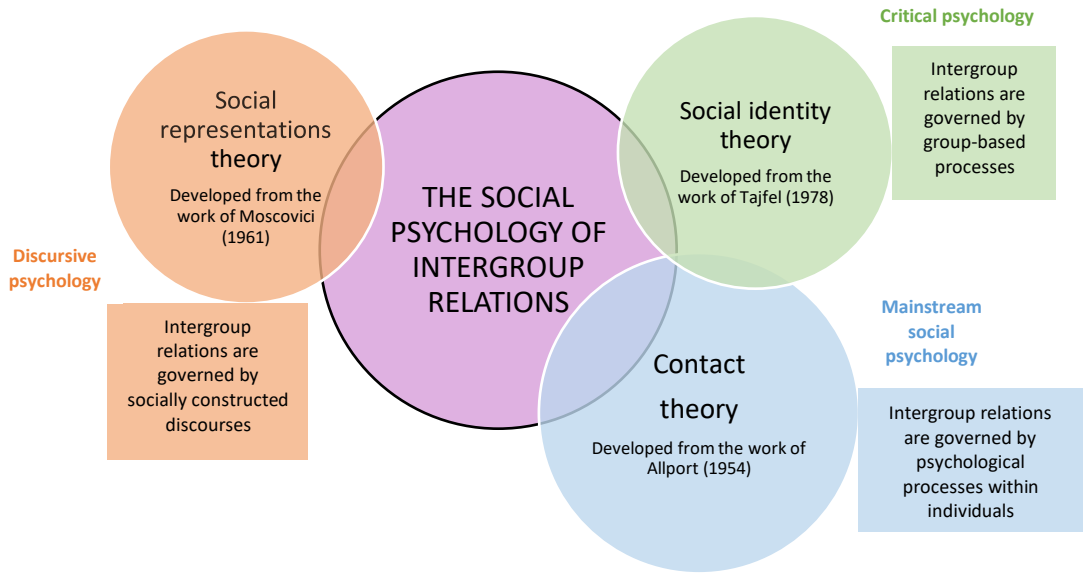

Figure2: Overview of the theoretical framework informing data analysis in the study

Social psychology and the study of intergroup relations

Social psychology and the psychology of intergroup relations can be organised into three different schools of thought with regard to human interaction and relationships between groups:

1. Mainstream social psychology with its individualistic approach explains that intergroup behaviour is the result of cognitive or psychological processes within individuals.
2. Critical psychology with its group-based perspective explains that it is largely group processes at play in intergroup relations.

3. Discursive psychology with its social constructionist approach explains that language and ideology (discourse) create and sustain relationships between groups (Foster in Ratele, 2006).

While it is beyond the scope of this thesis to critique each of these perspectives, I echo the viewpoint encapsulated in the following quote: "[e]*ach one has a position, and all are producing interesting and sharp research and are contributing to understanding. Each one has an argument, and … there is always a counter-argument*" (Foster in Ratele, 2006:62). According to Foster in Ratele (2006:62) "*all three perspectives … albeit in different forms…*" may be "*useful in helping to solve the numerous problems and difficulties that we face as endlessly interacting human beings.*"

The realm of social psychology is congruent with the interpretivist paradigm since the former is concerned with social interactions between individuals; and the latter is concerned with the co-constructed realities of the social world as negotiated by the interactions between researchers and participants. The use of a theory from social psychology is thus appropriate in this study.

A lens for data analysis: Contact theory

Implicit in this study is the fact that first year health sciences students were coming into contact with each other in BHP. Contact in this study means instances where people have social encounters of varying natures and forms. Contact theory has been developed from decades of mainstream social psychological research (Foster in Ratele, 2006). Contact theory originated from the contact hypothesis which postulates that when individuals from different groups have opportunities to come together under certain conditions, positive social outcomes may result; but that conversely, contact could have the opposite effect of aggravating negative relationships (Allport, 1954, Pettigrew, 1998).

Contact theory's conditions for positive outcomes of contact to occur include:

a) equal status of those involved in the contact situation;

b) institutional support for contact to occur between groups;
c) cooperative (non-competing) activities leading to rewarding outcomes;
d) contact must facilitate the achievement of common goals
e) and an environment in which friendships can grow (Allport, 1954, Pettigrew, 1998).

Contact theory describes a number of factors which may explain ***how*** changes in intergroup relations happen and these are known in the literature as ***mediators***. Mediators are interrelated ways of thinking and feeling operating within contact situations (such as intergroup anxiety and empathy) (Hewstone & Swart, 2011). Factors that explain ***when*** contact will have positive effects (such as reduced prejudice and stereotypes) are known as ***moderators***. Moderators include contact frequency and quality of contact (ibid). A seminal meta-analysis[11] found that positive effects of contact typically extended to "*a broad range of outgroup targets and contact settings*" (Pettigrew & Tropp, 2006:751). Research on contact theory's mediators (how contact can bring about change) and moderators (when contact can bring about change) have been pursued in a wide range of contexts (Lemmer & Wagner, 2015) including HSE (Amerongen et al., 2015, Michalec et al., 2017).

With a view of naturalistic environments Lemmer & Wagner (2015) conducted a meta-analysis of studies of intergroup contact theory conducted in real-world settings. According to Dovidio et al. (2017:608) this meta-analysis by Lemmer & Wagner (2015) "*shifted the primary focus from **when** intergroup contact is effective to **why and how** it affects intergroup relations*". The bulk of these studies were subsequent to Pettigrew and Tropp's large scale review of 2006 (which consisted mostly of manipulated rather than naturalistic studies). Notwithstanding the apparent persuasive power of Pettigrew & Tropp's (2006) meta-analysis, Dixon, Durrheim & Tredoux (2005) contend that the contact settings designed by researchers across the decades represent unrealistic worlds which bear little resemblance to everyday interactions between groups of people. Like Pettigrew & Tropp (2006), Lemmer & Wagner (2015) found that the studies

[11] This meta-analysis included over 500 studies; the results of which is often cited in the literature on contact theory for its persuasive effect.

in their meta-analytic investigations supported the tenets of contact theory: that intergroup prejudice between conflicted social groups can be reduced when these groups come into contact; even where the context of contact does not contain the optimal conditions which researchers have traditionally tried to stage in their studies (Dixon, Durrheim & Tredoux, 2005).

Recent contact theory research has moved into many different directions including:

a) The study of various forms of contact, such as 'virtual contact' where individuals interact online. Amichai-Hamburger, Hasler & Shani-Sherman (2015) argue that the internet enables people to have more control over their social interactions with others. Aspects such as anonymity, control over self-presentation and self-disclosure empowers individuals to actively experiment with social identities (Amichai-Hamburger, Hasler & Shani-Sherman, 2015:517). Where "*groups are defined by physical characteristics, which serve immediately to activate … stereotype*(s)" individuals may go to great lengths to present themselves in a way that matches an "*image they want to reflect*" (Amichai-Hamburger, Hasler & Shani-Sherman, 2015:517). The aspect of control is argued to be a buffer against the anxiety associated with intergroup contact and so has the potential to promote positive feelings of security in interacting with outgroups (ibid).

b) The consideration of mediators such as affective states. Contact encourages the development of positive feelings by inducing empathy (Hewstone & Swart, 2011). Empathy has been associated with a number of positive intergroup outcomes such as increased concern for the wellbeing of others; a sense of a common humanity; and attributing the behaviour of others to contextual factors (Swart et al, 2011). Hayward et al. (2017) found that empathy can change attitudes but only in instances where negative emotions such as anxiety and anger were low.

c) The role of group status in moderating the effects of contact for advantaged versus disadvantaged groups; and minority versus majority groups. Historically disadvantaged, minority groups were found to experience higher rates of negative contact than historically advantaged majority groups (Hayward et al., 2017). This

thread of research is relevant for this study since deeply entrenched historical group status differentials exist between the health professions[12] (Reeves et al., 2012).

These advances in the literature are noted however the scope of the application of contact theory in this study is delimited to some of the theory's basic tenets of optimal conditions for positive social interaction; and in this study teamwork was conceptualised as a positive social interaction.

The paradox of equal status

Predictably, the condition of equal status is contested in the literature and this condition is regarded as problematic in this thesis. The application of contact theory in HSE has described equal status as being derived from the specific skills each profession brings to the healthcare team. According to Bridges & Tomkowiak (2010:30) "*learning about each other's professions"* can *"prevent rivalry*" for status. This means that "*each member's knowledge, skills and opinions are regarded as equally important*" and if each individual perceives their contributions to the team as equally important, then these perceptions lend feelings of equal status within the team (Gierman-Riblon & Salloway, 2013:59-60).

According to Pettigrew (1998:66) groups in contact situations must "*expect and perceive equal status*". At UCT FHS however this would seem to be problematic due to the sentiments expressed by students in the aforementioned Health Sciences Students Council (HSSC, 2018) report. Health and rehabilitation students in particular reported experiencing marginalisation in the faculty (HSSC, 2018). Despite limitations of the theory[13], its pragmatic nature has been considered useful in HSE to design curricula which can potentially enable contact between mixed professional students in ways that could foster collaboration and teamwork (Amerongen et al., 2015, Michalec et al., 2017, Reeves & Hean, 2013).

[12] Status differentials emerged in this study as discussed in chapter 5.
[13] Discussed further in chapter 6.

Contact theory in health sciences education

Some of contact theory's conditions for optimal contact are implicit to teamwork and inherent in an interprofessional course offered by a university. Carpenter & Dickinson (2016:107) argue that these optimal conditions may mitigate the effects of health professional stereotypes to which students are exposed and readily subscribe to during their education and training, particularly undergraduate students (Carpenter & Dickinson, 2016, Hean et al., 2006). Stereotypes may compromise teamwork but where contact conditions are present, particularly in entry level students, negative effects of stereotypes may be lessened and thus the potential for teamwork increased. According to Carpenter & Dickinson (2016:107) "*educators should take account of the contact variables in… IPE*". Two of these conditions which I argue are applicable in the case of BHP were considered in this study[14]:

1. Carpenter & Dickinson (2016) recommend bringing together students who are similar in terms of years spent at university and level of subject knowledge, which they argue, lend status. Hence equal status is hypothetically possible by considering the placement of students in IPE spaces (ibid). In the case of BHP, the shared curriculum is introduced in the first year of study. According to Olckers et al. (2006) this is with the intention of having students at the same level in terms of years of study in their respective health sciences programmes, and thus with similar levels of subject knowledge.

2. Institutional support can be made explicit by giving IPE a prominent place in the curriculum with formal assessment (Carpenter & Dickinson, 2016). BHP's prominence is gained by being part of the compulsory curriculum at UCT FHS and an expression of the faculty's transformation goals. According to Olckers et al. (2006:256) BP and BHP are the first step in the faculty's goal of producing graduates who are competent to work in teams. BHP is a full 13 week semester course with formal assessment.

[14] I delimited my focus to these 2 conditions since they linked to the compulsory nature of the course as well as its early introduction (in year 1) which was intended to create a "level playing field" (Olckers et al., pg. 255). However, the other conditions as mentioned could also be applicable.

The applicability of using contact theory as an analytical framework in this study is critically evaluated in chapter 6.

Can contact bring students together? Current empirical replies.

Considering the nature of contact between students in the design and evaluation of IPE courses demonstrated the potential of social contact to have positive influences on students. Michalec et al. (2017:76) found that entry level health sciences students showed "*improved*" perceptions of the health professions at the end of a 2-year IPE programme. This study reported that students found formal aspects of the programme as less helpful in teaching them about each other. Instead students appreciated the informal opportunities to interact with students from other professions as being more useful in their learning. Michalec et al (2017) acknowledged that in a 2-year long programme it could not be concluded that the IPE programme alone accounted for the positive shifts seen in students from the beginning to the end of the program. A host of other factors could have had some influence. They maintain however that it would be safe to assume that the contact opportunities provided by the IPE programme did influence the students' ways of thinking in some way.

Michalec et al. (2017) highlighted the formal versus informal aspects of opportunities for contact associated with shared curricula. In particular the opportunities for students to chat, interact and socialise informally played an important role in students learning about each other. A similar finding was reported by Mahler et al. (2018) who looked at students' perceptions of a first year IPE programme. The students in this study mentioned that "*interesting discussions during breaks*" and "*chats on the side with fellow students*" were "*more effective to get to know each other than the shared lessons*" (Mahler et al., 2018:4-5). The three cohorts of first year students in this study reported that learning about each other afforded them the "*chance to become aware of and overcome prejudices*" (Mahler et al., 2018:4).

Similar to Michalec et al. (2017) Amerongen et al (2015: 566) used contact theory as a theoretical backdrop to discuss the positive outcomes experienced in an introductory, interprofessional "*mini-course*" for entry level medical, nursing and pharmacy students.

They found that students valued patient safety as their common goal and were able to link this to mutual respect and working as a team. Amerongen et al (2015) argued that the effect of unequal status of the different health professions was neutralised by designing team-based cases in such a way that students from each profession were able to contribute to a similar degree in group discussions. According to these authors status differentials in this context were further mitigated by the need to shift leadership from time to time during team discussions.

Mahler et al. (2018:6) used a competency-based framework in their discussion of findings but argue that health sciences students "*seem to need help overcoming the fear of contact*". This study reported that there seemed to be a progression of increased contact among the different profession-specific groups of students. There appeared to be "*a feeling of being different in the beginning, which seems to decrease over time*" (Mahler et al., 2018:6). According to Mahler et al. (2018:6) students "*describe*(d) *the learning about the other professions as beneficial in reducing prejudices*" and that this corroborates "*aspects of intergroup contact theory". "Apparently students slowly experience a change from staying in their own professional group … to … being curious about each other's professions*" as they came into increased contact throughout 2 consecutive semesters of the IPE programme.

Social identity theory

As mentioned previously, contact theory has been widely studied in mainstream social psychology research. Social identity theory (SIT) is regarded as an "*alternative theory … that challenges … mainstream … approaches*" (Ratele, 2006:43). SIT posits that individuals choose from within a pool of multiple possible identities in a given situation. These multiple identities represent opposite ends of a continuum from unique and personal to shared, social identities within an individual's self-concept. Thus, SIT argues that how individuals identify or categorise themselves is at the core of intergroup relations. These different identity options are more or less desirable and thus rivalry for social status based on identities is inherent in individuals (ibid).

Achieving a desired social status largely depends on the social categories to which an individual may identify with at a given time; or to which social groups an individual feels a sense of belonging. In the interest of attaining a perceived positive social identity, individuals will seek to differentiate themselves from the pool of available identities or social groups to which they have a sense of belonging and will identify with perceived high-status social groups. This process of differentiation aims to create a sense of advantage over other groups. SIT further argues that stereotyping ought to be understood "*in terms of power and competitive relations between groups*" over and above individual-based notions of this cognitive function (Foster in Ratele, 2006:49).

According to Forbes (1997) SIT's focus on social grouping is an alternative to the individualistic contact hypothesis. From this perspective categorising oneself in terms of a social group or identity informs intergroup relations. Burford (2012:149) notes that grounding research within a sound theoretical framework "*may deepen our understanding of how and why medical students, doctors and other clinicians interact and learn as they do, and so enable more effective developments in education and practice*". In this study the theoretical framework provides possibilities for translating results into meaningful questions about how aspects of BHP may be reviewed; as well as commenting on those aspects which may be contributing to positive outcomes. As Burford (2012) notes, asking questions against the backdrop of theory could potentially lead to a reconstruction of the present reality.

Social representations theory

Social representations theory (SRT) theorises that in response to being constantly overloaded with information in the social world, individuals must reconstruct this information into simplified form. The way individuals reconstruct reality constitutes their social representations of things experienced in their social worlds (Rateau et al., 2011).

Throughout our lives we come into contact with various social groups and social situations with varying degrees of involvement. These experiences contribute to the

acquisition and transmission of "*knowledge, beliefs, and values that allow us to share a common conception of things and of others… Not all social groups share the same values, the same standards, the same ideologies, or the same concrete experiences. Yet all construct representations that are closely based on these"* (Rateau et al., 2011:478). SRT contends that we are influenced by the belief systems, cultures, knowledge and opinions of our own networks of social memberships. The social representations we form are simultaneously a source of identifying with those who are similar to us and recognising 'others' whom we deem as different to our social selves (ibid). Thus SRT aims to "*highlight the social, cultural, and collective embeddedness of thinking"* (Gjorgjioska & Tomicic, 2019:172).

SRT takes a social constructionist approach and thus is outside of the ontological ambit and interpretivist paradigm of this thesis. That is, SRT has a different view of the nature of truth and social reality (Samuel, 2017). It is included in this theoretical discussion to demonstrate the development of perspectives in social psychology.

Positioning the thesis in relation to contact theory

As mentioned, the development of contact theory arose from the work of Allport. His widely cited 'classic' and indeed seminal 1954 book, *'The Nature of Prejudice',* contains Allport's thoughts and conclusions about racial and ethnic relations in conflict. Writing in America at a time when racial tensions were intense, Allport's 'contact hypothesis' was intended to address the juxtaposition between social contact and social change. In particular, Allport hypothesized that intergroup conflict was based on prejudice; and postulated that where certain conditions were present, contact could reduce prejudice and prejudiced behaviour (Pettigrew, 2016).

Contact theory literature reveals an almost polarisation of how writers have positioned themselves in relation to the epistemological status of the body of research produced from Allport's (1954) thinking. Some works refer to the "contact hypothesis" (Ratele, 2006; Dixon et al, 2005) and others refer to "intergroup contact theory" (Lemmer & Wagner, 2015; Hewstone & Swart, 2011). One could describe this use of words as a

continuum of challenging or confirming contact theory. My use of the word "theory" is tentative rather than conclusive since it is beyond the scope of the present thesis to unpack the nature of the knowledge produced by research in this field. Notwithstanding, it does become necessary to consider one's position within the "*intensively studied*" field of intergroup contact (Pettigrew et al, 2011: 272).

According to Casanave and Li (2015) theories show how concepts within complex phenomena interact and are related. As Hewstone & Swart (2011) note Allport's (1954) formative hypothesizing did not account for a number of ways in which concepts within contact theory interact and/or are related. However, these gaps have since been addressed and, albeit to debatable degrees, explained by subsequent research (Hewstone & Swart, 2011). These writers conclude that owing to a productive research history now spanning over 60 years, "*this body of work no longer merits the modest title of 'hypothesis', but fully deserves acknowledgement as an integrated and influential theory*" (Hewstone & Swart, 2011: 374). Dovidio et al (2017: 608) refer to the more recent work in the field as having a "*process orientation*" which helps transform the hypothesis into a viable theory. Thus, my position is to acknowledge contact theory as a theory which has been influential to thinking and research contributions in the domain of social interaction and specifically intergroup relations.

Casanave & Li (2015:105) encourage novice researchers to be decisive about the use of theory, while still acknowledging that for the novice (such as myself) "*abstract thinking is difficult and that it takes a great deal of time to become familiar with theory at any level of depth*." While I am familiar with the theory for some time, as Casanave & Li (2015) point out, time spent with a theory is not necessarily an indication of depth of understanding, thus articulating my intuitive understanding of concepts and ideas remains challenging. The motivation for using contact theory in this study was about the suppositions it makes about the conditions needed for positive social interactions (such as teamwork interactions) to occur. Which of these suppositions were experienced by participants was explored in this setting using an interpretivist approach since the goal was not to test the merit of contact theory; but rather to explore students' subjective

experiences. Inevitably however, the usefulness of contact theory in this study is critically evaluated in the chapter 6.

Purpose of this study

This study contributes what teamwork means from the perspective of first year students at a South African university, a neglected area in the HSE literature. Little attention has been paid to teamwork in entry level students, despite arguments for the early introduction of IPE. Taking account of students' perspectives can help the design and delivery of curricula to ensure that students have positive learning experiences (Darlow et al., 2016).

The study has implications for positioning BHP within '**inter**' professional education; and fits into its contemporary context at UCT FHS where, at the time of writing, the discourse around curriculum was momentous (CCWG, 2018). This study also presents baseline data for subsequent longitudinal work, particularly the vertical integration of 'teamwork' (or related competencies) throughout the health sciences curricula at UCT FHS.

Study rationale, aims and research questions

Since no formal research about first year students' perceptions and experiences of teamwork at UCT FHS has been documented, this study is the first to report on a student perspective of a mixed professions undergraduate course. As outlined above, the rationale for the study is derived from the following:

1) Constructions of teamwork ought to be context-specific, thus there is scope to problematise teamwork in HSE to understand its nature and process in this specific area (Reeves, 2010).
2) Creating opportunities to engage with curricular transformation resonate with UCT students and faculty in the aftermath of student-led protests at this institution during 2015 and 2016 (CCWG, 2018).

3) Consequently, this study contributes to the transformation conversation by drawing attention to a first-year course which is part of the transformed curriculum of 2002. Thus, this study provided a platform for students to offer their perspectives on teamwork which is a theme of the transforming curriculum.

The study aimed to understand students' perceptions and experiences of teamwork within an undergraduate professional course, BHP, in which students are required to work in teams. The research objective was to answer the following questions:

1) What are students' perceptions of what teamwork is?
2) Based on their own perceptions of what teamwork is, what are students' experiences of teamwork within the context of BHP?
3) What factors, based on their perceptions and experiences of teamwork, do students highlight as facilitators or inhibitors of teamwork?

The outcomes of the study are thus threefold:

1) It provides insight to faculty about students' perceptions and experiences of teamwork (a learning outcome for BHP); and by virtue of this contributes another South African perspective to the IPE literature.
2) It involved students in the ongoing transformation process at UCT FHS by engaging them in discussion about teamwork, a theme of the PHC led transformed curriculum.
3) It troubles the former 'multiprofessional' education conceptualisation of BHP by highlighting the interactive nature of the course.

Concluding comments

The theoretical discussion in this chapter has demonstrated how teamwork, considered as positive social interaction in this study, is multifaceted. Although the field of IPE has been somewhat atheoretical and more pragmatic in the past, the use of theory in IPE has been increasing. In this study, contact theory provides a useful theoretical lens

through which to consider the research question concerned with the factors which helped or hindered teamwork.

The tension between the similarities which bring teams together and the differences which are unique to each team member makes teamwork a complex phenomenon. Exploring the perceptions and experiences of the student team members in BHP helps to unpack the complexity of teamwork in this study context. The methodological implications of exploring this complexity is the work of the next chapter.

Chapter 4: Paradigm, design & methodology

Introduction to the research paradigm, design and methodology

The exploratory nature of the research objectives positions this study within a qualitative, interpretivist paradigm. In qualitative research, the subjectivity of a researcher is embedded in the research process. Since the present research topic constitutes subjective perceptions and experiences of students, this dialogue between researcher and participant subjectivity locates this study within an interpretivist paradigm (Samuel, 2017).

Teamwork is a social activity which by nature involves more than one person. Since teamwork is something one experiences in relation to others, one of the assumptions underlying the present research is that students' subjective perceptions and experiences of teamwork in BHP will be co-constructed. Therefore, the proposed research is positioned within an interpretivist paradigm since it is underpinned by the notion that reality is subjective but also co-constructed by individuals, including researchers and participants (Samuel, 2017). Qualitative research designs fit into the interpretivist paradigm since these highlight the role of subjectivity in the research process (ibid).

The research design is a framework linking broad research aims to the execution of a study. In light of the research aims, this study took an exploratory approach to its qualitative design where information was produced using open questions to generate novel data (Terre Blanche & Durrheim, 1999). In this study context no formal research has been done with first year BHP students as the population of interest, other than internal end of semester course evaluations. Therefore, this exploratory study presents preliminary insights to stimulate further research.

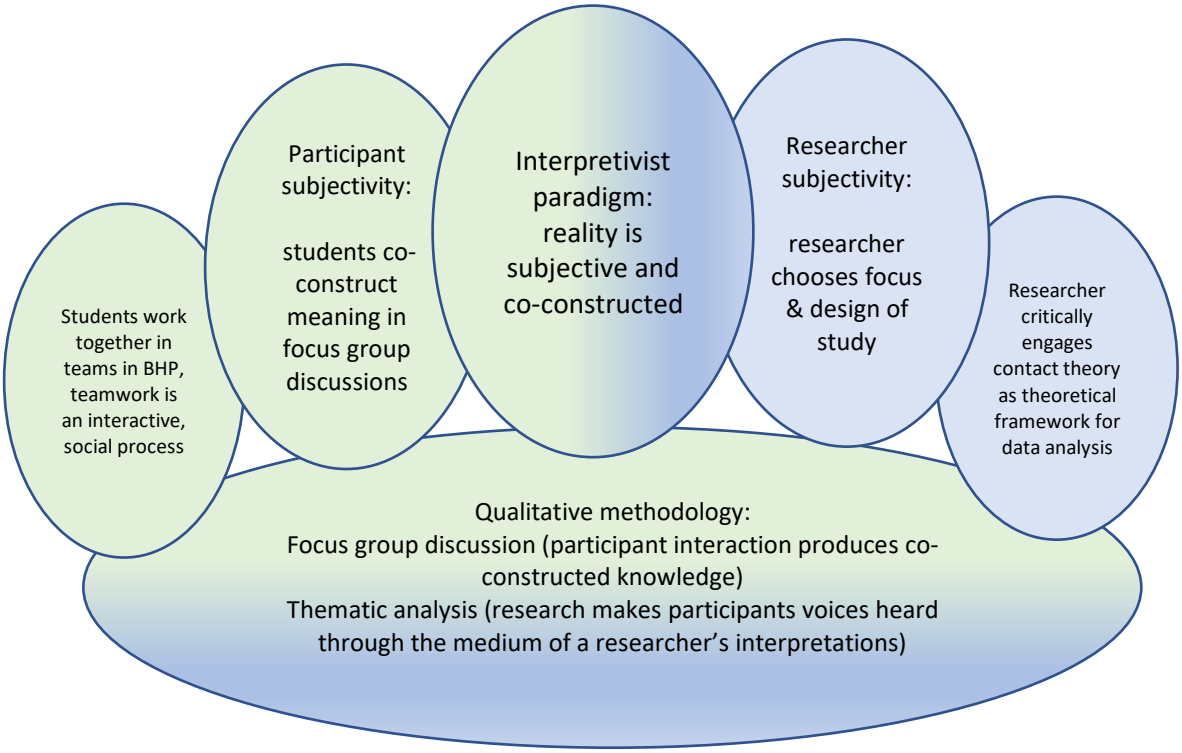

Figure 1: Overview of research paradigm, design & methodology

Data production procedure: focus group discussion

Focus group discussion (FGD) is an appropriate method for exploratory research (Stalmeijer, McNaughton & Van Mook, 2014) and was thus used to explore students' perceptions and experiences of teamwork in BHP. A FGD is the coming together of around 7 to 10 participants with a moderator to discuss a particular topic (Tavakol & Sandars, 2014). Focus groups present an opportunity to mimic the natural environment of BHP because participants "*are influencing and influenced by each other*" as they are in BHP group sessions (Krueger & Casey, 2000:11). The knowledge produced by FGD is thus co-constructed by the interaction between participants as they talk about the topic provided by the researcher (Stalmeijer, McNaughton & Van Mook, 2014). Accordingly, the intent of the research design was to reflect the naturalistic environment of facilitated interaction between students in BHP[15]; and to arrive at broad meanings of 'teamwork' at a collective level. FGD was deemed to be an appropriate method in this

[15] This was a salient point in my decision to incorporate FGD in the research design, in line with qualitative research as the study of naturalistic environments.

study since interaction between students was implicit in the research phenomenon of teamwork.

Two additional qualitative methods, free-listing and pile-sorting were included in the research design. The first, free-listing, was conducted at the beginning of the FGDs to produce participant-generated topics for discussion. In response to the questions "what are the parts of teamwork" and "what does teamwork require", students free-listed their responses on cards which then became concrete cues to refer to during the FGDs. This method produced students' broad perceptions of what teamwork is and provided impetus and links for the ensuing discussion, effectively answering the first research question[16].

After exploring what teamwork is from the participants' perspective, the second method, pile-sorting, was used later in the FGDs. Pile sorting was used to prompt discussion around whether the parts of teamwork raised in the free-listing exercise were experienced by students. Hence the second research question was addressed[17]. Since experiences are so uniquely subjective, the free-listed cue cards which students had written was a means to ensure that participants were talking about the same 'teamwork parts'. The sequence of these additional methods gave students an opportunity to first unpack what they perceived teamwork to be before discussing whether any of the parts of teamwork were experienced in BHP.

FGD logistics

In consultation with the BHP course convenor the ideal timing for the FGDs was towards the end of the semester during weeks 10 and 11 of the course[18]. By then students had experienced most of the course but were just ahead of examinations. Given the narrow window to conduct the FGDs (just over 2 weeks), four were tentatively planned with a maximum of 8 to 10 participants per group. This number was selected to allow for a

[16] What are students' perceptions of what teamwork is? (Research questions outlined in chapter 3)
[17] Based on their own perceptions of what teamwork is, what are students' experiences of teamwork within the context of BHP?
[18] Duration of the semester was 13 weeks.

greater breadth of perspectives from different professions to be included. Where FGD is the primary data production method it is recommended to conduct a minimum of four or five (Stalmeijer, McNaughton & Van Mook, 2014).

Table 2: Overview of participants and professions per data item

Data item	*No. of participants*	*Professions represented*
Joint interview	*2*	*Medicine* *Speech & language pathology*
Focus Group Discussion (FGD)	*6*	*Audiology* *Medicine* *Occupational therapy* *Speech & language pathology*
Individual interview	*1*	*Physiotherapy*
FGD	*4*	*Physiotherapy* *Occupational therapy*
FGD	*7*	*Audiology* *Medicine*
Individual interview	*1*	*Occupational therapy*
FGD	*8*	*Medicine* *Occupational therapy* *Physiotherapy*
FGD	*3*	*Medicine*

The FGDs conducted in this study were between 46 and 68 minutes long and occurred towards the end of semester two (end September to October 2019) so that students could draw on their experiences retrospectively. Various venues around UCT FHS campus were pre-booked in particular timeslots and students were invited to self-select to participate in FGDs according to their availability for the advertised slots. It was made known during recruitment that other times and venues could be arranged according to students' availability and preference.

While I was unable to recruit between 8 and 10 students for each focus group, a fifth FGD (additional to the four planned) was conducted to expand the scope of data and pursue saturation. One joint interview and two individual interviews (unplanned) were also conducted. The four participants in these interviews had self-selected to participate in the study, with the understanding that the method was FGD, and had signed up for the advertised slots. They were still willing to participate however, even though no other students had selected to or arrived to participate at those times in order to make up a FGD. Since the timeline for data production was very tight, I opted to interview the students anyway, not knowing how many participants I would be able to recruit, or how many students would arrive at the sessions they have signed up for.[19]

Sound methodological practice dictates that FGD ought to have been conducted until the point of theoretical saturation (Tavakol & Sandars, 2014). Practically, however, the data production process had a limited timeframe in this study. End of semester assessments and examinations had an inhibiting impact on participant recruitment beyond the first week of October 2019. While I wasn't convinced at the time that data saturation had been reached, I began to see and hear patterns and replications in the data as I progressed through the data production process. The scope of data being produced began to accrue to a point where I could recognise a story unfolding, particularly in response to research questions 1 and 2, namely: 'what are students' perceptions of teamwork?' and 'what are students experiences of teamwork?'. According to (Morse, 2015:587) "*comprehensiveness of data*" and the replication of data from many participants are signs of saturation in qualitative research.

Signs of data saturation in the present study[20]

1. Many aspects of teamwork had been discussed, thus the data had sufficient scope.

[19] Conversations with qualitative researchers experienced in FGD advised that students sometimes arrive without having signed up to participate; or often do not arrive after having signed up.
[20] These are my interpretations of the presence of these saturation signs by Morse (2015). According to Braun & Clarke (2019:591), *"researcher subjectivity* [is] *understood as a resource".*

2. Similar themes came up in the groups (and the interviews), thus data were replicated.
3. Novel data emerged in each of the FGDs and interviews. That is, while data topics were replicated across data items, different areas of discussion were also raised in each.
4. The sample of 32 participants across eight data items (of which five were FGDs) was deemed adequate. This estimation is based on the recommendation to conduct a minimum of four or five focus groups where this method is the primary source of data production (Stalmeijer, McNaughton & Van Mook, 2014).

The third research question 'what are the factors facilitating or inhibiting teamwork?' was often implicitly answered throughout data production and thus not explicitly asked during each focus group. One FGD ended abruptly as students had to leave to attend classes, hence an opportunity to address the final research question in that FGD was missed.

FGD limitations and researcher reflexivity

Krueger and Casey (2000) caution that where FGD participants are familiar with each other this may inhibit disclosure. Similarly, Barbour & Kitzinger (1999) contend that FGDs have the potential to change relationships between participants. Participants may be unwilling to share information knowing that it could filter through the social network and have consequences for later real-world interaction. I argue that these potential limitations were neutralised by the timing of the focus groups. As mentioned, FGDs were conducted close to the end of the semester at which time BHP tutorial sessions were preparing to terminate for the year. Since students self-selected to participate in the FGDs, this voluntary participation arguably demonstrated their willingness to share information. Where there was familiarity between students, this helped create rapport between the participants in this study. Overall, students were forthcoming with volunteering and sharing information throughout the FGDs, hence these limitations did not appear to materialise.

A disadvantage of the FGD method is the difficulty of managing group dynamics (Stalmeijer, McNaughton & Van Mook, 2014). Researchers must be weary of assuming that this method is "*inherently participatory*" (Barbour & Kitzinger, 1999). Although it was not possible to anticipate the dynamics of the FGDs prior to the commencement of each session, I tried to mentally prepare for possible counterproductive scenarios. An example of such a scenario would be defusing a dominant group member by directing questions to others in the group and thus redirect the flow of discussion (Stalmeijer, McNaughton & Van Mook, 2014). Stalmeijer, McNaughton & Van Mook (2014) suggest that prompting silent members to participate by directly asking questions is not out of place. As moderator I tried to be aware of silent members' non-verbal cues and considered whether or not it was appropriate to invite further verbal participation (Liamputtong, 2011). As discussed in chapter 5, some students were more extroverted and others more introverted personalities, and this was apparent in the FGDs. Since I did not consistently manage group dynamics effectively, this limitation was apparent.

Barbour (2005:747) notes that "*focus groups can overemphasise consensus*" and that researchers must be weary of basing analyses on summaries of discussions; instead data analysis must focus on "*content and process of discussions*". As shown in the discussion of findings in chapter 5, data were analysed holistically in terms of content and analytical procedures followed. According to Barbour (2005:747) a further limitation is the tendency to use FGD as "*proxy interviews*" or "*proxy surveys*". The use of FGD ought to have a process orientation rather than quantifying participants' contributions. Thus, the logic of FGD does not lie in numbers (Barbour, 2005). In this study the aim was to gain insight into students' perceptions and experiences of teamwork and the phenomenon of teamwork has a process orientation. The students in this study were inclined to work towards consensus in the discussion around their perceptions of what teamwork is, however, the subsequent focus on experiences of teamwork allowed me to address the tendency to work towards consensus as students had both shared and differentiated experiences.

Moderation & positionality of the researcher

The mandate of the focus group moderator is to encourage discussion amongst participants and stimulate active engagement with the topic. A moderator must also manage group dynamics and ensure that the group is focused on the topic. According to Krueger & Casey (2000:99) a "*moderator must have adequate background knowledge on the topic of discussion to place comments in perspective and follow up on critical areas of concern*." Having experience of facilitating student groups for BHP (and BP) lent some background knowledge of the course and experience with managing student group dynamics.

It has been argued that researchers should not assume the moderator role themselves in order to avoid researcher assumptions from influencing the process (Stalmeijer, McNaughton & Van Mook, 2014). These concerns were partly addressed by the free-listing and pile-sorting methods which enabled participants to generate the topics for discussion as well as the flow of discussion. As the researcher I was conscious of the aims of the research during the moderation process, and this allowed me to evaluate whether participants had engaged with the topic in a way that the research questions were being answered throughout the FGDs.

According to (Braun & Clarke, 2019:591) researcher subjectivity can be seen as a useful resource *"rather than a potential threat to knowledge production"*. Interpretivism acknowledges that research is a conversation between participants and the researcher and therefore researcher subjectivity is inherent to the paradigm. Researcher subjectivity though embedded must be rigorously managed and reported reflexively (Henning, Van Rensburg & Smit, 2004).

Rigour

Allowing sufficient time for discussion, building rapport and checking for accuracy with participants in the FGDs contribute to trustworthiness and credibility of the data produced (Liamputtong, 2011). In my summation I was able to establish rapport with students after the initial formalities of signing consent forms and making small talk. At

various points of discussion l offered verbal interpretations of what I perceived the main ideas were and checked for accuracy with the participants. I also prompted with questions for clarity where multiple meanings were possible. Students were sometimes forthcoming in correcting my interpretations when offered, and other times I sensed they were less willing to offer further clarification when prompted[21].

Dependability means that findings can be evaluated against the research context, methods, design and procedures followed in a study (Lincoln & Guba, 1985, Stalmeijer, McNaughton & Van Mook, 2014). Careful consideration was taken to ensure that each session was conducted in a reasonably similar manner to ensure consistency and this contributes to dependability of findings. To this end, each FGD followed a similar line of discussion:

1. Started with the free-listing exercise in response to the questions "what is teamwork" and "what does teamwork require".
2. Moved on to a discussion of experiences by pile-sorting the topics raised in the first part of the focus group. (Sorted into piles of 'experienced' and 'not experienced'.
3. Concluded with a discussion around what factors students thought would inhibit or facilitate teamwork.

FGDs were held during usual university hours and students could participate in a FGD at a time suitable to them. Thus, FGDs occurred either between classes or at the end of the academic day. This meant that students sometimes had to leave early for their next class or were tired at the end of the day. Thus, there was not always sufficient time or energy to draw discussions to a close or terminate the FGDs appropriately.

Reflexivity

According to Finlay & Gough (2003) the concept of reflexivity is an opportunity to make sense of the researcher's presence throughout the research journey. The reflexive route

[21] As per reflexive journal in appendix 1.

taken in this study was characterised by introspection as this is the type of reflexivity Finlay & Gough (2003:6) ascribe to researchers who "*begin their research with the data of their experience*". Having engaged academically with the concept of teamwork in my undergraduate studies in human resource management; and having applied contact theory in my honours level research project, these experiences have shaped my way of thinking around the interactions I observed while facilitating BP and BHP and have led me to the present research focus.

In qualitative research, data is produced subjectively to create meaning and the preconceptions of researchers influence the interpretation of meaning (Tavakol & Sandars, 2014). While researchers make use of personal insights to understand phenomena being explored, they must be mindful of their own beliefs and preconceptions throughout the research process. Reflexivity is encouraged so that researchers are constantly reflecting on these beliefs and preconceptions throughout the research process. This is particularly crucial in the data production process where participants' must be reliably captured and not tainted by the researcher's biases, motivations or interests (ibid). Being aware of my own bias was an important consideration in the present research journey since I have prior knowledge of working as a BHP facilitator. Having last facilitated in 2013 however, the prior experience in the background of my memory is mostly dated[22]. Overall, being reflexive throughout the duration of the study was flagged as an important goal.

Where a researcher has lived experiences of the phenomenon being explored[23] the criterion of confirmability is crucial to ensure that findings arise from the participants and the research context and not the researcher's lived experiences (Stalmeijer, McNaughton & Van Mook, 2014). Aware of my own subjective presence in the study, my practice of reflexivity as an early learner of qualitative research was primarily

[22] I had planned to (but then opted to not) go back to facilitating in 2020 and had gone through the facilitator training in February 2020. These new training experiences represent more up to date knowledge of the course.

[23] During the time of facilitating BP and BHP, I perceived some sort of teamwork happening in most of the groups I facilitated. That is, a sense of camaraderie developing over the semesters as students became more familiar with each other.

through introspection, using reflection as a mode of practicing reflexivity (Finlay & Gough, 2003). Thus, my reflexive journaling throughout this research journey has been mostly reflective of my own thoughts, feelings and reactions throughout the phases of the study. A sample of this informal writing is included in appendix 1. This record allows readers to consider "*the researcher's impact on the context of study and on the development of the interpretive account*" (Terre Blanche & Durrheim, 1999:429) and thus the confirmability of findings (Stalmeijer, McNaughton & Van Mook, 2014).

My application of these reflections to my research practice have been rudimentary in terms of *"deep thinking and 'knowingness' about methodology, epistemology and ontology… and the rationales for these"* (Braun & Clarke, 2019:591). Evocative of Braun & Clark's (2019:591) reflections on reflexive practice, *"another way to look at it"* which is *"somewhat kinder"* to myself is that my rudimentary practice of reflexivity is a factor of my inexperience. Since reflexive thinking is (hopefully) a developing skill, I elected to include extracts of my reflexive journal as an appendix (1) currently not possessing the *"deep foundation in thinking about research"* which comes with quality time spent in research education, training and practice (Braun & Clarke, 2019:591).

Sampling procedures

The 2019 cohort of first year students registered for BHP were the target population. This is a compulsory course, so all first-year students registered for audiology, medicine, occupational therapy, physiotherapy and speech and language pathology were eligible to be recruited. Sampling was purposive since participants were recruited based on the specific needs of this study (Cohen, Manion & Morrison, 2011). Sampling was convenient as students who self-selected to participate in the FGDs formed the sample.

A limitation of the self-selection, convenient sampling procedure was that there was no provision to ensure that the sample would be multiprofessional, however at the time of recruitment it was specified that at least 2 professions must be represented in the focus

groups in order to render it multiprofessional[24]. Of the five FGDs conducted, four included two or more professions and only one ended up consisting of participants from a single profession. Professional degree programmes in which students were registered was the only marker of difference in this sampling procedure. Although demographic diversity in terms of gender, race, ethnicity and socio-economic factors are pertinent to the context of this South African university, excluding these and other diversity markers was a deliberate delimitation in this study in accordance with its research questions.

Inclusion criteria: students registered for BHP in 2019 who self-selected to participate were included.
Exclusion criteria: students who deregistered from BHP early in the semester, who were unwilling to participate, or who withdrew from the study were excluded.

Recruitment procedure

Permission was sought from the Department of Student Affairs and the BHP course convenors to address students for recruitment. I was afforded two such opportunities[25] during which a short slideshow with a humorous cartoon[26] and information about the study was shown to students. I then offered a brief explanation of the study. Since recruitment occurred in a formal BHP lecture setting, I emphasized that the study was not linked to formal BHP activities or the assessment of BHP. Permission was sought from the UCT FHS marketing & communications department to post flyers advertising the study on campus. I also met with facilitators requesting their assistance by allowing me to recruit students on their tutorial days. Reminders about the times and venues for the FGDs were communicated to the self-selected participants through Whatsapp, a form of mobile instant messaging popular with students (Mudliar & Rangaswamy, 2015).

[24] 'Multiprofessional' is used semantically (to denote the presence of more than one profession) and not conceptually (as in reference to education).
[25] A few minutes before/after 2 lectures in September 2019.
[26] The humorous clip was produced by my minor nephew. It depicted 5 characters trying to slice a giant watermelon. It's intended purpose was to grab students' attention in a light manner before information about the study was presented.

Participant profile

The study sample included students from each health profession participating in BHP. A curious detail is that the number of students in each profession in the sample resembled the number of registered students for each profession in the 2019 cohort of BHP. This was entirely by fluke since no strategy was employed in the sampling procedure to pursue this outcome.

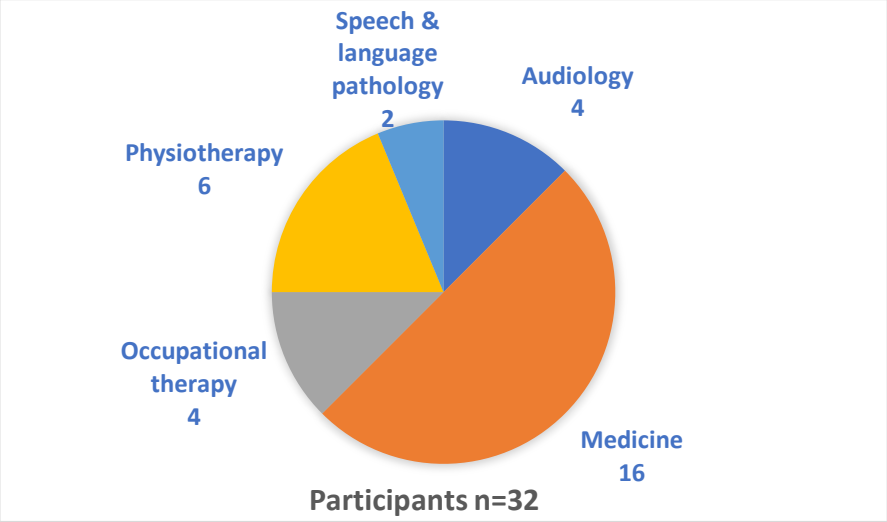

Figure 3: Research participants per health professional degree programme

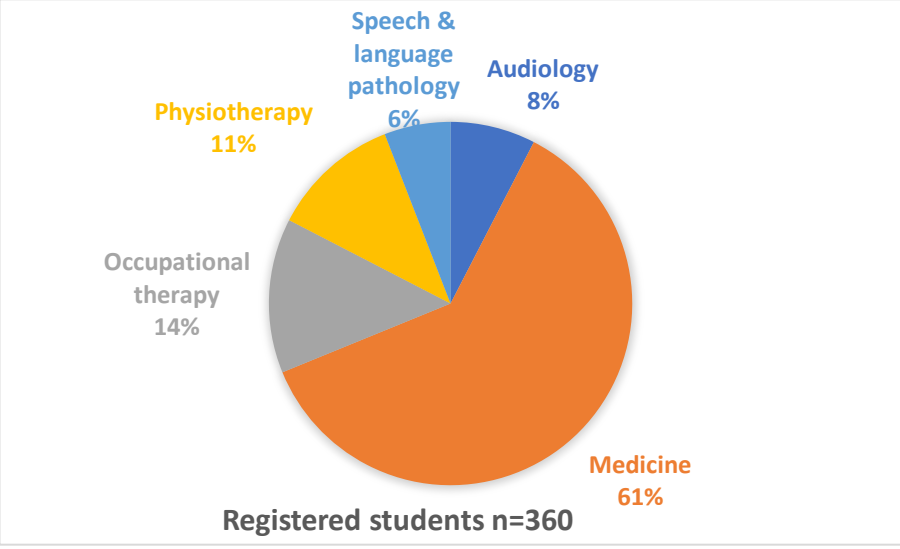

Figure 4: Registered students per health professional degree programme

Ethical considerations: Risks & benefits

This study aimed to explore students' perceptions and experiences of a course which they are formally assessed in, therefore a potential risk was that students may have felt obliged to participate. Students did not seem to feel obliged to participate as there were no responses to the recruitment invitation at first. Given the short window for data production, uptake was relatively slow and necessitated a daily reconsideration of the recruitment procedures. Notwithstanding, it was crucial to ensure that students did not feel pressured to participate and were thoroughly briefed that it was entirely a voluntary decision to participate in the study. During recruitment and again when obtaining informed consent, I reiterated that the research was being conducted independently of the administration of BHP and that participating in the study would have no bearing whatsoever on participation in or assessment of BHP.

While it was not anticipated that any mental, emotional or physical harm would come to participants in the study, a potential risk was that some students may have had difficult experiences in their BHP groups. Thus, it was anticipated that sensitive moments could arise during the FGDs. Having experience of facilitating students in small groups lent me the confidence to moderate should sensitive moments arise. In my summation however no sensitive moments arose in any of the FGDs. One participant in an individual interview was overtly anxious in the first 15 minutes or so of our interaction[27]. I generally used humour and reflective statements to try to make the student more comfortable and deliberately kept the interview short. I also offered more space for diversion from the topic.

A potential benefit of the study on an immediate level for participants was to reflect on their experiences throughout the semester. On a broader level it was an opportunity to contribute to the curricular change conversation in the faculty by engaging with one of its themes, namely teamwork.

[27] The participant verbalised feeling "nervous" when she entered the interview room and when I closed the door to shut out the noise in the passage outside, she asked me to keep the door open instead. I tried to further diffuse her anxiety by referring to the interview as "our little talk" so as to create a more relaxed tone.

Informed consent procedure

The Ethics, Heredity & Consortium (2013) guidelines for Informed Consent [28] were used in the drafting of informed consent documents[29]. These documents consisted of a consent form and information sheet that was read and signed by participants. I elected not to include the university banner as a header or footer on the consent form and information sheet to avoid students inadvertently associating the project with university course evaluations. Participants were given information about the research project in simple language. Consent documents were given to an experienced BHP facilitator for comment and suggestions regarding its suitability for first year students prior to its use. I addressed students at BHP lectures and tutorials and followed this up with flyers as mentioned above. Students thus had time decide whether to participate in the study or not. Consent forms were signed by participants at the beginning of each focus group and interview session.

Privacy & confidentiality

The professional programmes for which participants were registered were recorded as part of the data to determine whether FGD participants represented different professions. Students who knew each other addressed each other by first names however transcripts identified participants by numbers for anonymity. Since focus groups always contain more than one participant researchers cannot ensure confidentiality (Liamputtong, 2011). This was duly explained to participants at the beginning of the sessions and participants were asked to respect each other's needs for anonymity.

Privacy was ensured by storing data on a password protected personal computer and this PC was not accessed by any person other than myself. Data was also accessed by an independent transcriber and my supervisor. Data in the form of transcripts and audio recordings were kept securely in my home office for the duration of the study. After the final thesis had been written up, data in the form of audio recordings and anonymised

[28] These guidelines were downloaded at the time of the study from the FHS Human Research Ethics Committee website http://www.health.uct.ac.za/fhs/research/humanethics/forms
[29] Included in appendix 3.

transcripts will remain securely stored according to relevant guidelines in UCTs data management policy (as applicable to master's students). The data is acknowledged as having longitudinal value for further research[30].

Reimbursement

Offering some kind of refreshment is considered good practice when conducting focus groups (Krueger & Casey, 2000). A meal voucher was offered to students in exchange for their participation. This was mentioned at the time of recruitment as a possible incentive for participation. No other reimbursement was offered.

Exiting the field

Once data production was completed, data in the form of audio recordings were transcribed by an outsourced, independent transcriber. Although writers in qualitative data analysis such as Henning, Van Rensburg & Smit (2004) recommend that researchers transcribe the data themselves, there is a possibility that bias may be introduced in this step[31]. Bias occurs if a researcher transcribes recordings while including their own subjective recall of what was said, rather than transcribing the audio verbatim. Transcription is an initial phase in the data analysis process. Thus, as recommended by Henning, Van Rensburg & Smit (2004), I checked each transcript for accuracy by reading through the transcripts[32] while simultaneously listening to the audio recordings to consider whether the two iterations of data matched. The few inaccuracies and omissions found in each transcript were thus amended.

Dissemination

Findings of the study in the form of this thesis is available by its publication on UCT's open scholarship portal. This portal is available on the university libraries' electronic database and is thus easily accessible by the UCT community including the study participants. Based on the findings of this study, an article will be prepared for

[30] Data management plan for this study is included in appendix 4.
[31] Researcher bias was a concern in the present study due to my past experiences as a BHP facilitator.
[32] The transcription yielded a total of 227 pages of text.

publication in an academic journal. Should an article be published an authorship agreement is in place between myself; Dr Nadia Hartman[33] and Dr Lorna Olckers[34].

Conflicting interests

No conflicting interests are noted but the study involved its stakeholders. Dr Lorna Olckers, the founding course convenor for BP and BHP was involved throughout the study as mentor and co-supervisor. The BHP students who participated in this study are also its stakeholders by proxy. This means they represent past and future cohorts of BHP students.

Concluding comments

Since the present study was exploratory in nature and intended to produce baseline data for further investigation, FGD was deemed to be an appropriate primary data production method in this study. The two unplanned individual interviews and joint interview however, presented opportunities to evaluate (in retrospect) how appropriate the FGD method was for the first-year students in this study. While differences in the content of these two data sets were not considered analytically, some methodological observations were made:

Firstly, in the FGDs with larger groups (seven and eight participants) students tended to interact less with each other initially, looking to me for direction. I had to moderate this by reminding students that my role was to facilitate the discussion and not direct its course. I rationalised that perhaps that was how first year students may react in relation to a facilitator of any sort in a group discussion situation. It also indicated that I could have been more effective in my explanation of what a FGD is, and what a moderator's role entails.

Secondly, two 'piggy-back' FGDs were conducted immediately after the weekly BHP tutorial sessions. This was an unplanned strategy and a reactionary decision due to the

[33] Principal investigator / supervisor.
[34] Officially co-supervised in the first year until retiring from the university but remained involved in a mentorship capacity throughout the duration of the study.

poor participant uptake initially. The students in these FGDs however were more interactive with each and less concerned with my presence. I rationalised that this could have been due to their familiarity with each other and being more comfortable to discuss the topic among themselves.

Lastly, in my summation the two individual interviewees seemed more conscious of being interviewed, and perhaps the one on one situation was too threatening. While novel data[35] arose in both individual interviews, I had to do a lot of prompting to keep the students talking and this was contrary to the overall aim of the study which was to elicit the students' perspective. The students in the joint interview were able to engage with the topic meaningfully as there was more opportunity to relate their experiences fully, while still being able to hear the views of another student.

While there was a higher chance of data replication for the first research question "what is teamwork" in the larger groups, the second part of the FGD which asked about participants' experiences were better shared in the smaller groups. Here students could interact more freely without having to wait for an opportunity to speak. Thus, I concluded that FGD was an appropriate methodology in this context however smaller groups of students (between 3 and 6) seemed to be most effective for data production in this particular study.

[35] No distinction was made between novel and replicated data during data analysis. The pertinence of data in the analysis was not "*dependent on quantifiable measures – but in terms of whether it captures something important in relation to the overall research question*" (Braun & Clarke, 2006: 10).

Chapter 5: Data analysis, findings & discussion

Introduction and chapter overview

A niche of exploratory research is that it presents novel data in an area where "*little or no work has been done on the group, process, or activity under consideration*" (Stebbins, 2001:43). As argued in the literature review (chapter 2), little attention has been paid to teamwork in first year health sciences students particularly in the South African context. Thus, the novel findings of an exploratory study such as this ought to be written with some "*conventions of creative writing*" while still upholding the conventions of theory and science (Stebbins, 2001:43). It is with this spirit that the following chapter is written.

This chapter tells the empirical story of teamwork as told by the BHP students who participated in this study, with myself as a narrator and interpreter of that story. It begins by describing the landscape within which the story unfolds, portraits the characters in the story, and then moves on to report the analytical procedures. The study findings are then presented and includes a large collection of the actual words expressed by participants. The decision to include many data extracts is motivated by the notion that "*no one ever has a 'complete' or 'true' view*" of the social world and that "*our knowledge is always fallible*" (Case et al, 2018: 156). Presenting the raw data thus creates opportunities for the reader to explore other possible interpretations beyond mine as the writer (ibid). In conversation with the data extracts, links are made to the literature (chapter 2) and the chapter ends with a discussion of findings in relation to the theoretical framework (chapter 3). Through the intersection of literature, theory and raw data, more possible 'truth perspectives' are offered to the reader.

Study landscape and participant portrait

Students are required to work in small teams for 2 presentation assessments for BHP. Although students are expected to work as a team, the presentations are labelled as "group presentations" in the BHP student guide (2019: 23) while the assessment rubric indicates that "teamwork" is part of the overall presentation mark (BHP student guide, 2019: 26). Teams are made up of 2 or more professions, but the assessment task does not require application of any specialized knowledge unique to each profession (BHP

student guide, 2019: 23). As depicted in chapter 4, the BHP class includes students in the first year of study for audiology, occupational therapy, medicine, physiotherapy and speech & language pathology.

The joint interview and four of the focus groups included 2 or more professions; the fifth focus group involved only one profession[36]. The first individual interview was conducted with a physiotherapy student and the second interviewee an occupational therapy student. The data for this analysis was thus co-constructed by students from each profession that were required to enact teamwork in this context.

Figure 1: Abridged list of analytical procedures[37]

1. Audio recordings transcribed by independent transcriber.
2. Checked transcripts and made notes. This open coding included global impressions of findings, methodological observations, and reflexive journaling.
3. Coded transcripts using in vivo coding.
4. Organised codes deductively into 4 categories based on the research questions. These 4 categories were 'perceptions of teamwork'; 'experiences of teamwork'; 'factors facilitating teamwork' and 'factors inhibiting teamwork'.
5. Second cycle coding using in vivo and process coding.
6. Discarded instances where the same codes were repeated and condensed similar codes.
7. Considered whether codes were organised appropriately into the 4 deductive categories.
8. Further sorted codes from within categories into subcategories (e.g. codes for perceptions were categorised according to the parts of teamwork and the requirements for teamwork). Similar codes within subcategories were clustered together.
9. Organised subcategories inductively into 3 main themes.
10. Analytical interpretation extended into writing up of findings through matching data extracts with themes.
11. Further analytical decision making occurred during write up of findings, notably the interpretation of subthemes and the reconfiguration of codes within subcategories.
12. Made analytical links to theoretical framework and literature reviewed.

[36] The initial design intended for focus groups to contain at least 2 professions, but I made the decision to conduct the focus group anyway, not wanting to turn students away who were willing to participate in the study.
[37] Detailed excerpts of data analysis outlined in appendix 4.

Data analysis: initial steps

During the transcript checking process I recorded my initial reactions to the data in what Henning, Van Rensburg & Smit (2004:104) describe as "*open coding*", an inductive impression of what the data means to the researcher. According to these writers it "*makes good sense*" to read through all transcriptions in the early stages of analysis in order to get a "*global impression*" of the data[38]. Such a prelude to the formal coding process assists in the later stages of analysis. The formal coding methods used were a combination of in vivo and process coding (Saldaña, 2015).

Data from the FGDs and interviews were analysed together since the interviews were not intended as a second data production method for any triangulation purpose. Two individual interviews and one joint interview were conducted incidentally where only these students arrived on the day for what was intended to be focus group slots. Differences in the ontological content of these two data sets were thus not considered analytically since a "*theoretical or deductive*" approach to the thematic analysis was employed (Braun & Clarke, 2006:12). This means that data were coded for specific research questions across the data corpus.

While it may have been interesting to consider the nuanced ontological differences between the data obtained in each method, coding was done according to the needs of this particular inquiry (Saldaña, 2015). In this study data analysis intended to pursue the exploration of teamwork from the perspective of the students in the study context. Since there was no digression from the data production instrument in the interviews (the FGD guide was used) and the data produced satisfied the objectives of the study, coding was conducted across the data corpus without differentiating between data items. Empirically, perspectives of teamwork were represented in the data in each of the data items (Saldaña, 2015). Thus, in the spirit of exploratory research which by nature averts a sense of completion, this coding practice allows scope for further evocation of the study findings[39] (Saldaña, 2015, Stebbins, 2001). However, some

[38] An excerpt of 'open coding' global impressions in appendix 4.
[39] Metadata excerpts (including full list of codes) included in appendix 4.

methodological differences during data production were observed which have been highlighted in chapter 4.

In writing up this thesis, data analysis was organised according to the research wheel of Samuel (2017) which outlines three levels of analysis: descriptive, evaluative and theoretical. These levels of analysis culminate into a philosophical climax upon which the chapter ends.

Level 1: Descriptive findings

Students free-listed their responses to the questions 'what are the parts of teamwork?' and 'what does teamwork require?' on cards at the beginning of the focus groups (and interviews)[40]. The words that occurred more often in these data are represented in the word cloud[41] below. The word cloud is a visual depiction of the most repeated words recorded in writing, during the free-listing method. Free listing was included in the study design to enable students to generate their own topics for discussion during data production.

As depicted below, the word "*communication*" was most commonly written in response to the afore-mentioned questions, while the word "*motivation*" appears only slightly in the word cloud depicting less repetition. As mentioned previously, data replication is a sign of saturation in qualitative research. However, the pertinence of data to the interpretive account during data analysis was not considered solely in terms of frequency. Thus, both novel as well as replicated data were considered in relation to "*whether it captures something important in relation to the overall research question*" (Braun & Clarke, 2006: 10). Links in relation to teamwork between these concepts depicted in the word cloud are considered in the level 2 evaluative analysis.

[40] The interviews are mentioned in parentheses as these were incidental data production opportunities and were not part of the design of the study as outlined in chapter 4.
[41] Word cloud created on www.wordart.com

"Powered by wordart.com"

Figure 2: Word cloud depicting students' written responses to a free-listing exercise; in response to the questions 'what is teamwork?' and 'what are the parts of teamwork?'

The following tables show samples of codes for each of the categories derived from the transcripts:

Table 3: Sample of codes for 'parts of teamwork'

Category 1: Perceptions

Subcategory 1.1: Parts of teamwork	*Codes*
Interaction, working together	*Working together; integration; knowing each other; effective communication is key; a dynamic between people; togetherness,*
Common goals	*Purpose of the team; common goal is the success factor; everyone doing something different but for a common goal; motivation*
Defined roles	*Defined roles; each member's contribution; dividing responsibility; delegating tasks*
Collective pool of resources	*Different personalities, skills, competencies and perspectives; versatility; knowing each person's strengths & weaknesses*
Natural leaders	*Leaders rise up naturally; some people have leadership qualities which emerge*

Table 4: Sample of codes for "requirements of teamwork'

Subcategory 1.2: What teamwork requires	*Codes*
Building relationships: communication, empathy & trust	*Building relationships; respect; trust; considering others; listening to each other; empathy; being trustworthy; trusting others*
Everyone contributes, work is shared	*Everyone must participate; share work equally; everyone contributing fosters team spirit; equal dedication; taking responsibility; accountability to team & own responsibilities*
Utilising inherent diversity within the team	*People feel more part of a team when they are fulfilling their own talents; appreciating each person's talents; everyone needs to be represented; end product must reflect diversity*
Individual characteristics or aptitude for teamwork	*Open-mindedness; patience; humility; accept everything won't go your way; personal factor to participation*
Leadership	*No direction without leadership; keeps people accountable; without a leader it's a mess*

The logic of the data production process was to explore what students' experiences of teamwork were based on their own perceptions of what teamwork is. Thus, the logic of the data analysis was to analyse students experiences accordingly, that is within the categories derived from the analysis of their perceptions. These responses address the second research question: what are students' experiences of teamwork in BHP? The codes for students' experiences of teamwork were thus organised according to the parts and requirements of teamwork as shown in the following table:

Table 5: Sample of codes for teamwork experiences

Category 2: Experiences of teamwork	*Codes*
Interaction, working together	*We communicated well so could get the job done; asked for help when needed; we worked well together; we worked independently because of different schedules; we didn't work together at all*
Common goals	*People have different objectives; we were motivated to pass; everyone just wants to get out of the tut room; let's just do it to get our marks*
Defined roles	*Lack of clearly defined roles; work was collectively assigned to each member; delegated tasks; worked independently but together*

Collective pool of resources	*Personality differences; assigned working according to strengths & weaknesses; building shared knowledge; different perspectives*
Natural leaders	*No one was taking initiative, so I delegated; one person took on a leadership role; I'm a good leader but I held back from leading; someone else took on leadership but was passive*
Building relationships: communication, empathy & trust	*Difficult to trust people I don't know; feeling intimidated by opinionated people; we were nice to each other; respectful; we were all understanding; there were no personality clashes*
Everyone contributes, work is shared	*I was prepared but others weren't; no one did their part, so I ended up doing it; everybody did their part; they were hardworking; was work equally distributed?*
Utilising inherent diversity within the team	*We listened to ideas shared and chose the best option; building shared knowledge; wasn't much scope for appreciating different talents; no skills from different professions were required; people could work according to their strengths*
Individual characteristics or aptitude for teamwork	*We were impatient with each other; some people don't like working in teams; slackers add unnecessary stress; laid back attitudes*

Students perceptions of what helped or hindered teamwork was the concern of the third research question explored in this study. The third research question namely: 'what are the factors facilitating or inhibiting teamwork?' was explored in the context of what students experienced in their BHP presentation teams as well as their perceptions of teamwork generally. Thus, there is overlap between the parts and requirements of teamwork and the two subcategories: facilitating and inhibiting factors. Often students would simply state that having all the parts of teamwork facilitated teamwork (FG 004, pg.36) and that the "*opposite*" of the parts of teamwork would hinder teamwork (FG 003, pg. 27). Thus, the subcategories depicted in the tables below represent what I interpreted as differentiated from what is presented in the tables depicting 'parts of' and 'requirements for' teamwork above. In coding for inhibiting or facilitating factors, I relied largely on my own interpretations where students did not differentiate between parts, requirements, inhibitors and facilitators of teamwork[42].

[42] Detailed list of codes for each category in appendix 4.

Table 6: Sample of codes for factors facilitating teamwork

Category 3: Combination of perceptions & experiences *Facilitating teamwork*	*Codes*
Supportive environment	*Being able to ask for help; empathy;* *outside help from facilitator;* *encouragement*

Table 7: Sample of codes for factors inhibiting teamwork

Category 4: *Inhibiting teamwork*	*Codes*
Withdrawal	*Not feeling appreciated for work done;* *removal from the group; withholding ideas;* *sulking*

Level 2: Evaluating the data

Figure 3 below portrays an overview of findings in relation to the first research question: what are students' perceptions of what teamwork is? The figure shows my interpretation of the main concepts that students raised, essentially their own operationalisation of 'teamwork'. In order to approach students' experiences of teamwork, or what they think can facilitate or inhibit teamwork, it must first be understood what their understanding of teamwork is. This co-constructed conceptualisation of teamwork informs the subsequent analysis. The operationalisation of teamwork was co-constructed by:

1) participants' responses and interactions
2) my interpretations of the data during data production and analysis.

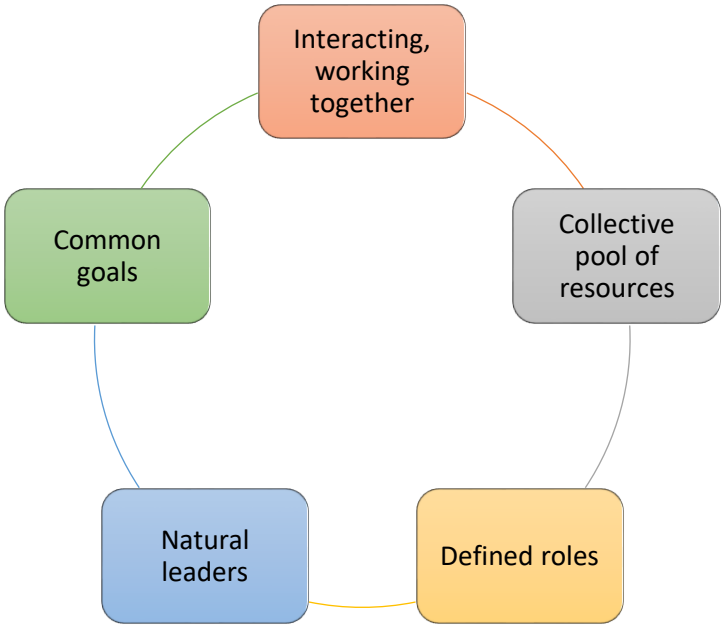

Figure 3: Interpretation of how students operationalised the parts of teamwork

From categories to themes

After much deliberation about the meaning of the organised data[43], I interpreted three broad themes to encompass the categories and subcategories depicted in the preceding categorical tables. These broad themes include: the purpose of teamwork; the persons[44] involved in teamwork; and the process of teamwork. The findings will now be discussed within these themes.

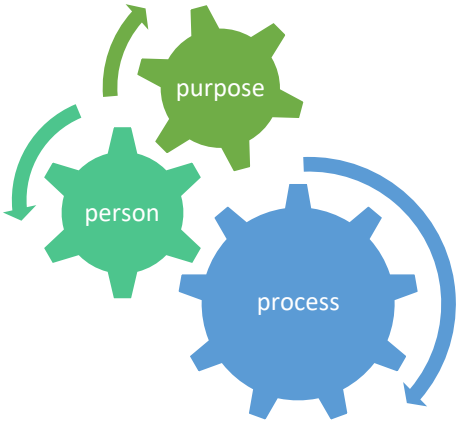

Figure 4: The three P's of teamwork in BHP

[43] Description of this process included in appendix 4.
[44] The word 'persons' rather than 'people' is used to denote that teams are made up of individuals. My interpretation is that the former is more distinctive, and the latter is more inclusive.

Theme 1: Students' perceptions and experiences of the purpose of teamwork in BHP

As cited in chapter 2, a team can be defined as a designated group of individuals with complementary skills, conjoined by a common purpose, working towards a common goal with mutual accountability (Katzenbach & Smith, 2005:165). A team of different healthcare professionals is often formed for the purpose of treating patients holistically in response to a range of clinical needs (Lerner, Magrane & Friedman, 2009). The students in this study widely understood that a team is formed for a specific purpose.

Because teamwork in this study was framed within the context of a course involving small group learning, students' perceptions and experiences of teamwork were constructed in relation to group work. Thus, students often used the word 'group' to refer to themselves and others working together. At various points during the focus groups and interviews, I asked students about whether there is a difference between a group and a team. The words 'group' and 'team' were used almost interchangeably by students throughout the focus groups and interviews; however, there was a clear distinction between their perceptions of the meanings of these words. The following extracts show students' understanding of what a 'team' is ***in relation to*** a 'group'.

> *Interviewee:* *… group is… a more generic term… but a team is more defined. They know each other, they know their purpose… they're working together towards a common goal.*
>
> Extract #1 (FG 007, pg. 27-28)

> *Interviewee:* *… with a team… there's different roles… everybody has a different task or responsibility in that team. Whereas with a group you could all be the same type of person… with* [a] *similar way of thinking…*
>
> Extract #2 (FG 007, pg. 27)

Interviewee: *… if you're doing 'group work'… it's like you're working around other people, but you're not all working towards the same thing. But with 'teamwork' you're working with each other and sharing information and all working towards the same thing.*

Extract #3 (FG 004, pg.30)

Interviewee: *… 'group' is just like a collection of people together. A 'team' is like having one… goal… there's something in common.*

Extract #4 (FG 003, pg.15)

Interviewee: *… interaction between people, that's the difference between a group and a team… I think it is definitely a positive interaction… between different people in a team.*

Extract #5 (FG 007, pg. 28-29)

Each of the five extracts above can be linked to the five dimensions of Katzenbach & Smith's (2005) definition. This is illustrated in the figure below:

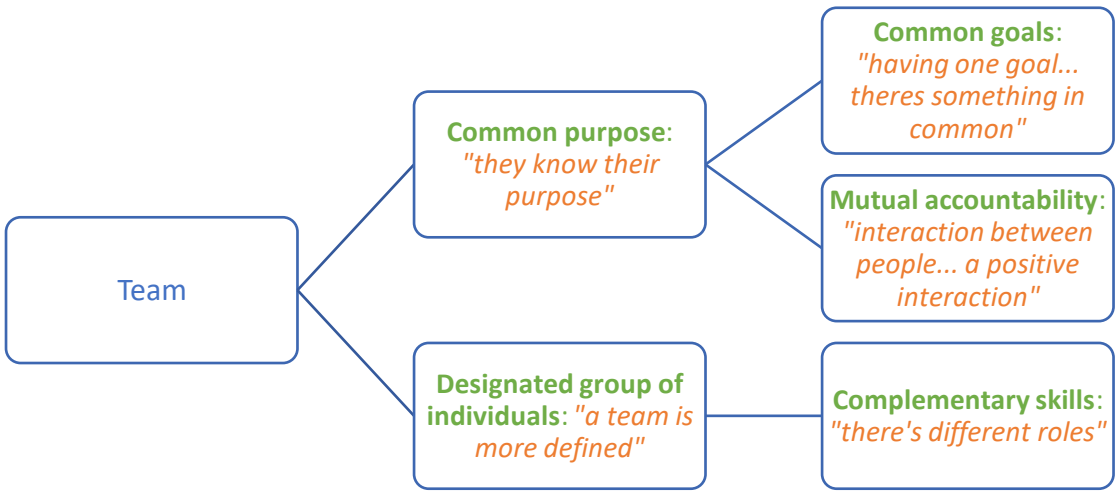

Figure 5: Students' operationalisation of 'team' (italics) and Katzenbach & Smith's (2005) definition (bold)

One of the broader aims of BHP is to introduce students to working in a healthcare team, and this includes learning about the roles of the different health professions potentially involved in a given team. The pedagogical approach of BHP is "*participatory,*

experiential, team and project based" (BHP course reader, 2019: 3) and as outlined previously, the manifestation of this broad aim was assessed in two presentation projects. Students were required to work in teams of 5 or 6 to produce two presentations[45] that answered broad public health questions. Thus, the immediate purpose of teamwork for students was to answer the presentation questions, fulfil the requirements of the presentation rubric and achieve the required pass mark.

The performance of working together was thus being assessed and there appeared to be a tension between the purpose of teamwork and the motivations of students as team members. As one student commented "*in our team… everyone had a common goal to get good marks…*" (FG 011, pg. 11). Students mentioned that if the presentation wasn't assessed they would not have made a big effort. In the extract below students joked about the importance they attached to scoring marks. The extract also indicates that this was often a common goal.

Interviewee: *… group members say 'ah let's just do it… it's for marks anyways. Let's just do it to get our marks and get it over and done with'…*

[Everyone laughs]

…

Interviewee: *Mm as long as we pass…*

Interviewee: *That's all that matters!*

Extract #6 (FG 004, pg. 33)

Having a common objective was also noted as a factor which facilitated teamwork:

Interviewee: *… a common objective…in this case* [for the presentation] *it was gonna contribute 15% towards all our final marks… so… maybe having a common objective whereby it benefits us all in the same way…*

[45] The presentations were due around 5 weeks apart and were both assessed. Presentation 1 had a weighting of 15% and presentation 2 counted 25% of the total year mark for BHP.

Extract #7 (FG 004, pg. 37)

While students' motivations for working as a team were strongly underpinned by the need to complete the project to get 'the marks', students noted that scoring high marks was not always a common motivation.

Interviewee: *… if one person wants to do well and the others just want to like get by or pass, it affects the entire team's performance.*

Extract #8 (Joint interview, pg. 18)

Although students were largely motivated to get good marks rather than practice teamworking, this motivation was tempered by the desire to "*pull together for the sake of each other*" (FG 011, pg. 11).

Interviewee: *… because it was with other people I felt like 'hey, I can't mess with their marks'… so you kind of… kick your game up a bit… in that sense I felt like everyone pulled up their socks.*

Extract #9 (FG 011, pg. 11)

While the concern for achieving 'good marks' was shared by many students, there was an understanding that the intended aim of the presentation project was to practice working with others. Students communicated that the purpose of working in small groups in BHP was ultimately linked to preparing them for future clinical practice; which they perceived would involve working in teams. This is captured in the following extracts:

Interviewee: *It's called a group presentation, but multidisciplinary team is one of the topics… that we're focusing on. I think working in a group is gonna help us to be a multidisciplinary team.*

Extract #10 (FG 003, pg. 14)

Interviewee: … [at] *an academic level where everyone's supposed to be doing work in order to like pass and do well… if you can't work at this level together it kind of makes me scared for the future… when you're working as part of the team like in a hospital or a clinical setting, it's not just your marks that are on the line or the fear of… failing. Its patient's lives… and their future that's on the line.*

Extract #11 (Joint Interview, pg. 25)

Interviewee: [the presentation must be done] *for the … course requirements to be met and … to pass the course on a superficial level. But on a deeper level to appreciate a multiprofessional team… and to… build relationships.*

Extract #12 (Interview 005, pg. 19)

From the students' perspective, the presentation had the dual purpose of practicing teamwork and also building the relationships teamwork requires. There was a tacit understanding that the first presentation gave students an opportunity to gauge what the process would be like and to get a chance to get to know each other for the next presentation.

Interviewee: *… we asked* [our facilitator] *'are we still gonna be together in the next presentation?'. She's like 'yes'. We're like 'yay!'. Because we worked really well together…*

Extract #13 (Interview 006, pg. 7)

Interviewee: *… we still have another presentation. Imagine you must work with the same group, and we had fights for the first presentation.*

Extract #14 (FG 003, pg. 13)

The tension between

1) the purpose of the BHP presentations (to practice working together) and

2) student motivation (the scoring of marks)

was linked to the perception that one of the requirements for teamwork is relationship building. Students noted that relationships take time to build and that while BHP creates opportunities for relationship building, this was not always a priority. These points are developed further in the next theme.

Synthesis statement of theme 1

The idea of having purpose implies deliberate action. Students' perceptions of teamwork included notions of having a sense of purpose, working towards something deliberate, and being motivated in that action. Students perceived teamwork as having a specific purpose and their experience of this purpose was having to work together on a presentation assessment. The presentation assessment doubled as a common goal since students had the collective motivation to pass. While their experiences of deliberate action were largely for the purpose of scoring marks, there was an understanding that the purpose of the presentation project was to learn to work with others, ultimately in future healthcare teams. The concept of individuals interacting is the focus of the next theme.

Theme 2: Students perceptions and experiences of the persons involved in teamwork in BHP

A team involves more than one person and students used words such as 'members', 'group', 'people', 'everyone' and 'everybody' to convey their perception that "*you need people*" (FG 004, pg. 5) for teamwork to happen. Notwithstanding the use of these seemingly benign words, students highlighted some specific 'persons' in their discussions of teamwork. Thus, the word 'persons' rather than people is used to convey my understanding that 'person' is more specific whereas 'people' is more general. Since the data encompassing this theme is particularly broad, it is further organised into the following subthemes: defined roles & diversity, converging personalities, and leaders & leadership.

Subtheme 2.1: Defined roles & diversity

A high level of role differentiation is noted in the literature as a feature of healthcare teams (Hughes et al., 2016) and students perceived a team as being composed of different roles.

> *Interviewee:* *"Everyone's got their role. Like their… cog in the engine"*
>
> Extract #15 (FG 002, pg. 16)

The idea that "*everyone's got their role*" in a team is pervasive throughout the data corpus. Students noted that a team is made up of individuals who each have a specific role. As indicated in extract #2 above, students perceived the concept of role differentiation as one of the factors separating 'team' and 'group'. Students constructed 'defined roles' in terms of the different tasks required for the presentation and the delegation of those tasks.

> *Interviewee:* *We had defined roles because we set it out… we said 'you're doing this, you're doing this, you're doing this…*
>
> Extract #16 (FG 002, pg.17)

> *Interviewee:* *… everybody meets up and they say 'we should divide the work and you do this; I'll do this, you do that… that kind of thing.*
>
> Extract #17 (FG 004, pg.8)

Discussion around defined roles and delegation of tasks was linked to leadership and individual diversity. In some teams one or more students took discernible positions by assuming leadership roles.

> *Interviewee:* *… the leaders in our group … gave us … questions to answer …* [for] *our presentation.*
>
> Extract #18 (FG 003, pg.5-6)

Interviewee: *… the first time we had to… discuss what we were gonna do there were a couple of people who were kind of leading the discussion and just making sure that we… stuck to the point. But then the more comfortable we got with each other… that kind of fell away and everybody was just contributing freely and… equally to what we needed to do. And we didn't need a leader, I guess.*

Extract #19 (FG 004, pg. 15)

In the main, there was a sense that delegation was shared where students chose which parts of the presentation they felt comfortable doing, based on their own strengths and weaknesses.

Interviewee: *Everybody had different strengths so… for the presentation… it was nice to see that some people would rather do… theory… and somebody else would rather do… the reflective… side…*

Extract #20 (FG 007, pg. 6)

Conversely, students did not always have the opportunity to play a role that fulfilled their strengths as noted in the extract below:

Interviewee: *I don't think there was much space for appreciation of people's talents… it was just about getting the job done, not about what everyone's strengths were.*

Extract #21 (Interview 005, pg. 4)

In instances of shared delegation there were no clear leaders, but often one or more students were somehow initiating the delegation of tasks while checking with others. It made a "*big difference*" to "*work*[ing] *together*" when students listened to each other "*as a person*" and not just as "*a role*" (FG 007, pg. 7). Delegating tasks so that each

person had a defined role to play in the team that they were comfortable with, was tempered by the need for structure.

Interviewee: *… if everyone's gonna … say 'oh I'm doing this'… it's gonna be a mess! … we need structure.*

Interviewee: *… Otherwise there's gonna be three people doing one topic and then the other topics isn't getting done.*

Extract #22 (FG 003, pg.6)

Interviewee: *I prefer it when everyone has their own role and they stick to it… then everything goes, like it flows.*

Extract #23 (FG 002, pg. 11)

Having defined roles appeared to be valued, however checking in with each other and "*sharing ideas*" within the team was perceived as "*a good part of teamwork because… other people will think of things that you didn't think of*" (FG 004, pg. 17).

Interviewee: *When I think about the presentation, I don't think… I would have been able to answer the question alone. But then with everyone putting in their ideas and their experiences, it was helpful… that's when I got direction… I was like… 'oh that's how you answer the question'.*

Extract #24 (FG 003, pg.13)

Interviewee: *… if everybody contributes their opinions and their ideas, and everyone listens to them properly then you could come up with something better than you could if you were working on your own.*

Extract #25 (FG 004, pg.17)

Sharing ideas and contributions implies that the product of teamwork is a shared outcome. As one participant noted "*everybody needs to feel represented by the outcome of whatever the group is working towards… diversity has to be evident in the end*

product…" (FG 007, pg. 4). This sense of shared ownership is echoed in the following extract:

> *Interviewee:* *… everybody…* [had] *done their part and then he would just change it… without asking anybody… he just made the whole presentation… so… you were grateful for him doing… a lot of the work… but also you felt a bit left out…*
>
> Extract #26 (FG 011, pg.13)

The structure of a team itself, which includes defined roles, presents a collective pool of resources in terms of skills and experiences. Students perceived team members as having different contributions to make, to add value to the end product of working together. Students seemed to appreciate that differences between individual team members must be exploited and that teams must utilise its inherent diversity.

> *Interviewee:* *… when you're working in a team you have such as resource of skills and experiences… that needs to be brought together.*
>
> Extract #27 (Interview 005, pg. 3)

> *Interviewee:* *… everyone would bring… their own expertise into a team… and being able to… maximise those skills, … when someone is fulfilling those talents, they feel far more part of the team and feel like they're actually contributing something valuable.*
>
> Extract #28 (Interview 005, pg. 5)

> *Interviewee:* *… the more versatile the group is, the more inputs… can come from different perspectives. And that's actually a very… good attribute for a group. As long as you respect those differences you can actually work with them and have a better outcome of whatever it is you're trying to accomplish…*
>
> Extract #29 (FG 007, pg. 5)

The extract above refers to 'respect', a concept often mentioned by students. In the following extract, having respect for different roles is highlighted:

> *Interviewee:* *… you need someone to be the leader and you have to respect that person for taking on the leadership role, but you should also respect the someone that's more artistic…*
>
> Extract #30 (FG 011, pg. 15)

Having a shared understanding of each person's role in a team was noted as a factor facilitating teamwork:

> *Interviewee:* *… a common understanding of each person's role… contributes to… success…*
>
> Extract #31 (FG 007, pg.21)

In a healthcare team one of the indicators of team diversity is the different professional roles which are distinct. The defined roles of interest in this study were the health professional roles represented in BHP: audiologist, doctor, occupational therapist, physiotherapist and speech & language therapist. Although students appreciated that there were differences between these professions, they noted that professional diversity was not part of the brief for the presentation. Since the interprofessional nature of healthcare teams was not made salient in the presentation, students perceived differences between team members as being largely personality based.

> *Interviewee:* *… we did have different… professions in our team, but I don't really think the… professions… played that big a role in what we did with our presentations… or our teamwork… I think mostly the personalities is what contributed to the differences.*
>
> Extract #32 (FG 007, pg.5)

Subtheme 2.2: Converging personalities

Regardless of the nature, purpose or goal of any given team, a team is always comprised of individuals. Thus, since social interaction is the bedrock of teamwork, it is plausible that individual attributes such as personality will be salient in an interactive process such as teamwork. Personality was not explicitly mentioned as a conceptual part of teamwork, but the effect of personality on teamworking was often referred to by students. In particular, the convergence of introverted and extraverted personality types was evident when students were working together.

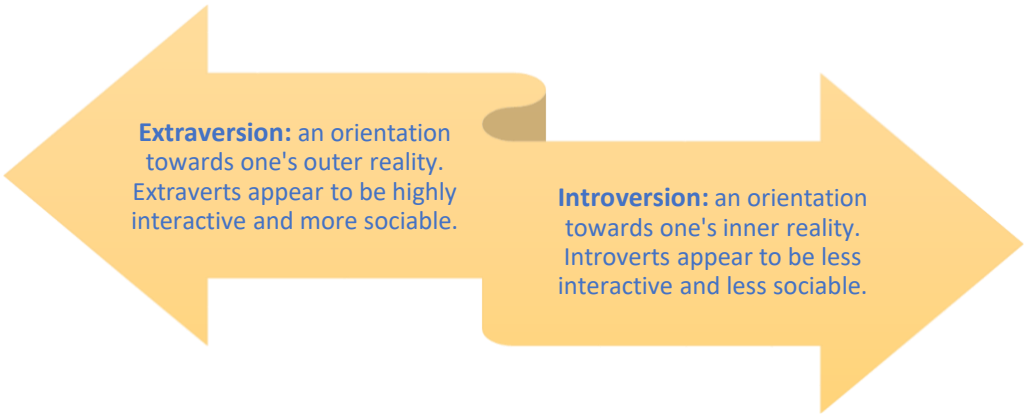

Figure 6: The convergence of introverted and extraverted personality types (Meyer, Moore & Viljoen, 2003) appeared to counteract teamwork.

Converging personalities were apparent not only in the presentation teams, but in the broader BHP groups where students met weekly, together with a facilitator, for experiential learning activities. Differences in contributing to the team, sharing information and taking initiative was ascribed to personality differences. This is shown in the following extracts:

> *Interviewee:* *… it* [teamwork] *requires communication between all members and… because everyone has different personalities… some people tend to speak less… but… it's important to … make a contribution… and if you're a person… who tends to speak too much… you have to not speak too much.*
>
> Extract #33 (FG 011, pg. 24-25)

Interviewee: *… if you get… people… that take… charge… I'm just gonna follow… because I don't like to put other people in that situation of… 'oh do this and do that'. So, I'll rather be…* [a] *follower in the group. But obviously… if I see it's not working then I'll raise my opinion… Because working in a group…* [if] *there's tension, that just makes everything more uncomfortable.*

Extract #34 (FG 003, pg. 13)

Interviewee: *… the personalities were fine in our group… but… when… your personality is generally introverted and you don't speak much, cool beans. But when it comes to the point where we need to suss out information from you constantly, I feel like you're giving extra work… it's burdensome… you should be assertive enough to say what you want and what you don't want.*

Extract #35 (FG 011, pg. 8)

Students resolved that a good mix of personality types would result in optimal functioning:

Interviewee: *… you have leader personalities and follower personalities. And if you have… a good balance of that then the group will function well…*

Extract #36 (FG 007, pg. 19)

Interviewee: *Honestly, teamwork is… a game of luck. Because they can put you with a great group of people or you can be grouped with a terrible group of people and its' just gonna go downhill…*

Extract #37 (FG 004, pg. 38)

Interviewee: *… I'm not quiet, I'm not quiet at home, but in a new setting… it makes me quiet up… and then I observe everyone around me. I*

was like 'oh they're actually nice', then I feel like I can share my opinion. But then unlike my first semester group there were those people who… [are] *very opinionated and they… make you feel like… 'okay they can speak'… just depends on the people.*

Extract #38 (FG 003, pg. 12)

The idea that the experience of working together with others "*depends on the people*", was also noted in terms of having complementary personalities in a team. This was noted as a facilitating factor for teamwork. Students highlighted that "*teamwork is about jelling with people*" (FG 003, pg. 18). In the extract below I asked the students what they thought would facilitate this '*jelling*' characteristic of teamwork:

Interviewee a: *I think its personality…*

Interviewee b: *Personality overall.*

Interviewee a: *… you just click with the people.*

Interviewer: *The people who just… get along… interpersonally?*

Interviewee b: *Because everyone in our BHP group is generally… nice people… you can approach them outside of group, inside of group… but you get those people… who's just not approachable… so overall… it would be harder.*

Extract #39 (FG 003, pg. 18)

I interpreted this idea that some people are '*just not approachable*' as an aptitude for teamwork. Students highlighted that some people disliked working in teams and that this was a personal preference based on prior experiences[46] or personal attributes.

Interviewee: *it's also… a personal factor. If you participate in a group and you share ideas and you respect people and… bring all of these things together… it's just like a personal aspect about yourself.*

Extract #40 (FG 004, pg. 36)

[46] Prior experiences of working in teams throughout high school (extract #77).

Interviewee: *When we were first told we're gonna be split into groups I was like 'oh no here we go again!' It's just… better to work on your own.*

Extract #41 (FG 003, pg. 17)

Interviewee: *… there's people who do not like working in teams and do not have these qualities…*

Extract #42 (FG 004, pg. 38)

Students resolved that this aversion to teamwork could be tempered by self-awareness and that teamworking was something that could be learnt:

Interviewee: *… I definitely think it's something… you can be aware of. Some of these* [parts of teamwork] *I think you can definitely learn.*

Extract #43 (FG 004, pg. 38)

Interviewee: *… I don't like to depend on people. I don't like teamwork, I just want to do this by myself because I know myself, I can trust myself… so… with teamwork… this BHP group specifically has changed my perspective on that… that it's okay to trust other people… that's the whole point of a team… to rely on others… but also be reliable.*

Extract #44 (FG 007, pg. 33)

The reciprocal nature of relationships between team members is alluded to in the extract above. Reciprocity implies mutual benefit, and some teams "*were very fortunate that no personalities clashed and there was enough… silent… people…* [and] *there were enough… people who speak out…*" (FG 011, pg. 25). Yet students' experiences of working with others was not always in balance. Extraverted and introverted personality types reportedly "clashed", resulting in a breakdown of the team itself and consequently making teamwork impossible.

Interviewee: *… some people wanted to do things their way and didn't seem to take note of what other group members had to say… so… we each did our own segment and then we came together on the day of the presentation and… that was it… When someone is outspoken, and someone is very introverted… then they don't take time to even listen to what the other person has to say. They shoot the idea down before its even there. That's why we just decided to* [do] *our own things.*

Extract #45 (FG 004, pg. 18-19)

There was a palpable tension between these two personality types where the more 'introverted' personalities seemed to feel intimidated into silence, too "*scared to… share* [their] *opinions*" (FG 003, pg. 4). The extracts below refer to the experience of "quiet":

Interviewee: *… depending on the group I'm in… I don't - because some people are very intimidating - speak up and… be equal…*

Extract #46 (FG 003, pg. 5)

Interviewee: *… you shouldn't be… neglecting the people who were the quiet ones because you are… extroverted… or… loud…*

Extract #47 (FG 004, pg. 28)

An individual aptitude for teamwork was further evidenced in the extracts below which seem to illustrate examples of how working with others could sometimes "*bring out the worst in people*" (FG 011, pg. 8).

Interviewee: *… sometimes when working in a group… I tend to have a fixed way of doing things and I always think that my way is better.*

Extract #48 (Joint interview, pg. 9)

Interviewee: *… sometimes I feel this responsibility to go and like polish… people's work… but that's not nice to do… it's kind of condescending…*

Extract #49 (FG 011, pg. 9)

Interviewee: *… someone who's a natural leader will… end up like trying to take control… and… its often someone who micromanages someone else's job.*

Extract #50 (FG 002, pg. 6)

Interviewee: *…for me personally I want to get an 'A' on the thing* [the presentation] *… but… that's awkward to say… because it kind of seems like… you're being an over-achiever.*

Extract #51 (FG 011, pg. 11)

These sentiments, particularly the last extract in the series above, seem to portray students' motivations, as addressed in theme 1[47], namely the desire to do what is required to score "*good marks*" (FG 011, pg.11). Students acknowledged however, that they were not "*always gonna click with everyone*" (FG 003, pg. 19) and that "*maybe… in places where your personalities don't exactly click… knowing your roles and fulfilling that for the greater purpose of the project instead of… focusing more on your personal relations…* (FG 003, pg. 19) was going to be "*efficient*" (FG 003, pg. 4).

The role of the facilitator in the efficiency of teamwork was also raised by students. Teamwork is about "*allowing everyone to be involved"* (FG 003, pg. 6). Giving each person the opportunity to contribute was perceived as part of the facilitator's role. Although facilitators were not involved in the student teams as they worked on the presentations, it was implied that facilitators ought to have 'facilitated' appropriate interaction between students:

[47] Theme 1 is concerned with the purpose of teamwork.

Interviewee: *They* [the facilitators] *are supposed to make sure that everybody participates equally and that everybody is on the same page.*

Extract #52 (FG 003, pg. 30)

Students related that the facilitator had an impact on teamwork in terms of allowing space for meaningful interaction, which in turn allowed relationships to form, particularly by managing 'extraverted' students:

Interviewee: *… there's never a moment of silence. It's… constantly people competing to speak… which usually means the same voices speak. So, in that sense I feel like I haven't been able to build deeper relationships with people or being vulnerable in that space.*

Extract #53 (Interview 005, pg. 13)

Interviewee: *…* [our] *facilitator… has built an environment where everyone can share. And he actually gives you time to… say your opinion. He allows you to do all those kinds of things which is… important for teambuilding.*

Extract #54 (FG 002, pg. 27)

Interviewee: *… first semester my facilitator was… very strict… and that kind of put you on edge a bit… then you don't enjoy the interaction with everyone. But… in this current group,* [mentions facilitator] *is very kind… it just feels like people getting together and speaking about the work that we're doing. So, it's more interactive and that's how we get to know each other better… we get to make jokes and we get to show our real sel*[ves] *instead of being like… having this strict structure.*

Extract #55 (FG 003, pg. 28)

Often students reflected on their experiences of facilitation in first semester versus second semester. A student related her experiences of the two facilitators she had for BP (semester 1) and BHP (semester 2). She described her BP facilitator as very outspoken and humorous but that "*he facilitated the fact that you need to understand there's soft spoken people… and he gave them a chance to… rise up as well*". In contrast she states that her BHP facilitator did not *"intervene*" when certain outspoken students would talk so much that the rest of the group would "*just… zone out into space*" (FG 003, pg. 29).

It was evident to students that facilitators also have different personalities and approaches to facilitation which could have a bearing on relationship dynamics including teamwork:

> *Interviewee:* *… my previous BP facilitator was… just a bit more involved. A bit more exciting and probing… and everyone in that BP group is my friend now… so there was nothing wrong with our* [BHP] *facilitator, but it was just… I think… personality types…* [although] *the teamwork dynamic came from us… and not necessarily her* [the facilitator] *involvement.*
>
> Extract #56 (FG 007, pg. 35)

A student commented that meeting for BHP group activities once a week was "*already acknowledging the importance of teamwork and of listening to each other…*" but that careful consideration was needed for the facilitators "*leading that space*" (Interview 005, pg. 16). It is possible that a facilitator's personality style and underlying pedagogical stance may impact on their approach to facilitation. The role of the facilitator as a leader or guide in creating *"a positive team dynamic*" was explicitly mentioned (Interviewee 005, pg. 14). It is worth repeating though that facilitators were not present when student teams were working together in preparation for their presentations. Thus, the individual roles that were at play amongst the students themselves had more bearing on teamworking, notably the role of leader.

Subtheme 2.3: Leaders & leadership

The role of leadership in the BHP student teams was deliberated in each of the five focus groups. There was a sense that leadership was inherently a part of teamwork and that some people are 'natural leaders' who tend to take on leadership roles in groups or teams:

> *Interviewee:* *… it's like a natural instinct… somebody always will… rise up to the position and be a little bit more authoritative over the group… it's a natural thing… somebody will just be a little bit… more assertive than everybody else…*
>
> Extract #57 (FG 007, pg.18)

> *Interviewee:* *… I think naturally she was sort of like* [the] *leader in the group… it went without… saying… I think we were all just really comfortable in our roles that we didn't know we had, but… it was there…*
>
> Extract #58 (FG 011, pg. 25)

> *Interviewee:* *… obviously some people tend to… encompass more leadership skills than others and that shows…*
>
> Extract #59 (FG 004, pg.14)

Students seemed conflicted over whether or not leadership was needed in their BHP teams. There was a sense that the role of a leader was defined, and that leadership can aid the teamwork process. This is evidenced in the following series of extracts:

> *Interviewee:* *… because a leader…* [is a] *defined role… it's not awkward if I as a leader tell*[s] *somebody else 'you haven't met your deadline' because you know… that's my role… keeping people accountable…*
>
> Extract #60 (FG 007, pg. 15)

Interviewee: *… we were… very chilled and lenient… with each other. So, I think that leader role would kinda be like 'okay guys no we need to you know get in order'… just someone to… step up.*

Extract #61 (FG 004, pg.16)

Interviewee: *We did everything necessary, but I think it could have been done better if we had a definite leader…*

Extract #62 (FG 007, pg.17)

Interviewee: *… if there isn't leadership… there is no direction in where… the group is going. And by leadership I don't mean an autocratic leader who's gonna say 'you do this, you do this' but a leader… that the group has mutually agreed on.*

Extract #63 (FG 007, pg.14)

Having an 'autocratic' leader was noted as an inhibiting factor for teamwork:

Interviewee: *… someone who just… dictates what everyone should do and… everything should basically be done according to their… ideas or plans. I think that will… demotivate the group… because they'll feel like everything they… contribute… will… be shot down.*

Extract #64 (FG 004, pg. 20)

Interviewee: *… leadership is a fairly big part of working together because… if there's no leader everybody will just… clash ideas or be… haphazard with what they are doing… it's also very important to elect a good leader depending on what skills they have so that they don't dictate… in a way that's patronising to… everybody else… but* [instead] *they are more encompassing of everybody's ideas.*

Extract #65 (FG 004, pg. 14)

While the importance of a 'mutually agreed' upon or 'elected' leader was raised, students acknowledged that in the context of BHP where students didn't "*really know each other that well… it's difficult… and kind of awkward to… nominate someone to be a leader*" (FG 004, pg.14).

The contested nature of students' perceptions and experiences of leadership in this study context is shown in the following extracts which both affirm and negate the need for leadership in the BHP teams:

Interviewee: *You'd have to have one person to take control… but it's not supposed to be like that. Everyone is supposed to take responsibility for doing their own part.*

Extract #66 (FG 011, pg. 8)

Interviewee a: *Having a leader makes it a lot easier… because… the leader can make sure everyone's doing their thing…*

Interviewee b: *I think a leader or not we should be accountable to one another…*

Interviewee c: *Yeah… you should hold everyone accountable… in my team everyone did their part… but when it came time to meeting up there were two people… who were always busy… in hindsight it really affected our presentation because we went over time.*

Extract #67 (FG 011, pg. 6)

Interviewee: *… some people have those leadership qualities within them so they can just… sort of show them… but it's not a prominent leader… they're just using their leadership qualities.*

Extract #68 (FG 004, pg. 16)

Students noted that often "*there was no clear-cut leader*" in their teams but that they "*still worked well together*" (FG 004, pg. 15). How this happened, or did not happen, is explored in theme 3.

Synthesis statement of theme 2

Students noted that teams are inherently diverse as each person brings their own unique attributes to the team. Being able to work within a defined role that matched individual capabilities and interests was considered an important part of teamwork. Individual differences impacting teamwork was perceived to extend beyond the immediate academic proficiencies required for the team task. Personality attributes (of both students and facilitators), particularly leadership qualities of students, were perceived to be pertinent to team process. Their actual experiences of working together are the focus of the next theme.

Theme 3: Students experiences of the process of teamwork in BHP

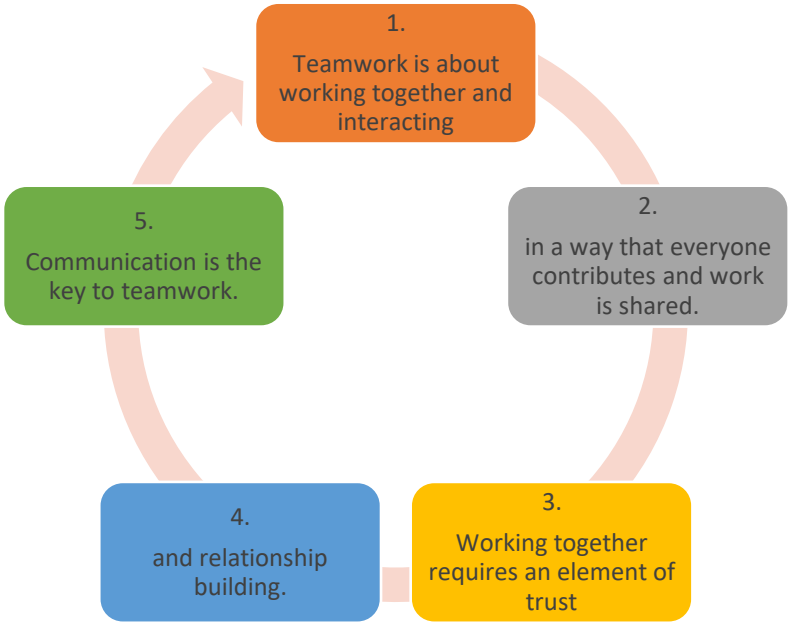

Figure 7: Students' perceptions of the parts of teamwork in relation to their experiences of working together in teams

Unsurprisingly, a range of experiences of working together were evident. These experiences can be described as ranging along a continuum. On the one end was 'zero' teamwork which included solo work, where one person reported having worked alone; and independent work, where each team member worked on their part of the presentation by themselves:

Interviewee: *We didn't work together at all… we set a date for when everyone was supposed to do their bits by, but no one stuck to it… I was the only one who was done…* [and] *I ended up doing the whole thing… everyone just read what I wrote… it was really unfair.*

Extract #69 (Joint interview, pg. 7)

Interviewee: *… our facilitator had said 'try and link' so…* [we] *mentioned… 'as my colleague so and so has already mentioned'…* [everyone laughs] *so that it looks like unified and that you did the work together… and we all wore… one colour to show unity… But otherwise, doing the actual work, there was no teamwork at all.*

Extract #70 (FG 004, pg. 29)

Interviewee: *… facilitators, they're not there when you're working. So, they don't actually know what's going on… they only see what you put in front of them… If you can lie well enough, they're not gonna know the difference* [when grading the presentation]

Extract #71 (FG 004, pg. 29)

The last two extracts seem to point to the notion that students sometimes presented 'fake teamwork'. My reference to the notion of 'fake teamwork' implied that the motivation to work as a team was linked to assessment, and students corroborated my interpretation (FG 004, pg. 28-29)[48]. The relationship between 'fake teamwork' and assessment seems to be worthy of further scrutiny.

On the other end of the continuum where experiences of positive interaction:

[48] My response to the student in extract #70 was "… it's like fake teamwork!" to which the rest of the group responded with laughter, facial expressions and body language indicating their agreement.

Interviewee: *I think this is probably the best group I got to work in… besides the one with my friends[49]… in BHP today we had to… reflect on our group presentation and there wasn't one negative from anyone… everyone was… laughing and smiling… it was honest.*

Extract #72 (FG 003, pg. 17)

Interviewee: *… we all shared our information with one another. It wasn't like you're doing your own thing and then just coming together at the end… we all ran through our presentation parts and then we would… say what's working, what's not working. And then we all corrected what we did wrong and kept what we did right.*

Extract #73 (FG 003, pg. 8)

Interviewee: *… my group was quite co-operative, and everybody was very much accountable for their own actions… and took on their role very well and took responsibility for the things they didn't do. And if they couldn't meet up, they would apologize.*

Extract #74 (FG 011, pg. 8)

The extract above refers to everyone playing "*their role very well*". As discussed in theme 2, students conceptualised role designation in terms of the work needed for the presentation and which of these contributions were delegated to each person. For the students in this study, an important part of teamwork was that work is shared, and this required that everyone in the team contributed to the workload:

Interviewee a: *If this is your role and you don't fulfil it you kind of let everyone down.*

…

[49] This student had referred to her experiences of working in groups on courses other than BHP during the year. Specifically, within her own department, there was an opportunity for students to choose who they wanted to work with in a group-based project.

Interviewee b: When one person doesn't do their thing then someone else has to do it… so that definitely happened. That people didn't do their job… and it put a lot of unnecessary pressure on other people…

Extract #75 (FG 011, pg. 5-6)

Students highlighted that working together required an element of trust and that this trust was broken down when team roles were not fulfilled, that is when others did not do the work assigned to them:

Interviewee: … once they didn't make the first deadline then… my trust like completely… well whenever I work in groups my trust isn't 100%. Because I've worked in groups… throughout high school and I know how it goes.

Extract #76 (Joint interview, pg. 10)

Interviewee: … at university we all worked hard to get here, on high school not everyone's as motivated… there would be the people… that would just slack and not do their part… sometimes because we're coming to university with that knowledge, some people aren't trusting to open up themselves to work with the group.

Extract #77 (FG 003, pg. 9-10)

Interviewee: … you have to … trust the other people. Because … if you're not gonna trust anyone, you're not gonna expect them to do the work.

Extract #78 (FG 003, pg. 6)

Students noted the difficulty of being expected to work in teams with other students whom they didn't know very well; and this made it hard to be trusting:

Interviewee: we couldn't choose who we'd be with… you're not… with friends where you know you can trust them. You know they always do

their work. So, in a situation like that… I don't have that much trust.

Extract #79 (Joint interview, pg. 10)

Interviewee: *… with one of our groups* [in another course] *we got to choose who we want to work with. And that worked better because you know the people, you trust the people… in BHP because we meet in these groups… we get to know each other, and we have a facilitator that guides us which makes it* [teamwork] *easier. Whereas in* [the other course] *we just have a lecturer that comes, talks and then it's over… you don't get that one on one time… so it makes it harder.*

Extract #80 (FG 003, pg. 10)

Alluded to in the extract above is the opportunity to build relationships during BHP group time, and these relationships could facilitate the teamwork process. Teamwork is facilitated by interpersonal interaction, the latter being the building blocks of relationships. Students acknowledged that relationships take time to build but that BHP presents "*adequate time*" for "*fostering relationships*" if "*the facilitator put a lot of importance on… getting to know people in the group*". "*Allowing people time to reflect and listen*" and "*being vulnerable in that space*" was linked to being able to "*build deeper relationships with people*" (Interview 005, pg. 12-13). BHP (as well as BP in semester 1) emphasizes the importance of reflection. These courses were described by a student as "*very reflective, very personal, so it was inevitable that you were gonna know things about people that… friends would know about each other. So, I think that was… a good basis to make friends* (FG 007, pg. 25).

The long duration of BHP's weekly sessions was acknowledged as offering 'quality time' to build relationships:

Interviewee: … because it was like three hours… you have to speak to somebody; you have to ask someone something… [you] *just see*

people…. being themselves, because… three hours is a long time to pretend.

Extract #81 (Interview 006, pg. 10)

While working in teams was described as "*very, very rocky in the beginning*" (FG 011, pg. 8) getting to know each other and being "*more comfortable… with each other…"* (FG 004, pg. 15) allowed people to begin contributing more freely.

Interviewee: … listening to each other in a team is really important and it fosters a sense of team spirit and everyone contributing.

Extract #82 (Interview 005, pg. 3)

Listening is a communicative skill, and communication was a leading theme in the data. As depicted in the word cloud at the beginning of this chapter, the most widely perceived part of teamwork was communication. Communication was identified as the part of teamwork that allowed all the other parts to be enacted. Thus, students perceived communication as an enabling tool. A way to achieve the interactivity of working together, to facilitate the exchange of collective resources, to designate each team members' defined role, to enact leadership; and ultimately effective communication was perceived as an important factor in achieving a team's common goal. The "*priority*" of communication is captured in the following extracts:

Interviewee: … communication is… the first thing… the most important out of all because… that's how you can actually do all of these… other things… so communication's priority.

Extract #83 (FG 002, pg. 21)

Interviewee: … because we communicated so well together, we were able to… get the job done.

Extract #84 (FG 004, pg.9)

Interviewee: *Like how the body works. It's all about communication… how each body system can only function because it communicates with each other...*

Extract #85 (FG 002, pg. 21 - 22)

Although it was widely acknowledged as crucial to teamwork, effective communication was not widely experienced:

Interviewee: *It was difficult communicating… because we… weren't able to see each other very often… over the phone is not always the best way.*

Extract #86 (FG 011, pg. 25)

Students seemed to value listening and talking to each other in person as being effective ways to communicate. Meeting in person was not always easy to co-ordinate however, with students in different degree programs having different timetables and different combinations of course loads across their respective academic programs. Students resolved this difficulty by communicating via a popular messaging platform on their smartphones. Students formed online chat groups via the mobile phone messaging platform 'Whatsapp'. Students related their experiences of communicating via Whatsapp as mostly ineffective and even "*useless*" (FG 011, pg. 27). Communicating "*face-to-face*" was described as more productive (FG 011, pg. 29).

Interviewee: *… Whatsapp groups are not always the best.*

Interviewee: *… it kind of acts like a scapegoat for being productive.*

…

Interviewee: *… it gives people an alternative to meeting in person…* [so] *they think it's fine to just not be there* [at a face to face meeting] *… 'Yeah… its fine, we'll discuss it in the* [Whatsapp] *group.' And then? And then no one replies in the group. So, where's the discussion?*

…

Interviewee: *We definitely got more work done…*

Interviewee: *… in person*

Extract #87 (FG 011, pg. 28)

Although as one participant joked, "*nobody's **not** on their phones 24 hours!*" the students in the age category[50] for this study, living in a digital age, curiously preferred meeting in person above communicating online for the purpose of the team task (FG 011, pg.27). Whatsapp, or more broadly online communication, was deemed a barrier to teamwork, while face-to-face communication was seen as a facilitating factor:

Interviewee: *… sitting around a table actually speaking to each other facilitated a lot of teamwork… the rest of the project was completed online which didn't really facilitate… teamwork as much because everyone just… did their individual bit.*

Extract #88 (Interview 005, pg. 6)

More generally, open communication which showed "*... respect, empathy... for a person... a team member...*" (FG 002, pg. 22) was noted as a facilitating factor:

Interviewee: *… the person was actually going through a really hard time and didn't feel like he could talk to us about that… like if I sent him a personal message… asking him… 'are you okay? What's going on? Can I help you with anything?'*

Extract #89 (FG 002, pg. 21)

Similarly, failing to effectively communicate each one's role in the team was seen as inhibiting teamwork:

[50] A South African study which included a number of universities reported that first year students were between the ages of 18 and 21.

Interviewee: *… if there's…* [no] *proper communication between what the different roles are… it will lead to conflict… and hinder… progress…*

Extract #90 (FG 007, pg. 21)

Conflict within the team was noted as an inhibiting factor, particularly tensions arising from hierarchical issues among team members (FG 007, pg.21). Students referred to 'the hierarchy' often and this concept is expanded upon in the theoretical analysis which follows.

Interviewee: *… if you think that you're… on a hierarchy or you know more than other people and you're not willing to… accept any new ideas…*

Extract #91 (FG 004, pg. 21)

The factors facilitating and inhibiting teamwork depicted in figure 8 below are presented separately from the evaluative analysis in the preceding pages. I interpreted these two factors as being outside of the '3 P's of teamwork in BHP' as shown in figure 4 earlier in this chapter. The 3 P's of teamwork in BHP encompass the broad themes of 'purpose', 'persons' and 'process'.

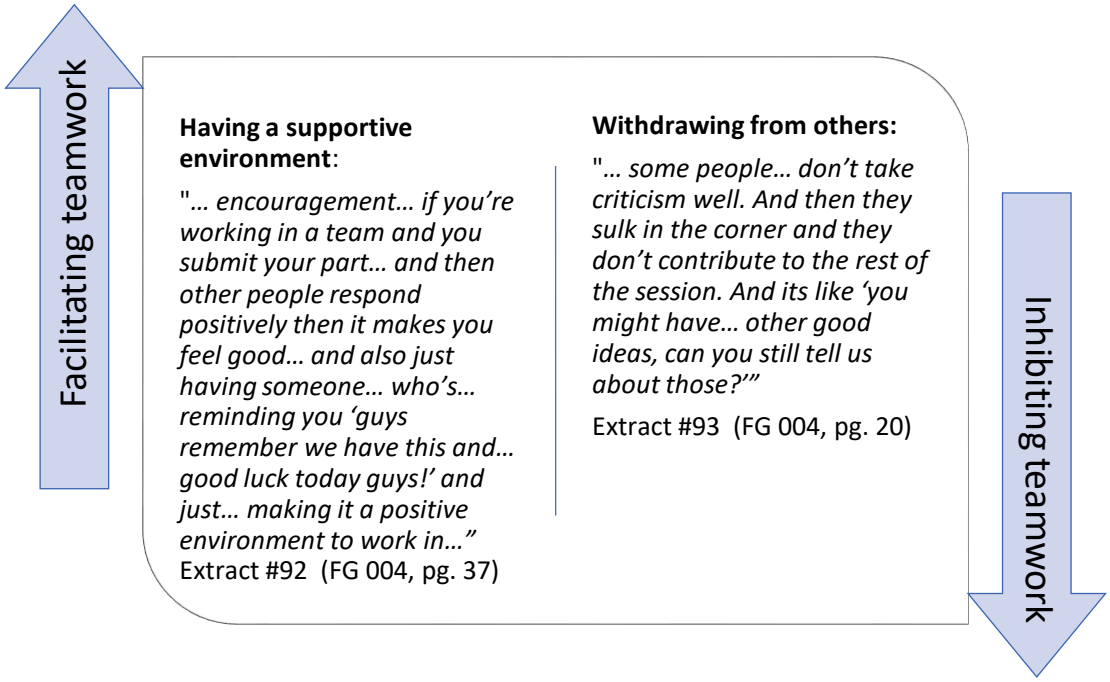

Figure 8: Students perceptions of factors that helped or hindered teamwork

Synthesis statement of theme 3

The concepts encompassed in this theme emphasise the intimate nature of teamwork. Aspects such as 'trust' and 'relationship building' are primal features of the human social condition and teamwork which is fundamentally a social interaction, required the presence of these features. The students in this study highlighted the salience of essential skills such as communication, sharing and helping each other as important for teamworking. The importance of the broader context in which teams work must also be considered hence a broader, theoretical perspective of working together in BHP is offered in the following section.

Level 3: Theoretical analysis

To reiterate, contact theory postulates that where individuals from distinctly different groups have opportunities to come together in the presence of a number of optimal conditions, positive social outcomes may result. In this study a contact situation is any instance where BHP students came into contact with each other both formally[51] and

[51] 'Formally' refers to formal academic activities such as weekly facilitated group sessions and scheduled visits to healthcare facilities.

informally[52] in relation to the course. As discussed in chapter 3, two of contact theory's suppositions which are applicable to a health professional course such as BHP are included in this theoretical analysis. Namely, 'equal status' and 'institutional support'.

'Equal status'

Contact theory requires that contact situations must involve people who have 'equal status' in the context in which contact is enacted. Because contact theory presupposes that some sort of social tension is present which can be resolved, the idea of 'equal status' seems impossible within a context of pre-existing social tension[53]. This is particularly pertinent in a country such as South Africa with its history of institutionaly segregated social life (Ratele, 2006).

Dixon et al (2010) reflect on the paradoxical nature of South Africa's recent history of transformation following the end of apartheid in 1994. They comment on the dichotomy of the "*almost overnight*" end of legalised segregation and its governmental policies aimed at restitution on one end; and conversely, the "*ongoing racial inequality and discrimination*" with the "*massive economic gulf between the rich and the poor*" on the other end (Dixon et al., 2010:405). According to Mangcu (2017) South Africa's post-apartheid inequities are both socio-economic and race based for students at UCT. Thus, contact theory's condition for 'equal status' is problematic for UCT students.

While Dixon et al (2005:700) maintain that the condition of 'equal status' has been volatile and "*applicable only within a narrow range of settings*", Finchilescu & Tredoux (2010) cite university campuses as being within the narrow range of favourable settings for intergroup contact[54] to occur. University campuses potentially allow for intergroup contact particularly by bringing diverse student populations together in close proximity for shared learning activities (ibid).

[52] 'Informally' refers to students self-organised (voluntary) meetings to prepare for presentation assessments and other casual conversations or interactions.
[53] Fittingly, the notion that equal status is possible has been much contested in the literature.
[54] Intergroup contact in this study refers to students from the different professional groups who participate in BHP.

BHP does bring together students from different socio-economic backgrounds, including racial and ethnic diversity, and this broader socio-economic reality certainly cannot be ignored. Notwithstanding, this study is located within IPE in HSE, thus the findings in relation to 'equal status' are discussed within the conception of 'equal status' in this narrow field. If universities *ought* to be able to conjure up contact theory's optimal conditions for contact, including 'equal status', then how does UCT FHS fare within the ambit of this study's findings? If different groups involved in contact situations must "*expect and perceive equal status*" (Pettigrew, 1998:66), this implies that students must expect to be treated as equals and perceive such equality. At UCT FHS however, this seems too far of a stretch.

During the student-led protests of 2016 (alluded to in chapter 2) students in the faculty reported "*apparent privileging*" and "*second rat*[ing]" of certain degree programmes in the health sciences (CCWG, 2018: 36). References to the hierarchical status differentials of the health professions (highlighted in chapter 2) are also evident in the present study. Since the application of contact theory has been delimited (in chapter 3) to its application in HSE (specifically IPE), the present analysis is similarly delimited.

1.1. How does 'equal status' manifest in BHP contact situations?

According to Carpenter & Dickinson (2016:107) "*equal status… may be easier to achieve*" with undergraduate students since equal status can be derived from years spent at university and level of acquired knowledge[55]. While the students in this study did not refer to these 'markers of equality', they did explicitly highlight the importance of the concept of equality in teamworking. This is evidenced by the relative size[56] of the word "equality" in the word cloud depicted earlier in this chapter.

[55] This was the intention of the implementation of BHP in the first year of study (Olckers et al., 2006).
[56] Relative size indicates the prevalence of words in the free-listed responses to the questions about what teamwork is or requires.

'Equal status' was perceived as inherent in the assessment practice of BHP. That is, all BHP students regardless of their respective degree programmes were assessed according to one rubric. Students thus perceived BHP as a level playing field in terms of being assessed. As shown earlier in this chapter, scoring marks was something the students in this study valued widely, thus this observed manifestation of 'equal status' is deemed an important finding:

Interviewee: *… in this case it* [the presentation] *was an equal thing for everyone so I think that could maybe influence people's… motivation to actually… participate…*

Extract #92 (FG 004, pg. 37)

Interviewee: *…* [the presentation] *was gonna contribute 15% towards all our final marks… so… it benefits us all in the same way…*

Extract #7[57] (FG 004, pg. 37)

Interviewee: *… everybody is gonna get… similar marks in the group… if you're accountable for yourself and for your own marks you're gonna get a good mark, the whole group.*

Extract #93 (FG 011, pg.9)

Interviewee: *… most of the marks are as a result of the group, so the individual component is very small comparative to the group component… so if one person… doesn't do something… you're going to lose those marks collectively… not just the person that did it badly."*

Extract #94 (Joint Interview, pg. 27)

The extract above alludes to another way students perceived 'equal status' in this study. Equality was constructed in relation to the process of teamworking. Specifically, the

[57] Extract #7 appears earlier in this chapter in the discussion around student motivations for teamworking in BHP being linked to scoring marks.

contribution that each person, by way of their profession, brings to a healthcare team. Participants also described students as being equal in terms of having a "*quality degree*" in their respective professions:

> *Interviewee:* *… by the time we have finished studying… we both have… a quality degree… up to standard with what* [we] *have been taught… just because you have a different profession doesn't mean you are less equal or less competent in whatever it is you're doing… whichever degree they are, they are very competent in that field… In that way we are equal.*
>
> Extract #95 (FG 007, pg. 12)

> *Interviewee:* *… there's things that I as a doctor cannot do… there's somebody else that can do that. So… it's almost… impossible to assume that one is better than the other when they are completely different…*
>
> Extract #96 (FG 007, pg. 9)

> *Interviewee:* *… one of the first things we learnt in BHP is how the world has now redefined health… health used to be about curing… getting rid of… disease… so… now it's about… not just curing, but also prevention, also rehabilitating. So… equality comes in because we need to all recognise that health is not just about curing people. It's about rehabilitating them, improving their lifestyle and improving their function… so we need to realise that we all need each other…*
>
> Extract #97 (FG 007, pg. 13)

These apparently egalitarian perceptions were however not always part of students' experiences of teamwork in BHP. An element of inequality evident in the data was what students referred to as the "*hierarchy*" (FG 003, pg. 22; FG 004, pg. 21; FG 011, pg. 17).

1.2. 'The hierarchy'

Within healthcare, the problem of 'equal status' manifests in hierarchical structures, a pecking order of professions. Students in this study were aware of this hierarchy of health professions, and some had experienced it in different ways in BHP:

> *Interviewee:* *… the health and rehab students always feel like the med students take over, like overpower within BHP.*
>
> Extract #98 (FG 003, pg. 17)

> *Interviewee:* *… we're* [health & rehabilitation sciences students] *always… the minority… sometimes we'll be the only one in a group full of med students and that's hard because then they won't understand that you have a lot of other things to do.*
>
> Extract #99 (FG 003, pg. 26)

> *Interviewee:* *this might seem a bit biased but I'm just gonna be honest. I expected the… medical students to put in a little more… harder work because we're… supposed to be used to doing hard work, although I expected from the other professions too… but I don't know if maybe… they wanted to… not feel overpowering… that might… be a reason why the medical students sat back a bit…*
>
> Extract #100 (FG 007, pg. 8)

The last extract in the series above implies that there was an expectation that hierarchical issues would play a role in teamworking, even at first year level. These expectations of perceived hierarchy however were not always experienced in BHP:

> *Interviewee:* *I feel like BHP's trying to prepare us for… the hierarchies more outside of the university space, because… right now it's not very apparent… I don't know. I just feel like right now it's quite equal.*
>
> Extract #101 (FG 011, pg.17)

Interviewee: *Outside of BHP I feel like the hierarchy was evident… in old main[58]… there was a project where… they asked about the hierarchy… there'd be like quotes from people… so I expected the hierarchy to come out and play like a major role in the teamwork but it didn't…*

Extract #102 (FG 011, pg.17-18)

The nature of working relationships between BHP students as described earlier in this chapter offers a vista of why "*the hierarchy*" didn't "*play… a major role in the teamwork*". When working in presentation teams it wasn't always evident which profession each team member was studying. As revealed in the level 2 evaluative analysis earlier in this chapter, students interacted mostly on an interpersonal level where emerging professional identification[59] was not salient:

Interviewee: *… as soon as you get to know a person… you understand 'okay their profession doesn't define who they are'.*

Extract #103 (FG 007, pg. 31)

Interviewee: *We all respected each other and were able to just… work together… it wasn't evident that this person was studying this, and this person was studying this.*

Extract #104 (FG 011, pg. 24)

Interviewee: *… you couldn't see… hierarchy because of… different professions… it didn't prevail… when we were working together… there was… no divisions.*

Extract #105 (FG 011, pg. 17)

[58] 'Old main' refers to the old main building of Groote Schuur hospital on the FHS campus.
[59] An 'emerging' professional identification is acknowledged here since professional identity differentiation can be discerned by health sciences students in the first year of study (DeMatteo & Reeves, 2013).

This finding is central to the usefulness of contact theory as a theoretical framework in this study. Contact theory was applied in this study because of its potential to understand group dynamics in IPE contexts (Carpenter & Dickinson, 2016). The implicit assumption was that teams of students from different health professional degree programmes would have interacted with their emerging professional identities salient, thus rendering their teamworking as 'emergent interprofessional' intergroup encounters[60].

According to Clarke et al (2007: 203) several "*differences within professional groups*" of first year health sciences students add to the complexity of their interprofessional relationships, including academic factors. One of the factors students highlighted as a barrier to teamworking was linked to 'academic politics'[61] among different health sciences degree programmes. Different academic requirements for students in different degree programmes were linked to the maintenance of hierarchical structures. This notion of academic politics is interpreted from the following extracts:

> *Interviewee:* *… I heard that medics have… a higher pass rate than ours* [health and rehabilitation sciences students]*. So not only are their… admission requirements higher… they have to work really hard to maintain… being in the degree. So now I think that's where the feelings of 'we work harder than you guys' comes from. Whereas… our content is really… in detail and… we qualify as specialists in our various fields. So… they study longer and broader, but… we study shorter and… in detail so… its' not exactly a fair scale to measure who works more.*
>
> Extract #106 (FG 003, pg. 23)

[60] The applicability of contact theory as a theoretical framework for this study is critically evaluated at the end of this chapter.

[61] My interpretation of interconnected factors involving authority, organizational processes and underlying beliefs at play in the faculty which have bearing on how students in different degree programmes perceive themselves and each other; and which consequently may have bearing on their interactions. These ideas are discussed further in chapter 6.

Interviewee: *… my older friends who are medics… they do make a lot of jokes and a lot of microaggressions towards… health & rehab students and they don't see any fault in it… like it's just ingrained… I think… when your environment entertains that… mentality and… way of talking then… you're encouraged to keep going.*

Extract #107 (FG 007, pg. 11)

I inferred from the extracts above that the 'academic politics' within UCT FHS had implications for students' perceptions of the position of their own and other's professional degree programmes and by extension, had implications for interactions between them[62]. Academic requirements are traditionally determined at an institutional level, highlighting the role of universities in subtly affecting relationships between students through this notion of academic politics.

'Institutional support'

As mentioned in the previous section, universities have been identified as favourable settings for the manifestation of contact theory's optimal conditions for contact, specifically by bringing diverse students together for shared learning (Finchilescu & Tredoux, 2010). The students in this study made explicit links to institutional support evidenced by the extracts in the following discussion.

[62] My common-sense assumption is that this notion of institutional 'academic politics' potentially filtering down to students is not unique to UCT FHS, however it is acknowledged that this assumption must be further investigated in the health sciences education literature. It is a moot point in this thesis however in relation to the present research questions which aimed to foreground students' perspectives.

2.1. How does 'institutional support' for contact manifest in BHP?

Within the academic politics of UCT FHS, the BHP course appears to be a pedagogical tool for promoting progressive, transformative relationships between diverse health sciences students:

> *Interviewee:* *… BHP has made a lot of effort to sort of… promote equality of… all the professions… one time we were having a BHP lecture and the medics had just had a lecture before in that same venue. And then one of the lecturers said 'no medics, go and split. Some of you will sit in this lecture hall, some of you sit in there' because they didn't want all the medics to sit in one place… otherwise it would look as if… we're trying to isolate ourselves from the other*[s].
>
> Extract #108 (FG 007, pg. 11)

BHP facilitators represent the institution of UCT FHS as educators; and in this capacity they were influential in shaping interactions between students. As mentioned in the level 2 evaluative analysis, students perceived facilitators as leaders in the BHP space, indicating a level of institutional authority over students. The role of the facilitator in relationship building was explicitly mentioned by students[63]:

> *Interviewee:* *…* [our] *facilitator… has built an environment where everyone can share. And he actually gives you time to… say your opinion. He allows you to do all those kinds of things which is… important for teambuilding.*
>
> Extract #54 (FG 002, pg. 27)

> Interviewee: *…in BHP because we meet in these groups… we get to know each other, and we have a facilitator that guides us which makes it*

[63] These two extracts appear earlier in this chapter (level 2 analysis) #54 in the discussion of the facilitator role in overseeing group dynamics; and #80 later in that section where the role of the facilitator in relationship building is highlighted.

[teamwork] *easier. Whereas in* [the other course] *we just have a lecturer that comes, talks and then it's over… you don't get that one on one time… so it makes it harder.*

Extract #80 (FG 003, pg. 10)

The compulsory weekly facilitated group time in BHP is the sanction of institutional support as promulgated by contact theory to promote contact, interaction and eventually teamwork. In their recommendations based on implementing a compulsory, semester long, team-based IPE course for first year students, Peeters et al. (2017:1107-1108) note that institutional support, including "*dedicated time*", was "*a very strong element*" for success.

In BHP, students meet for formal academic activities throughout the second semester, and sometimes informally in preparation for presentation assessments. Students noted that "*time can play a big role in… relationship building in group*[s] *and teams*" (FG 002, pg. 24). The extracts below make reference to both formal and informal opportunities for contact and interaction between students offered by BHP.

Interviewee: *… sitting in a circle once a week, I think that's already acknowledging the importance of teamwork...*

Extract #109 (Interview 005, pg. 16)

Interviewee: *… I feel like BHP… really helps with… getting to know people… who I wouldn't normally be friends with… and then sometimes they introduce me to their other friends and… you kind of get a way into the group, into the other group… you just broaden your horizons…*

Extract #110 (FG 011, pg. 22)

As alluded to in the above extract, students perceived that BHP could help "*broaden"* their *"horizons*". Broadening the horizons of the study findings presented thus far is the work of the level 4 analysis which follows. The knowledge presented in this last stage of

analysis presents an opportunity for BHP to "*help*" students further as they grapple with working together.

Level 4: Incidental new knowledge generated by this thesis

While this MPhil level study did not set out to produce new knowledge, the nature of the research question in relation to the data that emerged lent itself to this progression at the later stages of data analysis. This study sought to answer the broad question 'what is teamwork?' from the perspective of the first-year health sciences students who participated in this study. The knowledge contribution generated by this study is essentially a synthesis of how these students have operationalised teamwork, through their perceptions and experiences, of a mixed professional course. This synthesis is packaged[64] as a heuristic.

A heuristic is a set of guidelines that can be used in order to achieve a particular outcome. The Oxford dictionary (1992: 553) defines heuristic as "*allowing or assisting to discover*" or a way to train learners to "*find out things for themselves*". As alluded to in chapter 2, the present heuristic is inspired by the work of Salas et al. (2015) who developed the "*Heuristic of the Critical Considerations of Teamwork*", a set of guidelines that teams can use to create and maintain effective teamwork. Salas et al. (2015:615) encourage researchers to engage with the heuristic in ways "*that will result in findings that are meaningful to real-world*" contexts.

By definition, a heuristic is not a fit for all prescriptive[65], rather it is a tool to navigate a particular learning outcome (such as teamwork). Thus, I echo the assertion of Salas et al. (2015:602) mentioned in chapter 2 that a heuristic provides guidelines for ***how to do*** teamwork and in light of this study's findings, *"serves as an evidence-based tool"* for growing teamworking. The heuristic also provides a concrete learning tool for explicit

[64] I use the word "packaged" to denote that the heuristic is the final "consumable product" of this study.
[65] A heuristic allows space for interpretation by students; thus, a heuristic is able to sit comfortably within the interpretivist paradigm of the study.

teamwork training for health sciences students as recommended by Earnest, Williams & Aagaard (2017).

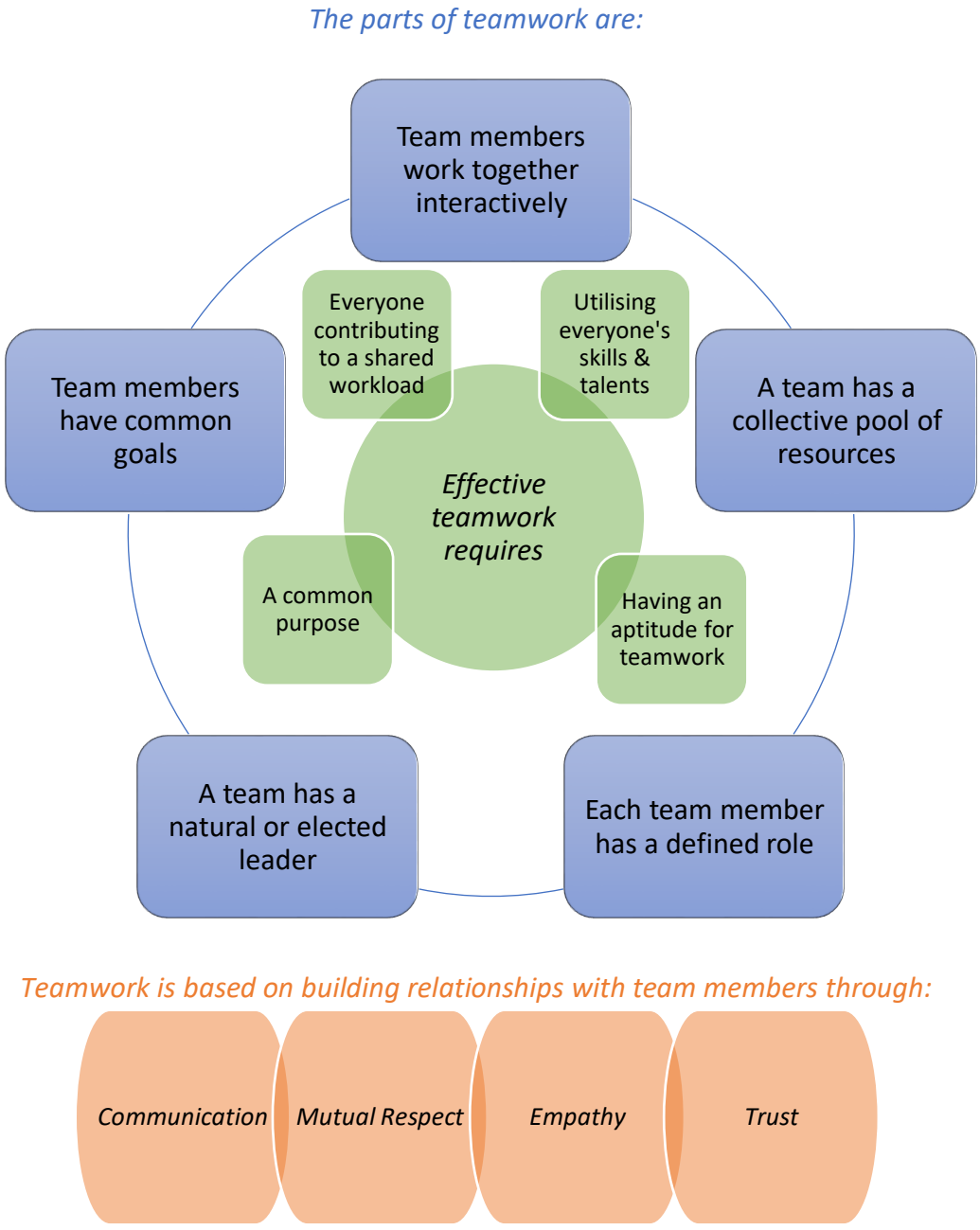

Figure 9: Students' Teamwork Heuristic: its parts (blue), requirements (green) and foundational components (orange)

The heuristic developed in this study can also be used more widely, that is outside of BHP, as it represents general guidelines for health professional students grappling with teamwork. This suggestion is motivated by its congruence with the 'Heathy Teams

Model' (Mickan & Rodger, 2005) outlined in chapter 2. The characteristics of effective healthcare teams included in this model are a well-defined purpose, common goals specified in measurable terms, adequate leadership, good communication, group cohesion, and mutual respect among team members. This model was derived from an empirical study of teamwork involving over 200 health professionals. The congruence between the 'Healthy Teams Model' and the 'Students Teamwork Heuristic' is tabulated below:

Table 3: Congruence between the 'Healthy Teams Model' (Mickan & Rodger, 2005) & the 'Students' Teamwork Heuristic

HEALTHY TEAMS MODEL	STUDENTS' TEAMWORK HEURISTIC
Well-defined Purpose	*Purpose*
Common goals	*Common goals*
Adequate Leadership	*Natural or elected leaders*
Good Communication	*Communication*
Group Cohesion	*Working together interactively*
Mutual Respect	*Mutual Respect*

Concluding comments

The findings of the exploratory study presented in this chapter are novel, making this chapter the climax of the thesis. What is not new however, is the discussion around 'equal status' in HSE, particularly the perceived power differentials between students from different degree programmes. According to Engel, Prentice & Taplay (2016:209) these power differentials, if left unchallenged, "*maintain the social constructions of power along the lines of knowledge that have been historically established and accepted as… legitimate*".

Engel, Prentice & Taplay (2016) argue that the social distance between health sciences students seemed to be narrowed by opportunities to interact and become familiar with each other through academic as well as social engagement. Getting to know each other on an interpersonal level, Engel, Prentice & Taplay (2016:210) further argue, creates the opportunity to dissipate the "*mystique of knowledge and its power*". Thus, the

importance of social interaction is highlighted, as it is in this study. Engel, Prentice & Taplay (2016) recommend that IPE courses ought to focus on allowing students to create their own patterns of interaction instead of maintaining existing power structures which may be hindering the eventual goal of working together in healthcare teams.

While the data appear to corroborate that the BHP space allows for these patterns of interaction in the form of relationship building, students also highlighted the role of the facilitator (or educator) as an ambassador of that opportunity. Negotiating teamworking through engaging with a heuristic for teamwork (developed by BHP students themselves) arguably shifts the balance of power. It may effectively allow students to forge their own patterns of interaction for teamwork by using a pedagogical tool which is consistent for all BHP students.

As noted in chapter 2, instigating student involvement in the co-development of their own curriculum was not an explicit aim of the study. The study did however aim to enter students into the conversation about curriculum change by engaging their perspective of one aspect of the transformative curriculum, namely teamwork. Ultimately, the outcome of this conversation, grounded in empirical research, has been that students *did* co-develop a pedagogical tool for facilitating their own learning of teamworking. This and other implications of the study are further engaged in the following chapter.

Chapter 6: Concluding discussion

Introduction and chapter overview

The aim of this study was to explore teamwork from the perspective of first year students participating in a mixed professions course. An intended outcome of the study was to generate a student-centred contribution to the future design and delivery of BHP; and more broadly to involve students in the current curriculum change discourse at UCT FHS. Thus, the focus of this study was to foreground a curricular perspective rather than a socio-economic or political perspective of the study context.

While it is acknowledged that socio-economic, historical and political factors have deep bearing on the study context, population and curriculum, the focus of this study has been to foreground ***students' perspectives*** of one aspect of their transforming curriculum, namely teamwork. Bar the importance of macro factors, a pragmatic perspective underscores the rhetoric of the implications and recommendations derived from the findings of this study. A broader theoretical perspective informs the discussion of the study's limitations and possible future research directions which this chapter considers.

In terms of implications & recommendations I argue that:

1) the immediate implications of this study are that teamwork ***has been*** contextually operationalised by the students in this study and that these findings position BHP within the sphere of IPE;
2) teamwork training could be made more explicit to students by introducing a pedagogical tool to assist them with negotiating teamworking; and
3) teamwork could be formatively rather than summatively assessed to avoid the motivation to present 'fake' teamwork.

The limitations & future research directions outlined in this chapter are that:

1) my early ontological position in the conception and design of this study constricted the ambit of the study;
2) contact theory as a theoretical framework for the study limited the scope of analysis. Broader, underlying themes were thus not considered in the analysis. Future research could gain from utilising a broader theoretical framework to uncover a deeper meaning of teamworking in this study context.

Implications & recommendations

Designating BHP as an interprofessional course

In the design of this study, teamwork as the research phenomenon was a construct to be operationalised. Although the concept of teamwork had been contextualised in the literature review within a health sciences context, there was scope to understand the meaning of teamwork for first year students in the pre-clinical years of their education. Teamwork is a learning area in BHP, and this study's findings indicate that students had experienced teamworking in varying forms.

Currently BHP (along with its foundational course BP in semester one) is not explicitly identified as 'interprofessional'. As shown in chapter 2, these courses have been framed within the ambit of MPE in the early days of its design and implementation. Dimoliatis & Roff (2007) note that the term 'multiprofessional education' was *"preferred by those universities which take their lead from the World Health Organisation"* which adopted the term in 1998. This time period (the end of the century) saw major shifts in HSE at UCT FHS which culminated in the renaming of the former 'Medical School' to 'Faculty of Health Sciences'. This change signalled the faculty's commitment to the implementation of a reformed curriculum based on PHC which underpins the current national health policy (Hartman, 2009).

At the time BP and BHP were planned, designed and first implemented as part of UCT FHS's reformed curriculum in 2002, the term 'multiprofessional' was the currency at the

time, at this institution and elsewhere. The literature indicates that terminology has evolved from MPE to IPE as the evidence base in the field has grown. The evolution in the literature is not limited to the more frequent use of 'interprofessional' over time, but has been characterised by 'multiprofessional' conceptions evolving into 'interprofessional' conceptions. As Xyrichis (2020:3) note, the contemporary trajectory of HSE and practice indicates that *"interprofessionality is the new normal and old uniprofessional ways something to look back on in puzzlement."* IPE and collaborative practice initiatives are *"now appreciated as paramount in most national and international developments for achieving quality and safety, strengthening health service delivery systems and achieving universal health coverage"* (Xyrichis, 2020:2). Similarly, BHP has evolved over the twenty years of its rendition. The findings of this study offers empirical support for the interprofessional principles of learning "*with*[66]", "*from*[67]" and "*about*[68]" each other being present in BHP. Thus, this study's findings motivate for the explicit positioning of BHP as an ***inter***professional course.

To reiterate, the present study was concerned with the more universal concept of 'teamwork' rather than 'collaborative practice', the latter being more in the scope of clinical work and thus beyond the experiences of the first year students in this study context. As indicated in chapter 5, the BHP students in this study interacted primarily interpersonally, with their emerging professional identities mostly latent. This finding not only offers an empirical basis for the assumption (suggested in chapter 2) that 'interprofessional teamwork' or 'collaborative practice' readiness was beyond the possibility for these first year BHP students; it also suggests that there was a missed opportunity to reinforce interprofessionality or collaborative practice awareness by making each student's profession salient in BHP's learning activities[69].

[66] Such as extracts 3, 9 and 14 (chapter 5).
[67] Such as extracts 29, 35 and 24 (chapter 5).
[68] Such as extracts 55, 81 and 89 (chapter 5).
[69] Particularly the team presentations to which the students in this study largely referred to.

Making interprofessionality salient through teamwork

The focal contribution of this study is a student-based perspective of what teamwork is, synthesised into a heuristic. Essentially students' own contribution to their teamwork learning. The analysis has shown examples of how this student-based operationalisation of teamwork is consistent with the literature[70]. Thus I argue that this heuristic is both unique to the study context while still being grounded in the previous work of others. A resolute recommendation is that this heuristic can be added to BHP's pedagogical toolkit as a concrete guide for students to refer to as they learn to work together in teams. Linked to this recommendation is that students' emergent professional identities, namely audiologist, doctor, occupational therapist, physiotherapist and speech & language therapist, must also be made salient alongside the more inclusive identity of 'Integrated health professional[71]'.

Reassessing teamwork assessment

As discussed in chapter 5 the study findings revealed that students were motivated to do well in their team-based presentation assessments. The findings also revealed that students sometimes presented 'fake teamwork' in their motivation to score marks. However, it would be superficial to ascribe 'fake teamwork' to student motivations for high scores alone. As Kumar (2013:274) notes, *"it is not uncommon to attribute the bad performance of students to their lack of interest in the subject instead of scrutinizing our own approach to teaching".*

As students in this study noted, facilitators only see what is presented to them, and were not privy to what was "*actually… going on*" in the student teams (FG 004, pg. 29). Teamwork is overtly assessed in a presentation rubric[72] and indirectly assessed by a peer assessment in which students are required to rate each other's contributions to the team presentation[73]. Although a rubric is used, facilitators are empowered to score

[70] Katzenbach & Smith (2005) & Mickan & Rodger (2005) as shown in chapter 5
[71] As outlined in chapter 2, a core component of BHP is inculcating the common identity of 'integrated health professional' (IHP) across all 5 of the professions represented in BHP.
[72] Teamwork counts 15% of the overall presentation mark.
[73] Peer assessment counts 5% of the overall presentation mark.

teamwork according to their subjective judgments of whether or not the rubric criteria for teamwork were demonstrated.

The logic of the study findings seem to infer that the reverse could be viable. That is, that the summative assessment of 'teamwork' could be allocated a smaller percentage of the presentation rubric, thereby shifting the power dynamic away from facilitators; and giving the student-based peer assessment a higher weighting. This would lend agency to students in the assessment process through using their own experiences of interacting with each other, to assess each other's teamwork performance. This in turn would lend greater alignment between the outcome being assessed (teamwork among students) and the assessment practice (peer assessment among students).

The shift recommended above would entail a re-evaluation of both the peer assessment and teamwork scales on the presentation rubric to ensure that students' perspectives of this aspect of their curriculum are reflected in the assessment instruments[74]. According to the CCWG (2018: 34), FHS students raised *"dissatisfaction with teaching approaches and assessment methods"* during the 2016 student-led protests. During its engagement with the FHS, members of the CCGW team who were based in the faculty *"stressed the importance of the… principles that helped to safeguard the legitimacy of its work"* (CCGW, 2018: 36), including that its *"work should be seen as intimately intertwined with student mobilisation around curriculum issues"* (ibid). According to Kumar (2013:274) partnering with students to facilitate their learning processes "*should be a natural ingredient of our discourse with… students*".

Study limitations & future research possibilities

What is real?

During the course of my reading for this project, my superficial engagement with the Curriculum Change Framework document (CCGW, 2018) referred to above is indicative of my personal ontological position at the beginning of this study. The ontological

[74] Informed by the findings discussed in chapter 5, that students' perspectives of teamwork in this study can be evidenced in the literature.

perspective informing the present study was that reality and truth were subjective. Within the interpretivist paradigm in which this study has been located, the different versions of reality of individuals or groups were acknowledged to be true, while the existence of a universal truth, independent of these versions, was also acknowledged. So, while I believed (and still do) that the perceptions and experiences of teamwork may have been different for each student in the present study, I also intuitively believed that some universal knowledge of the phenomenon of teamwork was knowable. Thus, the existence of the phenomenon of 'teamwork' independent of participants' individual experiences and researcher's interpretive observations was believed to be a universal 'truth'. That is, it could exist and was 'real' whether or not it was perceived, experienced, observed or interpreted [75].

For future research, the question of what is real in this study context must be revisited. Is teamworking just the sum of multiple versions of reality of participants and researcher? The notion of 'academic politics' posed in chapter 5 could be unpacked using a more substantive theoretical framework. Oltmann & Boughey (2012) discuss critical realism as a philosophical approach to ontology, or what researchers believe to be the true nature of the world. Critical realism is a philosophy which outlines three domains of reality. The empirical domain which consists of what can be empirically observed; the actual domain of what happened but may or may not have been observed; and the real domain which consists of what ultimately has led to the events that may or may not have been empirically observed (Oltmann & Boughey, 2012).

In the present study, a critical realist framework may have placed students' perceptions and experiences of teamwork within the empirical domain; teamwork within the actual domain; and the mechanisms and processes which allow teamwork to emerge within the level of the real. From a critical realist stance, students' perceptions and experiences of teamwork would have been less important than the underlying mechanisms which caused these perceptions and experiences in the first place. Future research then could

[75] Conceptions of 'truth' and 'reality' within research paradigms from Samuel (2017).

seek to uncover these deeper underlying mechanisms and not limit conclusions to the analysis and interpretation of empirical data only (Oltmann & Boughey, 2012).

A critical realist perspective may be more useful to uncover the 'academic politics' of interconnected factors involving authority, organizational processes and underlying beliefs at play in the FHS which have bearing on how students in different degree programmes perceive themselves and each other; and which consequently may have bearing on their interactions. A deeper level of "*excavation of structures and mechanisms at the level of the Real allows us to understand the way in which they* (mechanisms) *work together to produce events and experiences*" (Boughey & McKenna, 2017). Thus, as mentioned previously, this study offers baseline data for further research.

From ontology to design & methodology

As highlighted in chapter 2, the long-term impact of IPE initiatives such as teamwork training on future collaborative practice continues to be a gap in the literature despite recent growth and development in scholarship in the interprofessional field (Reeves, Palaganas & Zierler, 2017, Xyrichis, 2020). In the present study, teamwork embedded in this research context was seen as a building block for future collaborative practice. Similarly, the building blocks of baseline data produced in this study could advance further research in a number of directions such as:

1) a mixed method design to determine the utility value of explicit team training using the 'Students' Teamwork Heuristic';
2) an evaluation study of BHP as an IPE course in terms of pedagogical approach and assessment practice;
3) a longitudinal study to investigate the impact (if any) of BHP later in the curriculum and even further beyond in clinical practice; or
4) assessing viability of implementing interprofessional courses beyond first year level for the vertical integration of teamwork learning throughout subsequent years of study.

Critical evaluation of contact theory as theoretical framework

The theoretical framework of contact theory was used in a very narrow sense. Contact theory is much more complex than it has been presented in this study. This theory contains a web of interconnected mediators and moderators [76] identified in the literature as having impact on contact between different groups. None of these mediators or moderators were considered in the data analysis, however identity salience, as outlined earlier in this chapter, is an area of contact theory research which emerged in the data that warrants further investigation.

The missed opportunity to reinforce students differentiated emerging professional identities presents a possible further investigation along a dual identity framework. A dual identity means that students can identify themselves at a differentiated level (as emerging audiologist or doctor for example) as well as a superordinate group level (as an integrated health professional)[77]. According to Eller & Abrams (2004) such an integrative model of contact theory which takes account of different levels of social identity is useful[78].

According to Pettigrew (2008) the lack of contextualising intergroup contact within their wider social context is due to the methodological tradition of contact theory studies. These methodologies have been criticised for treating social phenomena as "*fixed, controllable and manageable*" (Zuma, 2013: 104). Dixon, Durrheim & Tredoux (2005) argue that the evidence base for contact theory tends to discount participants' conceptions of what contact means through the extensive use of quantitative methodologies which correspond to researchers' worldviews. These writers question the extent to which participants' subjective meanings are captured in the contact literature and support the use of qualitative methodologies to uncover participants' understandings of intergroup contact encounters. Hayward et al. (2017) argue that contact must be understood as deeply subjective and nuanced since it is grounded in

[76] How and when contact between different groups can bring about changes in intergroup relations.
[77] BHP promotes the superordinate identity of IHP (integrated health professional).
[78] Eller and Abrams (2004: 254) studied contact between diverse groups of university students longitudinally and found that a sense of ascribing to a dual identity was "*most beneficial"* in bringing about positive intergroup outcomes.

the personal experiences of individuals. Thus, applying the theory in an interpretivist, qualitative study to foreground participants' subjective perspectives of teamwork, as a contact encounter, was deemed methodologically appropriate.

Notwithstanding the limitations discussed above, for the purpose of sketching a defined focus for this study, it was deemed appropriate to delimit the use of contact theory in terms of the conditions for positive contact identified as useful for IPE. Institutional support and equal status were the two conditions highlighted in this study as being of underlying importance for IPE for collaborative practice.

In terms of the first condition, regardless of the theoretical framework within which institutional support is named, it continues to be recognised as an important factor in the success of IPE (Peeters et al., 2017, Waller & Nestel, 2019). Regarding the second condition, the functionality of equal status is appreciated in relation to the barriers to collaboration posed by the hierarchical structures between the healthcare professions. "[E]*qual status does not necessarily mean that the members come into the group with equal status; rather each member's knowledge, skills and opinions are regarded as equally important to all others"* (Gierman-Riblon & Salloway, 2013:59). Thus, mutual respect and value for the unique contribution of each professional in a healthcare team is deemed to be an indicator of equal status, and these ideals are central to interprofessional, collaborative practice (ibid).

Closing comments

A common feature of contemporary HSE is the collective pursuit of universities worldwide to implement learning opportunities which facilitate collaborative activities between students from different health professions (Paradis & Reeves, 2013). Within IPE, the inclination to avoid exploring theoretical frameworks "*that had seemingly little practical relevance or were regarded as inaccessible or overly complicated*" by clinical educators is now being replaced by a more eager interest in theory and its application in the interprofessional field (Reeves & Hean, 2013: 1).

Contact theory has been identified as a pragmatic framework to design curricular activities in ways that will get optimal contact going between students from different professions in shared learning programmes. In support of the use of applicable theory, this study hopes to renew a research interest in BHP (and BP) as introductory interprofessional courses, with a view to expand the growing evidence base in the interprofessional field.

The need to engage in the academic scrutiny and critical reflection of the meaning of commonly held terms such as 'teamwork' resonates within the interprofessional literature (Reeves, Xyrichis & Zwarenstein, 2018). This study has responded to the need to scrutinise the meaning of teamwork in an IPE space; and by extension satisfied its aim of problematising the concept of teamwork. Concomitantly, the need to engage in academic reflexivity and critical reflection by scrutinizing one's own research practice has been identified as a key learning area in the experience of this study. As Braun & Clarke (2019:592) write, "[q]*ualitative researchers are always thinking, reflecting, learning and evolving*" and this study has been a practical navigator for my own introductory learning about qualitative research.

The significance of this study is that it contributes a practical tool for undergraduate students learning about teamwork, developed as a result of engaging with students in an empirical study. A contextualised operationalisation of teamwork from the perspective of first-year health sciences students is a novel contribution to the interprofessional literature. The pedagogical tool produced by this study, intended to assist students in their learning to do teamwork, places students firmly in a position *"to play a critical role in informing meaningful curriculum change"* (CCWG, 2018: 5).

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APPENDIX 1: REFLEXIVE JOURNAL EXTRACTS

GOING INTO THE FIELD

Reflections: Recruitment week 1 (September 16th to 22nd 2019)

I was extremely apprehensive and stressed out about the recruitment process, asking myself "what if no one signs up?!" I was terrified that it would all be a complete flop. I went through my recruitment presentation in an extremely rushed manner, acutely aware of the lecturers who had to wait outside during my recruitment event. I was so mindful of following my recruitment plan as set out in my proposal cleared by ethics, that I didn't leave sign-up sheets with students to think about participating. In hindsight this was a huge missed opportunity since students reacted positively at this first recruitment event. Students were so amused by the video clip - laughter and applause demonstrated that they were paying attention and were engaged. After this positive reaction to the very short recruitment presentation (under 5 minutes, literally) I felt likewise positive about the prospects for recruiting participants. I expected to have some responses.

Reflections: Recruitment and data production week 2 (September 23rd to 29th 2019)

This was the most stressful week. After a disastrous second recruitment event at the Monday lecture I started losing all hope of getting any students to participate in the study at all! I had to wait till the end of the lecture to talk to the students this time around and it was a long, content heavy lecture. Anyway, students must have been totally zonked out by the end but what followed the long lecture was some rebuke about various aspects of the course requirements that students had fallen short of throughout the semester. This to the point that there was loud moaning and complaining coming from the students. Of course, addressing the students under these conditions was not opportune. After this experience I was quite convinced that the study would be a fail. I thought it was time to start brainstorming the reasons for non-participation and finding some direction in the literature for how to move forward. I decided to change incentive from offering snacks at the focus group to offering students a meal voucher from a popular fast food outlet. After this strategic move students began to sign up.

Although focus groups were happening and I was beginning to see responses from students, I was still so anxious each day not knowing if the students who had signed up would actually attend. I almost didn't notice that I was beginning to produce data. I kept worrying about what was still to come, or what I still had to line up that I failed to live in the moment each day. In hindsight I was in robot mode, and not engaging fully with the students in the first 2 focus groups. Probably missing many opportunities to prompt further discussion, and cues to engage with students more meaningfully.

People who have experience with FGD had warned me about the challenges. One person told me they had taken a year to conduct 8. I had a few weeks to do a whopping 5! It seemed pretty impossible and the prospects utterly dismal.

Reflections: Recruitment & data production week 3 (September 30th to October 6th 2019)

This week I am feeling less stressed and trying to take a broader approach to this last week of recruitment. By broader approach I mean to think about the things I had not been considering. Such as the quality of the data I have produced, whether I had been engaged in my interactions with students during the FGDs, concepts such as saturation, and how I could adapt and change going forward.

It is a huge relief to know I only have a few days left for this phase of the process and it has also sunk in that the study has not been a complete fail - I do have data!! I now have the space to consider the quality of the data I have. And try to do some more reading ahead of the next 2 sessions I have planned, to hopefully maximise the quality of the data these produce.

IN THE FIELD

Reflections after Thursday 3 October 2019 focus group

In this focus group I was not as hesitant as before to ask questions that I thought were pertinent relative to my research questions and theoretical framework. Before I had been so overly cautious about asking "leading questions" or unduly influencing participants that I was less direct in linking my follow up questions to my actual research questions! It was almost serendipitous that this group of students brought up issues around "grouping" and "social categories" using expressions such as "their people" and "cliques", concepts that sit within the study's theoretical framework. But was it really serendipitous or was I just listening more attentively/thoughtfully?

The discussion felt really rich and interesting and the students seemed engaged and interested in the topic. Just as the discussion began to reach a climax it was 2pm and students had to get to their next class. And very suddenly the focus group just came to a very abrupt end and I didn't even get to thank them properly as they all went rushing out the door! There were several points I still wanted to raise with them, in response to what they had said and also from my perspective as the researcher. But I feel a sense of calm that I ought to just live in the moment and all I can do is my best on the day!

Reflections after Friday 4 October 2019 focus group

Sooo impressed with these young people – so intelligent and articulate. And the same is true for most of the students who participated in the study. This session was rich not

only from the input from the participants themselves but because I took the opportunity to address the issues that I wanted to by asking particular questions. The ensuing discussion answered the research questions and more! The only thing I think I could have asked them about was the chosen methodology. Although this came up in small talk outside as we waited for the previous booking to exit the room. I mentioned that it was just going to be 3 people and one of the students said that it feels more "intimate" (her word) when it's a small group and that in a bigger group people end up talking over each other or not getting a chance to speak. I agreed with her and explained that that was exactly the kind of vibe I picked up in my focus group the day before. 8 people was too much for the second part of the focus group where people are asked about their experiences. So while it was nice to have a bigger group for more replication of the "parts of teamwork" it wasn't as nice when it came to asking them about their experiences. This was better shared in smaller groups.

AFTER THE FIELDWORK

Reflections during data analysis (December 2019)

After my first attempt at coding I felt insecure and out of my depth. Now that I have found a coding "manual" that explains the methodology and logic and philosophy of coding I feel more in tune with the process and what it requires. It is hard to understand what coding is based on reading about it –it's only through the actual process or act of coding oneself that it actually begins to make sense.

On methodology - I am seeing the benefit of focus groups – where students are talking about their perceptions of what teamwork is. They were feeding off each other's ideas / comments / thoughts. Often one student would start a trail of conversation and then others would add on to what was being said. As one student noted "sometimes you just need that spark in your brain". The content of the focus groups largely came from the participants' side as opposed to the individual interviews where I had to continually prompt.

Reflections during the write up of findings (February 2020)

As I'm reading the transcripts to look for quotes to include in the chapter, I am picking up on points during the focus groups where I was probably not listening very attentively. I see points where I should have prompted more when they were saying some really key things, but I was so quick to move on to the next thing. To get through everything quickly! Acutely aware of the limited time available with students' tight schedules.

In hindsight I see it as my inexperience as a researcher and also collective / circumstantial stress at the time. It was a very intense couple of weeks, and I was not

able to function at an optimal level and it shows in the transcripts. I often did not read feelings / situations accurately – while this can't be expected to be done all the time, I feel like I have disappointed or failed the students in the sense that I ought to have reflected their feelings more appropriately. But maybe this is the facilitator in me speaking, and not the emerging researcher. It's an interesting dichotomy of lived realities. However, reading through the transcripts multiple times during the analysis does present multiple opportunities to reconsider what it is that students were saying. I now see and appreciate the value of having had the audio recordings independently transcribed. It gives me the ability to see myself as almost separate from myself if that makes sense. It's allowing me to see those subtle versions of myself – what I thought was happening and what someone else (the transcriber) thought was happening. And how this could have been heard differently by me, a biased researcher.

Reflections during the final stages of compiling the thesis (March2020)

A big part of this research has been a journey of self-discovery. My experiences of data analysis were like experiencing interpretivist research in action. The research wheel says, "nature of discourse is dialogic" and for me the dialogue was not only between the analyst and the data or the researcher and the participant, but also there was an internal discourse happening. A constant buzz of dialogue in my mind as I tried to make sense of everything. An exploration is a discovery of something new, simultaneously I was discovering and exploring a new side of myself as a person, as a researcher, and possibly, as an educator.

APPENDIX 2: FOCUS GROUP DISCUSSION GUIDE

The venue will be set up to seat participants around a table.
Sticky notes, blank paper and markers will be placed on the table along with a recording device, bottles of water, and some snacks.
As participants arrive consent forms will be signed.
At the start of the FG participants will be thanked for coming and I will briefly explain what a FG is and my role as moderator.

Opening question: getting participants to think about their respective emerging professional roles – aims to "switch on" this group membership in participants minds

- Can you tell me about the profession you chose to study and why you chose it?

Introductory activity: getting participants to think about the discussion topic
Free-listing

- Ask participants to write down words and phrases in response to the question "what is teamwork?"
- Ask participants to write down words and phrases in response to the question "what does teamwork require?" or "what are the parts of teamwork?"

Transition activity: moving the discussion toward a climax
Pile sorting

- Ask participants to consider each of the words and phrases about teamwork and evaluate whether these had been experienced in BHP.
- Ask participants to sort the sticky notes into 2 piles: one for those they had experienced in BHP and the other not experienced.

Key questions – questions most pertinent to the thesis

- Based on the ideas generated by the participants' responses to the free-listing and pile sorting activities, ask relevant questions to prompt further discussion. Make verbal summary of discussion so far and check for accuracy with participants. Key questions will depend on what participants highlight in the free-listing and pile-sorting activities.

Ending questions – allows participants to reflect on the discussion and add anything more

- Reiterate what the aim of the FG was and ask participants if they thought anything else should have been mentioned or discussed.
- Summarise what the main points were and check for accuracy.
- Thank participants and terminate the session.

APPENDIX 3: CONSENT FORMS

Part 1: Information sheet for focus group participants

Information about the research project entitled:

"Exploring first year health sciences students' perceptions and experiences of teamwork in a multiprofessional course."

Who am I?

My name is Adibah Hendricks and I am a master's student in the Department of Health Sciences Education at the University of Cape Town (UCT). As part of my degree I am writing a thesis about how students understand and experience teamwork in the course "Becoming a Health Professional" (BHP).

What will I do?

Writing a thesis requires that I do some research myself and part of my research plan is to conduct focus group discussions. A focus group discussion is a collective conversation between a group of people together with a moderator with the purpose of gathering information about a particular topic. The topic to be discussed in the focus groups is teamwork in BHP.

I will ask the group to discuss their responses to a few questions. I will act as a moderator or facilitator in the discussion but will not offer any opinions. The group does not have to stick to my line of questioning and is free to raise other points for discussion which must be related to teamwork in BHP. The focus group discussion will be audio recorded so that as much information as possible can be retained. I might still jot down a few notes during the focus group.

The research will take place on campus at UCT Faculty of Health Sciences at venues to be confirmed. The discussions will be between 60 to 90 minutes long and light refreshments will be provided.

What does this have to do with you?

BHP students are invited to participate in the focus group discussions, however not all students from any particular BHP group is expected or required to participate. It would be preferred to have as many professions as possible in the focus groups, but at the very least 2 professions.

Your participation in this research project is entirely your decision. If you decide not to participate that is your right. If you do decide to participate, you are free to change

your mind and withdraw from the project at any time. Whether you agree to participate or not *there are no consequences for your participation or assessment in BHP*. Although this project is about BHP, it a personal interest of mine. Thus, this research is not prompted by UCT or the faculty of health sciences.

What happens next?

The focus group recordings will be transcribed. I will then analyse this transcribed data and interpret what it means in light of my research questions. All the data that I collect will be kept confidential and will only be looked at by myself, my supervisor, and because I am a master's student an independent researcher may assist me to analyse the data. No information about your personal identities will be recorded at any point in the research process. Participants may contact me for access to the transcriptions of the focus group discussions they participated in. The findings of the research will also be available to participants as the thesis will be available on UCT libraries electronic database.

What else you need to know before you consent to participate in this research project

Because this research is being conducted in a group context, I will not be able to ensure that any information shared during the group sessions will remain confidential. Confidentiality means that participants' identities will not be revealed. I ask that you respect each other's right to confidentiality by not disclosing any personal details of any participants to any other parties outside of the focus group.

There is no connection between the administration or assessment of BHP and this research project.

If you have any questions or concerns about this research project you may contact me or my supervisor.

Researcher: Adibah Hendricks email: adibahh@gmail.com
Supervisor: Dr Nadia Hartman email: nadia.hartman@uct.ac.za

The UCT Faculty of Health Sciences (FHS) Human Research Ethics Committee (HREC) can be contacted in case participants have any questions regarding their rights and welfare as research subjects in this research project.

FHS HREC Tel: 021 406 6338

Part 2: Consent form for focus group participants

Consent form for the research project entitled:

"Exploring first year health sciences students' perceptions and experiences of teamwork in a multiprofessional course."

Please tick the following boxes to indicate that you have read and understood each statement:

- ☐ I have received an information sheet containing details of what the research project is about
- ☐ I understand what the purpose of the research is
- ☐ I understand that participating in the research means that I will be part of a focus group discussion of about 1 hour and up to a maximum of 1 hour and 30 minutes in duration
- ☐ I understand that the researcher will be facilitating the focus group discussion
- ☐ I understand that my voice will be recorded during the focus group
- ☐ I understand that the researcher might make written notes during the focus group
- ☐ I understand that the researcher will keep all information she collects confidential but that she cannot ensure that others in the group will do the same
- ☐ I understand that the researcher's supervisor will also have access to the data collected by the researcher
- ☐ I understand that it is my responsibility to help ensure that the right to confidentiality of others in my focus group is upheld
- ☐ I understand that the results of this research project will be written and reported as part of a formal thesis in the Department of Health Sciences Education at UCT
- ☐ I understand that there is no connection between the administration or assessment of the course BHP (Becoming a Health Professional) and this research project
- ☐ I freely agree to participate in this research project
- ☐ I understand that I may decide to withdraw from the research project after having consented without any consequences for me
- ☐ I understand that I may refuse to participate in this research
- ☐ If you have any questions or concerns about this research project you may contact me or my supervisor.

Researcher: Adibah Hendricks email: adibahh@gmail.com
Supervisor: Dr Nadia Hartman email: nadia.hartman@uct.ac.za

- The UCT Faculty of Health Sciences (FHS) Human Research Ethics Committee (HREC) can be contacted in case you have any questions regarding your rights and welfare as research participants in this research project.

FHS HREC Tel: 021 406 6338

Print Name of Participant: _____

Signature of Participant: _____

Date: _____

Statement by the researcher or person taking consent:

I have provided an information sheet and consent form to the participant. I have explained what it means to participate in this study and made sure that the participant understood my explanation. The participant was given the opportunity to ask questions which I have answered honestly and to the best of my ability.

I confirm that I have not coerced the participant to give consent and that consent has been given by the participant voluntarily and by their own free will.

Print name of researcher or person taking the consent: _____

Signature of researcher or person taking the consent: _____

Date: _____

APPENDIX 4: METADATA EXCERPTS

1. Excerpts of open coding (as listed in step 2 of abridged list of analytical procedures in chapter 5)

DATA ITEM # 3: 26 SEPT – INDIVIDUAL INTERVIEW #1			
PROFESSIONS REPRESENTED	FIELDWORK NOTES	NOTES DURING TRANSCRIPTION CHECKING	FIRST IMPRESSIONS OF ANALYSIS
Physio	As it was happening, I thought that this interview felt flat. Since only one person signed up, a focus group could not happen in this time slot. The student seemed very nervous when she entered the venue, and when I closed the room door to shut out the noise, she became more anxious. She indicated that she was uncomfortable with having the door closed so I opened it again. I wasn't sure how to proceed for this interview since this study was not designed for individual interviews. (In my mind, it didn't really make sense to interview one person about teamwork unless there were more specific, detailed questions to be asked about their experiences. That was not the intention of this study, so I did not have an interview schedule of questions going into this session.) Since this was an exploratory study, it did not make sense in my mind to pre-empt the exploration with a pre-determined set of questions. I followed the intended format for the focus groups with the understanding that it would not satisfy the methodological objective of the study (i.e. interaction between participants produces co-constructed knowledge). Although individual interviews were deemed inappropriate for the aims of this study, I chose not to turn participants away who had shown interest, not knowing how the data production process would go for the rest of the week. So I just 'ran with it'.	I tried to make some small talk in the beginning to try to put this participant at ease. I referred to the interview as "a little talk" in an attempt to make the mood informal and encourage the participant to be more relaxed about the interview. Just getting one perspective on teamwork doesn't seem to be very useful listening to the audio now. This student said that the group she worked with worked really well together. When prompted (twice) to think about anything that could have been "bumps in the road" or "barriers" to teamwork she said that there were none, repeating that the group worked "really well together" and were glad that they would be working with each other again on the second presentation assessment. I kept on prompting for negative responses because I probably assumed it couldn't all have been positive! But in hindsight I could have explored this positivity a bit more instead of trying to illicit the 'other side of the story'! The participant calls me out on this assumption when she asks me "what have you heard?" picking up on my disbelief that it couldn't all have been so positive. This was a good check for me; and I responded by saying that everyone has different experiences and that I was looking to find out what her experiences were.	The participant mentioned that her group was very "work orientated" suggesting that they were still motivated to do well on their presentation assessment despite the mourning period. (Nene memorial / mourning period where classes and other academic activities were suspended for the period 4 to 6 September 2019) It might have been interesting to find out if other students felt the same way – but this point of interest is beyond the aims of this study. Still, it points out another instance where the intended interactive element of the FG was lost. Assessment is one of the discussion topics that came up repeatedly with the participants. Students often made links to their marks, doing well, wanting to achieve high marks and so on. This participant was quite emphatic about her experience of teamwork being positive in BHP. When asked about what sort of things she thought could be barriers to teamwork she said that if people don't do their part the whole team will fail as a result of those who did not do their part. So the need to pass is the motivator for doing one's part of the work. When asked about the facilitator, she said that it was "really us" suggesting that the facilitator did not play a big role in creating a team spirit. According to this participant BHP sessions provide students with an opportunity to get to know the people who are in the group with them since people have to be themselves. "Three hours is a long time to pretend" notes this participant.

DATA ITEM # 7 3 OCT – FOCUS GROUP #4			
PROFESSIONS REPRESENTED	FIELDWORK NOTES	NOTES DURING TRANSCRIPTION CHECKING	FIRST IMPRESSIONS OF ANALYSIS
Med Med Med Med Physio Physio OT Med	I went into this session feeling very relaxed and accepting of the research journey. To use my supervisor's words, I felt like I had "found my research feet". I had since let go of the anxiety about having the research go according to plan, which intellectually I understood was always NOT going to happen according to plan. But in the beginning, I was still too green, wide-eyed and hopeful that it somehow would. The last 2 focus groups though I resigned myself to the process and began to internalise and believe the knowledge that "no research goes to plan" and is "always messy" as my supervisor counselled. This group was made up of students who self-selected from different BHP groups on different afternoons. From what I could tell one or 2 students seemed to know each other (two students were from the same group). One participant brought a friend along.	I asked all the participants to free-list responses rather than asking the group to pick one person to write and come up with the content for the cards together. I thought this way might be a better approach to getting more responses to answer the first research question, namely "what are the parts of teamwork?" I had replication in mind – that is to test whether the same themes were being replicated and also to increase the chances of that happening by increasing the number of cue cards written. Better instructions at the beginning of this FG explaining what is expected / what the activity is. There is so much background noise coming from the area below the cafeteria – there is some live music playing too. I remember this being very disconcerting for me, but the participants didn't seem to even notice. One participant arrived 20 minutes into the FG. Some attempt was made to moderate the involvement of students who seemed like they wanted to say something but for whatever reason were not finding the space to talk. With 8 people present eager to contribute it was quite challenging to moderate the discussion. (I really want to say 'extremely difficult' but because I was really relaxed on the day it didn't feel too stressful.) I got the sense that one or 2 people were holding back to allow everyone to speak so I suspect they may not have said everything they wanted to say.	The awkwardness of the peer assessment comes up again in this group when students were talking about accountability. One participant related that it doesn't "feel nice" to have to tell someone that they didn't do their job (in the peer assessment). Where one person doesn't do their job, it puts strain on the rest of the group to do that person's part. The participant states that having a leader in the group can make it easier for people to be accountable to someone. (In response to my question "who are team members accountable to?") This idea is challenged by another participant who states that each person should be accountable to each other and themselves. The idea that a leader shouldn't be necessary if everyone does their part comes up in this group (and elsewhere). The idea that someone in the groups ends up having to "take control" or "rise up" when people don't do their part. (**who assigns the parts? Or do people elect to do certain parts? This comes up elsewhere – where sometimes people are assigned a "part" that they are not comfortable with doing or that they are not good at or which isn't their strength. And that sometimes this is the reason why people don't perform so team members need to listen to each other / communicate so that this doesn't happen.) The differences between the professions is often described in logistical terms e.g. one student described her presentation team as consisting of mostly med students who had different timetables to the "allied health" – students who often had to go to "upper" campus. She explains that this caused a rocky start to the experience of working together but that they all "made sacrifices". Taking "accountability for yourself and your own marks".

			Another student refers to the postponement of the presentation assessments as being due to the “protests” which in fact was the period of mourning. No one spoke up to clarify this. There is a sense that students have a blanket understanding of disruptions to their academic schedules being due to “protest”. (**This is evident elsewhere in the data too). This participant explained that because the presentation had been “drawn out” for so long students who had been previously motivated to “follow the rubric” and get good marks eventually just resigned themselves to the common goal of “getting it over and done with”. (The effect of ‘protest’ on the ‘academic project’?) “I don’t take BHP seriously” many times it “takes the back burner” one participant explained. But because other people’s marks were at stake, she felt she “couldn’t mess with their marks” and therefore stepped up her “game”. She explained that others in her presentation team felt the same way.

2. Full list of in vivo and process codes organised into deductive categories based on research questions (as listed in step 4 of abridged list of analytical procedures in chapter 5).

LIST OF CODES FOR CATEGORY: PERCEPTIONS OF TEAMWORK	LIST OF CODES FOR CATEGORY: EXPERIENCES OF TEAMWORK	LIST OF CODES FOR CATEGORY: FACTORS HINDERING TEAMWORK	LIST OF CODES FOR CATEGORY: FACTORS FACILITATING TEAMWORK
group could all have same role	we shared opinions	autocratic leader who dictates	respecting each other
group a generic term, team more defined	everyone just did their part without being policed	one person taking charge	different cultures = different perspectives
have purpose	some people took initiative to delegate tasks	difficult to trust others to do work if u don't know them	being productive in short meetings
dynamic between ppl	some people have leadership qualities which emerge	when others don't fulfil their part	helping each other can add value to team function
having a leader	goals affect process - if goal is high marks follow the rubric	personal stresses	each member being committed to success
everyone must participate	we did the work but not as a team	no leader guidance/structure = a mess	being able to ask for help
being consistent	we were all understanding	facilitator didn't prioritise getting to know each other / fostering relationships	diversity to be used as a strength
having patience	no one was "bossy"	one person doing the work / unfair workload	being motivated to do well
delegating tasks	worked independently but together	all parts won't get done without leader	being accountable to self & others
needs to understand how to work together	team is there when u need help	taking on more than one can handle	could've done better with definite leader
sharing ideas	assigned work accord to strengths & weaknesses	inconsistencies	facilitator gave us tips - motivated us
equal opportunity to contribute	facilitator didn't play a major role	mistrusting of teamwork because of prior experience	accountability easier when there's a leader
taking responsibility	we listened to ideas shared and chose best option	favouritism / unfairness	checking up on each other
everyone does diff thing but for common goal	empathized with others (workload)	presentation wasn't priority due to other demands	taking in each other's ideas
humility	I made good friends	having to suss out input from quiet ppl	physical contact time
listening to each other	we sit together outside of BHP	inability to choose team members	getting to know each other through
dividing responsibility	this team isn't real	tension	facilitating different personalities
being trustworthy and trusting others	I disliked my group (because I did all the work)	ideas were shared but not listened to	compromising schedules/times
support	it was "really us"	one person can drag a team down	outside help from facilitator
balance of leader/follower personalities	we appeared to be a team but there was no teamwork	different personalities that "don't click"	teamwork qualities can be learnt
equal importance of all members	I was prepared but others weren't	no leadership = haphazard	learning about other's professions
accept everything won't go your way	lack of clearly defined roles	It's just ppl's personalities	learning each other's strengths & weaknesses
motivation	we didn't work together at all	ripple effect of non-performance	being aware of own tendencies & adapting / learning
common understanding of goal	being intimidated by "opinionated" ppl	different motivations	breaking profession barriers due to ignorance
micromanaging	difficult to trust ppl I don't know	focusing on self only	making sacrifices
building relationships not possible on a project	slackers add unnecessary stress	ideas were not shared	mindfulness of other commitments
constructive criticism	BHP facilitated sessions feel like group	wanting to polish others work	outside BHP
common goal is the success factor	we worked well together		
being efficient			
effective communication is key			
respect			

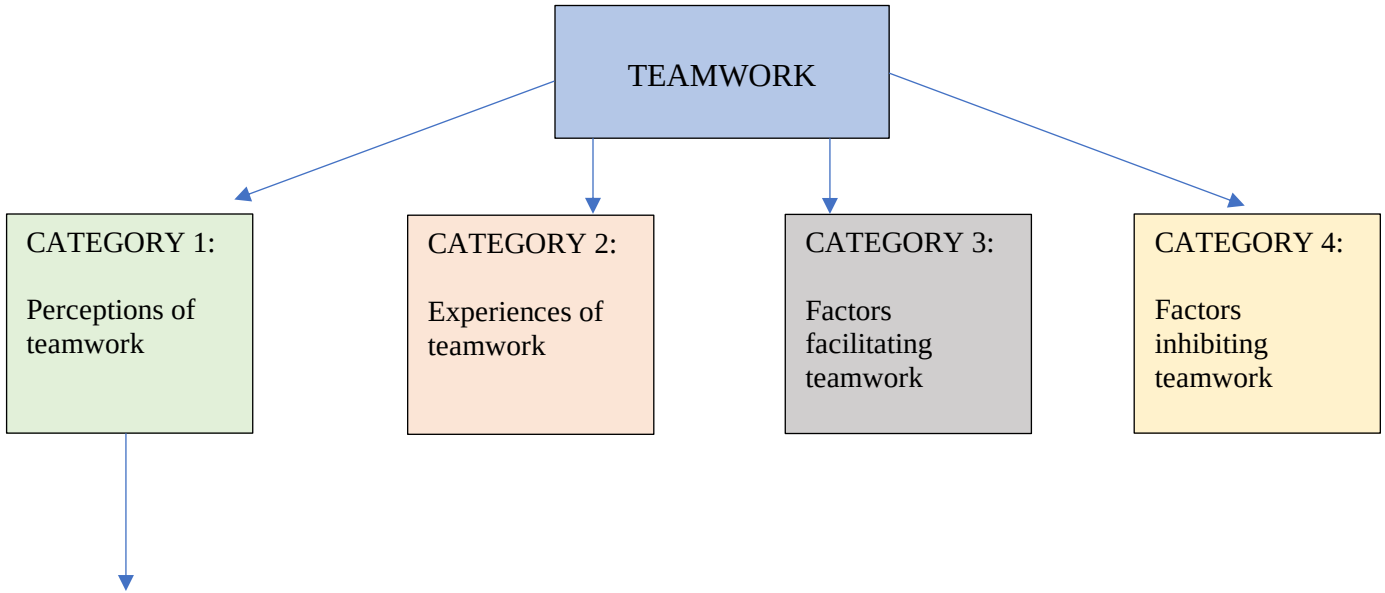
open mindedness	going quiet feeling intimidated by opinionated people	facilitator factor	knowledge about professions allows respect
personality traits	BHP an environment people can become friends	forgetting about others in the team	trying to reach goals together
fear around working in future MP team	impatience with each other	outspoken & introverted personalities clashed	when everyone fulfils their role
empathy	working on presentation feels like team	judging others	someone's got to write a plan
everyone needs to be represented	we were nice to each other	lack of physical contact time	common goal of getting good marks
some situations might need clear cut leader	we were respectful to each other	hierarchy in admission requirements	sharing ideas allowed for more clarity
"an actual person"	teamwork was only a small portion of the mark	circumstantial factors - pressures at the time	respecting each other makes future working easier
considering others	but doesn't seem to be facilitator's priority	undermining others	others' marks are at stake
accountability - to team & own responsibilities	lack of communication initially	Whatsapp groups were ineffective	you need to spark the flame in your brain with someone else
no need for leader if everyone is disciplined	in lunchtime we don't sit together	hierarchy in pass marks	getting along with people makes teamwork efficient
knowing each other's strengths & weaknesses	building shared knowledge	clash if too many leaders	a positive environment to work in
punctuality	let's just do it to get our marks	not feeling appreciated for work done	having all the parts of teamwork
whole is greater than sum of parts	same voices speak, constantly competing	med students are the majority	open mindedness
equal dedication	different timetables make it hard to meet	laziness	relationships that allow constructive criticism
leader keeps ppl accountable	relationships were formed for next presentation	lacking proper communication hinders	common objective for all degrees
a team is more than a group	in 3 hrs u have to talk to somebody	progress & leads to conflict	oh, that's how you answer the question!
the group is more like 'multi' and team 'inter'	passing is all that matters	not taking BHP seriously	taking initiative to fulfil tasks / team needs
need for leadership depends on the team	differences between professions only came up in scheduling	health & rehab a small number	an equal thing presentation counts 15% for everyone
having a plan / time management	it's hard to confront non-performers	dictating demotivates	learning from each other
camaraderie / togetherness	delegating tasks	micromanaging	being willing to change things without taking offense
everyone contributing fosters	defining roles	not understanding each other	common objective influences motivation/participation
leadership can be shared if all committed	no one did their part, so I ended up doing it	not taking criticism well then withdrawing & withholding other ideas	focusing on the purpose when personalities don't click
end product must reflect diversity	we communicated well so could get the job done	culture can cause conflict if differences are not respected	patience with different levels of competency
decisions can be made faster with a leader	one person delegated	being controlling	encouragement
sense of team spirit	some people more comfortable doing theory or reflections	being disrespectful	a leader that reminds us what the goal is
to the team, getting job done	some people drew up a plan and checked with us	authoritative personalities not always good leaders	being assertive to say what you want & don't want
compromising	I panicked because the due date was imminent	different degrees	being university students (not high school)
each member's contribution is important	difficult to select / nominate a leader between strangers	"strict" facilitator puts u on edge	
appreciating each person's talents	delegation was mutual and voluntary	hierarchy hinders participation	
defined roles (makes leadership unnecessary)	people could work according to personal strengths	impose laidback attitude on others	
freedom of expression	was work equally distributed?	lack of clearly defined roles	
dedication / being disciplined	there was equal dedication / commitment	facilitator doesn't intervene outspoken personalities	
pool of resources/skills/experiences	someone encouraged people to work	ppl who think they are better than others	
commitment	I'm a good leader but held back from leading	personality clashes	
a positive leader			
having collective resources			
feel more part of a team when fulfilling own talents, take more responsibility			

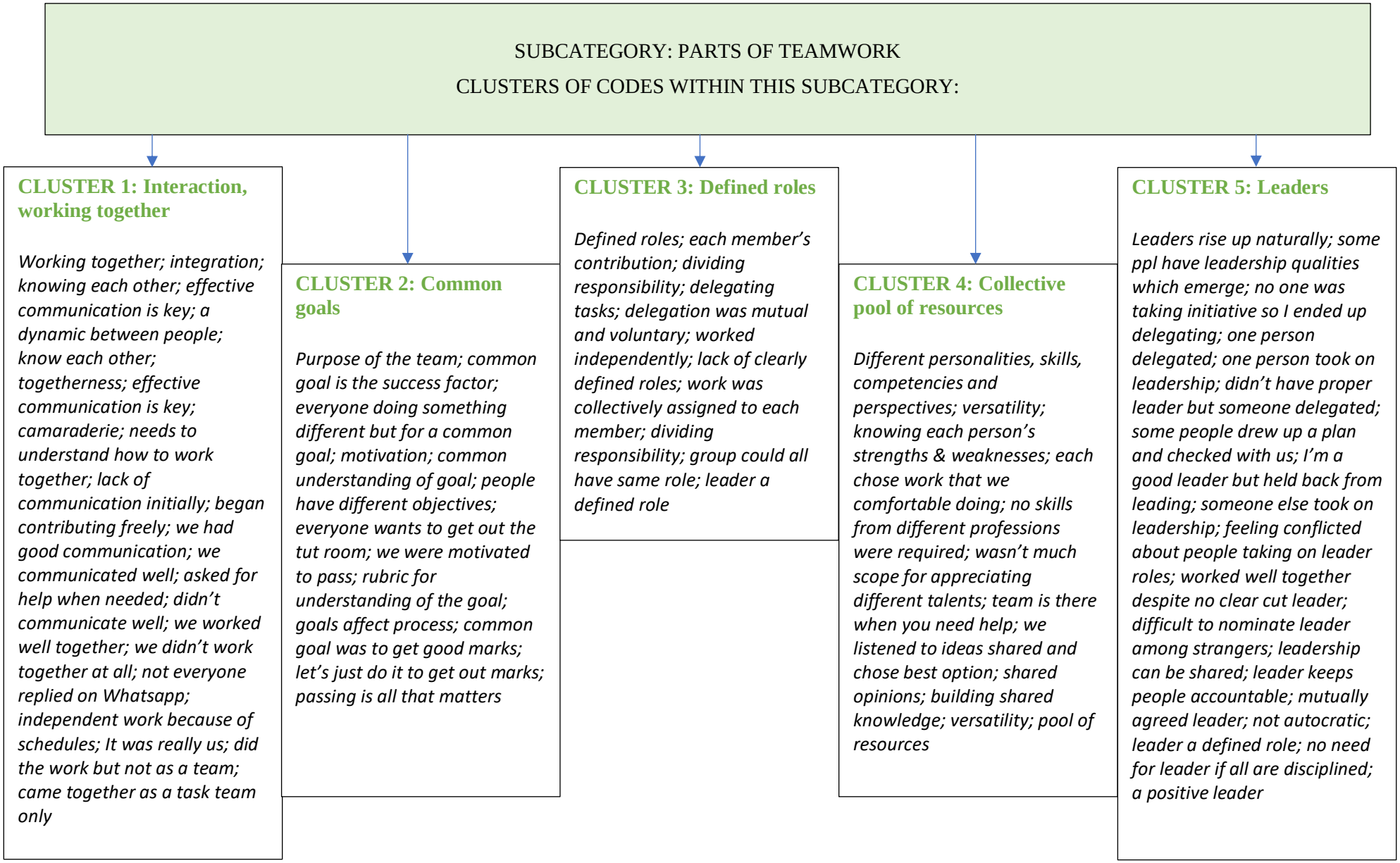
working together, integration share work equally leader to give guidance and structure know each other future practice requires "real teamwork" having one person take control will rise up naturally leader a defined role so not awkward to ff up freedom of expression but shouldn't be necessary - all must be responsible no direction without leadership mutually agreed leader, not autocratic facilitator has impact on teamwork versatility - input from diff. perspectives different professions equal in terms of different competencies equal in terms of quality degrees	got more work done in person than Whatsapp it was really unfair, I did all the work relationships were built after presentation stress facilitators don't see the truth didn't want to be overpowering common goal at first was to get good marks other students went to the marches we were motivated to pass personal factor to participation someone else took on leadership but was passive protest delays changed goal to "get it over with" some people were not trusting overall a positive experience (but usually it's not) worked independently because of schedules teamwork a game of luck took constructive criticism she edited my work and then decided to redo it we chose work that we comfortable doing we had good communication some people don't have teamwork qualities and don't like working in teams one person took on leadership role communication is hard with strangers BHP a relaxed space for building relationships we gave & requested feedback everybody did their part relationships take time to build didn't have proper leader but someone delegated presentation was during "that hectic week" people were patient & forgiving choice of language matters but that's no excuse no friendship potential not everyone replied on Whatsapp presentation postponed due to protests we didn't communicate well we didn't bond too much there was no real friendship everyone wants to get out of the tut room asap	team/group had to self - delegate different schedules professional roles lack of commitment of some members ppl choosing to be apathetic some leaders hurtful suppress contributions professional hierarchy failing to take responsibility role uncertainty (of own role) talkative ppl talking too much	pooling collective resources Whatsapp helps if personal meeting is not possible interactive facilitator empathising with team members communication makes other teamwork parts possible communication a tool for transparency

	work was collectively assigned to each member need to use protest delays to our advantage compromising on time rubric for understanding of the goal facilitator involvement varied no one was taking initiative, so I ended up delegating we were work orientated / hardworking facilitator emphasized that we lacked leadership wasn't much scope for appreciating different talents facilitator gives the energy hierarchy is present outside of BHP space worked well together despite no clear-cut leader no personality clashes facilitator influences students' experience of BP/BHP couldn't work together at academic level expected the hierarchy to play a role but it didn't group became more comfortable we aren't necessarily friends outside of BHP asked for help when needed facilitator creates space for teambuilding time to get to know each other in BHP sessions began contributing freely personality differences team respected each other we saw each other as a person not "med" student we're BHP students rather than "OT" or "speech" it wasn't evident who was studying what people have different objectives we helped each other came together as task team only no skills from diff professions were required initially aware of professions feeling conflicted about people taking leader roles got to choose what work we contributed		

3. Excerpt of code sorting from categories into subcategories (as listed in step 8 of abridged list of analytical procedures in chapter 5)

Steps 5, 6 & 7 of data analysis (as listed in abridged list of analytical procedures in chapter 5) which preceded this step were done manually. Codes for each category were printed and cut up so that each code was on a separate strip of paper. For each category I manually sorted the codes into subcategories, discarding repeated codes and condensing similar codes. Within each subcategory similar codes were clustered together. I interpreted these clusters as the 'parts' of teamwork, using the codes to label each cluster. The diagram below depicts the in vivo and process codes in this analytical step for the subcategory: 'parts of teamwork' within the broader category: 'perceptions of teamwork'.




SUBCATEGORY: PARTS OF TEAMWORK
CLUSTERS OF CODES WITHIN THIS SUBCATEGORY:
CLUSTER 1: Interaction, working together
Working together; integration; knowing each other; effective communication is key; a dynamic between people; know each other; togetherness; effective communication is key; camaraderie; needs to understand how to work together; lack of communication initially; began contributing freely; we had good communication; we communicated well; asked for help when needed; didn't communicate well; we worked well together; we didn't work together at all; not everyone replied on Whatsapp; independent work because of schedules; It was really us; did the work but not as a team; came together as a task team only
CLUSTER 2: Common goals
Purpose of the team; common goal is the success factor; everyone doing something different but for a common goal; motivation; common understanding of goal; people have different objectives; everyone wants to get out the tut room; we were motivated to pass; rubric for understanding of the goal; goals affect process; common goal was to get good marks; let's just do it to get out marks; passing is all that matters
CLUSTER 3: Defined roles
Defined roles; each member's contribution; dividing responsibility; delegating tasks; delegation was mutual and voluntary; worked independently; lack of clearly defined roles; work was collectively assigned to each member; dividing responsibility; group could all have same role; leader a defined role
CLUSTER 4: Collective pool of resources
Different personalities, skills, competencies and perspectives; versatility; knowing each person's strengths & weaknesses; each chose work that we comfortable doing; no skills from different professions were required; wasn't much scope for appreciating different talents; team is there when you need help; we listened to ideas shared and chose best option; shared opinions; building shared knowledge; versatility; pool of resources
CLUSTER 5: Leaders
Leaders rise up naturally; some ppl have leadership qualities which emerge; no one was taking initiative so I ended up delegating; one person delegated; one person took on leadership; didn't have proper leader but someone delegated; some people drew up a plan and checked with us; I'm a good leader but held back from leading; someone else took on leadership; feeling conflicted about people taking on leader roles; worked well together despite no clear cut leader; difficult to nominate leader among strangers; leadership can be shared; leader keeps people accountable; mutually agreed leader; not autocratic; leader a defined role; no need for leader if all are disciplined; a positive leader

4. Inductive interpretation of themes (as listed in step 9 of abridged list of analytical procedures in chapter 5)

Like the analytical procedures described above, this was a tactile process. Once clusters of codes were organised into subcategories, working on a large surface I looked at the subcategories together with the codes all at once. I then deliberated whether codes had been clustered appropriately to derive logical interpretation. I drew several diagrams, organising and then reconfiguring the clusters of codes within each subcategory and looked for themes across the categories, subcategories and clusters of codes. I inductively themed the data through 2 or 3 iterations, deliberating possible themes that could encompass the processed metadata. I settled on three overarching themes:

1. The ***purpose*** of teamwork in BHP: the nature of a 'team' versus a 'group'; and students' motivations for working in teams in relation to the requirements of BHP.
2. The ***persons*** involved in teamwork: the role players in teamworking in BHP. Theme 2 is organised into three subthemes: defined roles & diversity, converging personalities and leaders & leadership.
3. The ***process*** of teamwork in BHP: working together in a way that everyone contributes and there is trust, relationship building and communication.

These are the themes I interpreted from the metadata as they made intuitive as well as logical sense to me at the time; in relation to my interactions with the raw data, my reflexive and field notes, my global impressions of the data, as well as the literature I engaged. With the proviso that knowledge produced through research endeavour is inherently fallible, I accede that a reader may interpret the metadata differently, and this is in accordance with the study's interpretivist paradigm.

APPENDIX 5: DATA MANAGEMENT PLAN

How qualitative data will be stored for future use

In accordance with the University of Cape Town's Research Data Management policy[79] (2018) the qualitative data produced in this study is acknowledged as having longitudinal value for further research. The policy states that a researcher may use the primary data for subsequent research within a 2-year time frame. Beyond the 2-year time frame, no other parties other than the principal investigator / supervisor in the present study will have access to the data.

Data in the form of transcripts and audio recordings will be kept securely in the researcher's private home office for the duration of the two-year time frame specified above, after which the raw data (audio recordings) will be destroyed. Anonymised transcripts may be retained for an extended period should further research utilising the same preliminary data be pursued[80].

[79] Draft Policy Document Version 4- revised
[80] I intend to pursue this particular research area toward a PhD within the next few years.

APPENDIX 6: ETHICS APPROVAL

UNIVERSITY OF CAPE TOWN
Faculty of Health Sciences
Human Research Ethics Committee

Room E53-46 Old Main Building
Groote Schuur Hospital
Observatory 7925
Telephone [021] 406 6626
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Website: www.health.uct.ac.za/fhs/research/humanethics/forms

10 July 2019

HREC REF: 429/2019

Dr N Hartman
Health Sciences Education
Room E52.23
OMB

Dear Dr Hartman

PROJECT TITLE: EXPLORING FIRST YEAR HEALTH SCIENCES STUDENTS' PERCEPTIONS AND EXPERIENCES OF TEAMWORK IN A MULTIPROFESSIONAL COURSE. (MPHIL CANDIDATE: MS A HENDRICKS)

Thank you for submitting your study to the Faculty of Health Sciences Human Research Ethics Committee.

It is a pleasure to inform you that the HREC has **formally approved** the above-mentioned study subject to Head of Student Affairs permission.

Approval is granted for one year until 30 July 2020.

Please submit a progress form, using the standardised Annual Report Form if the study continues beyond the approval period. Please submit a Standard Closure form if the study is completed within the approval period.
(Forms can be found on our website: www.health.uct.ac.za/fhs/research/humanethics/forms)

Please note that the ongoing ethical conduct of the study remains the responsibility of the principal investigator.

Please note that for all studies approved by the HREC, the principal investigator **must** obtain appropriate institutional approval, where necessary, before the research may occur.

The HREC acknowledge that the student, Adibah Hendricks will also be involved in this study.

Please quote the HREC REF in all your correspondence.

Yours sincerely

PROFESSOR M BLOCKMAN
CHAIRPERSON, FHS HUMAN RESEARCH ETHICS COMMITTEE

HREC 429/2019