The Eye of the Team : Critical incidents analysis of Team metaphors used by teams in a health setting

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Abstract

This study sought to explore working teams' mental models of their success and failure, to cast light on what improves rather than undermines the teams' performance. Implicit team mental models may become explicit through exploring the language, specifically metaphors, that teams use to describe successful and unsuccessful performance. Ten teams comprising 69 individuals from a large district health board and including one all Māori team, participated in semi-structured interviews, that focused on the positive and negative critical incidents, when working together. Twin Content analyses of each type of incident revealed classical attribution biases, for example self-serving biases (team failures externalised using system metaphors as in "It is not our fault, it is the computer's fault" and successes internalised as in " the high standard of work is a reflection on the integrity and skills of the team"). At the same time however teams occasionally sidestepped these biases by reflecting on whether they could have achieved even more. Unlike their counterparts, the single all-Māori team used the same "two worlds" metaphor to describe both success and failure through bi-cultural harmony and bi-cultural conflict. Discussion focuses on how metaphors enhance team development. For example through discourse analysis of training sessions, teams may become aware of what biases the team is engaging in, thereby fuelling organisational learning.

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Introduction

Teamwork has been increasingly utilised by organisations as an effective means of coping with more complex organisational activities (Mathieu, Heffner, Goodwin, Salas, & Cannon-Bowers, 2000). In this thesis, a team is defined structurally, as a group of two or more people who work together interdependently to achieve common commitments and goals (Brannick and Prince, 1997; Stewart, Manz & Sims, 1999). Organisations increased use of teams is motivated by the view that teams are able to accomplish more than the individual employee alone (Aranda, Aranda, & Conlon, 1998). According to Wageman (1997), organisations have given teams an increased emphasis (e.g., with teams having their own resources, meeting space, time and organisational mission for themselves). The increased use of teams by organisations has stimulated research on understanding teams and how to enhance teamwork. One stream of team research has explored team cognition - which is the team's perceptions, viewpoints, beliefs, and knowledge base (Johnson-Laird, 1983). Researchers are especially interested in the development of a team mind or what is termed a "Team Mental Model" (Cannon-Bowers & Salas, 2001).

Team Mental Models

A Team Mental Model is a shared, collective mental state that supplies a team with a shared understanding of their functioning. Team Mental Models are cognitive schemata. Schemata are defined in cognitive psychology as structures for organizing and understanding phenomena (Poole, Gray, & Gioia, 1990). Schemata are the "intuitive models of the world that help people make sense out of – or give shape and form to - the vast array of experiences that confront them daily, including their experiences with others"

(Carr, 2003, p. 239). In a team context, schemata would include the team's shared beliefs, expectations, and working models of their tasks, and their team processes (Cannon-Bowers, Salas, & Converse, 1993; Hinsz, 2004). It is this shared knowledge that provides teams with a theory of action, by supplying what Klimoski and Mohammed (1994) refer to as "scripts for action" (p. 416). Klimoski and Mohammed's metaphor of a 'script' for action derives from drama (Clark & Mangham, 2004). The metaphor reflects for example William Shakespeare's view, that life is a stage upon which each person has a part. This dramaturgical metaphor can be extended to illustrate how Team Mental Models operate within teams in organisations.

Dramaturgical Metaphor of Team Mental Model

Team life can be viewed as a stage, where all team members are actors, each having a role to play. The script is for the same play to avoid any confusion on how the story is to unfold (Cannon-Bowers, Salas, & Converse, 1990; Klimoski & Mohammed, 1994). The script is flexible enough to allow for an individual's improvisation and creativity in his or her role execution. The team's previous interactions serve as actors' rehearsals, and enable a sense of expectation and predictability, as team members can anticipate their fellow team members' actions, and are able to make predictions about how the team will jointly perform. Team members are able to quickly approach new situations without having to debate each issue or having to develop a new process for each team action. In both the theatrical production and team interactions, the actors/team members take their cues from each other, so when one actor/ member completes his or her part then the other actors/ team members know at what point to step in to perform their role or their part in the production

(Orasanu, 1990). Each actor/team member, knowing his or her cues allows for a production that flows smoothly. A practical example of how a Team Mental model can function in a team is by observing a well functioning team that works in a restaurant. The team knows what orders have come in, who is responsible for each part of the meal preparation, and what each team member needs to do to get orders out to the customer. The team's shared knowledge assists the team in the execution of their roles.

The above example serves as an illustration of how Team Mental Models can potentially function to improve team performance by equipping teams with a shared understanding of their operation, and by improving co-ordination (Cannon-Bowers & Salas, 2001; Cannon-Bowers et al., 1993). The presence and possession of a Team Mental Model however does not automatically equate to successful teamwork experiences. Team Mental Models can also undermine team functioning, if for example, a team has a mental model that encourages 'groupthink'. Groupthink refers to a team's collective pull for unanimity in decision-making (Janis, 1972). Groupthink can prove to be unproductive in teams, as teams are likely to avoid disagreements, discourage independent thinking, make quick compromises and limit their survey of alternatives. A dysfunctional Team Mental Model, involving groupthink, would compromise teams information processing and decision- making (Janis, 1972). This example illustrates that not all teams possessing Team Mental Models will perform as well as they could (Levine & Choi, 2004). This thesis is interested in examining those facets of Team Mental Models that assist teamwork, as distinct from those that impede team performance.

Research Strand 1: Factors Discriminating High from Low Performance

The core assumption of Stream 1 research is that teams are unstintingly either successful or unsuccessful, rather than teams being partly both successful and unsuccessful, depending on the circumstances. Stream 1 research makes comparisons between effective and ineffective teams. Comparisons are generally made by the research investigator or subject matter experts (i.e., job–experienced observers). Orasanu (1990) for instance, used a simulator to simulate in-flight emergencies and focused on the communication patterns that distinguished effective from ineffective cockpit operation. The effective teams differed from their less effective counterparts, by the greater use of explicit problem-definition and by verbalising actions plans which made their intentions known to other team members. Successful teams not only used Team Mental Models but also articulated their scripts for action. The current research will continue the theme of Orasanu's research, by exploring team communication through less direct forms of communication namely through metaphor usage. Before proceeding to a review of metaphors, there is a need to briefly consider a second stream of research involving team self report.

Research Strand 2: Self report on Critical Incidents

Stream 2 makes the reasonable assumption that all teams both succeed and "fail" and a team can articulate and learn from their own mistakes (Marks, Zaccaro, & Mathieu, 2000). Team members serve as their own subject matter experts in team performance. Stream 2 research examines team behaviours and circumstances that enhance team performance, as opposed to behaviours and circumstances that impede team performance. The current research adopts this approach, specifically borrowing from Webber, Chen,

Payne, Marsh, and Zaccaro's (2000) use of Critical Incidents Technique. The Critical Incidents Technique was originally devised by Flanagan (1954) and examined behaviours that succeeded in resolving mini-crisis versus the behaviours that created mini-crisis. This research utilises the Critical Incidents Technique to provide teams with a means to verbalise their thoughts and to articulate the nature of their Team Mental Model.

The Nature of Team Mental Models

Stream 1 and Stream 2 research approaches point to the difference between the two types of knowledge used by teams; namely explicit knowledge and tacit knowledge (Nonaka, 1994; Polanyi, 1966). The team's explicit knowledge can be easily verbalised and recorded. An example of the team's explicit knowledge is their identification of their physical resources, or their professional roles within the team. Tacit knowledge is harder to verbalise, and includes for example, the team's habits, relationships, and ways of interacting. An example of team tacit knowledge is when team members appear to intuitively know how to inter-relate and communicate with each other, without necessarily being able to verbalise what exact communication patterns exists in the team (Fiore & Salas, 2004). An emergency response team, for instance, arriving at a scene of a disaster, appears to almost instinctively know how to function together in rescue operations. This intuitive or 'taken for granted' knowledge becomes an ingrained part of team interaction (Nonaka, 1994). A team's mental model forms part of the team's intuitive or tacit knowledge.

A team's mental model, like other tacit knowledge, often remains unexplored, non-verbalised and undocumented. Cannon-Bowers et al. (1990; 1993) believe that it is this implicit quality, which makes Team Mental Models difficult to extract. The implicit nature of Team Mental Models means that tools are needed to grasp the concept of Team Mental Models, to activate them and consequently to make them more explicit and understandable. By externalising Team Mental Models, teams could be assisted in goal setting by identifying their desired ends and the means to these ends. Teams could also learn more about themselves. Explicit Team Mental Models benefits team performance as both goal setting and team learning enhances teams' functioning (Argyris, 1999).

Rentsch and Klimoski (2001), found a way to externalise the tacit forms of knowing in Team Mental Models. These researchers interviewed 13 teams at a U.S. Department of Defence organisation, to enable teams to articulate their perceptions and views about their joint functioning. The teams were questioned on the typical events that characterise their working life. The researchers viewed the teams' language as being an indication of the teams' "teamwork schema" (Rentsch & Klimoski, 2001, p. 112). In the Rentsch and Klimoski (2001) study, the teams' descriptions that appeared most frequently, represented the team's teamwork schema. The current research proposes to implement a complementary approach to Rentsch and Klimoski, by using a team interview process to capture team schemata. This project will be addressing an identified shortfall in Team Mental Model research. Mathieu et al. (2000) and Rentsch and Klimoski (2001) identified that very little Team Mental Model research has been conducted in naturalistic settings. This project therefore seeks to utilise existing organisational teams.

The Rentsch and Klimoski (2001) study has proved valuable in allowing teams to verbalise their explicit functioning. There are however aspects of team functioning that are really implicit and a window is needed into these underlying mental models. According to Mathieu et al. (2000), the examination of teams' language usage, provides a means to access teams' implicit mental models. This research proposes to interview teams and to analyse their language usage as a means to access the team's schema. Further, the proposal is to specifically utilise metaphors as a language tool in this study since metaphors have been cited by Fiore and Salas (2004) and Schooler, Fallshore and Fiore (1995), as being an effective means to gain valuable information into complex phenomena such as Team Mental Models. In order to extract the relevancy of metaphor's application to the Team Mental Model research, there is the need to examine what metaphor entails and how metaphors reflect team's cognitive structures.

Metaphor

Metaphor is defined as a tool for grasping the unfamiliar through the familiar (Inkson, 2004; Ortony, 1979). The word 'Metaphor' is derived from the Greek '*meta*' meaning 'over' or 'across' and 'pherein' meaning to carry from one place to another (Kopp & Craw, 1998). Metaphor usage involves a person making an association from one experience to another, in order to shed light on his or her experience. Metaphor utility extends beyond literature, to being a refection of thought and mental models (Lakoff & Johnson, 1980). Lakoff and Johnson hold that metaphor is principally the way people conceptualise the world and that metaphor is prevalent in everyday conversations. The

world of work is an important component of people's lives, and metaphor also features as an expression of mental models in organisational settings.

Organisations and Individual Mental Models

Vocational psychologists (e.g., Inkson, 2004; Mignot, 2004), have employed metaphor as a means of examining individuals' mental models about their careers. Mignot (2004) used a case study to illustrate how an individual can use metaphor to represent his or her career through words and images. The case study was of a young, business studies graduate who belonged to a minority ethnic group in the United Kingdom. The young man initially described his career aspirations to work in business by using the photographic image of his business studies class and a picture of a corporate building. The corporate building represented a symbol of power, prosperity and security. Following difficulties in finding business related work, and possible discrimination, the young man finds shift work in a fast-food industry and starts joining his work colleagues in a 'gansta-rapping' pursuit. One year later, the young man chose alternate images of the burger bar where he worked and a picture of Tupac (a rapper), to describe what was significant to him. The burger bar replaced his business aspirations and the corporate building had ceased to be a symbol of power and prosperity and was viewed as a symbol of repression and discrimination.

The above case study (Mignot, 2004) illustrates how language and imagery can describe an individual's mental model about his or her career. The study also illustrates how these images can change with time, as the same participant revoked some of the images that were significant to him in the previous year, in light of his new experiences.

Therefore metaphors and individual mental models can change with time and life experiences. In a team context it would be interesting to observe if situational changes and different team experiences also yield differing metaphors. For instance, would metaphor used for successful performance be distinct from metaphors used to describe unsuccessful performance? This research is interested in addressing this question and seeks to uncover if metaphor shifts reflect performance shifts.

Simsek (1997) also utilised metaphor in the assessment of individual mental models. Randomly selected educational staff of the University of Minnesota, U.S.A., were interviewed to access the metaphorical images used by faculty members to describe the university both pre and post organisational change situations (before commencement of an organisation's new focus plan and after the focus plan had been implemented). Simsek used open coding (Strauss & Corbin, 1990) to examine the metaphoric images used by the participants. Simsek noted that different staff members generated similar images when they were describing their past experiences. When staff were describing current situations, there was greater diversity in the metaphors used; and there were less consensus amongst the staff. Simsek's observation on the differences in staff views when recounting past and current situations has implications for research exploring mental models. A period of reflection may be necessary to allow staff the time to assimilate and process what has occurred to them and, in so doing, make sense of their experiences.

Research on mental models may need to implement a retrospective analysis of situations, to allow for respondents to have made full sense of their experiences. In Team Mental Model research, retrospection as opposed to introspection, would allow for Team

Mental Models to be externalized. Further, sense making in retrospect could offer clarity on mental models and could assist in organisational planning initiatives. This research therefore seeks to question teams on their past experiences and their thoughts surrounding these experiences. Whilst Simsek (1997) has explored individual mental models, this research is interested in metaphor usage in a team context and seeks to explore how metaphors serve to reflect team schema and mental models.

Metaphor and Team Mental Models

A review of the literature reveals that Team Mental Model research, using metaphors, has been limited. A significant study (Gibson and Zellmer-Bruhn, 2001), explored metaphor usage as a reflection of Team Mental Models. The Gibson and Zellmer-Bruhn study explored the use of metaphors and meanings cross – culturally across six multi-national corporations. The study was conducted with pharmaceutical and medical product industries in Puerto Rico, the Philippines, France and the United States of America. Individuals (N=107), representing teams (52 teams), were interviewed. The study utilised a text analysis approach (Strauss and Corbin, 1990) that was also utilised by Simsek (1997). A Content analysis of the data was completed by the use of QSR*NUDIST which generated a word list of metaphoric expressions and words used by the respondents. Five raters worked collectively and grouped the resultant word lists into five different metaphors for teamwork namely *military, sports, community, family and associates*. The raters worked collectively so no inter-rater reliability was reported. These five metaphors served as "cognitive reference points" (p. 276) for the teams which, according to Gibson and

Zellmer-Bruhn (2001), served as Team Mental Models as the metaphors provided a script or structure for how the team worked together.

Gibson and Zellmer-Bruhn (2001) propose that the utility of these five metaphors is that these metaphors hold expectations of the team on the scope of their work, their roles and objectives. For example, the sports team metaphor is used typically to describe clear roles for sports team members. Typically, these teams have little hierarchy and clear consequence that is sport teams win or lose. A work team using a sport metaphor is likely to display similar characteristics and have clearly designated roles; exhibit less formalised reporting structures and has set goals with clear performance consequences for example win/lose is replaced by profit/loss.

The Gibson and Zellmer-Bruhn (2001) study also explored the differences between metaphors across different cultures and organisations. Gibson and Zellmer-Bruhn found that countries where the focus was more individualistic (e.g., United States of America), metaphors that described individualistic behaviour were more prominent (viz., sports and associates metaphor). In organisations that emphasised tight control, the military metaphor (with clear objectives and performance indicators) was more prominent. The implications of these findings are that teams in different national or organisational contexts are likely to have different expectations of how their team will be managed (Gibson & Zellmer-Bruhn, 2001; 2002). Gibson and Zellmer-Bruhn provide an example that illustrates how metaphors affect expectations of team management. If a team used a sporting metaphor with clear objectives, then the team would prefer a manager who was more task focused to assist them in accomplishing the shared team goal of gaining the competitive advantage.

Whilst the Gibson and Zellmer-Bruhn (2001) study has provided valuable information on metaphors and how they reflect societal and organisational cultures, the study did not consider the micro-cultures of teams. No other known studies were found that utilised metaphors to describe the micro-culture of teams, hence there is a gap in the research on the application of metaphor usage in examining the micro-cultures of teams. Furthermore, neither the Gibson and Zellmer-Bruhn study, nor any other known study, has explored the possibility of differences in metaphor usage between teams within the same organisation. The Gibson and Zellmer-Bruhn study has assumed a single pervasive metaphor across all team experiences. The study did not consider that metaphor usage may differ with differing team performances. This thesis seeks to address both the gaps in research by exploring team micro-cultures and intra – team differences. This research seeks to explore the possibility that metaphor usage may not be standard across all team experiences or across all teams. If Team Mental Models as depicted by teams' metaphor usage is different when teams are successful and unsuccessful, then there is an implication for teams who can access and utilise the metaphors of success in an attempt to improve their team performance. Teams may also be able to differentiate between their successful and unsuccessful team behaviour and could consider ways of changing such unproductive behaviour. Metaphor can therefore have an application for effecting change in organisations.

Metaphor and Change Initiatives

Atkin and Palmer (2000), indicate that metaphors have practical applications for organisations involved in change initiatives; but caution that metaphor needs to be appropriate to meet the particular needs of an organisation. Atkin and Palmer quote an example of an organisation that wants to transform itself. Instead of using metaphors that showed an overhaul or a complete changeover, the organisation used metaphors of 'developmental' change and used images of building incrementally on the past successes. The organisation reported non-success in meeting their purpose of re-invention. A metaphor indicating a 'large leap' would have been more appropriate than an 'incremental' metaphor. A large leap or transformational metaphor (e.g., metamorphosis) would probably have met with greater success by setting a mental map of the organisation's need to re-invent itself. Atkin and Palmer's case example points to the potential pitfalls of ad hoc metaphor usage; and the case example illustrates the need for more appropriate metaphor usage in real world applications.

Mainstone and Schroeder (1999) conducted an unusual study that has a bearing on the above point that metaphors need to suit the individual organisation. The Mainstone and Schroeder study illustrates how metaphors were used in change initiatives by a construction company in the United States of America. The owner of the company valued the game of basketball and proposed a basketball metaphor be used in the company to improve teamwork and to create an organisational vision. Hence, Mainstone and Schroeder utilised the basketball metaphor in the company. The owner directed intervention took into account only one perspective and there was no consultation with the organisation's team members

to assess the appropriateness of the use of a basketball metaphor to the whole organisation. Despite the consideration of only one perspective, there was reported success to the intervention.

After the implementation of the metaphor, the owner reported improved working relationships (increased staff attendance at after hours sporting activities), improved sub-contractor performance by 6%, and improved customer satisfaction gauged through customer surveys. The owner, in a post completion evaluation of the change initiative, mentioned the team's after hours activities (white-water rafting, ballgames, golf outings) and this reference could provide a clue to the success of the program to certain staff members. The owner's basketball imagery may have appealed to and mirrored the team's already existing sporting interests and the metaphor was therefore similar and complemented the team members' existing mental models.

There were however some team members to whom the imagery did not appeal, and who voluntarily left the company or whose employment was terminated. One key member to leave the company was a senior member of the management team. A possible negative consequence of inappropriate metaphor usage could be the loss of valuable team members. An additional negative consequence could be the pressure to conform to a single metaphor which encourages a dysfunctional groupthink dynamic in the team (Janis, 1972). In the Mainstone and Schroeder (1999) study however, the basketball metaphor appealed to the majority of the teams members in the organisation. The appeal of the basketball metaphor is indicative of the significance of sporting metaphors, in particular basketball, to the wider American culture. Metaphor in the company mirrored the societal culture that the team

belongs to. The Mainstone and Schroeder (1999), like the Gibson and Zellmer-Bruhn (2001) study, signal how metaphor can assist in reflecting societal culture. If metaphor can reflect macro-culture then there is the possibility that metaphor can also be utilised to reflect a team's micro-culture, which is the focus of the current research.

Metaphor and Culture in Organisations

The question arises as to why would one study team culture by using a Team Mental Models approach? The answer lies in the link between a Team Mental Model concept and a concept of culture. Both culture and Team Mental Models are examining the same phenomenon that is 'collectively held beliefs' (Schein, 1992; Marshak, 1996). Both culture and Team Mental Models address the shared habits of thinking, culture being at a more macro-level than Team Mental Models (Schein, 1992). According to Schein, Team Mental Models are a component of culture and the examination of Team Mental Models is invariably the exploration of team culture.

The overlap in team mental model and cultural research has special implications for countries like New Zealand. Metaphor may be an appropriate research tool with indigenous Māori who have, like other cultures, relied on the oral transmission of culture through the generations. Māori oral tradition has utilised metaphor (symbolism, imagery and proverbs) to transmit culture (Moon, 1997). Therefore Māori may identify with the use of metaphor as medium of communication and a means to transmit culture (Moon, 1997). Further, New Zealand is a country with a culturally diverse society. New Zealand has a high immigration rate and has a culturally diverse workforce. Metaphor's potential to capture multi-cultural

perspectives and to facilitate multicultural understanding (Abernethy, 2002), would suit the purpose of the current study, which will be undertaken in a culturally diverse New Zealand context.

The multi-cultural nature of the New Zealand workforce is also attributed to the shortage of New Zealand trained staff, which necessitates the employment of overseas staff. The health sector (District Health Boards) in particular have to employ overseas trained staff (Johnston, 2003), due to health staff shortages (Dearnaley, 2002). The employment of overseas staff enhances the multi-cultural diversity in health organisations. The use of metaphor could prove valuable in a health setting to capture the multicultural perspectives of team members. The current research seeks to specifically explore the metaphors employed by health teams to describe their team experiences.

Metaphors in Health Organisations

Language is a core component of health and healing settings (Kearns, 1997),and metaphor is a language tool that is a means of understanding the language used in health settings (Gesler & Kearns, 2002; Kearns, 1997). Metaphor provides a means of de-mystifying the issues surrounding health and wellness and health settings have utilised metaphor as a tool to cope with illness and disease (Gesler & Kearns, 2002). For instance, patients experiencing health problems may view their illness as a journey that involves travelling a path from illness to health (Gesler and Kearns, 2002). Metaphor therefore assists in sense making, reflecting the individual's mental models associated with health.

Whilst research on health organisations and metaphors has focused on patient perspectives, the investigation into dialogue of health staff and the metaphors they use, has been limited (Hanne, 1996). The research on Metaphor used by staff in health contexts, have predominantly focused on the metaphors used by the nursing profession (Froggatt, 1998; Goodman, 2001). The available metaphor research on the nursing profession has occurred in an overseas context as compared to a New Zealand context. Froggatt's(1998) research was conducted in England and explored how metaphor was used by nurses to describe hospice work, death and their emotions. Froggatt felt metaphor enabled nurses to talk about the sensitive nature of their work. Nurses described how they "switched off" or their "standing back" (p. 335) in order to cope with the pressures of their jobs. Froggatt's study showed the distancing of staff from emotional impact of their work.

Goodman (2001) also examined metaphor usage in the United Kingdom. Goodman, used a case study analysis involving both qualitative analysis of interviews and observational data, and explored the definitions that British district nurses have of their work. Goodman found the recurring metaphor of the need for balance that was linked with the images of sailing and sea travel. An example of the balance and sea travel metaphor was of nurses descriptions of keeping things steady and "not rocking the boat" or "making waves" (p. 108). As both the Froggatt (1998) and the Goodman studies shed light on the metaphors used by nurses in an overseas context, the findings may not be applicable to a New Zealand context. Further, both studies have focused exclusively on nurses and have not explored the metaphors used generally by other health workers.

There has been noticeably little research of the narrative and metaphor of the multiple services and disciplines (e.g., medical, administration, service, and so forth) working in health settings (Hanne, 1996). The research on nursing staff neglects the change in the world of health where more multi-disciplinary teams are being used (Heinemann and Zeiss, 2002). According to Heinemann and Zeiss, a team approach is being increasing utilised because teams increase efficiency through less duplication and fragmentation of services. The use of teams is considered to be cost efficient and is viewed as improving the quality of care to clients. The increasing use of multidisciplinary teams in health could mean that the different disciplines may have more difficulty sharing the same mental models; therefore metaphors may assume proportionally greater salience for these teams. Shared metaphors may function as Team Mental Models and thereby allow for the removing of any divide between professions. Such shared team concepts could help foster team coherence and thereby assist in increasing efficiency.

The presence of shared mental models that increases efficiency of service is extremely important in health settings where peoples' lives may be at stake, as health workers work in emergency and crisis situations involving the saving or the loss of lives. These crisis and emergency situations constitute the critical incidents that are a significant feature of the work in health. The present research seeks, through using Flanagan's Critical Incidents Technique, to examine the impact and significance of critical incidents to health workers. Further, the present study seeks to examine if health teams' mental models change in varying critical situations.

Critical Incidents Technique

Flanagan (1954), developed a 'Critical Incidents Technique' to explore the positive and "negative" situations that workers face. The Critical Incidents Technique may easily, but wrongly be confused with Mitchell's (1983) use of 'Critical Incidents' to describe stressful or traumatic critical incidents. Flanagan's Critical Incidents Technique is a technique often used in job analysis that delineates critical events into 'good' and 'bad' events. The technique involves questioning participants on previous behaviour that they considered to be especially effective or especially ineffective (Flanagan & Altman, 1953).

The information on effective and ineffective behaviour has many applications in the areas of performance appraisals, selection, training needs assessment and design (Brannick & Levine, 2002). The information on critical incidents also has applications to a team setting and to the present research. The Critical Incidents Technique yield of information that distinguishes effective from ineffective behaviours can serve as a means of team analysis. The distinguishing between the effective and ineffective team behaviours, can allow for the accessing of the factors that enhance teamwork as opposed to factors that inhibit effective teamwork. Enhanced team functioning is important and has implications for both increasing workers motivation and job satisfaction.

Critical Incidents Technique as used in Motivation Studies

Herzberg, Mausner, and Snyderman (1959; 1966), specifically addressed the use of Critical Incidents Technique in the area of work motivation and job satisfaction. In the Hertzberg's study, 200 engineers and accountants were interviewed and

questioned about their work events that made them feel particularly satisfied or particularly dissatisfied with their work. Herzberg found that satisfaction and dissatisfaction were produced by differing events. Participants had different mental models about their positive, satisfying events versus their negative, dissatisfying events. Similarly teams may also have differing mental models of their satisfying versus dissatisfying team experiences.

In Herzberg's study (1966) there were five identified 'motivators' that were determiners of job satisfaction namely achievement, recognition (for achievement), work itself, responsibility and advancement. These factors were all based on job content, the actual work that people engaged in or the intrinsic parts of the job. The major factors that evoked feelings of dissatisfaction were company policy and administration, supervision, salary, interpersonal relations, and working conditions. These factors related to the job context or the extrinsic aspects of the job and were termed 'hygiene' factors. A question arises as to whether what counts as motivators and hygiene factors vary with a change in context? Herzberg's study has not allowed for contextual differences that might occur. For instance, what serves as motivators or hygiene factors may possibly vary in a team context.

Herzberg's (1966) theory has been acknowledged for the importance placed on psychological growth for job satisfaction and the acknowledgement of the growth that can arise from the work itself for example in job enrichment programs (Locke, 1976). Herzberg's theory has however also faced numerous criticisms. One of the criticisms levied against Herzberg, was what Locke (1976, p. 1318) termed "two unipolar continua" which basically means that one factor (Hygiene) contributed to dissatisfaction and another factor (Motivators) contributed to satisfaction. Subsequent research has shown that both Hygiene

factors and Motivators can contribute to both satisfaction and dissatisfaction. Hines (1973) conducted a New Zealand application research on Herzberg's theory. Hines found the factors influencing motivation, were centred on personal and relaxed employer-employee relationships. In Herzberg's theory this would be related to the quality of supervision (hygiene variable) whereas in New Zealand it served as a motivator (Elkin & Inkson, 2000). Hine's (1973) study illustrated that what serves as Motivators and Hygiene factors can change in different cultural contexts.

Another criticism levied against Herzberg (1966) and Flanagan (1954), is the creation of bipolar events designated as either 'good' or 'bad' (Locke, 1976). A polarized viewpoint has been viewed, by cognitive psychologist (Ellis, 1994; 1999) as creating dysfunctional or black or white thinking. It is these dysfunctional thinking patterns that prevent behavioural changes. The current study proposes a way of avoiding a sense of dichotomy by using a Motivational Interviewing Technique used by Miller and Rollnick (1991), where interviewees are rather asked about their 'good' and 'not so good' experiences. This questioning is designed to avoid the assigning of a value judgment on an event as being 'negative' or on a team as having 'failed.' The questioning simultaneously avoids a dichotomous questioning style. The motivational interviewing techniques proposed by Miller and Rollnick (1991) is reported to have met with success in counselling contexts, where motivational interviewing techniques have been found to encourage reflection and increase motivation for behavioural change (Monti, Barnett, O' Leary, & Colby , 2001).

A further criticism levied against Herzberg's (1966) theory, is that when questioned about an event that made people feel good, they would more likely recount events that they could take personal credit for whereas something negative was more likely to be attributed to external conditions (Locke, 1976). The tendency to take credit for success and attribute failures to external sources (Self serving bias) is described in the literature on Attribution theory (Weiner, 1992). Attribution theory describes how and why people assign causality for their behaviour. Attribution theory is central to the current research as teams are likely to make sense of their experiences by attributing causes for their team successes and failures.

Attribution Theory

According to attributional theorists, people are far more likely to take responsibility for success than they are for failure (Weiner, 1992). Persons attributing success to themselves are described as having an internal locus of control (Rotter, 1966). When failures are attributed to external factors then people are described as having an external locus of control (Rotter, 1966). Causal attributions are however known to vary with culture. For instance, people who belong to more collectivist culture will more likely display a modesty bias. A modesty bias occurs when groups attribute failures more to themselves and they take less credit for their success (Kashima & Triandis, 1986). Modesty bias may exist on an individual level and is termed self effacement bias (Kashima & Triandis, 1986), or at a group level as in group effacement bias (Hewstone & Ward, 1985).

An ultimate attribution error is also possible in a group setting (Pettigrew, 1979). Ultimate attribution error is where success is attributed to the group's dispositions when the success occurs within the group and to situations when success occurs in an out-group. A definite 'in-group' and 'out-group' dynamic is created. The question arises as to whether these described attribution biases that are applicable to an individual and group level, are also applicable to a team context. The present project hopes to observe if attribution biases do exist in teams' attributions of success and "failures."

Expectations of Findings

The overview of the literature has generated three areas of theoretical expectations of this study. These three main areas are centred on:

- Attribution theory versus the team think perspective and expectations
- Motivational theory and metaphors of success and failure
- Culture and context and associated metaphor usage.

Each of these theoretical areas has generated findings and questions that serve as road maps to what this study might potentially expect to find from its investigations.

Attribution Theory and Associated Expectations

The literature indicates that people attribute successes to themselves (self serving bias, internal attributions) and attribute failures to external sources (external attribution). It would be interesting to find out if the teams' views reflect the attribution theory perspective on team successes and failures. If teams are successful, then it is likely that teams would view their success as a function of their own process, initiatives and efforts. Team's failures

are likely to be attributed to external sources or causes, for example through scapegoating. Alternatively, cultural differences may account for a portrayed modesty bias. In New Zealand, for instance, we can anticipate a group-effacement bias in New Zealand Māori. Māori have a collectivist value orientation (Harrington and Liu, 2002) and may attribute success less to themselves and take more responsibility for their failures. It could be supposed then, that if a non-Māori team were using a military metaphor, they would attribute failure to things outside the immediate military unit (external attributions). Whereas, it is anticipated that if a Māori team were using a military metaphor, then they would be blaming their own troops.

Group Attribution Theory and Associated Expectations

There could be a contribution to the literature on attribution theory, to examine whether a group attribution error will replicate in a workplace's *team* settings. For instance, is there the possibility of a sense of "in-team" (in-group) and "out-team" (out-group) differences occurring between the teams in the organisation? If there is differentiation between the teams, then there is also the possibility that the 'ultimate attribution error' (Pettigrew, 1979) may occur between in-teams and out-teams, whereby success may be attributed to the team's dispositions when the success occurs within the team and to situations when success occurs within an out-team. As metaphor assists in making the implicit more explicit, then it is predictable that the teams' attribution biases (implicit) will wash through into the teams' explicit metaphor usage. This would mean that if in-team and out-team differences do occur, then it is anticipated that metaphor usage will depict the teams as being competitive, proprietal, insular and exclusive; to emphasise the difference

between 'us' of one team versus the 'them' of other teams. If the ultimate attribution error does exist, then metaphor usage is likely to emphasise the favourable depiction of the in-team outcomes compared with the less favourable out-team outcomes. Metaphor usage is likely to depict teams claiming ownership of and celebrating their team's successes whereas descriptions of out-team successes may emphasise the assistance given to other teams to precipitate their success. It can be anticipated that metaphor usage will emphasise in-team and out-team differences between teams in the organisation.

Team think theory (Manz & Neck, 1995), however, points in a different direction to attribution theory and it will be informative to establish which theory features more prominently in health teams. Attribution theory is adaptive when it assists the team in sense making but becomes maladaptive when attribution biases inhibit effective team functioning. Team think theory is about breaking down these habitual, maladaptive attribution biases in order to assist the team in challenging themselves (Manz & Neck, 1995). If Team think theory is evident, then alternate expectations to attribution theory might be found, and attribution biases may not be present in teams' descriptions. It is possible to find that rather than comparing themselves with other teams, teams would engage in more self-reflection and their focus would be on encouraging individual input and differing contributions to enable new ways of thinking, problem solving and new learning. In team think situations, teams are likely to be thinking about how they are going to further improve themselves, rather than getting complacent when successful. In team think situations the team would view their failures as learning opportunities.

Expectation 1, is when explaining failure, metaphors will be self-serving and group-serving except when the team is predominantly Māori.

Motivational Theory and Associated Expectations

The second area of expectations is generated by the overview of Herzberg et al.'s (1959; 1966) theory on motivation. Herzberg's study saw participants describing negative situations by using extrinsic factors and Herzberg utilised the 'Hygiene' metaphor to depict dissatisfying situations. When participants talked about success, they used different descriptions. Herzberg used a 'motivator' or concept of an invigoration metaphor to describe the intrinsic, satisfying situations. Herzberg's whole theory suggests the use of different metaphors being used for success and failures.

Expectation 2: Metaphor usage will differ in teams' descriptions of their successful (motivating) versus their unsuccessful (de-motivating) team situations. In successful team situations, metaphors will describe more team qualities and team dynamics, as compared to unsuccessful team situations, where metaphors will feature more external factors.

Cultural and Contextual Differences and Associated Expectations

The third area of expectations is generated by the overview of the literature on teams' metaphor usage in differing cultural and contextual settings. The overview of the Gibson and Zellmer-Bruhn (2001) study indicates that there are nationally shared team metaphors. The present study anticipates that contrary to the notion of a single national metaphor, metaphor usage will change with contextual and cultural differences. It is therefore anticipated that there will intra-team differences within a single national (New

Zealand) context, which will be reflected in the use of differing metaphor usage by teams working within the same organisation. Specifically, there will be occupational as well as societal culture reflected in metaphor usage. Given that metaphors use the familiar to grapple with the unfamiliar, we expect that occupational and professional groupings will use metaphors familiar to them, for instance administration teams are likely to use administration metaphors.

Expectation 3: It is expected that different occupational teams or professional teams will use metaphors similar to their area of expertise and their experiences.

Tall Poppy Syndrome

In New Zealand, the reference is made to the not so positive existence of a "tall poppy syndrome" (Harrington & Liu, 2002; Mouly & Sankaran, 2002; Riley, 2000). The tall poppy syndrome refers to the competitive preference of individual advancement rather than the advancement of others (Feather, 1989). In a team context, it is anticipated that the tall poppy syndrome will feature in a teams' unsuccessful situations. Team metaphors will indicate that team members were hindering each other. The Harrington and Liu (2002) study indicated that there were differences in how the tall poppy syndrome presented in New Zealand. Harrington and Liu, indicated that Māori have a strong collective orientation and encouraged the advancement of the 'tall poppy' or high achiever. In keeping with the Harrington& Liu study, we therefore anticipate that the tall poppy syndrome will not feature as a metaphor in the Māori team.

Expectation 4: The tall poppy syndrome is expected to feature in a New Zealand team context in unsuccessful team situations, except in the case of New Zealand Māori, who will utilise metaphor depicting more communal advancement

Summary of Aims of the Present Study

The study seeks to explore how teams in a health setting in New Zealand conceptualise themselves. The study endeavours to gain an insight into teams' concepts of themselves by examining the metaphors that health teams use to describe themselves. The study also seeks to explore if there is a similarity or a contrast in the type of team metaphor usage when teams work in successful team situations and when the team works in unsuccessful team situations. To enable a comparison, the study is structured to explore both the positive, successful facets of team functioning and the not so positive, unsuccessful facets of team functioning. A sub-analysis is also proposed to explore the metaphors that shape Māori team members experience of their team functioning.

Method

Participants

Participating Organisation

The organisation involved in this study was from the health sector within New Zealand. A state funded regional District Health Board was approached in writing and consented to participate in the study on the basis of informed consent being gained from all respondents. The District Health Board covers health provision to two major geographical regions in New Zealand, and employs over 2,300 staff. The District Health Board also services different community based health sites and clinics in the district, and has two main hospital sites situated at approximately one hour's travel distance from each other. The respondents who volunteered for the study were based at both the community and hospital sites.

Respondents

The respondents were staff members employed by the District Health Board. Every participating staff member was a part of a workplace team. A team comprised a minimum of five respondents who had worked together for a period of at least six months. The respondents were either the members of multidisciplinary, workplace units with organisation-designated team titles (e.g., inpatient team) or they were teams that self-identified themselves as a team through their professional affiliations (e.g., team of social workers). A demographic overview of the respondents is given in Table1 (see next page). Table 1 indicates the Type of team (e.g., Service Area), the two main geographical areas (designated as Area one and Area two), the number of male and female respondents, and

the total number of respondents at each team site interview. From Table 1, there was a total of 69 respondents, who were members of 10 teams.

Table 1 Profile of respondents by service area, gender and <n>per team

Service Area	Geographical Area	Gender	Total number of respondents
Team1:Inpatientservice;Counselling and therapy Services	Area one	7 Females	7 Respondents
Team 2: Community Service, Counselling and Therapy Services	Area one	3 Females 2 Males	5 Respondents
Team 3: Community Service, Counselling and Therapy Service	Area one	7 Females 3 Males	10 Respondents
Team 4: Advisory and Support Services	Area one	6 females 1 Male	7 Respondents
Team 5: Service Team (Operation and Maintenance)	Area two	6 Males	6 Respondents
Team 6: Community service Treatment and Counselling Service	Area two	5 Females 5 Males	10 Respondents
Team 7: Inpatient Ward, Hospital based	Area two	6 females	6 Respondents
Team 8: Operations team, Analysis and Technology	Area two	5 females 1 Male	6 Respondents
Team 9: Inpatient ward,	Area two	6 females	6 Respondents
Team 10: Middle management	Area two	6 females	6 Respondents
Totals (Area one and Area two)		51 Females 18 Males	69 Respondents 10 Teams

Occupations

From Table 1, it can be seen that the respondents belonged to different health service sectors. The teams worked either in provision of health care services at the different sites, or in administration and operation functions of the District Health Board. The study included a total of 21 nurses, two doctors, two social workers, three counsellors, 10 therapists, five Psychologists, seven health advisors/ support persons, four Administrators, four team leaders, five service persons, two Customer services/liaison staff and four analysts/ technical support staff. The professional composition/makeup of each team, has been excluded from Table 1 to protect and preserve the anonymity of the respondents.

Indigenous Makeup of Sample

The participants were predominantly indigenous New Zealanders (Pākehā and Māori team members) with some British, Welsh, Indian, American and Scottish team members represented also. Five of the 10 teams interviewed had Māori team members. Of these five teams, one team comprised only Māori team members, who all were also Te Reo (Māori language) speakers. A Māori sub-analysis was included to capture any metaphors that were uniquely significant to the all-Māori team.

Sample Design

The study utilised a non-random, convenience sample of teams, who were willing to participate in the research. The sample of teams were recruited and selected through a two-tiered process. First, a written proposal was sent to the Board of Management of the

organisation, seeking permission to recruit teams in the workplace. Second, once written permission was obtained, advertising commenced at the different community and hospital sites, to recruit participants directly. An advertisement invited all teams that had been working together for at least six months to consider volunteering to participate in the study. The six-month team membership requirement, specified on the advertisement, allowed for sufficient time for the team to have had shared experiences that they could talk about (i.e., Team Mental Models).

The sample was self selected, by volunteering to be a part of the study. There were a total of ten teams that volunteered to participate in the study. Nine of the ten teams involved had 6-10 team members. The number of teams is in keeping with Vaughn, Schumm and Sinagub (1996) suggestion that there be between 6 to 12 team members in a team interview. Fewer than six members may not be sufficient to produce stimulating conversations, and more than 12 members means that not everyone gets a chance to express their opinion. One team involved in the study, due to team members' absences, comprised five team members.

Materials

An information sheet was provided to all interested teams (see Appendix A). This Information sheet indicated the provisions made by the researcher to protect anonymity and to respect confidentiality. Potential respondents were informed that their participation was voluntary, and was not connected to their conditions of employment. The participants were

also informed of their right to withdraw from the study up until the point of the analysis of data.

A consent form (see Appendix B) accompanied the information sheet. By signing a consent form, participants agreed to take part in the study; to have the interviews tape-recorded; to have an independent Māori sub-analysis done; and to have the transcripts given to an independent rater to establish inter-rater reliability.

A confidentiality agreement was drafted to be signed by the Human Resource manager, the cultural advisors and the second rater (Appendix C).

A series of rooms were used for the focus group session. The rooms were located in both of the geographical areas in Table 1 (Area One, Area Two). The rooms were furnished in a standardized manner with a table and chairs.

Refreshments were provided at the session. With permission and under the conditions of informed consent of all participating teams, the session was taped using a tape recorder and a microphone sat on the middle of the table.

An Interview Schedule

Table 2(see 2 pages over), outlines the questions used at the team interviews, along with an explanation for the use and/or the phrasing of the questions. The questions were aimed initially at establishing rapport (Questions 1, 2, 3, 4). Subsequent questions were

thereafter based on Flanagan's (1954) Critical Incident Technique, specifically with the interview starting with questions on the positive critical incidents (Question 6, 7, 8, 9). The order of questions was chosen because it was considered it would be easier for the team to talk about positive incidents and then proceed to the less positive situations (Question 10, 11, 12, 13). Participants are considered to recall effective incidents more readily than ineffective incidents (Latham & Wexley, 1993). The gain in rapport was also considered greater than the potential for order effects. For example an initial focus on negative incidents could make the participants suspect a sinister purpose for the researcher collecting the data (Latham & Wexley, 1993). The interview ended with questions exploring the future aspirations and direction of the team (Question 13, 14, 15). The questions on future perspectives were included to allow for the development of a team vision. A team discussion followed each question that was asked of the team. If there were any team members that did not contribute to a question, they were asked if they would like to say something or add anything to the discussion. In this way, each team member was given an opportunity to contribute to the discussion and to present a voice.

Table 2 Interview questions and reason/s for inclusion and/or phrasing of questions

INTERVIEW QUESTIONS	REASON FOR INCLUSION/ PHRASING OF QUESTION
1. Can you introduce yourself by providing some information on your origins/ ethnic background and your cultural affiliation? You do not have to identify yourself by your name or your occupation if you do not want to.	The collection of information on cultural membership was gathered to enable a cultural sub-analysis being done. The reason for collecting this information was explained to the participants in the information sheet and at the team interview.
2. How has your day been so far? Has anyone had anything happen to you today that was upsetting and that could affect your participation here today?	There may have been a situation where the team or a team member may have had a recent stressful experience (death of a patient, crisis situation). Therefore it was important to gauge how the team members felt at the start of the session. If the need arose then the members could be excused from the session or redirected to gain the appropriate assistance (Debriefing, Employee assistance program, Counselling).
3. Are there any members of the team that are not present here/today?	The question assists in gauging the 'completeness' of the team. The Health and Disability Ethics Committee had suggested the inclusion of this question.

INTERVIEW QUESTIONS	REASON FOR INCLUSION/ PHRASING OF QUESTION
4. Can you describe the kind of work that you do as a team?	This question serves as a warm-up to establish some rapport. The team is also able to provide some background information, and to reflect on their core undertakings as a team.
5. Preamble: As a team you would have worked on situations where things went well and the team worked well together. There are also those times when you felt that you may have worked better together or where things did not go as well. These good and not so good experiences are the critical incidents that teams go through (Flanagan et al., 1959)	A preamble was included to explain Critical Incidents to prevent the association of critical incidents with only emergency, catastrophic or disaster situations.
6. Can you tell me about situations or instances that the team has been through in the last two years that you thought went well and that you may have found to be satisfying, positive or enjoyable? (Positive critical incident)	The question is phrased so as to include the feelings and process outcomes of incidents/ situations and not only the physical output / results of these situations.

INTERVIEW QUESTIONS	REASON FOR INCLUSION/ PHRASING OF QUESTION
7. What about these situations made them a satisfying, positive or enjoyable experience for you?	This question allows the team to reflect on what worked for them as a team or on what proved effective. This question allows for an overall broad scope view of situations.
8. As a group, when you think about these positive or satisfying situations, what metaphor comes to mind…this may be a symbol, an image or a picture to describe how the team worked together during this time?	This question allows the group to access any specific imagery that comes to mind about these positive situations. This question yields the clearly apparent (manifest or explicit metaphors) whereas the previous three questions have accessed the latent (underlying or implicit) metaphors (Cannon-Bowers et al., 1993)
9. Are there any symbols or images that are specific to you (as an individual) that come to mind when you think about these situations? These images could be from your culture, background and experiences.	The multi-cultural make-up of teams could mean that participants may recall images that were reminiscent of their national or cultural backgrounds. Some team members volunteered this information. The team members who did not volunteer information were questioned if there were "symbols that are specific to you," in an attempt to encourage their participation.

INTERVIEW QUESTIONS	REASON FOR INCLUSION/ PHRASING OF QUESTION
10. Can you tell me about situations or incidents that has happened to you as a team in the last two years that you found to be "not as satisfying, not as positive or not as enjoyable? " These situations should be those that you are not currently going through.	The word "negative" is not utilised in the question construction. The question is phrased in terms of motivational interviewing techniques (Miller and Rollnick, 1991; Rollnick, Heather & Bell, 1992). This question deliberately avoids a sense of dichotomy (positive / negative). The phrasing of the question also avoids the assumption that a situation was entirely problematic. Even negative situations can have positive consequences for the team for example possibly growing as a team and learning from difficult challenges. Further, the questioning avoids the recall of traumatic memories.
11. What about these situations made them not as satisfying or not as positive an experience for you?	The team is able to reflect broadly on what might not have worked for them as a team or what causes discontent in the team.

INTERVIEW QUESTIONS	REASON FOR INCLUSION/ PHRASING OF QUESTION
12. As a group: when you think about these not so positive experiences or situation, what picture comes to mind…this may be a symbol, an image or a picture to describe how the team worked together during this time.	This question allows the group to access any specific imagery that comes to mind about these "not as positive" situations. This question encourages the verbalising of the clearly apparent (manifest metaphors) whereas the two previous questions have accessed the latent (underlying) metaphors.
13. Are there any symbols or images that are specific to you (as an individual) that come to mind when you think about these situations? These images could be from your culture, background and experiences	This question draws on the individual experiences and background that the participants bring to the team.
14. If you had a vision of how you would like the team to be, what would that vision be?	The questions thus far have focused on the present and the past. This question extends the focus to the future and allows the team to consider what their goals are. Each team member was given an opportunity to voice their vision for the team.

INTERVIEW QUESTIONS	REASON FOR INCLUSION/ PHRASING OF QUESTION
15. What would be a small practical step towards this dream, or towards making things a bit better in your team?	This question allows for, what the team proposed as visionary, to have some practical possibility or feasibility. The team can go away with some constructive ideas or could have started to think about some ideas.

Procedure

Securing Organisational Participation and Consent

A meeting was arranged between the researcher and a Regional District Health Board representative (organisation's Human Resource Manager), who was provided with a research proposal. The proposal made a request for organisational consent for their staff's participation in the research, and for staff to be given the time-off from their regular work, to enable such participation.

The Human Resource Manager agreed to circulate the research proposal to be read by all the General Managers and the Chief Executive Officer of the organisation. At a subsequent Board Meeting, the board of management, by consensus, consented to the organisation taking part in the study. The Board's recommendation was that the conditions for participation be drafted into a Memorandum of Understanding, which was later signed by the researcher and the Human Resource Manager (who served as the main contact person).

The researcher drafted the Memorandum of Understanding, which outlined the conditions for participation for the organisation and the researcher. The organisation's Human Resource Manager and Massey University Research Services were consulted, and reviewed a draft of the Memorandum of Understanding, making a few additions. The Human Resource Manager and the researcher thereafter signed the Memorandum of understanding (see Appendix D).

Māori Raters/Advisors

A meeting was held with two Māori Community members, who agreed to to take on the role of Māori advisors for the research. The advisors provided written consent for their involvement in the study. The advisors' advice was sought in the interview design process to ensure cultural appropriateness. Following the input of the Māori advisors, each interview session was structured with a Karakia (blessing) at the commencement and the closing of the interview session. One team interview held with all Māori team members featured the members talking in Te Reo (Māori language). The Māori advisors served as transcribers of the Te Reo taped interview and the advisors also served as raters of the transcripts that featured the Māori team members.

Ethics Application

Ethics applications were made firstly to Massey University Human Ethics Committee and secondly to Human Research Council Ethics Committee (Health and Disability Human Ethics Committee). Massey University Human Ethics Committee requested and received a letter of consent, from the Chief Executive Officer of the Healthcare organisation. The Massey University Human Ethics Committee granted Ethics approval under Protocol MUAHEC 03/054.The Health and Disability Human Ethics Committee granted approval under Protocol X/03/09/044.

Pilot Study

Prior to the first team interview session, a pilot study was conducted to review the interview questions and to assess the running time for the team. Following ethics approval, the interview schedule was used in the pilot study involving one health team with six team members attending. The health team belonged to the participating organisation (District Health Board, Area 1), and was known to the researcher. The suggestions of the pilot study team informed some changes to the interview questions (see Table 2).

Recruitment of Participants

An advertisement of the study was drawn up to inform staff of the research (see Appendix E). Advertisements were placed on notice boards, on the Staff intranet (internal computer network for the health departments), and in the Employee Newsletter. Advertisements were also sent to all health departments. The advertisement included a brief summary of the proposed research and contact details. Teams wanting more information on the study were able to access information sheets from the Human Resource Manager. Teams, interested in participating in the study were advised in the advertisement to elect a team representative. The team representative could forward the team's expression of interest in participating, to the Human Resource Manager. The Human Resource Manager had signed a confidentiality agreement to preserve the identity of the participants and the teams that were involved in the study (see Appendix C).

Arrangements for Team Interviews

The researcher contacted the interested teams' nominated representatives, via e-mail to negotiate specific arrangements for the team interview (i.e., time, place, date, attendees and meal preferences). Additional Information sheets and consent forms were distributed to the team members, to be viewed and signed before the team interview. Venue sites were arranged through the team nominated representatives. The teams were asked where they would prefer to meet and the teams generally chose rooms that were located close to their work sites. The room preferences catered for increased team comfort and allowed the teams to have a larger input into the arrangements for the team interview session.

The Team Interviews

There were 10 team interviews, one for each team. The entire set of interviews was conducted over a five-month period. Each team interview session lasted approximately 90 minutes. The team interview commenced with an opening of the teams choosing (Prayer/Karakia or a Saying-Thought for the day). Refreshments (Kai) were thereafter provided to all teams to allow for a more comfortable, sharing environment. The time spent sharing a meal and conversing also allowed for the team to orientate themselves to the surroundings and to feel more at ease with the facilitator/researcher. The researcher has 10 years previous experience in group facilitation and interviewing and this experience was conveyed as part of the process of building rapport.

At the beginning of the team interview, the participants were re-assured of the anonymity of the team's identity, and each participant gave written consent to being a part

of the research project. Each team was advised of the need to respect the confidentiality of others in their team by not divulging details of the team interview to anyone who was not present at the team interview session. Group composition details and basic demographic information (ethnicity) were obtained from every team to assist in the cultural analysis of transcripts featuring Māori participants. The reason for collecting this information was reiterated at the session.

The team with all Māori members (who were fluent in Te Reo), were given the option to have their session conducted in Te Reo. The team indicated their preference to have the researcher conduct the session in English with the participants having an option to respond in either English or Te Reo. The Māori team interview session had some English discourse, but was predominately in Te Reo. During the team interview, the team members indicated to the researcher when they felt they had covered the question sufficiently in their discussion, and when they were ready to proceed to the next question. At all 10 team interviews, the questions in Table 2 were primarily used to generate team discussion (i.e., as prompts to discourse). The researcher asked each question as it appears in Table 2, and the team responded to each question in the same order. The session was audio taped to retain a completely accurate record of the team interview.

At the end of each session, teams were given information regarding feedback arrangements. Feedback, in the form of a written summary of the findings, would be forwarded to the team's representative after content analysis was completed. Towards the end of an interview session, the researcher informed the team that she would be available

for 10 minutes after the session, should anyone need to talk to her. The session ended with a Karakia (prayer or blessing) or a closing of the teams' choosing.

Transcription of Tapes

The researcher transcribed nine taped sessions from the nine non-Māori team interviews. The Māori rater transcribed the session that featured the all Māori members (Te Reo speakers). By excluding the identifying details (names of participants and team identities) from the transcripts, the researcher and Māori rater were able to protect the anonymity of participants. The researcher utilised randomly selected, unique identifiers (letters of the alphabet and pseudonyms) to identify individual speakers in the transcripts.

Analysis

Method of Data Analysis

The predominant form of data analysis was content analysis (Berg, 2004). Content Analysis identifies and codes themes from transcribed texts and in this study the themes are the metaphors used by respondents. In a quantitative Content Analysis approach, the researcher sets down a number of themes, deemed relevant to the research question, before coding the entire data set. Themes are gained deductively from theory; by choosing already-established themes in the field of research. The established themes are found in already agreed upon definitions or word lists, in dictionary type definitions and in themes established in previous studies. The researcher uses this predetermined list of themes (an 'a priori' theme list) and scans the data set to find instances when the same themes occur and recur (Neuendorf, 2002; Robson, 1993). This quantitative content analysis process is

termed 'closed coding.' Closed coding works with a closed set of themes from which to choose, and the researcher has 'closed' off the option of discovering any new themes. Closed coding suits areas of research where there is substantial prior research on a topic, where there are large samples of texts, where there are already agreed upon definitions or word lists, dictionary type definitions and previous studies, to inform the development of an a priori theme list (Neuendorf, 2002; Robson, 1993).

The current study is attempting, like the Gibson and Zellmer-Bruhn (2001), to explore the metaphors used by teams. As Gibson and Zellmer-Bruhn indicate, there is limited existing information (specialised dictionaries, word lists, previous research) on teamwork metaphors, and it therefore difficult to draw up an a priori list of teamwork metaphors. A closed coding system does not suit the Gibson and Zellmer-Bruhn approach, and would not suit the purposes of the present study. The present study is explorative, open-ended, and seeks to uncover metaphors from data (Bernard, 2000). Working with a predefined set of metaphors would be restrictive, and would not allow for the discovery of new information and emerging metaphors that might arise from the data (Hesse-Biber and Leavy, 2004).

An alternative to closed coding, suitable for less-well-researched topics as in the current study, is known as 'open coding' (Glaser & Strauss, 1967). Open coding involves the researcher analysing the data to discover what metaphors (relevant to the research question), emerge from the data (Berg, 2004). Open coding is as the name suggests an 'open process' whereby the researcher strives to make the effort to make no prior assumptions about what the metaphors will be, but rather tries to let the spoken words

inform the researcher of the metaphors. For this reason, open coding is part of 'Grounded theory' (Strauss and Corbin, 1990). Grounded theory stems from the respondent's own views. Rather than a closed set of metaphors, there is no limitation placed on the number of metaphors that may be inductively gathered from the data. As there is no limitation on the metaphors that may be assigned, the initial metaphors may be too numerous and may need to be grouped together into overarching categories. The present study, as in the Gibson and Zellmer-Bruhn (2001) study, utilised open coding analysis and the researcher endeavoured to make no prior assumptions of metaphors that might emerge.

Process of Analysis: non-Māori team

1. To enable inter-rater reliability, two raters took part in the analysis of the non-Māori team data. Rater 1 was the researcher and Rater 2 was a teacher of English and Speech and Drama for over 30 years and was experienced in working with symbolism and metaphoric content.

2. Each rater had a physical copy of the transcript, and worked independently (i.e., at different locations).

3. Rater 1 and Rater 2's agreed task was to identify and underline metaphors (analogies, comparisons, symbolism, proverbs). Each rater indicated in the right margin of the transcript, a metaphor label to depict what was being described. For example when the underlined transcript was "All of these girls were *like mothers* to me, they were really supportive," the passage was given a metaphor label of a 'Family' in the right margin. At the same time that metaphors were being identified, the raters indicated whether the incident being described was positive (+) or negative (-), by using a symbol (+ or –) in the

transcript's left margin. The reason for establishing whether an incident was positive or negative, was that even though the questions followed the sequence of describing positive and then negative incidents (see Table 2), the respondents on a few occasions recalled negative incidents when being questioned on positive incidents and vice versa.

4. Once each rater had assigned the metaphors for the transcript, the raters came together to look at each other's independent ratings. The raters sat at a table, and went through their transcript analyses to compare the findings. Both raters agreed at the onset that there had to be consensus on two features. Firstly, there needed to be consensus that metaphor usage had occurred in a passage; and secondly whether the incident described was positive or negative. If the raters could not agree on both these features, the passage was discarded from further analysis.

5. The raters compared the assigned metaphors. Two matrices were drawn, one for positive incidents and one for negative incidents. Each matrix had an axis for each rater with the metaphors each rater had assigned. The matrices served as a record of all the agreements and disagreements between the raters for the nine transcripts. A cross (X) was placed in a matrix to record the metaphor assigned by each rater. All the crosses on each matrix were thereafter tallied by the researcher to indicate a total count of the number of agreements and disagreements between the raters for each metaphor. This information on the agreements and disagreement between the raters was gathered to assist in compiling a Kappa co-efficient of inter-rater reliability.

6. After all nine Non-Māori transcripts were analysed by the two raters, the metaphors that both raters agreed on, were used for further analysis. This process involved the researcher, grouping together similar metaphors, through a card sorting process.

7. The researcher made copies of the transcripts on a different colour paper for each team, to distinguish the different teams. The researcher used a cut and pile technique that involved cutting the passages of text containing metaphors and then sorting them into piles. The researcher placed the cut passages into two boxes, one for the positive incidents and one for the negative incidents. All the passages from each box (positive and negative incidents), that had the same metaphor were grouped together. For example, all the passages dealing with family metaphors were placed in one pile. A rule of thumb proposed by Berg (2004) and Strauss (1987) was used, where a minimum of three metaphor occurrences was required in order to indicate that a metaphor existed. If there was below three counts of a metaphor, the metaphor was discarded. There were 38 metaphors discarded because of an insufficient number of metaphor counts. This left a total of 43 metaphors for the positive and 58 metaphors for the negative incidents.

8. As there were too many metaphors for a reasonable analysis, the metaphors had to be condensed into overarching metaphor categories. The researcher and the second rater met again and condensed the originally labelled metaphors into overarching metaphor categories. All the originally labelled metaphors that shared similar characteristics or patterns were grouped together. For instance, the 'family,' 'friends,' and 'community' metaphors, were grouped together under an 'Affiliation' metaphor. The raters, hereafter considered these originally labelled metaphors (i.e., Family, friends, and community), to be sub-metaphors of an Affiliation metaphor.

9. Both raters discussed all the metaphors until they reached an agreement on how the sub-metaphors should be grouped together to form a metaphor allocation. This process of further categorisation (Hesse-Biber & Leavy, 2004), resulted in the 43 sub-metaphors for

the positive incidents being condensed into 15 metaphors and 58 sub-metaphors for the negative incidents being condensed into 16 metaphors.

10. The researcher then returned to the matrices that were compiled for the positive and the negative incidents (see Step 5). The originally labelled metaphors (sub-metaphors) depicted on the axes of the matrices, were too numerous for a reasonable analysis and therefore needed to be re-categorized according to the 15 metaphors for the positive incidents and the 16 metaphors for the negative incidents. The condensing process resulted in two matrices (see Appendix F) that depicted the two raters' overall agreements and disagreements of the overarching metaphors for the positive incidents and the negative incidents.

11 The information on these two confusion matrices was then used to calculate a Kappa index of the inter-rater reliability (Cohen, 1960, Cohen,1968). Kappa expresses the level of agreement between raters; that is the extent to which two raters can obtain the same result when independently coding the same transcript (Robson, 1993). A Kappa coefficient was calculated for the total number of positive incidents over the nine teams and the total number of negative metaphors for all nine teams. The significance of Kappa was assessed utilising Fleiss's (1981) 'rules of thumb':

Kappa of 0.40 to 0.60: fair

Kappa of 0.60 to 0.75: good

Kappa of above 0.75: excellent

Process of Analysis: All-Māori Team

A separate analysis was conducted on the transcript featuring all Māori team members. The Māori language (Te Reo) tape was given to the two Māori raters as part of

the analysis to ensure that specific Māori metaphors were identified and assigned. The Māori raters were fluent in Te Reo. Both Māori raters were both employed at a tertiary education provider. One of the raters was employed as a Māori cultural advisor and the second rater was employed as a lecturer.

The Māori rating analysis followed the same open coding process as utilised for the nine non- Māori teams' transcripts. As the two Māori raters felt it was more culturally appropriate for them to work jointly to determine metaphors, they chose to work collaboratively to assign metaphors, therefore no confusion matrices or Kappa was calculated for the Māori sub-analysis. .

Results

This section of the report presents the findings of the content analysis. The results are structured to:

1. Check the inter-rater reliability of metaphors, as assigned by the two raters.

2. Examine the metaphor usage in each of the teams' performance domains namely success and failure.

3. Explore what, if any, bicultural differences in metaphors occur, as one team comprised of all Māori team members.

Following the summary of the general pattern in the content analysis, the results proceed to relate the content of the metaphors to the expectations of results. The expectations of the results are as generated from the literature review and as outlined in the Introduction.

Inter-rater reliability

Confusion matrices for the metaphors for the successful team and the unsuccessful team performance (failure), are presented in Appendix F. Coefficient Kappa for successful team performance is $\kappa = .87$ and for unsuccessful team performance is $\kappa = .85$. According to Fleiss (1981), Kappa coefficients above 0.75 are considered excellent. Hence, the content analyses performed are sufficiently reliable to proceed to examining the metaphors generated during teams' descriptions of successful versus unsuccessful team performance.

Metaphors for Successful Versus Unsuccessful Team Performance

The content analysis resulted in the researcher and second rater assigning 43 sub-metaphor and 15 metaphor labels for successful team performance and 58 sub-metaphors and 16 metaphor labels for the unsuccessful team performance. A description of these sub-metaphors and metaphors would be too extensive to cover in this section. For this reason, and for the interest of the reader, a compact disc is available on the rear cover. This compact disk provides examples and illustrations from the transcripts of the metaphors and sub-metaphors for the teams' successful and unsuccessful performances.

The researcher's analysis of the 31 metaphors for successful and unsuccessful team performances revealed that some metaphors were similar across successful and unsuccessful team performance whereas some metaphors were opposing (antonymic). There were also metaphors that featured exclusively in the successful or unsuccessful team performances and these metaphors were considered non–aligned across successful and unsuccessful team performance. Table 3 (next page), depicts the rater-assigned metaphor labels that were similar, antonymic and non-aligned across successful and unsuccessful team performance. The metaphors in Table 3 have been ranked ordered, from the highest to the lowest totals. A description of the metaphors (as contained in Table 3) follows, with illustrative examples from the transcript. The transcript examples contain the participants' words that have been edited to include only the pertinent passages and in no way has the meanings been amended. Unique identifiers (A, B, C) have been used in the examples to identify the individual team member that is speaking.

Table 3: Metaphors for team success and failures: Similar, Antonymic, and non-aligned metaphors

SIMILAR METAPHORS ACROSS PERFORMANCE LEVELS				ANTONYMIC METAPHORS ACROSS PERFORMANCE LEVELS					NON-ALIGNED METAPHORS ACROSS PERFORMANCE LEVELS			
METAPHORS	Total	Team Performance										
		Frequency of metaphors (Team success)	Frequency of metaphors (Team failures)	Metaphors for Team Success	Frequency of metaphors (Team success)	Metaphors for Team Failures	Frequency of metaphors (Team failures)	total	Metaphors for Team success	total	Metaphors For Team Failures	Total
TRAVEL	58	28	30	SUPPORT	51	CONFLICT	70	121	RECOGNITION	19	STRAIN	72
IDENTITY	50	15	35	BONDING	49	DIVISION	29	78	SOCIAL	15	SYSTEMS	34
EMOTION	42	8	34	ORDER	15	DISORDER	21	36	DESCRIPTION (Height)	13	WASTE	14
AFFILIATION	38	31	7	BUILDING	5	CONSTRAINT	25	30			DESCRIPTION	18
HEALTH	25	7	18	HARMONY	15	IMBALANCE	12	27			Description: Personification	6
DESCRIPTION Circle	21	11	10								Description: Change	4
MACHINE	19	7	12								Description: Senses	4
COMMERCE	16	5	11								Shapes	4
DESCRIPTION												
Sport	11	7	4									
Nature	10	5	5									
Mathematics	9	5	4									

Similar Metaphors

Travel Metaphor

From Table 3, the travel metaphor was the most frequently used metaphor across successful and unsuccessful team situations. The travel label assigned by the raters reflected teams' narratives about different types of journeys, direction and destinations. In successful situations, journeys mention progress, growth and having a sense of going in the "right direction." A textual example of a travel metaphor is seen in this description of a sea journey: "We are all on a *boat, a whaka...* all *linked* together ... all *rowing t*ogether..." The sea journey metaphor, depicting a sense of direction, was used by four team members within the same team, which conveys a shared team goal and a shared team mental model of the *direction* in which a team is traveling.

In the unsuccessful team performances, the teams' narratives depict journeys as having "no direction", being "speedy" and a "chase" and the team members as having "limited vision." An example of the travel metaphor from an unsuccessful team performance is "It is a single track" that "does not come *the other way* back down to us." Teams also indicated that a set course, whilst being functional in providing direction and goals, is limiting when there is a limited sense of vision, "a mindset", and a sense of travelling with "blinkers on." Team 3 used a sea journey metaphor, across both successful and unsuccessful situations, to describe the different type of journeys that the team is takes place, which is travelling in "calm waters" versus "rough seas."

Identity Metaphor

The identity metaphor label assigned by the raters, depicted teams' descriptions of the teams' sense of identity, their perceptions of team roles and their sense of

belonging during successful team and unsuccessful team situations. During successful team performance, teams used descriptions that convey a sense of classification as a collective identity and a sense of belonging and fit. An example of a metaphor used during success is "We had a team building exercise with a couple of *our patch*." This and other examples of team success indicate a strong sense of the collective identity, which supports the salience of social identity to teams. In the unsuccessful team situations, teams' descriptions depict a sense of being invisible and of having different, individualistic identities. An example of the identity metaphor in the unsuccessful team situations is: "Not having the recognition and respect for your role and the team's role. We do a good job and they do not have a clue."

Besides the teams' expressed discontent with not being acknowledged by external sources, team members also express their dissatisfaction with the existing within team differences that is created by elitism. An example of an elitism metaphor used in the unsuccessful team situations, is where team members challenge each other on the sense of professional elitism that divides the team:

A: "It strikes me that there is a certain level of comfort in being a member of this club."

B: "I think so and it is an exceptionally long process and it is a hard process to get into that club in the first place and you don't want to forget who you are.

C: "But, I don't forget who I am"

Emotion Metaphor

The emotion label assigned by the raters, covers the teams' expressed feelings about their successful team and unsuccessful team situations. In successful team situations, teams' descriptions are of experiencing happiness, joy and laughter. An example of a metaphor used in the successful team situation is "We have a high laughter structure here and we try to maintain that." In the unsuccessful team situations, teams indicate feelings of distress, loneliness, and anger. An example of a metaphor in the unsuccessful team situations is "It is like a grieving thing, when really respected and long term people that have been in our family have left, it is hard to let go of these gorgeous people."

The emotion metaphor is more frequent in the unsuccessful team situations, compared to the successful team situations (see Table 3). The possibility exists that whilst feelings of happiness are not overtly expressed, feelings of distress are more verbalised in teams.

Affiliation Metaphor

The raters assigned the label of an affiliation metaphor as team members associated their team relationship with other types of relationships and networks. These relationships include 'family,' 'friends,' and the 'community.' During successful team situations, family relationships were depicted by team members as being a nuclear unit and as being nurturing. When describing success, teams described situations where friendships were present and a sense of community exists. A typical example of a family metaphor in the successful team situation is "All these girls were like mothers to me, they were really supportive." Teams in the unsuccessful team situations described

the family dysfunction that can occur, the family members that may not be as well received by other family members and the concept of an extended family that is considered to be less close or more independent than the nuclear family. Teams indicate that friendship states are absent and the sense of community does not feature in teams' descriptions during their unsuccessful performance. An example of the family metaphor in the unsuccessful team situations is: "The analogy of a little sister, the real pain in the neck who tries to join in with all the games and gets pushed out." The point of these examples is that the same family metaphor is being used in both successful team and unsuccessful team situations, but in different ways. Whilst a nuclear family structure is described in the successful situations, an extended family structure is described in the unsuccessful team situations. Close family relationships in the successful situations were different from the estranged and distant relationships described in the unsuccessful situations. Team 8 utilised the family metaphor across both successful and unsuccessful team situations to depict the discrepancy between family members that were well received during team successes and those members that were ostracised and "pushed out" during unsuccessful team situations.

From Table 3, it can be seen that the family metaphor is being used more frequently in the unsuccessful team situations than the successful team situations. Clearly, therefore the family metaphor is preferred when the team is working well together. The teams described how important it is to them to have a sense of "family" and a type of "family" support in the team. The teams expressed importance of having this social network is possibly an indication of the salience of social identity to teams in successful team situations.

Health Metaphor

The health metaphor covers the presence or absence of illness and wellness in the team environment. In the successful team situations, teams describe healthy team states ("healthy team"), whereas in the unsuccessful team situations, there are descriptions of symptoms of physical ill health ("gut ache", "high blood pressure") and mental ill health ("hysteria", "craziness"). The use of a health metaphor has special significance to health teams and reinforces the definition of metaphor (see Introduction), that teams are using the familiar (health metaphors), to express the unfamiliar (Inkson, 2004).

Description Metaphor (Circles)

The description metaphor is made up of different descriptors. All the description metaphors have been classed together as all the descriptors utilise the properties or characteristics of a metaphor to describe a specific situation. For instance circles is specifically chosen and applied to varying contexts or situations. From Table 3, it is noted that the circle metaphor is the most frequently used across successful and unsuccessful team situations. In the successful team situations, the circle's properties are used to indicate an interlinking ability ("Olympic circle"), and continuity and strength ("a ring"). In the unsuccessful team situations, the circle is used to show disconnection ("out of the loop"), incessant quality ("roundabout"), fruitless endeavours ("chasing your tail"), and diminished strength (staff "turnover"). Smaller circles are referred in the successful team situations, for instance "tight circle", "a ring" or an "embrace." Larger circles are referred to in the unsuccessful team situations, for instance, "loops" and "snowball effect." The circle metaphors, whilst being common

across both successful team and unsuccessful team performance, display differing circular properties across successful and unsuccessful team situations.

Machine Metaphor

The raters assigned a label of a machine metaphor as the teams utilise mechanical descriptions to describe both successful team and unsuccessful team situations. In the successful team situations, the machine is seen to symbolise being "in-synch" and mechanical terms are used to convey motivation, for example "and the sum of the whole is worth heaps more than the bits that go into it, and that's the driver." In the unsuccessful team situations, the 'machine' denotes differing properties of higher output demand, and sense of being robotic (without feeling) and automated. A team member illustrates these machine qualities with the following description: "I can describe very well how they looked, it was this group of people ... operating on *robot* mode, like there was little animation and what animation there was, was not happy, but the body language, well there was no language really, it was all very automated, it was from one task to the other." The above examples illustrate how metaphors are used in varying ways and the appropriate properties of the metaphor are used to suit the situation and to convey a specific message (mental model).

Commerce Metaphor

The raters assigned a label of a commerce metaphor as teams' utilised accounting and business terminology (investment, marketing, commodities, quantities, cost) to describe their successful and unsuccessful team situations. In the successful team situations, teams use descriptions of investment and marketability. An example of the commerce metaphor used by a team in the successful team situations is "Our

department raised its profile, because we're delivering something now, and people are actually buying what we're selling them and that is very positive." The commerce metaphor in the unsuccessful team situations differs from the use of commerce metaphor in the successful team situation. In the unsuccessful team situations, commerce is seen as focusing on quantities rather than quality and the teams' sense of being "taxed." An example of the commerce metaphor in the unsuccessful team situations is: "We are not of that culture where you don't want to be thinking in numbers. Numbers isn't necessarily good work. It seems that we are driven by numbers. The dock has got to be full, even if it is full up." In the unsuccessful team situations, more 'economic' terms appear to be used, where the focus is on maintaining a positive yield ("profit") and economic growth.

From Table 3, the commerce metaphor is noted to feature more frequently in the unsuccessful team situations. Besides being more frequently used, the commerce metaphor also features across more teams in the unsuccessful team situations. There were seven teams that used the commerce metaphor in the unsuccessful team situations compared to two teams that made reference to the commerce metaphor in the successful team situations. The greater use of commerce and economic terms used by teams in the unsuccessful team situations highlights the teams' indicated discontent with the greater emphasis on the business principles that underlie health delivery.

Description Metaphors (Mathematics, Sport and Nature)

Like the circles metaphor, the descriptors of mathematics, sport and nature feature differing descriptions and properties when described in the successful team situations as compared to unsuccessful team situations. For instance, the sports

metaphor depicting a collaborative sports team in the successful situations ("rugby team, all lined up and arms around one another"), is compared with competitive sports ("we are always *wrestling* to keep on top of the work") of the unsuccessful team situations. In the nature metaphors, the nurturing quality of animals ("mother duck and her ducklings") and the positive work ethic of animals ("a big clusp [*sic*] of bees, we all know our jobs and we get on with it") in the successful team situations, is compared with the predator quality of animals in the unsuccessful team situations ("we are the little mouse and the big eagle comes down on us"). In the mathematics metaphors, the function of addition in the successful team situation ("being recognized by the organisation for *adding* value") is compared to the division function in the unsuccessful team situations ("split unity", "fraction that is working"). It is noticeable that the similar metaphors used across successful team and unsuccessful team situations, have differing properties. The reader is directed to the compact disc on rear cover for further examples of the similar description metaphors.

Antonymic Metaphors

Support Metaphor Versus Conflict Metaphors

The supportive and aiding actions of team members described by team members during successful team situations, is contrasted to destructive actions and the conflict that is described during the unsuccessful team situations. From Table 3, it is noticeable that the support and conflict metaphor have high frequency counts and has the highest total of the antonymic metaphors. Both support and conflict appear to be of substantial salience to the teams. Teams describe their support as being visible in the teams' sharing, aid, support, camaraderie, protection, rescue from difficulties, and team members offering a sense of team closeness and proximity, as well as sufficient space

and freedom to function. An example of the support metaphor in the successful team situations is "I think it's the camaraderie in the work on the ward. Definitely the work situation is damn hard but I rely on the girls I work with." This example highlights how trust and support exists within a team that is operating in potentially taxing or difficult situations. The example illustrates that challenges and adversity can result in positive team consequences like the described development of "trust" in a team. Adversity is therefore not necessarily negative in the team and could be a stepping-stone to team camaraderie, learning and development. This example is an illustration of a situation that can be considered as not "negative" but that is possibly "not so positive" (Miller & Rollnick, 1991)

The unsuccessful team situations, in contrast to support, reflects the team disputes as seen in the teams' descriptions of incidents of abuse and assault, deception and backstabbing, resistance and defiance, the sense of being under attack (war and combat terminology), wanting to get away (escape), and the rejection of team members as seen in "closed windows" or "shut doors." An example of the conflict metaphor is described by a team member," That is how I feel that we are banging our heads against each other all day. I think as a team, that almost every nurse in the ward feels like we are banging our head all day and trying to be nice to the patients. It is very difficult."

Bonding Metaphor Versus Division Metaphor

The raters assigned a bonding metaphor label to capture the teams' descriptions of the actions that bind the team, different types of bonds within the team and the bonding processes that exist in the successful team situations. An example of the bonding metaphor is: "We do care about each other; we are a very *close knit* team." The

opposing division metaphor depicts teams' descriptions of actions that split the team in the unsuccessful team situations. An example of the division metaphor in the unsuccessful team situations is: "We were having to work together but we were walking on other sides of the fence."

From Table 3, it is clear that there was a higher frequency of a bonding metaphor ($n = 49$) than a division metaphor ($n = 29$), which points to bonding being perceived as highly important to team effectiveness. The team bonds and cohesiveness could assist in the development of shared mental models which could enhance team performance.

The raters noted that team members in both the bonding and division metaphors, refer to the 'diversity' that exists in the team. Team diversity appears to have different consequences and effects in the successful versus the unsuccessful team situations. The raters felt that diversity in the successful team situations could be likened to the sounds of different instruments that come together to create a medley...one united, enriched sound. An example of diversity that enriches the team is "I think another factor that makes the job special is the skill mix that we have...it is what makes us so vibrant and it makes us learn off each other." The raters felt that in contrast, diversity in the unsuccessful team situations created division and exclusion, which is seen in the teams' descriptions of 'elitism'. An example of the effect of differences in the unsuccessful team situations is "The only thing that has the potential to split the unity that we have here is the sense of elitism and we need to work strongly against that." These examples imply that the team members receive diversity differently in successful team interactions versus their unsuccessful interactions. In the successful situations diversity

appears to be embraced by the team and in unsuccessful situations diversity appears to be the source of team division.

Order Metaphor versus Disorder Metaphor

Team members' descriptions of ordered states in the successful team situations are in contrast to their descriptions of disordered team states, described in the unsuccessful team situations. In the successful team situations, team members described the specific team actions that brought about order (organising and housekeeping, communication, and continuity). An example of an order metaphor is "just that sequence takes a lot of decisions and a lot of communications." In contrast, in the unsuccessful team situations, teams' descriptions of the disordered and disorganised team actions and distorted communication, is viewed as bringing about disorder in the team. Team members described situations that were "out of hand" where some team members "upset the apple cart." In comparison to the housekeeping terms used in the order metaphor, such as "we discuss and iron out any problems", the disorder metaphor described "messy" states such as "an entangled mass of wool"

Building Metaphor Versus Constraint Metaphor

The raters' opinion was that teams' descriptions of growth and development portrayed a building metaphor in the successful team situations. Team members in the building metaphor, described the structures or "bridges" that provide stability. An example of the building metaphor is "The foundations are good; the rest is a bit shaky... I was thinking about the bridge itself, and the fact that our systems are the troubled waters with lots of problems under but that bridge is quite stable and it allows almost weighty things to go under there." In contrast, the raters felt that the teams' descriptions

of inhibition and restriction conveyed a constraint metaphor in the unsuccessful team situations. The constraint metaphor in the unsuccessful team situations included teams' descriptions of the restrictions that exist in the team. An example of the constraint metaphor is "We are all ruled by the belt."

The above examples of the building and constraint metaphors, illustrate that both these metaphors are largely dealing with teams' difficulties in working with systems. In the building metaphor, the teams appear to have team resources as reflected in structural metaphors (bridges, foundations), to overcome these systems restrictions. In the constraint metaphor however the system appears to serve as an insurmountable barrier, as illustrated in the following exert: "I can't change the system, it is a *brick wall.*" The higher number of constraint metaphor (see Table 3), could point to the team perceiving their barriers as being far greater than team resources that are available to cope with system pressures.

Harmony Metaphor versus Imbalance Metaphor

Team descriptions of harmony and balanced team states during successful team situations are in contrast to the descriptions of imbalanced team states during unsuccessful team situations. The raters view was that the harmony metaphor created a sense of even distribution and tranquillity in the successful team situations. An example of the harmony metaphor is "I see people linked but also carrying the same weight, everyone is carrying a similar weight." In contrast, the raters viewed the unsuccessful team situations as describing inverted states such as "It was a case of there being 15 Indians and 12 hundred chiefs." Besides inversion, the raters noticed descriptions of imbalance for instance "tipped scale" and "Juggling…it is a hard balance."

Non-aligned Metaphors: Metaphors Only Present In Successful Team Situations

Recognition Metaphor

The recognition metaphor encompassed the teams' descriptions of their receipt of rewards and acknowledgement from external sources for the work that the team was doing. The teams also recognize themselves and acknowledged their sense of success and accomplishment. An example of the recognition metaphor is: "It is a really positive thing when the patient gives you a heartfelt "Thank you" not just a polite "Thank you." There were also situations were the teams celebrated their team successes as indicated in "Savoir Blanc...a sign of celebration" and "The success stories...it is quite exciting to share that with other team members."

Social Metaphor

The social metaphor included teams' descriptions of the social interaction of the participants and the sense of welcoming that greeted the team members when they joined the team. An example of the social metaphor is "A bit of a yarn or social thing...I think that the social actually helps. Just sitting around and chewing the fat for a while...it helps." The social metaphor also includes descriptions of the extension of the social interaction of the team members to out of work hours, where members choose to socialise with each other: "A lot of us socialise together after work." The point worth considering is that the work and personal lives of the team members may not necessarily be separated. There is the possibility that the role of the team is evolving to fulfill more than work needs and is extending to other facets of team members' lives.

Non-aligned Metaphors: Metaphors Only Present In Unsuccessful Team Situations

Strain Metaphor

A strain metaphor, was assigned by the raters, to depict teams' descriptions of their sense of overload, erosion, depletion, pressure, and deterioration that feature as part of their unsuccessful team situations. From Table 3, it is clear that the strain metaphor was the most frequently occurring non-aligned metaphor in the unsuccessful team situations. The 'critical' nature of health work appears to exert substantial strain on the teams. An example of the strain metaphor is seen in an analogy that a team member makes to align their current situation with a previous experience:

> D: I used to be a bartender and there used to be loads of people. I can't remember who was first and they are all shouting these weird orders at me and I got my manager on my back to stock take and there are just loads of people…
>
> E: How often does that occur?
>
> D: Well it depends how many people come to the bar. so...
>
> E: Yeah, yeah, I like that picture…

The above excerpt also indicates how a team member is using the 'familiar'(their previous work experience) to better explain their current situation.

One team member reverts to her description of the bridge (building metaphor) and offers a variation to her imagery, to explain her thoughts (mental model), "I have got my picture of a *bridge* and now I have a *crack* in it. When the pressure is out there you start noticing the crack. You have got a *flood* on either end and the cars can't get across. And you have got that *massive crack* when you've only got, for me I think, only the stronger people go over that bridge. Only because they really are designed, they

have got these really big tyres to get across...and those weaker vehicles that don't have all the extra sort of flash tyres or whatever; they are the ones that get lost."

Systems Metaphor

Teams described the systems that operate within the organisation and the way that systems affected their functioning. The teams refer to the following systems: hierarchy, politics, personnel, paperwork, the law and the general systems that operate in the organisation. An example of the systems metaphor is "Even though we work as a team, the political situation, and management's side of how they are dealing with things are *all entwined*."

Waste Metaphor

A waste metaphor was used by teams to convey the teams' descriptions of feeling like matter that can be discarded and to convey the distasteful circumstances that teams reported. The all male team used the most expressions referring to excrement to describe their distasteful and unpleasant situations. Other examples of the waste metaphor are: "I am *discarded* as a worker because I am not a Profession X" and "We have a nice new building and *rubbish resources* within it." The raters views are that in the unsuccessful team situations, waste signifies limited utility and implies the teams' sense of being ignored or not feeling valued.

Description Metaphor - Personification

Personification refers to the attributing of human qualities or actions to inanimate object or ideas. Six teams use personification in teams' unsuccessful team situations. Personification appeared to be used by team members to depersonalise the

unpleasantness of the situation. For example, in the following excerpts, a meeting was described as being unpleasant rather than individuals who attended the meeting: "The meeting was a bit scary" and "it was totally non-supportive that meeting."

Description (Change Metaphor, Senses Metaphor, and Shapes Metaphor)

Change Metaphors

Change metaphors refer to the changes that teams described, that require team adjustments. A 'cusp' metaphor was used to describe change in the following example,"This area seems to me like its on the *cusp* of moving from a small hospital into a big hospital and we are right on the *edge* and there is a lot of stuff that we still do with a small hospital mentality which is not to say a bad thing. In fact having the General Manger walk around the ward is mad (compared to bigger hospitals) and the fact that if anyone wants to write a letter to manager B, they can. A lot of that is really good! And I think it is the community accountability that is something you feel you don't feel in a big hospital so there are things like that that I hope we never lose, but we are on the *cusp* we're as tight as we can be with all our resources in keeping to the same services but you know we can see development. We are bound to have a *restructuring* and resolve that we're going to *tip over* into a big hospital and my vision is that we do that in a way that is a good opportunity to rebuild the team or to grow it to change in a way that is going to be supportive for the team and also set ourselves up well for the next phase. Because if we carry on like we are, we'll cancel out, it won't work and we are going to *fall over* so it is that *gap* between what we want now as a cohesive group and what we are going to grow into when we are a bigger hospital ..."

The previous description is significant to the health setting as a whole because the organisation at the time of the team interviews was going through a hospital campus development and other changes. The population growth, in both geographical areas, necessitated expansion of hospital services. The above excerpt was from the only team that acknowledged that there was the presence of a General Manager (Manager B) involved in the everyday running of the organisation. The team commented on how positive it was to have the presence of Manager B.

Senses Metaphor

The raters viewed the senses metaphors as describing the 'absence of the senses' that placed team members at a disadvantage for example: "She was blind coming into the job because she did not work here before and she did not know how everything ran or worked."

Shapes Metaphor

Other shapes besides the circle are introduced by teams in the unsuccessful team situations. Lines (margins"), squares ("four walls") and angles are described.

Māori Team Metaphors and the Non-Māori Team Metaphors

The third part of the results section looks at what, if any, bicultural differences occur, as one team comprised of all Māori team members. The Māori analysis was conducted and compiled by two Māori raters . Table 4 (see next page) lists the metaphors that emerged from the Māori analysis for the successful situations and the unsuccessful situations. In examples on the C.D. on the rear cover, the raters describe these metaphors and indicate the significance of these metaphors to Māori.

Table 4: List of Maori team metaphors for successful and unsuccessful situations

METAPHORS FOR SUCCESSFUL TEAM SITUATIONS	METAPHORS FOR UNSUCCESSFUL TEAM SITUATIONS
TWO WORLDS	TWO WORLDS
WHANAU	PRESSURE
COMING BACK TO HOME/ BASE	LACK OF CLARITY
SHARING	DRAINING
THE COLLECTIVE	SEPERATION
UNITY	LOST CONTROL
LAUGHTER AND JOY	
BALANCE	
SUPPORT AND PROTECTION	
GROWTH	
RESPECT	
ROLE AND IDENTITY	
NATURE	

A comparative overview of the metaphor usage of the Māori teams and the non-Māori teams is depicted in Table 5 (see next page). Table 5 provides a brief description of metaphors from both Māori and the non-Māori teams and how they compare. This comparison is based on the researcher's and the two Māori raters' analysis and view of the data.

Table 5: Comparison of Maori metaphors and non-Maori metaphors for successful team situations

SUCCESSFUL TEAM SITUATIONS	
Non-Māori Metaphors	*Māori Metaphors*
Family(affiliation): Reference to Close family relationships and bonds. Nuclear family structures depicted	Whanau: reference to close family relationships in family and bonds, nuclear and extended family depicted, extended links with Iwi and Hapu
Identity: team identity, sense of fit, positive qualities of team	Role and identity: importance of roles "kaupapa" to Māori. Some of the roles are delineated according to custom
Emotion: happiness, joy and laughter associated with positive situations Part of team life. Social: social interaction, play and fun	Laughter and Joy: importance of social interaction and laughter as a way of life and functioning as well as coping
Travel: growth, goals, progress, adaptation	Growth and Learning: Progress, Growth through learning from others
Support: sharing, aid, camaraderie, protection, rescue, space and proximity	Sharing: way of life, distributed tasks. Support and protection
Bonding: The collective, cohesion (sense of togetherness), respect for individual contributions.	The collective: the sense of a collective identity. Bond with whanau, iwi, hapu Community feeling. Sense of togetherness.
Bonding: Unity (sense of oneness within team)	Unity: sense of being one, cohesiveness
Harmony: smoothness and balance	Balance and equality
	Two worlds: having a knowledge of two worlds (non-Māori and Māori). Two worlds in harmony with each other (understanding, partnership, working together

Comparison of Māori Metaphors and the non-Māori Metaphors for successful team situations

From Table 5, it is noticeable that the affiliation metaphor, specifically the reference to family and whanau (family), feature across both non-Māori and Māori metaphors for successful situations. An example of the whanau metaphor from the Māori team is "I look up to Team member B as a aunty." This example refers to an extended family relationship with an Aunt. The non-Maori teams refer to the extended family structures in the unsuccessful team situations, whereas the Māori team refers to the extended family structure when describing successful team situations.

Another metaphor that featured in a differing way in the non-Māori and Māori team was the home metaphor. The Māori team used the 'coming back to home/base' to refer the success of having body parts returned from another hospital and returned to the patients home based hospital, "That was the most awesome. Wasn't an easy feat getting O's legs back from Place X. Durie (1998) indicates that the return of body parts to home or the land is important to Māori. The home metaphor also refers to the land and to the wider area and the importance of being from the area "It is the knowledge of you being a local and that helps."

From Table 5, we also see the reference to identity in the successful team situations across both non-Māori and Māori teams. The Māori team refers specifically to their designated roles "Kaupapa", which is not necessarily assigned because of professional capacity. Kaupapa is described by the Māori raters as being inherent in the

Māori team members' cultural responsibility to the community. An example of the identity metaphor is "Kaupapa (roles we fulfil)" and "Part of my job is my culture."

From Table 5, it is noted that happiness and laughter (emotion metaphor, laughter and joy metaphor) is common in both non-Māori and Māori teams. An example of the happiness and laughter metaphor in the Māori team is "We always have a laugh, that is the whole team." The growth and progress metaphor in the Māori team is similar to the use of a travel metaphor in the non-Māori team. An example of the Growth and progress is "A huge journey took place." The growth metaphor used by Māori team also refers to the spreading of positive feelings "Good feeling... rubs off and grows"

The metaphor bonding and unity feature across both non-Māori and Māori teams' descriptions of successful team situations. An example of unity as used by Māori team is "Ki wáhi ka mahi tahi tatou. Kaor wehe" (We are not separated, we are united). The bonds between the Māori team members are also described by " Ana he mahi tiima ke tena- "we ...stick together."

From Table 5, the sense of the *collective* is depicted slightly differently in the non-Māori and Māori metaphors. The collective (bonding metaphor) in the non- Māori teams also encompasses the contribution of individual and the maintaining of the individual's identity in the group. In the Māori teams descriptions, the collective refers to the community, the larger groupings (link to whanau, hapu, iwi). Non- Māori team members also referred to a sense of community (as depicted in the Affiliations metaphor). An example of the collective metaphor used by the Māori team is " Ka

korero a e he whanau kotahi tatou...Na mahi ka oti..." (We are all one group...to complete the work together)

The support and caring in the non-Māori team is also described in the Māori team. An example of the support and protection metaphor in the Māori team is "Tino awhi tera" (support each other). The team members also describe the sharing that is present in the team. For example "What we call kuti kuti korero which means that one always bounces from here to there, and we share ideas" The nature metaphor also features across both Māori and non-Māori teams. An example of a nature metaphor is "Ka amu amu mai etahi" (some growl but work still gets done).

A sense of balance in team life (harmony metaphor) in non-Māori teams, is also depicted in the Māori team. An example of the balance metaphor used in the Māori team is "We are all seen as equal." The Māori team also refers to a sense of balance in a way that is especially applicable to Māori. Māori team members refer to the sense of harmony, as it applies to the concept of the Two worlds (non-Māori and Māori worlds) existing in harmony (partnership, working together). Examples of the two worlds metaphor as use by Māori team members are "Accessing ourselves in the taha maori pehea te taha pakeha. Actual fact we should be part of Ao e rua." (walking/working in both worlds) and " I roto I nga ao ereua" (brought up/ grew up in both worlds).The two world metaphor was only used by the Māori team but not by the non-Māori team.

Comparison of Māori Metaphors and the Non- Māori Metaphors for Unsuccessful Team Situations

The Māori sub-analysis also included an analysis of metaphors generated by Māori team members, during the unsuccessful team situations. Table 6 (below), provides a comparison of non-Māori and Māori metaphors across unsuccessful team performance.

Table 6: Comparison of Maori and non-Maori metaphors for unsuccessful team situations

Unsuccessful Team Situations	
Non-Māori Metaphors	Māori Metaphors
Disorder: disordered states, entangled, messy, upset order and waste	Lack of clarity: messy, "rubbish"
Disorder: lost control (out of hand, slips)	Lost control: different types of knowledge; academic and global knowledge at the expense of local knowledge, can create uncertainties. Lost control of situations
Division: fragmentation and splitting.	Separation: need to make others who are on the 'other side'(outsiders to the area) feel more welcome and more included
Division: gaps(indicating a sense of separation between teams in the organisation	
Strain: depletion and erosion	Draining: of energy, time and skills
Strain: pressure to get more done, fast paced work, imagery of force (heat, speed)	Pressure: demands of other work roles. Sense of haste to speed up work
Conflict: discord and differences (abuse and assault, deception, distancing, fights)	Two worlds- different views and approaches. Between Māori and non-Māori and between those working with Māori and those who do not work with Māori. Lack ofunderstanding, misunderstanding that can occur, clash in views

From Table 6, both Māori and non-Māori teams mention the presence of lost control, separation, strain, and conflict. The Māori team members however present a different perspective on the presence of these metaphors. For instance, lost control in the Māori context is seen in the lack of respect for local Māori input and knowledge. An example of a lost control metaphor from the Māori team is "Me he awangawanga puta mai" (in the midst of uncertainty, we rely on what we know)

The separation that occurs in Māori teams is described as not attributed to within the team differences, but is seen in how the team is on a different side from those with academic knowledge, and to visitors to the region. An example is "Nga whanau a tera taha e watea ana haera ki te awina" (on the other side are people who need to be made to feel comfortable and be shown hospitality). The team members' attribute the pressure that exists in both Māori and non-Māori teams to a sense of haste. The haste described by Māori, pertains to the haste that prevents the adherence to protocol and working through a process. An example is "Ka aki aki mai" (then hurry up now).

The draining metaphor in the Māori team is similar to the Strain metaphor in the non-Māori team. An example is "Emptying of energy." The Māori team members also refer to their "*loss*" of time and skills. The lack of clarity metaphor in the Māori team is similar to the Waste metaphor in the non-Māori team. Examples of the lack of clarity metaphor in the Māori team are "Messy" and "All the rubbish of rules."

The *conflict* metaphor is evident across both Māori and non-Māori teams. The described nature and reasons for the struggles are different across Māori and non-Māori teams. Conflict in the non-Māori teams is predominantly the physical struggles between

people whilst struggles in the Māori team are about the dispute that exists between two world views (Māori and non-Māori). In the successful situations the two world metaphor symbolised balance and harmony but in the unsuccessful situations the worlds do not work well together but clash in their views. An example of the two-world metaphor in the unsuccessful situations is "Tau patu patu" (clash between different points of view).

The Māori raters indicate that the above comment signifies standing your ground and the battle to get power and authority. The "patu" which is a warfare weapon is used to symbolise the conflict. Other examples are: Te tahi taha (on one side, the opposite side) and "Mohio ratou engari etahi o ratou...kaki maro" (Some are knowledgeable, some do not listen - hard necked).

For further examples of metaphors used by Māori team members and excerpts from the transcripts, please refer to the compact disk, provided on the rear cover.

Expectations

Using the metaphors as contained in Table 3 and Table 4, as reference points, the results proceed to relate the content of the metaphors to the expectations of results that have been outlined in the Introduction.

Expectation 1: Attribution biases versus Team think perspective

Attribution biases and group effacement bias

Expectation 1 was that when explaining failure, metaphors would be group serving except when the team is predominantly Māori. From Table 3, there was evidence of attribution biases among the non- Māori teams. In non-Māori teams' descriptions of success in the recognition metaphor (Table 3), teams that were successful, took credit for and recognised their team successes. Teams utilised a height metaphor to indicate their success, accomplishment and their increased confidence. An example of a team's use of a height metaphor to describe their achievements was "I see us being on *top of the mountain* and being *conquerous* [*sic*]." The word 'conquerous' connotes self-attributions of effort, drive and competence. The team using this example also reported that the success of reaching the 'top of the mountain' was as a result of the team's efforts. Metaphor usage was noted to be consistent with the presence of group–serving biases in teams.

Teams also externalised blame for failures. For example, personification (see description metaphor, Table 3) was used by six teams during unsuccessful situations to externalise blame. In the following excerpts, the computer and the system is being blamed for 'failure,' "That's not our fault that's the *computer's fault*" and "When the *system fails us*." By blaming the systems (see Table 3, systems metaphor), the teams did not have to take responsibility for failures or for the lack of progress. The researcher noted that in keeping with the ultimate attribution error, teams took credit for their team successes. The teams did not, as per the ultimate attribution error, make assertions as to

why other teams were successful; or imply that assistance was given to other teams to facilitate their success.

In direct contrast, the Māori team was expected to display a humility bias. A team member, referred to a Māori proverb: "kare te kumara e korero mo tona eka" (a kumara does not speak of its own sweetness), to indicate the importance of humility to Māori in executing their roles, especially in times of success. Four other Māori team members indicated that their team performed well because of the input of the community and support from others. Success was indicated as being an indication of community efforts. These examples are in keeping with the presence of a modesty bias in Māori. The Māori raters indicated that their impression of the data was that whilst the Māori team members appeared to downplay their successes, there was no clear indication in the metaphor usage that the Māori team members chose to take more responsibility for their failures.

The researcher noted that in success and failure, non- Māori team metaphors changed to accommodate the attribution biases that were identified in the introduction. Metaphors expanded to accommodate external sources for failure or shrank to take credit for success (i.e., metaphors became more nuclear, insular). For example, in the affiliations metaphor, a nuclear family structure is described during team success whereas an extended family structure is described during team failure. The teams' nuclear descriptions points to the teams tendency to keep successes closer to the team unit whilst distancing themselves from failure by using an extended or distant family relationship structure during unsuccessful team performance.

The changing form of metaphors during success and failure is also noted in the circles metaphor (description metaphor). Teams utilise smaller circles to describe team successes for instance "tight circle" or a "a ring." Larger circles were used to refer to unsuccessful team performances, for instance, "loops" and "snowball effect." The use of larger circles during unsuccessful team performances points to teams distancing themselves from failures.

Personification (see Table 3), was used by team members to distance the team from the association with failure. An example of personification is "This *ward* is getting a [negative] [*sic*] reputation amongst the house surgeons." This example illustrates how a team, refers to their physical work environment (ward), rather than referring to the actual team members that work in the ward, that have a negative reputation.

Group Attribution Theory

An expectation as generated by group attribution theory was that there would be the presence of in-group and out-group differences in teams. The teams' metaphor usage signals the presence of in-group and out-group differences in teams. In the unsuccessful situations, for example, teams used a conflict metaphor (see Table 3) to describe between team conflict situations. Teams also describe their protectiveness of the in-group. For instance, "I think we are quite defensive in our team, though we are allowed to tear each other to bits, but nobody else is allowed to." In the conflict metaphor, there are references made to the out-group (other teams and management), who are described by the team members through using adversarial terms; or who are viewed as the outsiders or the enemy. An example is "adversaries, we view that department as the common enemy" and "the interaction with other teams, I suppose it is

very hostile and unsupportive." These descriptions of in-group and out-group differences support the presence of a group attribution bias in a team context.

There is also the presence of the Ultimate Attribution Error in teams' metaphor usage as teams created a sense of 'us' to denote the in-group and 'them' to denote the out-group. From Table 3, the division metaphor (unsuccessful team situations), highlighted the in-group and out-group differentiation in teams as evident in team members' descriptions of "cliques." An example of cliques is "you have your own *little niche* and perhaps this *divisionlism [sic] is wired,* as I never think of them as being members of our team." The circle metaphors also allude to a group attribution theory view of in-group represented as smaller circles and the more distant out-group formations represented by larger circles. Teams' references to hugs and a circular "embrace" convey a tendency of the team towards keeping the team insular. In the systems metaphor, there is also the presence of in-group and out-group differences that are described in "I guess there is the wider teams that we are working in as well, not as much communication there and where the *systems don't mix so well* and that gets really frustrating because it slows you down and stops you working as well as you should." An example of the order metaphor that makes a comparison with an out-group is: "We don't have much to clean. You don't know of us having to clean here as opposed to other teams." The above mentioned examples emphasise in-group and out-group differentiation which is consistent with group attribution biases in teams.

Team Think

Despite Expectation 1 that performance will be group serving, there was an indication of teams engaging in self criticism in positive situations. An example from

the bonding metaphor, is by a team member who clarifies how s/he feels team cohesiveness should work in a team, "I was thinking that it is not just conformity, it is proper cohesiveness, and you can actually be like glue that can stretch and come back into shape." This team member described the need for the team to extend and challenge themselves during success and their comments on being able to pull away from the team is in keeping with a team think view of the need to respect differing and individual viewpoints.

Another example is of a team engaging in self criticism during successful performance is when a team member comments on the ability of the team to challenge the system of working or to question the status quo. Other team members agreed with this comment that reflects a travel metaphor, "I think people are prepared to *rock the boat* here..." The ability to question the team actions is in support of a team think perspective.

Expectation 2: Motivation theory

The second expectation was that metaphor usage would differ in teams' descriptions of their successful (motivating) versus their unsuccessful (de-motivating) team situations. It was expected that during successful team situations, metaphors will describe more team qualities and team dynamics, as compared to unsuccessful team situations, where metaphors will feature more external factors. The systems metaphor (see Table 3), displayed the strongest support for Expectation 2, as the systems metaphor only featured in the unsuccessful team situations and the systems metaphors described only external factors as being de-motivating. Teams also externalised blame to external sources when failures or the lack of progress occurred. An example of this is

"I think we have exhausted everything we can do, we have tried. And maybe it is the layout of the department; there is nothing physically more that we can do. We have shifted beds, we know the pressure is going to go on as this town is growing like a mushroom, so it is not going to get any less, it is going to get a hellava lot more. And how do we cope with the next stage? That is the worry. It is *not us*, it is the *pressure from the outside or beyond our control.*" The descriptions of strain are predominantly on external pressures and factors, which is also in keeping with Expectation 2 that external factors will feature in de-motivating team experiences.

The examples from identity metaphors however, in the unsuccessful team performance situations, highlights that metaphors usage has considered both within team deficits (elitism) and external factors, as being responsible for team discontent. Within team conflicts (bullying, backstabbing) were also described by teams as being a source of team dissatisfaction. The consideration of both internal and external factors for teams' failure is contrary to Expectation 2 and motivational theory that states that only external factors will feature as a contributory factor, in the unsuccessful team situations (Herzberg et al., 1959).

Expectation 3 Occupation Differences

It was expected that different occupational teams or professional teams will use metaphors similar to their area of expertise and their experiences. The researcher found evidence of occupational differences in metaphor usage. An example is of a middle management team that indicated that they function with a higher degree of autonomy than other work teams. This team was the only team that made references to an independent journey. A team member described this journey, "You can move in that

direction yourself rather than the change being forced upon you so you've got ownership as to how you move on and that's really important." The reference to an independent journey is applicable to this team because their middle management positions have afforded them greater autonomy. This example supports the view that the type of metaphor usage will resemble the type of work that the occupational team is engaged in.

The emotion metaphor also provides an illustration of how metaphor usage will differ in different occupational teams. The distress metaphor was a more prominent feature of inpatient teams, who had a minimum of three or more incidents of recall of distress metaphors. The highest recall of the distress metaphor was in Team 9 (an inpatient team). The only community team that mentioned a distress metaphor did so in the context of recalling a confusing, and difficult situation rather than the situations recalled by inpatient teams that involved feelings of grief and sadness. The higher frequency of distress metaphor in the inpatient teams could be an indication and an alert to the heightened stress conditions being experienced by the inpatient teams.

The commerce metaphor was predominantly used by a Team 8 (see Table 1) in the successful team situations. Team 8 reported working predominantly with numbers and product delivery. The teams' use of a commerce metaphor is in keeping with what was familiar and applicable to this team.

The system metaphor also indicates support for Expectation 3, as there are occupational differences in the use of systems metaphors. Issues with paperwork and the legal systems, was predominantly an issue for Team 6 and not for the other teams.

Team 6 indicated working in an environment where legal accountability is part of their work role and keeping well-documented paper trail is part of this responsibility; to avoid legal ramifications. An example from Team 6 is "It is a *paper war*... The paperwork is *like a vine*. I think there could be a better paperwork system."

Expectation 4: Tall poppy syndrome

Expectation 4: The tall poppy syndrome is expected to feature in a New Zealand team context in unsuccessful team situations, except in the case of New Zealand Māori, who will utilise metaphor depicting more communal advancement. The conflict metaphor reveals descriptions of the tall poppy syndrome (Feather, 1989). The reference to the tall poppy phenomenon is seen in the several references made to "backstabbing" and "betrayal." The tall poppy phenomenon is also evident in the descriptions of team "bullying" and a description by a team member that " Someone is going to cut you down." These descriptions are examples of team members bringing about the *downfall* of each other.

The recognition metaphor that features the use of a height metaphor offers an alternative perspective to the tall poppy syndrome (Expectation 4). As opposed to discouraging fellow team members and pulling them *down*, team members are seen to encourage each other and *uplift* each other. Examples of this are: "Just when you think it is a waste of time, and you are gonna get a headache, someone *pulls you up* and says look at what you have done, and achieved." Another example is "That person inspired us and we were *up 5 inches.*" The pull-up and push-up actions described by team members in these examples are opposed to push down and pull down actions of team members when the tall poppy syndrome is evident. These descriptions of push down

and pull down as well as pull-up and push-up actions are in keeping with a Motivational Gravity metaphor as used by Carr & MacLachlan (1997).

Discussion

The discussion highlights some of the key findings of this study and then proceeds to consider the findings in light of the literature review as outlined in the Introduction. The limitations and the implications of the study are also discussed.

Key Findings

Metaphors as a Window to Team Mental Models

A purpose of this study was to use metaphor as a window to more implicit processes of teams. The metaphors that teams used have cast light on the way team members think about their teams (i.e., their Team Mental Models). Metaphors illuminated what teams thought served as the antecedents to their effectiveness (Druskat & Kayes, 1999), namely cohesiveness, positive affiliations, sense of identity, resourcefulness, synchrony (co-ordination), past achievement, self esteem maintenance, team support, opportunities for growth and development, recognition, and regard. Metaphors assisted in identifying what teams perceived as sources of dysfunction, namely poor relations, team identity issues, poor co-ordination, communication difficulties and systems difficulties. A picture was also gained of teams' views on the consequences of dysfunctional team functioning namely disorder, conflict, strain, and team unhappiness. The teams, through metaphors, have tried to paint pictures of how the health teams work together during situations of success and failure. Although metaphor may not be the perfect window that can truly capture all of what happens in a team, the metaphors have provided access and glimpses into the world of teams. Metaphors have served as a useful indicator of what goes go on in team life.

Metaphors Across Performance Levels

The study was interested in examining the patterns of metaphor usage by teams to assess if metaphors vary with performance levels. The results indicate that team performance is reflected in differing metaphors for success and failure. Metaphors that were similar across situations of team success and failure, changed their properties to portray different characteristics in situations of success and failure. A team that has the properties of a nuclear family with close affiliations became more distanced from each other in periods of poor team performance (as is reflected in extended family metaphor). Adaptive family relations became maladaptive and dysfunctional. Feelings of happiness and joy became feelings of grief and loss. The teams moved across a metaphor's continuum of differing properties, depending on whether they are successful or unsuccessful. Some core qualities (e.g., teams' affiliative qualities) and states (team emotion), as depicted by teams' metaphors usage, transversed effective and ineffective performance. The differing properties of the metaphors used across successful and unsuccessful situations means that the characteristics of the metaphor as well as the team characteristics changed during effective and ineffective team performance.

The results indicate that some metaphors varied to the extent that they were opposing (antonymic). The antonymic metaphors reflect team experiences that tip in favour of order, harmony, and support during effective team performance and tips in favour of disorder, imbalance and conflict during ineffective team performances. Teams' usage of antonymic metaphors emphasises the differences in their experiences of success versus failure. The antonymic metaphors point to the functional team conditions during success namely support, bonding, order, building, and harmony,

versus the dysfunctional team conditions namely conflict, division, disorder, constraint, and imbalance, during unsuccessful team situations.

Occupational differences

The results revealed that metaphors also varied across occupational groups. Occupational teams were found to use metaphors that were associated with their professional and occupational groupings. This finding was expected and in keeping with the definition of metaphor which is the expressing the unfamiliar in terms of the familiar (Inkson, 2004). There is also a pragmatic application to this finding. If occupational teams are using metaphors particular to them then metaphors used in team interventions (training, vision formulation, and goal setting), need to be appropriate to the occupational or professional of the team using them. A team that works very therapeutically is not likely to respond to administration metaphors unless they identify specifically with administration tasks. A therapeutic team is more likely to respond to travel metaphors that reflect progress and growth as associated with counselling.

Bi-cultural Analysis

The bi-cultural analysis indicated that some metaphor usage was similar and similarly used across Māori and Non- Māori teams (e.g., emotions, support, travel, and growth metaphors). The Māori raters indicated that although there were metaphors that appeared to be similar across Māori and Non-Māori teams, the specific way that the metaphors applied to the Māori teams was different from how the metaphors applied to Non-Maori team contexts. For instance, the teams' views of the collective and family differed in the Māori and Non-Māori teams. Māori included the extended family in their descriptions of successful team situations and the Non- Māori team described the

extended family as being an indication of unsuccessful team situations. The collective in Māori teams focused on a single entity whereas the Non- Māori teams described the contributions of the individuals who made up the collective. There were cultural variations in how certain metaphors appeared across Māori and Non- Māori teams. According to the Māori raters, Māori's emphasis on the extended family and the communal entity reflects Māori's sense of value on their collective interests (Hui & Triandis, 1986).

There was metaphor usage that was only applicable to Māori. Only the Māori team used a 'Two worlds' metaphor, which they indicated was significant to them. The two worlds metaphor described the Māori and Non- Māori worlds and their partnership and harmony or the conflict of the two world views. The two worlds metaphor was described by the Māori raters as mirroring the principles of the Treaty of Waitangi and specifically the principle of partnership between Māori and Non-Māori. The raters also interpreted the Māori team's metaphor of "Lost control", as reflecting the need for Tino Rangatiratanga (Māori self determination). The Māori raters' analysis points to the historical and cultural significance of the 'Two worlds' metaphor and the 'Lost control' metaphor to Māori.

Attribution versus Team Think

The results indicate that there were several references to attribution biases in teams' metaphor usage. In success and failure metaphors changed their shape to accommodate the attribution biases that were identified in the introduction. Metaphors expanded to accommodate external sources for failure or shrank to take credit for success (i.e., metaphors became more nuclear and insular). Metaphor usage also

indicated that teams became self-serving when they failed. The attribution biases served as team defenses enabling the team to deal with threat and embarrassment (Argyris, 1999). When attributing blame to external sources, teams were engaging in what Argyris (1999) refers to as single loop learning. Single loop learning occurs when teams discover a problem and then quickly find a reason for the problem. For instance in this study's results, teams blamed the systems for their failure (hierarchy, politics, personnel shortage, paperwork and legislation)

Cognition in the teams however, was not only self serving. For example, during descriptions of team success, team members still questioned their credit. There were incidents where individual team member chose to challenge their fellow team members during the teams' descriptions of success, so as to discourage complacency and encourage growth in the team. Situations of team failure were also examined and questioned as to how teams could respond differently and improve. Therefore it would not be possible to state that only attribution biases were present in teams. Teams were able to challenge each other to extend themselves and they were engaged in what Argyris (1999), refers to 'double loop' learning whereby the underlying issues are addressed. Argyris' concept of double loop learning is akin to what teams engage in when they are in team think mode that is questioning their interaction and performance. The presence of team think and incidents of double loop learning points to attribution biases being only a part of the picture of how teams attribute success and failure. Teams did engage in self-reflection and learning when they were successful and self- criticisms when they were unsuccessful.

Findings and link with theory

Team Mental Models

The theory on Team Mental Model was the first area of research addressed in the Introduction of this thesis. The use of metaphors in this study has assisted in examining the Team Mental Models that exist in the teams that were studied. Metaphors provided a conceptual understanding of teams' teamwork schema by the predominant descriptions used by teams to describe themselves and their teamwork. Team descriptions captured some of the teams' tacit knowledge surrounding the teams' communication, affect, support and bonding. This study has also indicated that Team Mental Models changed across performance and was not static. The non-stagnant nature of Team Mental Models means that they are transformable, flexible, and receptive to change. Therefore, initiatives aimed at changing Team Mental Model to enhance performance, holds promise and possibilities for success.

Research on Metaphor and Team Mental Models

The Gibson and Zellmer-Bruhn (2001) study included five teamwork metaphors (family, military, community, sports, and associates). The present study has extended Gibson and Zellmer-Bruhn's list of teamwork metaphors and has shown variations that can occur in metaphors during success and non-success. For instance, Gibson and Zellmer-Bruhn's family metaphor varied from being a nuclear, functional family structure during success to being an extended, dysfunctional family structure during team failures.

Gibson and Zellmer-Bruhn (2001) study included use of military metaphor which incorporated war metaphors. In the current study military and war metaphors

were classified into sub-metaphors, as there was a slight differentiation in how the respondents used military and war terms. Respondents used military metaphors when they referred to the discipline of the personnel and the practice of defence, whilst war metaphors were used to reflect instigatory actions and battle terminology. The differences in the use of the military metaphor points to the possibly differing stances (military and defensive or forceful and instigatory) and differing actions (protect; defend or attack) taken by the team during difficult and conflict situations. The subtle differences in team metaphor usage between the Gibson and Zellmer-Bruhn study and the current study, points to possible contextual variations in use of metaphors.

The current study has enhanced the findings of the Gibson and Zellmer-Bruhn (2001) study; by showing the metaphors are flexible across successful and unsuccessful team situations. The current study points to the variable quality of metaphors used in teams rather than the notion that team metaphors are fixed. Teams are dynamic and are likely to utilise a range of metaphors to describe their dynamic nature. The current study also points to the occupational differences in metaphor usage within a single organisation and national context (New Zealand) whereas the Gibson and Zellmer-Bruhn study focus was on ecological metaphors and did not capture occupational differences. The current study has also contributed to the research on metaphors in teams by showing that metaphors are flexible within a country, across occupational groupings, and across success and failure. The present study has contributed to research on teamwork metaphors by extended the list of teamwork metaphors used by teams.

Metaphor and Culture

There was a strong possibility that the Gibson and Zellmer-Bruhn (2001) sports metaphor, could have featured strongly in the current New Zealand study in view of strong emphasis on sport in New Zealand (Riley, 2000). The sports metaphor however, was not as prominent as it was in the Gibson and Zellmer-Bruhn study (2001). Sports may feature as a predominant national metaphor in New Zealand (Riley, 2000) but it did not feature as a prominent organisational metaphor in this study. This points to the possibility of differing national and organisational metaphors being used in New Zealand. Another possible explanation is that the context of health, with its altruistic focus, may not be as competitive as other organisational settings where more competitive sporting metaphors may be applicable and more widely used. An area of future research could focus on the possible differences between organisational and national metaphors.

Metaphor and Health Teams

The current study has contributed to the research on metaphors and health by looking at multidisciplinary teams and their metaphor usage. This study has examined the differing ways that health staff conceptualise successful and unsuccessful critical incidents and how the team's metaphors change to accommodate these differing experiences. The study has also shown that health professionals use metaphors that are common and significant to them, namely health metaphors. Besides the health metaphor, there were also other metaphors that were significant to a health context and that have links with the historical changes within the health sector.

Health Context and Metaphors

The current study points to how changes in the New Zealand Health system are reflected in the metaphors used by teams. The commerce metaphor was used by most teams and this points to the increasing business focus adopted by health settings (Cypher, 1997). The commerce metaphor is significant in view of changes in health funding from 1989, when Health boards had to draw up strategic and business plans for all their services and had to meet national health goals and targets (Ashton, 1995). Area health boards had to function in a more business like fashion. The teams' reference to rubbish resources (waste metaphor) also points to historical factors namely the budget constraints that affected health and resulted in "aging equipment and poor maintenance" (Ashton, 1995, p.86).

The strain metaphor was a prominent metaphor used by health teams to describe unsuccessful team situations. The strain metaphor is understandable, in view of the contextual demands being placed on health services and staff. There are increasing demands placed on health care to meet the needs of an increasing population where health care resources are insufficient to meet the health needs of the population (Cordery, 1995). Further strain is placed on health by the lack of sufficient health staff and the movement of health staff to overseas locations (Wilson, 2001). Another influence of the shortage of health staff in New Zealand has meant that more international staff have been recruited which has resulted in a culturally diverse staff complement. The changes of a diverse staff complement are seen in the Medley theme, which describes the impact of differing contributions to health. The above illustrations on health context and the metaphors used, illustrates how metaphor usage reflects the

changes in health care needs and health funding and the associated impact of these changes on health staff.

Tall Poppy Syndrome

Teams' descriptions of backstabbing and betrayal reflect the presence of the tall poppy syndrome in teams. These actions constitute a 'pulling down' of fellow team members. There was however, teams' use of a 'height' metaphor that offered an alternate team action of 'pulling up' fellow team members. The results indicate that team behaviour includes both inhibiting team actions during times of failure and encouraging team actions in periods of success. These descriptions of both 'push down' and 'pull up' actions are in keeping with a motivational gravity metaphor as used by Carr & MachLachlan (1999), where staff are described as engaging in both inhibiting (negative motivational gravity) and encouraging behaviours towards each other (positive motivational gravity). The Māori raters however, did not report a presence of the tall poppy syndrome in the metaphors used by the Māori team. This finding is in keeping with the expectation that the tall poppy syndrome would not feature as a metaphor in the Māori team because of Māori's collectivist culture. Māori raters reported that the Māori team mentioned metaphors on community advancement. Community advancement was described by these team members as working to pursue collective interests, having a collective identity and representing an entire community. This finding is in keeping with Harrington and Liu (2002) study that indicates that Māori have a strong collective orientation. The results did not report the Māori team actively encouraged the advancement of the 'tall poppy' or high achiever, as was also depicted in the Harrington and Liu study.

Critical incidents

Another area of theoretical review was on the use of critical incidents technique. The current study has shown that health teams have differing mental models surrounding their successful versus their unsuccessful situations. The current study has employed a motivational interviewing technique (Miller & Rollnick, 1991), which offers an alternative to the critical incidents technique of labelling incidents as successful or unsuccessful. The utilised motivational interviewing technique was considered more appropriate in health settings because of the sensitive nature of the work. Health staff work in settings that involve life or death scenarios and trauma related incidents and the cost of failing is quite high. Due to the sensitive nature of the work, there is an ethical consideration of not wanting to label a situation as having been a failure. The motivational interviewing technique also had the added advantage of avoiding a researcher imposed sense of dichotomy between success and failure.

Motivational Theory

The current study illustrates that what serves as motivators and hygiene factors vary in a team context as well. Whilst the teams identify external factors, namely systems as being a source of dissatisfaction, the teams have also indicated dissatisfaction with the interpersonal and professional conflicts within the team (conflict metaphors, elitism metaphors, cliques metaphor) and inefficiency that has resulted from the teams actions (lack of team co-operation). Whilst the references to systems points to teams blaming external factors, the references made to internal dynamics of the team as being forms of dissatisfaction, belie the view that only external factors are responsible for team discontent. The current study is consistent with more recent research on Herzberg's (1966) theory by Knoop and Brock (1994) and Maidani (1999), that

indicated that what served as motivators and hygiene factors varied in different contexts.

Unexpected Findings

Emotion in teams

The results have also revealed some unexpected findings. One unexpected finding was the strong indication of social affect in teams. Teams appeared to be unable to report on their successes and failures without describing the emotions associated with these experiences. This study has identified a strong emotional content (happiness, joy, grief and sadness) to team experiences. The expressed emotions form part of the Teams' Mental Models of their experiences. By revealing their emotions through metaphors, teams have made explicit that which is implicit, that is the teams have expresses their innermost feelings.

When reflecting on situations, teams described their thoughts (cognition), emotions (affect) and actions (behaviour). Previous research in organisational psychology has focused on the cognition-behaviour link whilst neglecting the influence of affect (Kanfer & Klimoski, 2002). Clinical and counseling psychology is an area of psychology that has included emotions into the cognition and behaviour equation. A Rational Emotive Behavioural approach was developed in the 1950's by Albert Ellis and included the analysis of the interaction of emotion with cognition and behaviour (Ellis, 1999). Ellis also developed a Rational Emotive Behaviour Therapy approach to coping with stress. As in counselling psychology, the examination of the emotion in a team context can also have practical applications, as the emotions expressed by the team can be an indication of the areas of teams' contentment and dissatisfaction. The areas of

discontent can point to potential areas of team development, for instance the possible need for debriefing and trauma counselling for teams experiencing high distress. Team stress management packages can take into account the current levels of distress in teams by examining team emotions. As in counselling psychology, perhaps the way forward for organisational psychology, is to further explore the interactive relationship between a team's thoughts, emotions and behaviour (Barsade & Gibson, 1998).

Identity

Another unexpected area of theory, which has emerged from the results of this study, surrounds the teams' utility of an identity metaphor. Teams have indicated the importance of identity to them. It would appear that these teams have attempted to identify themselves and to carve a mould of themselves that distinguishes their team from other teams. This attempt by the teams is in keeping with Social Identity theory (Tajfel, 1978), where teams will attempt to classify themselves according to certain characteristics. The use of metaphor is a means of the team delineating the characteristics that distinguish them and that serve to identity them as a distinct unit. An over-identification with a team however has the potential to be dysfunctional to the team if the team membership becomes too insular and results in possible attribution biases against out-groups. Social identity however can also enhance Team Mental Models by increasing motivation, commitment and adherence to team goals and the collective performance of the team can be improved (van Knippenberg & Ellemers, 2003). The examination of team social identity therefore holds potential for understanding both effective and ineffective team performance.

The Individual or the Group?

Whilst Attribution theory focuses on the individual or the groups' interest and identity, team think theory focuses on encouraging the individual input to avoid Groupthink. These two theories offer either an individual or group focus of enquiry. In this study, the metaphors used by health teams offer another component that is overlooked by these theories. In the teams' descriptions of cohesion, they talk about a mesh, where individual units come together to form a network; a mesh. Each unit holds onto its individual identity whilst at the same time creating an additional identity as a whole. The mesh exists whilst holding onto both its properties and identities (i.e., as a collection of individual components and as a whole identity, the entire net). The imagery of the net points to the option of addressing both components of a team; both as a group of contributing individuals and as a whole unit. The metaphor of interlinking Olympic circles also promotes the idea of a network that exists whilst still being able to maintain and sustain its individual identity. The metaphor of the collective as used by the non-Maori teams, also describes a gathering of individuals whereby the collection serves individual purposes, whilst the unit is still able to maintain a group identity and link. Theory perhaps needs to consider an approach that embraces both aspects of teams that is as individuals and as a collective.

Limitations

A limitation of the current study is that the respondents all worked in health setting and the findings are not easily generalised to other work teams working in situations outside of health. The Gibson and Zellmer-Bruhn (2001) study was conducted in pharmaceutical companies which also has a health related component to the work. An area for future research could be the examination of the metaphors used by teams in

different settings and locations across New Zealand. Despite its single setting limitation, the current study's use of existing work teams in health, does offer more possibilities for generalising to other health work teams than if the work teams were simulated and teams did not actually work together.

The use of self-report may be considered a limitation, as the respondents in the study were not engaged in objective reporting. The objective of the study however, was to consider the perceptions of teams and their subjective reality. Therefore the respondents' self report data was the focus of the study. Further, the respondents' self report data provided valuable information on their attribution biases in situations.

Implications of the Research

The current study has offered a team forum for teams to discuss their success and non-success. All the teams interviewed, indicated that their self reflections, were valuable in providing insights into their team functioning. The consideration of success and failure also opened the opportunity for teams to consider their defences in a public discussion. As Argyris (1999), indicates the examining of team defences in a public (team) forum, can encourage new learning and double loop learning in organisations. The examination of what works, allows for the fostering of these beneficial aspects of team performance. Team deficits can also be identified and the team can explore ways of addressing these deficits, for instance opportunities for training can be recognised. If training is designed, then training packages can include the use of metaphors that are applicable to a specific occupation or professional grouping instead of the metaphors being selected randomly and arbitrarily. The examination of team metaphors can serve as an important assessment and intervention tool to enhance team functioning.

Conclusion

In summary, the present study has provided insights into team functioning during success and failure. The study has revealed that teams conceptualise their successful and unsuccessful performance in varying ways. The study has also indicated that attribution theory is only a small part of what goes on in teams and the motivation factors in teams, do vary. It has been noted that teams are capable of engaging in both attribution biases and team think.

Teams do not exist in vacuums. This study has highlighted the need to consider historical, cultural and current context when examining metaphors and the meanings that are used by teams. Team mental models exploring contextual factors can provide further insight into team functioning. The current study has revealed a rich array of metaphors used by teams. Any study examining teams need to consider that that like the teams the metaphors describe, the teams' metaphor usage is likely to be just as dynamic.

The study also holds out a challenge for future research to consider the contributions of both the individual team member and the team as a whole. Both the individual and team dynamics enhance team functioning and research and practice need to embrace both components of team functioning. Further, situations need not be wholly successful or unsuccessful and all team experiences can provide opportunities for learning and growth.

The teams through their descriptions and their metaphor usage have afforded an opportunity to have a glimpse into their world. Teams through their metaphor usage have painted pictures of themselves, and each picture tells a story. Like any story, the

teams' stories have been best recounted by the people experiencing it, the team themselves. Metaphors have been valuable in assisting teams to paint their pictures and to tell their stories. Metaphors have therefore proved to be a valuable aid to providing a window into the world of teams, an eye into the world of a team.

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Appendix A
Information sheet

PROJECT TITLE: AN ANALYSIS OF TEAM METAPHORS USED IN A HEALTH SETTING.

INFORMATION SHEET

Date :

You are invited to take part in a research project. You have the next 4-6 weeks to consider whether to take part. It is your right to choose not to take part. Participation is entirely voluntary.

Who is doing the Research?

My name is Vino (Vinodhini) Ramkissoon and I am currently a Masters student at Massey University (Albany Campus). This year I am conducting a research in preparation for writing my thesis. My address is…..... My telephone number is ..... My e-mail address is [redacted]

Project Title: An analysis of team metaphors used in a health setting.

What is the Research about?

The research project focuses on teams' functioning within a health setting. The project explores the teams' views and their shared understanding of situations where the team felt that they worked well together and the situations where the teams felt that they were less effective. The aim of the research is to attempt to improve the quality of the working life of the team.

Who are the participants of the study?

Participants will be approximately 6-10 team members from approximately 4-10 teams, operating within XX Health. Teams, which have been functioning together for at least six months, are being approached. XX Health has consented to participants being given the time off work to take part in the study. The CEO, Mr. Z. has given permission for this study to be carried out. No teams are excluded from the selection. No group member is excluded from selection. The maximum of ten members per group has been selected to allow for greater group interaction.

How will the participants be recruited?

Teams are being approached via the intranet, notices, noticeboards and the XX Health Newsletter. Interested teams can forward their indication of interest to participate, to the Human Resource Manager. The Human Resource Manager will sign and be bound by a confidentiality agreement in order to protect the identity of the participants that are involved in the study. In the instance of there being more than 10 interested teams then the required number of teams will be randomly selected from this list. This will be done by the researcher using a table of uniform random numbers to make a random selection. The teams that may not be selected will be notified by the researcher of this decision and of the process of random selection.

What does taking part in the Research involve?

You and your team members will be invited to a focus group discussion. A group interview of 60-90minutes(including refreshments) will take place. At the focus group discussion, your team members will talk about your positive and less positive experiences of your team functioning. The semi-structured interview will be audio recorded/taped. Participants will be assured of the anonymity of the group identity (no names will be identified in the research) and informed consent will be gained. Members will be requested to provide ethnicity details (only if they wish to) to allow for a cultural sub-analysis. This information will not directly identify the participant or the teams to which they belong. The transcripts as well will not identify the members nor their teams but will indicate the ethnicity of the individual speaker. This is to aid in the cultural analysis and assignment of appropriate cultural themes.

How will the data be analysed?

The interview transcripts will be analysed by the researcher using content analysis (open coding) to derive the dominant themes within the teams. Inter-rater reliability will be established by an independent second rater (an anonymous expert) who will analyse the transcripts and assign dominant themes. The second rater/judge will sign and be bound by a confidentiality agreement. The portions of the transcripts featuring. Maori team members will be given to Maori adviser/s as part of the analysis to ensure that cultural nuances are captured and that specific Maori metaphors may be identified and assigned. The Maori adviser/s will also sign a confidentiality agreement.

Will anyone who reads the Research know who you are?
No one will know who you are, as you will not be identified by your name or by your team on the transcript. No material, which could personally identify you, will be used in any reports on this study. Any information that could potentially identify the teams or the individual members will be edited from any written report. Further no staff members or Management will have access to this taped information so the participants' anonymity is assured. The tapes will be securely kept in premises, outside the organisational premises, that will be known by the researcher and the research supervisor/s alone.

Where will the study be held?
The interviews will take place at XX Health hospital and community sites in Area one and Area two

How do you give consent to be involved in the Research?
Each participant will sign a consent form to indicate his or her consent to taking part in the study. Should you require an interpreter, please contact the researcher at least three weeks prior to your team's focus group discussion so that one can be arranged to explain the content of the information sheet and the consent form.

What rights do you have?
You have the right to decline to take part in this research. You have the right to decline to answer any question(s) and you have the right to ask questions about the study at any time. You have the right to provide information on the understanding that your name will not be used. As a participant in this research you also have the right to have access to a summary of the findings of the study when it is concluded. You also have the right to ask for the audiotape to be turned off at any time during the group interview. If you do agree to take part you are free to withdraw from the study up to the point of the analysis of data. You do not have to give a reason for withdrawing and this will in no way affect your employment.

Will I get feedback on the research?
You will get feedback on the research. You can have access to a copy of the thesis, which will be made available to XX Health. Team feedback can also be available to all teams who participate. A general finding summary will appear on the intranet. A copy of the research results can also be made available to you.

What happens to the information collected during and at the end of the Research?
All information collected and transcribed will be stored in a locked cabinet until the thesis has been graded. Thereafter the information will be held for ten years at Massey University and then destroyed by a Massey University staff member.

What are the potential risks of the study?
The discussion may evoke an association with an unresolved personal issue for the participant. In the unlikely event that the discussion causes you distress in any way, support systems are available to you. As a staff member of XX Health you are able to access the Employee Assistance programme. Written details of these contacts as well as other counselling and support resources will be provided to each participant at the group session.

What are the benefits of the study?
You will be given an opportunity to meet as a group to share your experiences. The research may therefore be a team-building opportunity. You will have a chance to look at what works best for your team. This could help improve the quality of your team's interaction. The study holds a strong practical value of bringing about self-awareness amongst your team members and can contribute to group learning.

What is the time span of the study?
The group interviews will be conducted over a 3-6 month period.

How will the Research information be used?
The collected information will be written into a thesis, and may possibly be published in a Psychological Journal. The Research will add to the literature on team prototypes and assist in allowing teams to be more aware of how teams see themselves and to how this can improve the quality of their working lives.

What if you want to contact my Supervisors or me?
You are welcome to contact my supervisors at Massey University or myself should you have any questions about the project.

Supervisor contact details:

Stuart C.Carr
Massey university
School of Psychology
S.C.Carr@massey.ac.nz
Ph: 09-4140800 Ext.9073

Richard B. Fletcher
Massey University
School of Psychology
R.B.Fletcher@massey.ac.nz
Ph: 09-4140800

If you have any questions or concerns about any aspect of this research you have the right to contact me. My e-mail address is [redacted]

This study has received ethical approval from the Massey University Human Ethics Committee and from the XX Ethics Committee(Accredited by the Health Research Council).

If you have any queries or concerns about your rights as a participant in this study you may wish to contact a Health and Disability Advocate, Advocates Trust telephone number: 0800423638.

Thank you for taking the time to read this information. Your support with my Research project would be greatly appreciated.

Appendix B
Consent Form

CONSENT FORM

Project title: Critical incidents analysis of team metaphors used by teams in a health setting.
(Health teams' concept of themselves as experienced in satisfying and in less satisfying team experiences.)

Please circle the appropriate option to indicate your response.

REQUEST FOR INTERPRETER

English	I wish to have an interpreter.	Yes	No
Maori	E hiahia ana ahau ki tetahi kaiwhakamaori/kaiwhaka pakeha korero.	Ae	Kao
Samoan	Ou te mana'o ia i ai se fa'amatala upu.	Ioe	Leai
Tongan	Oku ou fiema'u ha fakatonulea.	Io	Ikai
Cook Island	Ka inangaro au i tetai tangata uri reo.	Ae	Kare
Niuean	Fia manako au ke fakaaoga e taha tagata fakahokohoko kupu.	E	Naka i
State other languag e:	I wish to have an interpreter.	Yes	No

If you have answered "yes" to the above then please contact the researcher at least three (3)weeks before the date of your team's focus group discussion so that an interpreter can be arranged for you.

I have read and I understand the information sheet dated _____ for volunteers taking part in the study designed to look at team's concepts of themselves in satisfying and in less satisfying team experiences. I have had the opportunity to discuss this study and have the details explained to me.

My questions have been answered to my satisfaction, and I understand that I may ask further questions at any time.

I understand that taking part in this study is voluntary (my choice) and that I may withdraw from the study at any time and this will in no way affect my employment.

I understand that my participation in this study is confidential and that no material, which could identify me, will be used in any reports on this study.

I have had time to consider whether to take part.

I know whom to contact if I have any side effects to this study.

I know whom to contact if I have any questions about the study.

I consent to the interview being audio-taped. YES / NO

I understand that the portions of the transcripts featuring Maori participants will be given to Maori consultant/s for the purpose of providing a cultural sub-analysis. I consent to this cultural sub-analysis. YES / NO

I understand that the transcripts, that contains no identifying details of the participants, will be given to an independent rater for analysis. I consent to this analysis occurring solely for the purpose of establishing inter-rater reliability. YES / NO

I wish to receive a copy of the results. YES / NO
(Please note that there may be significant delay between data collection and printing of the results handout.)

I agree to participate in this study under the conditions set out in the information sheet.

If you have any queries or concerns regarding your rights as a participant in this study, you may wish to contact a Health and Disability Services Consumer Advocate, telephone:
0800 423 638 (4 ADNET)

I _____(full name) hereby consent to take part in this study.

Date _____

Signature_____

Full names of Researcher : Vinodhini Ramkissoon (Vino)
Contact Phone Number for researcher:
[redacted]

Signature:

Date:

Appendix C
Confidentiality Agreement

CONFIDENTIALITY AGREEMENT

Project Title :
Critical incidents analysis of team metaphors used by teams in a health setting

I ..... (Full Name - printed)

agree to keep confidential all information concerning the project
"Critical incidents analysis of team metaphors used by teams in a health setting"

Signature: **Date:**

Full Name - printed

Appendix D
Memorandum of Understanding

1. Parties to Memorandum:

Vinodhini (Vino) Ramkissoon, Masters Student in the School of Psychology at Massey University and XX District Health Board.

2. Short Title of Project:

Critical incidents analysis of team metaphors used by teams in a health setting.

3. Project Objectives :

The interviewing of teams to collect data for the purpose of Mrs Ramkissoon's Masters thesis.

4. Agreement:

This memorandum formalises the agreement of XX District Health Board to participate in this project and to allow staff to volunteer to participate in the research.

Informed consent will be gained from each staff member who volunteers to participate.

A copy of the interview questions will be provided to XX District Health Board in advance of the proposed visits to the site.

Requests for meetings with volunteer groups are to be negotiated via the XX District Health Board Human Resources Manager, who will also serve as the primary source of contact. All contact with operational managers will be directed through the Human Resource Manager.

All participants will remain anonymous and data generated will not be traceable to any participant.

A copy of the research will be made available to XX District Health Board.

Mrs Ramkissoon retains the rights to publish the results of the study and will on request provide a copy of the research summary to the participants. The right to use the results of the project for further research and educational purposes is also retained. Subject to prior agreement by XX District Health Board in writing, XX District Health Board will be identified in any publications as acknowledgment of their agreement to allow their staff to participate.

Mrs Ramkissoon agrees to comply with any applicable organisation policies while on site. Occupational Health and Safety requirements will also be adhered to (as is directed by the Health and Safety Manager of XX District Health Board).

Signed:

Vinodhini Ramkissoon ..... Date .....

XX District Health Board

Name ..... . Date : .....

.....

Appendix E
Advertisement

A Team Development opportunity:

ARE YOU PRESENTLY WORKING AS PART OF A TEAM?
Would your team benefit from the opportunity to get together to talk about:
a) how you work together?
b) what makes you satisfied in the team and
c) what makes working together more enjoyable?

Most of us function within a team and we know that teamwork plays an important role in our daily functioning. Yet, we often function within this team situation without having the opportunity to **stop** and think about how our teams work together. We also do not explore the other members' concept of the team. We often do not examine what is it that makes us feel more satisfied in our teams? The answers to these questions can provide a valuable means of developing our teams and finding ways that we can enjoy our work together.

An opportunity has presented itself to explore these questions .A Massey University Masterate student has offered to conduct a research project with teams on how they see themselves and their work together. Teams, who have been working together for at least six months, will be given the opportunity to meet and to talk about their team experiences. The research is not intended to be a performance evaluation of the team but is rather an exploration of how teams in health settings see themselves.

XX Health recognises the importance of team research and has approved that interested staff will be given the time off work, to participate in the research. Participation is entirely voluntary so you choose if you want to be a part of the programme. The teams, who choose to be involved, will participate in a group discussion of approximately one and a half hours. The researcher will maintain the confidentiality of the discussion and you will remain anonymous. Refreshments will be provided for all participants.

If this project sounds as if it could be of potential advantage to your team, then please have a team discussion about your team's possible involvement. If there are 6-10 people who are interested, have a team nominated representative forward your team's name and contact details, in confidence, to the Human Resource Manager, Mr Y by : Friday.....(Date).
Contact details: E-mail: Telephone:

If you would like more information about the project, please request an information sheet from Mr Y. on the e-mail or telephone contact, listed above. The teams that are going to be a part of the programme will be contacted (through your representative) before the end of.....,to arrange a time that best suits you. This team project holds the potential to be a valuable team development experience so take advantage of this opportunity.

Confusion Matrix of Metaphors for Successful Team Situation

	Observer 2															
Observer 1	Social	Building	Recognition	Bonding	Support	Harmony	Order	Description	Machine	Commerce	Health	Travel	Identity	Emotion	Affiliation	Total
Social	15				1							2				18
Building		5														5
Recognition			19		2		1	1		1			1			25
Bonding				49			1	1							1	52
Support			2		51		2	1				2				58
Harmony						15										15
Order							15	1				1				17
Description			1		1			41								43
Machine									7				1			8
Commerce			1							5						6
Health											7					7
Travel					3		1	1				28				33
Identity			1		2								15		1	19
Emotion						1	1							8		10
Affiliation	1				1										31	33
Total	16	5	24	49	61	16	21	46	7	6	7	33	17	8	33	349

Metaphors (Sub-metaphors) : Social (Play and Fun, Reception); **Building; Recognition** (Reward and Acknowledgement, Accomplishment); **Bonding** (The collective, Bonding processes, Adhesion, Unity, Cohesion, Medley, Sewing) ; **Support** (Aid and Support , Sharing, Camaraderie, Rescue, Protection, Space); **Harmony** (Smoothness, Balance), **Order** (Organizing and Housekeeping, Communication and continuity); **Description** (Height, Mathematics, , Circle, Sport, Nature); **Machine**(Mechanical, Motivation); **Commerce; Health; Travel** (Journey, Growth and Change, Goals and Purpose,); **Identity** (Belonging and Identity, Fit metaphors, Reflection); **Emotion** (Happiness and Joy); **Affiliation** (Family, Friends, Home, Community)

Measure of inter-observer agreement for overarching theme categories for the Positive team situations of nine health teams:

Proportion of agreement =(number of agreements/ number of agreements + number of disagreements)

$P_o = 311 \div 349$

$= 0.89$

The index of agreement or concordance is 89 %

The proportion expected by chance P_c

$P_c = (0.052 \times 0.046) + (0.014 \times 0.014) + (0.071 \times 0.068) + (0.148 \times 0.14)$

$+ (0.16 \times 0.17) + (0.04 \times 0.05) + (0.05 \times 0.06) + (0.12 \times 0.13)$

$+ (0.02 \times 0.02) + (0.017 \times 0.017) + (0.02 \times 0.02) + (0.095 \times 0.095)$

$+ (0.054 \times 0.048) + (0.028 \times 0.022) + (0.095 \times 0.095)$

$= 0.0985$

$\kappa = P_o - P_c / 1 - P_c$

$= (0.89 - 0.099) \div (1 - 0.099)$

$= 0.79 \div 0.9$

$= 0.8777$

Confusion Matrix of Metaphors for Unsuccessful Team Situations

								Observer 2									
Observer 1	Affiliation	Emotion	Identity	Travel	Health	Commerce	Machine	Description	Disorder	Balance	Conflict	Constraint	Division	Systems	Waste	Strain	Total
Affiliation	7												1				8
Emotion		34			1		1	1	1		2					2	42
Identity			35													1	36
Travel		1		30				5				4					40
Health					18										1		19
Commerce						11								1			12
Machine							12										12
Description		2		3				41			3					1	50
Disorder		2	1	1					21	1						1	27
Balance										12				1			13
Conflict					4			2			70		5				81
Constraint		2						1				25					28
Division											1		29		1		31
Systems									1					34			35
Waste		1													14		15
Strain		1		4				1		1	3	2				72	84
Total	7	43	36	38	23	11	13	51	23	14	79	31	35	36	16	77	533

Metaphors (Sub-metaphors): Affiliation (Family, Friends); **Emotion** (Distress, Vulnerability, Loneliness and Isolation); **Identity** (Different Identities, Lack of acknowledgement, Being Invisible, Elitism); **Travel** (Journey, Mindset, Speed and Race); **Health** (Physical Ill health, mental ill health)**; Commerce; Machine; Description** (Circles, Nature, Senses, Shapes, Personification, Mathematics, Change); **Disorder** (Disaster, Lost control, Distorted communication, Disorganization); **Balance** (Imbalance, Inversion); **Conflict** (War, Defense, Military, Abuse and assault, Fights, Deception, Resistance, Deception, Resistance and Defiance, Distancing/Closing off, Escape); **Constraint**(Restrictions, Stuck, Barriers, Gaps); **Division**(Splits/Fragments, Cliques, Sewing); **Systems**(Hierarchy, Politics, Personnel, The System, Paperwork, The law); **Waste**(Discard, Excrement); Strain(Overload, Erosion and Depletion , Pressure, Deterioration)

Kappa calculation of inter-rater reliability:

P_o = number of agreements ÷number of agreements + number of disagreements

= 465 ÷ 533

= 0.87

$P_c = P_{1A} \times P_{2A}$

= 0.1165

$K = (P_o - P_c) \div (1 - P_c)$

= (0.87 –0.1165) ÷ (1 – 0.1165)

= 0.8529