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How to make organisational meetings effective: The
critical influences on successful and unsuccessful
meetings.

A thesis presented in partial fulfilment of the
requirements for the degree of

Masters of Arts

In

Psychology

At Massey University, Albany

New Zealand

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2003

Abstract

The purpose of this research was to evaluate the internal features (features internal to the meeting context) and external features (organisational features external to the meeting context) that influence successful and unsuccessful meeting outcomes. The major strength of this research was the multilevel analysis method utilised to separate individual and group level effects. The research consisted of two studies. Study one utilised a sample of 180 University students, business professionals, and members of the general public to clarify the dominate/prototypical features of successful and unsuccessful organisational meetings. The three leading internal aspects found to impact on successful meetings were: 'Active group participation', 'clear and detailed agenda', and 'positive outcome'. Conversely, the three leading internal aspects found to impact on unsuccessful meetings were 'Necessary attendees were not invited or present', 'unresolved conflict' and 'lack of group participation with unequal interaction'. Study two utilised the prototypical meeting features identified in study one as indicators of successful and unsuccessful meeting outcomes, and examined the organisational aspects external to the meeting context that influence these meeting outcomes. One hundred and seventy nine individuals from 30 collections of individuals who participate in meetings took part in study two. Team functioning, high cohesion (Group Integration to the Task and Attraction to the Group Social), norming and performing stages of development, Teamthink, and positive job-related affect were external aspects found to influence successful meeting outcomes. Group functioning, low cohesion (GI-T and ATG-S), low operation in the norming and performing stages of development, low Teamthink and negative job-related affect were the external aspects found to influence unsuccessful meeting aspects.

Acknowledgements

I would first like to thank my supervisors, Dr Richard Fletcher and Dr Stuart Carr for their invaluable knowledge, time and support they have given me over the past year. I would also like to thank the organisations and employees that participated in the research as without their commitment this project would have been impossible. Finally, I would like to thank my close friends and family for their support, patience and continuous optimism that has encouraged me to continue in the face of difficulties.

Ethics approval for this project was obtained from internal peer review at Massey University, Department of Psychology.

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CHAPTER ONE

Introduction

Meetings are simply defined as occasions which “bring together a number of people with a definite communication purpose in mind” (Auger, 1976, p.4). Doyle and Straus (1976) further define meetings as planned and formal occasions where individuals come together for face to face interaction. Meetings are important as knowledge and experience required in any given situation is often not available in one head, but rather requires the convergence of knowledge and experience of several individuals (Drucker, 1966 – 1967). Meetings may then be viewed as “critical nerve centers” for communication (Mosvick & Nelson, 1996, p.6) and the primary “vehicles for the exchange of ideas, information, and advice” (Tobia & Becker, 1990, p. 34) and therefore essential for efficient organisational functioning. In turn, Kaufhold (2000) advocates that the planning and execution of meetings is the most common barrier to high performance groups and teams. Consequently, the crucial impact that meeting outcomes have on organisational performance leads to the need for understanding how to promote successful over unsuccessful meeting outcomes. This thesis set out to explore the features that influence successful and unsuccessful meetings.

The existing research regarding organisational meetings has identified numerous features that are associated with successful and unsuccessful meeting outcomes (Elasayed-Elkhouly et al. 1997; Monge et al.1989; Mosvick & Nelson 1996; Nixon & Littlepage 1992; Smart, 1974). In general the meeting features that have been identified tend to focus on internal rather than the external context of meetings. For the purpose of this research, internal context was conceptualised as the formal/face to face meeting process in the organisation, including activities such as preparation for the meeting, the meeting itself, and follow up actions. The external context was conceptualised as the wider organisation and included all organisational processes and interactions that occur outside the formal/face to face meeting context, for example, electronic communications and informal face to face interactions. The internal meeting features may be classified according to task and relationship dimensions. For example, internal features such as: meeting goals, and a written agenda are task-related meeting aspects that have been identified as important influences of successful meetings

(Nixon & Littlepage, 1992). Relationship-related features such as: outbursts (Smart, 1974), multiple conversations (Kaye, 1998), deadlocked discussions (Kaye, 1998), people not listening (Smart 1974), arguments (Supervisory management, 1995) and personal attacks (Kaye, 1998) are internal features that have been identified to influence unsuccessful meetings. Meetings however do not exist in a vacuum and therefore external aspects to the meeting process such as operation in the wider organisation are likely to influence meeting outcomes. Very little consideration has been given to the wider organisational functioning external to the meeting context and its impact on successful and unsuccessful meeting outcomes. The foremost aim of the present research was therefore to identify the influential internal and external features of successful and unsuccessful meeting outcomes.

In order to help examine the internal and external features of successful and unsuccessful meetings a conceptual model was developed (shown in Figure 1). As illustrated in this figure, the internal and external aspects that were examined in the present study included: (1) internal task and relationship features; that influence meeting outcomes, (2) degree of team functioning; the degree to which collections of individuals function at a team as opposed to a group level (external to the meeting context), (3) group cohesion; the degree to which the collections of individuals are united (external to the meeting context), (4) group development; the development stage in which the collections of individuals are operating (external to the meeting context), (5) teamthink; the balance between the individual and group forces (external to the meeting context), and (6) job-related affect; individuals positive and negative emotion experienced (external to the meeting context).

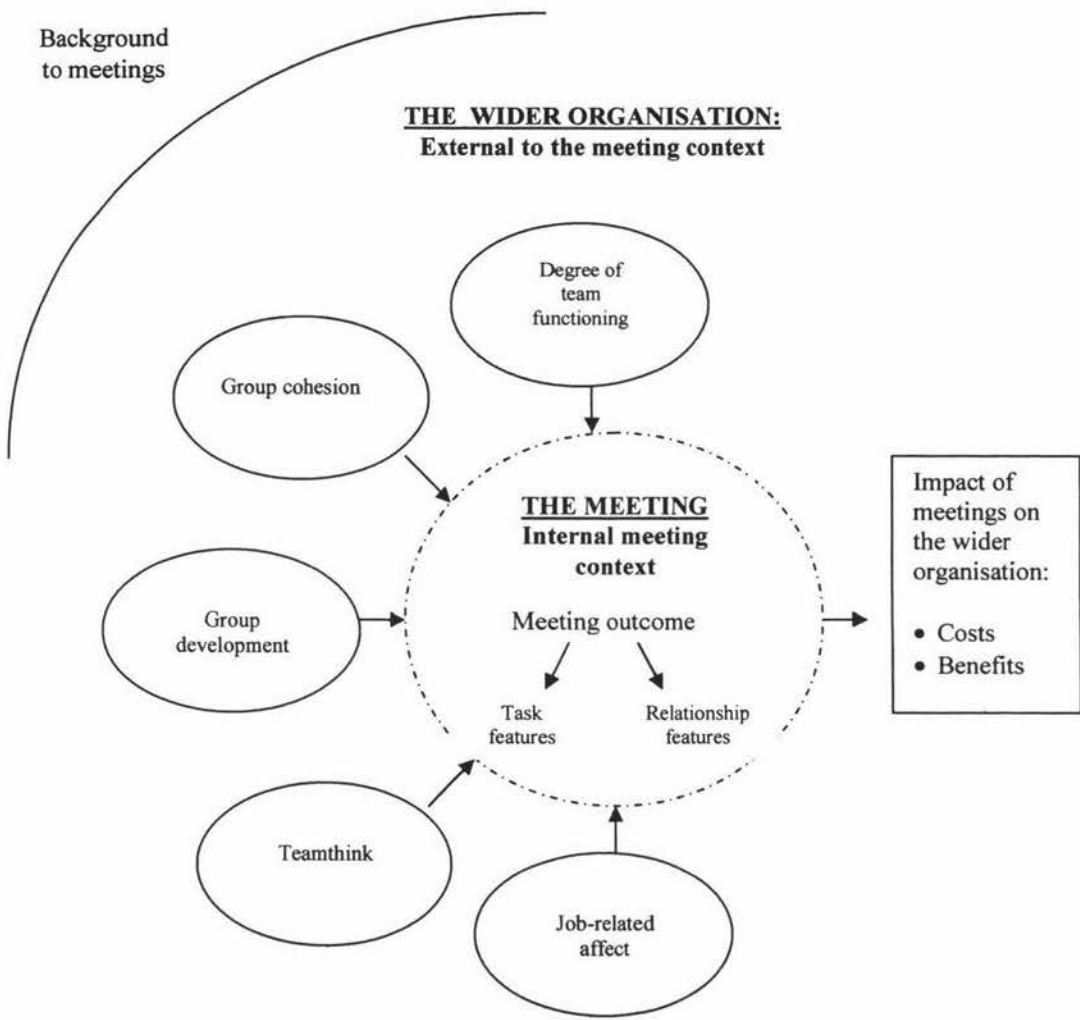


Figure 1: Possible internal and external influences on meeting outcomes.

Background to organisational meetings.

Shown in Figure 1, meetings are a central process within organisations, and as a result are widespread and frequently occur within organisations. Mintzberg (1973) indicated that chief executives have approximately eight meetings a day and spend 69% of their time in structured and unstructured meetings. The frequency and time spent in meetings has not recently been examined, however, Elsayed-Elkhouly, Lazarus & Forsythe in 1997 suggested that 75% of business executives and professionals spend more time in meetings than they did five years before. Mintzberg's (1973) findings should therefore be viewed as an underestimation of meeting time spent by business professionals in organisations today. The utilisation of organisational meetings is further expected to increase. Elsayed-Elkhouly et al. (1997) states that 35% of respondents expect their time spent in meetings to increase in the future. The 3M meeting management team and Drew (1994) offer numerous reasons for the expected increase of meetings in the future. Greater pace of change, increased availability of information, flattening of organisational structures, increased utilisation of teams, cross company partnerships, globalisation and technology advances are among reasons offered for the expected increase in meeting utilisation in the future. The current high employment of organisational meetings and their expected growth suggest that meetings are a fundamental process within organisations and will continue to be in the future. This high utilisation of organisational meetings consequently creates a need for full understanding of the meeting process especially in relation to the aspects that induce successful and unsuccessful meeting outcomes.

Impact of meetings on the wider organisation.

1.1 Costs of organisational meetings.

The meeting process is important to the organisation as this process is undertaken at a considerable cost (as shown in Figure 1). The 3M meeting management institute estimates that for a meeting group consisting of six attendees with average annual salaries of \$50,000, the meeting cost associated is \$300 per hour. A framework of the levels of meeting costs has been offered by Johnson (1992, as cited in The 3M meeting management team and Drew, 1994). At the surface level (level 1) meeting costs include the actual costs of the attendees

time and materials used. A deeper level (level 2) are the costs associated with hidden expenses of meeting ineffectiveness such as wasted time caused by the involvement of too many people for an extended period of time. At level 3 costs include those resulting from missed opportunities due to the increased time taken to make decisions. At a deeper level still (level 4) are the costs associated with poor quality decisions that often result from ineffective meetings. At the deepest level (level 5) costs include those due to individuals' perception of ineffectiveness. These costs can result in dysfunction at the individual, intragroup, intergroup and organisation level, overall resulting in lower productivity. As illustrated in Figure 1, meetings are important to organisations as they consume a considerable proportion of company revenue and furthermore may have detrimental effects on the wider organisation when they are unsuccessful. Research regarding organisational meetings is therefore necessary to further explore the ways to promote more successful meetings and in turn the optimal use of company revenue.

1.2 Benefits of organisational meetings.

As noted in Figure 1, organisational meetings are also important as they benefit the organisation. Meetings are performed to achieve many purposes which are crucial for organisational functioning. These purposes may be categorised as those relating to the achievement of a task or those relating to member relationships.

1.2.1 Task-related purposes of meetings.

The central purpose of meetings is the communication of information and ideas (Tobia & Becker, 1990). Without this form of communication organisations would be unable to perform the organisational tasks required to achieve their organisational goals and perform efficiently. In addition to a communication purpose, Monge, McSween and Wyer (1989) suggest that 29% of the time organisational meetings are performed to make decisions, 26% of the time to perform problem solving and 11% of the time to aid understanding. Similarly, Jay (1976) suggests that meetings are a means for the revision and updating of collective knowledge that is then required by members to effectively perform their jobs. Meetings are therefore important to organisations as they achieve basic processes such as communication, decision making, problem solving and knowledge revision which are vital for the fulfilment

of organisational tasks leading to the achievement of organisational goals and greater organisational performance.

1.2.2 Relationship-related purposes of meetings.

Meetings also fulfil purposes concerning the relationships between members. Schwartzman (1986, as cited in Staw and Cummings, 1986) identifies the purposes of meetings in relation to the expressive functions they achieve. Meetings are a way of communicating and displaying status, and in some cases the primary means for an individual to evaluate their own position or status in the organisation. For example, meetings can bring together individuals from various levels of the organisational hierarchy and therefore enable individuals to evaluate their status in relation to other members. Additionally, meetings are a vehicle for the development and encouragement of informal and interpersonal interaction. Time directly before and after meetings, and breaks during the meeting are opportunities for attendees to hold informal unscheduled meetings with other members. Schwartzman (1986, as cited in Staw and Cummings, 1986) uses the term “ripple effect” (p. 245) to demonstrate how one scheduled meetings can spark numerous unscheduled meetings and states that these meetings are “perhaps more important than the scheduled meeting itself” (p. 245). Finally, meetings enable the discussion of interpersonal issues, termed the ‘informal system’, under the pretence of ‘business’ or being work related. In this way meetings bring together the formal and informal systems within the organisation and in doing so are needed to create and maintain the organisation (1986, as cited in Staw and Cummings, 1986). Therefore, in addition to the task-related purposes that meetings may achieve, meetings also influence relationships between organisational members. Jointly, task and relationship-related purposes that meetings achieve signifies the importance of the meeting process to organisations and the necessity to understand how to manage such processes.

Overall, as suggested in Figure 1, organisational meetings have utility and benefits for the organisation, nevertheless, do cost the organisation as they consume considerable company resources such as time and revenue. However, if organisational meetings are effective in achieving benefits for the organisation, the resources that have utilised may be justified and inconsequential in relation to the payoffs that the organisation can receive. Conversely, if meetings are ineffective, detrimental effects are likely to result for the organisation, with

costs being increased. Overall, this signifies the need to understand of the features that influence meeting outcomes, in order to promote successful over unsuccessful meeting outcomes.

As Illustrated in Figure 1, internal and external features are proposed to influence the outcomes of the meetings.

Internal aspects of organisational meetings.

The literature regarding the features that influence successful and unsuccessful meeting outcomes at large focuses on aspects that are internal to meetings. These internal influences are illustrated in the central circle shown in Figure 1. The existing literature comes from two streams, one where aspects are identified through research (Elasayed-Elkhouly et al. 1997; Monge et al.1989; Mosvick & Nelson 1996; Nixon & Littlepage 1992; Smart, 1974) and the other, where aspects are based on speculative judgements and individual opinions (Cox, 1982; Dutton, 1987; Jay, 1976; Kaye, 1998; Lacey, 2002; Lally, 1996; Myrsiades, 2000; Supervisory Management, 1995). Typically, the research-based meeting literature draws upon large samples consisting of business professionals and executives, and requires these individuals to identify aspects that are important for effective meeting outcomes. A typical example of a research-based examination of meetings is the study conducted by Elasayed-Elkhouly et al. (1997). In this study, 230 business professionals who had experience in business meetings were asked to identify the elements that contributed to successful meetings and furthermore the importance of each of these elements. Features with the greatest perceived importance such as agreement of follow-up actions and adequate presentation were considered the most influential meeting aspects. In contrast, the opinion based literature tends to be generated from individuals speculation of their own experiences. For example, Kaye (1998) has herself identified: multiple conversations, drifting from the topic, unequal participation, deadlocked discussions and personal attacks as aspects that lead to meeting ineffectiveness. In relation to Figure 1, the internal aspects can be categorised according to task and relationship dimensions. The discussion will continue with a review of the literature regarding the task and relationship features that influence meeting outcomes.

1.3 Task-related features of meetings.

The task-related meeting aspects that are associated with successful and unsuccessful meetings can be categorised as those important prior, during and after the meeting (these aspects are shown in Table 1, however, this list is not exhaustive). Please note, the meeting aspects important prior and after the meeting may occur outside the actual meeting, however, are still a part of the meeting process, and therefore are considered internal meeting aspects

Table 1.

Unsuccessful and successful meeting aspects relating to tasks.

Unsuccessful meeting aspects	Successful meeting aspects
<p style="text-align: center;">Pre Meeting</p> <ul style="list-style-type: none"> * Inadequate preparation * No goals/purpose or agenda * Lack of notification * Incorrect people in attendance <p style="text-align: center;">During the meeting</p> <ul style="list-style-type: none"> * Starts or ends late * Drifting off the subject * Length – too long * Information overload / unfocused * Unclear expression by attendees * Interruptions * Inconclusive * Political pressure <p style="text-align: center;">After the meeting</p> <ul style="list-style-type: none"> * Perception of meeting ineffectiveness 	<p style="text-align: center;">Pre Meeting</p> <ul style="list-style-type: none"> * Adequate preparation * Defined meeting goals and purpose * Group size * Inviting the appropriate people * Preparing a written agenda <p style="text-align: center;">During the meeting</p> <ul style="list-style-type: none"> * Starting and ending on time * Following the agenda * Staying on track * Definition of problems * Agreement of follow-up actions * Exploration of options and consequences * Summarising * Documentation <p style="text-align: center;">After the meeting</p> <ul style="list-style-type: none"> * Outside evaluation * Timely action of decisions

Task-related meeting aspects that are important prior to the meetings (see Table 1) are those relating to meeting preparation. Specifically, defining the meeting goals and purpose (Mosvick & Nelson, 1996; Nixon & Littlepage, 1992), setting an approximate group size (Cox, 1987), inviting the correct people (Monge et al., 1989), and preparing a written agenda (Littlepage, 1992) are viewed as important influences of meeting success and may reduce the likelihood of an unsuccessful meeting.

Task-related meeting aspects influential during the meeting have also been identified (refer to Table 1). Starting and ending the meeting on time (Elasayed-Elkhouly et al., 1997; Mosvick & Nelson, 1996; Nixon & Littlepage, 1992) with adherence to the agenda (Nixon & Littlepage, 1992) will ensure the meeting does not become too long increasing the likelihood of meeting success. Other meeting features including information overload (Mosvick & Nelson, 1996), unclear expression by attendees (Smart, 1974), and interruptions (Mosvick & Nelson, 1996), may make discussions unfocused and lead to an unsuccessful meeting. Additionally, there needs to be agreement especially in relation to problem definitions (Cox, 1987) and follow-up actions (Elasayed-Elkhouly et al., 1997) that can be achieved through exploration of options and consequences. Finally, any agreement or decisions that are made need to be then summarised (Lacey, 2002) and documented (Nixon & Littlepage, 1992).

After the meeting, factors such as the perceptions of meeting effectiveness (Smart, 1974) become extremely important to reduce the likelihood of unsuccessful meetings (see Table 1). In turn, individuals who perceive their meeting to be effective are likely to seek outside evaluation and act upon the decisions made during the meeting (Nixon & Littlepage, 1992) leading to a more successful meeting outcome.

With examination of the task-related features identified in Table 1 the majority are associated with internal functioning of meetings. These task-related features are therefore conceptualised as internal aspect to meetings as illustrated in Figure 1. The research and suggestions concerning the task-related influences on meetings therefore implies that internal factors are the primary influences on meeting outcomes. However, Monge et al., (1989) findings indicate that external aspects to the meeting context may play a role in successfulness or unsuccessfulness of meetings. Monge et al. (1989) identify 'political pressure' as an influence on unsuccessful meeting outcomes. Political pressure such as the form of authority, power use and political opinions are characteristics that define the general organisation. Schwartzman (1986, as cited in Staw and Cummings, 1986) terms such characteristics as informal aspects which are communicated and expressed by organisational members through processes such as meetings. Political pressure is therefore an example of an external characteristic that originates from the wider organisation and impacts on the internal meeting context and more specifically the outcomes of meetings. Therefore, the identification

of this feature suggests that external features to the meeting context may influence successful and unsuccessful meeting outcomes, as illustrated in Figure 1.

1.4 Relationship-related features of meetings.

As shown in Figure 1, aspects that influence meeting outcomes also include those relating to the relationship aspects of the meeting. The relationship-related meeting aspects are shown below in Table 2.

Table 2.

Unsuccessful and successful meeting aspects relating to relationships

Unsuccessful meeting aspects	Successful meeting aspects
<p style="text-align: center;">During the meeting</p> <ul style="list-style-type: none"> * Lack of or unequal participation * Individuals monopolising discussions * Emotional outbursts * Multiple conversations * Deadlocked discussions * People not listening * Arguments * Hidden agendas * Personal attacks * Lack of control 	<p style="text-align: center;">During the meeting</p> <ul style="list-style-type: none"> * Participation by all * Leader being a servant to the group * Leader impartiality * Effective moderator * Establishing a group identity * Adoption of roles aiding group development * Commitment * Satisfying <p style="text-align: center;">After the meeting</p> <ul style="list-style-type: none"> * Being comfortable working with each other in the future

During the meeting the interaction between attendees becomes very important (see Table 2). Equal participation by all attendees is needed for meeting success (Mosvick & Nelson, 1996; Nixon & Littlepage, 1992; Smart, 1974). Furthermore, outbursts (Smart, 1974), multiple conversations (Kaye, 1998), deadlocked discussions (Kaye, 1998), people not listening (Smart 1974), arguments (Supervisory management, 1995) and personal attacks (Kaye, 1998) need to be managed and controlled to reduce the likelihood of an unsuccessful meeting (Table 2). Management of these aspects is perhaps one of the roles of the meetings leader as they act as a servant to the group (Jay, 1976) and show impartiality (Nixon and Littlepage, 1992). Group identity and group development are also important for meeting success (Cox,

1987). Individuals who identify together and who are operating at higher stages of development are more likely to control and manage the relationship aspects to any meeting.

Finally, being comfortable working with each other in the future (Table 2) has been identified as important to meeting success (Nixon & Littlepage, 1992). Unlike the other relationship-related features which are internally focused, being comfortable working with others in the future implies a link between the individuals desire to work with each other outside of meeting context and the outcomes of meetings. The identification of this feature further suggests that external features to the meeting context, such as organisational characteristics, have an impact on meetings and can influence successful and unsuccessful meeting outcomes. Therefore, as noted in Figure 1, both internal and external meeting aspects are important influences on organisational meeting outcomes.

1.5 Summary of the task and relationship-related features of meetings.

An extensive variety of task and relationship aspects have been identified as influential for meeting outcomes, suggesting that the concepts of successful and unsuccessful meetings are complex. This variation of meeting features further suggests that there is some confusion as the dominant or leading features that influence meeting outcomes, and in turn implies that mental models or stereotypes may be being drawn upon by individuals when discussing the concepts of successful and unsuccessful meetings. Fehr and Russell (1991) illustrate using a Prototype theory approach how the mental model for the concept of love may be assessed by identifying the dominant features (or prototypical features) of the mental model. According to prototype theory, individuals endeavour to simplify the infinite and different stimuli in the environment by classifying these stimuli according to their similarities (Rosch, Mervis, Gray, Johnson & Boyes-Braem, 1976). Simplification occurs through the cognitive coding of stimuli into categories (mental models) that are considered to be continuous rather than having definite boundaries (Cantor & Mischel, 1979). Knowledge of a category (mental model) is represented in memory as a prototype, each with a set of features that vary in degree of prototypicality in relation to 'clear cases' or good examples of the prototype (Rosch et al., 1976). Using prototype theory, Fehr and Russell (1991) generated a list of the prototypical types of love each being expressed in terms of their prototypicality to wider concept of love. By identifying the highly prototypical types of love, Fehr and Russell (1991)

evaluated the dominant characteristics of the mental model and in doing so were able to simplify the otherwise complex concept of love. Like the concept of love, the meeting concept is also complex and subject to variability, therefore the first aim of the present research (study one) was to use the approach illustrated by Fehr and Russell (1991) to identify the most prototypical/dominant features of successful and unsuccessful meetings. These prototypical features will be taken as indicators of successful and unsuccessful meeting outcomes.

The review of the task and relationship-related meeting features further suggests a need to examine the external aspects to the meeting context such as wider organisational functioning that may impact on meeting outcomes. The research regarding the influences on meetings has tended to focus on identifying internal meeting features and has neglected to further examine the external aspects that may impact on those internal features and more generally on meeting outcomes. The second aim (study two) of this research is to examine how the external influences illustrated in figure 1 impact on meeting outcomes. Each of the external aspects identified in Figure 1 will be discussed in turn.

External aspects of organisational meetings.

As illustrated in Figure 1, aspects such as: degree of team functioning, group cohesion, group development, teamthink and job-related affect, are proposed to impact on meeting outcomes. Given that in general, individuals spend a larger proportion of work hours in the wider organisation, in relation to that spent in the specific meeting context, it is expected that the wider organisational context will be more influential on performance than the specific meeting context. Therefore, although each of the external variables shown in Figure 1 may be observed within the meeting context, it is expected that it is their prevalence in the wider organisational context (external to the meeting) that will have a greater impact on meeting outcomes. In study two, degree of team functioning, group cohesion, group development, teamthink and job-related affect, in the wider organisational context will be examined in relation to meeting outcomes.

1.6 Degree of team functioning.

As illustrated in Figure 1, the degree to which individuals are functioning at a team level in the wider organisation is proposed to influence meeting outcomes. The expected link between team functioning and meetings comes about as the utilisation of organisational teams is a primary influential factor for the high utilisation of organisational meetings. Teamwork requires the bringing together of unique information, ideas, opinions, skills and knowledge, that for many organisations can only be achieved and performed through meetings. Additionally, team utilisation has been linked to improvements in organisational performance (Wellins, Byham & Dixon, 1994) and therefore may also aid performance of organisational processes such as meetings.

1.6.1 Background of team utilisation in organisations.

As organisations have strived for flatter organisational structures the utilisation of teamwork to achieve organisational goals has also radically increased (Patton & Downs, 2003). Additionally, the utilisation of organisational teams is also expected to increase in the future. In a study by Lawler, Mohrman and Ledford (1992) sixty percent of business professionals expected to increase their use of self managed teams in the future. The current and expected increase in team utilisation may be in part due to the numerous organisational benefits that teamwork generates. Wellins, Byham and Dixon (1994) evaluated the consequences of team functioning through the examination of twenty organisations that have become the worlds leading and competitive organisations through the introduction of teamwork. Wellins et al. (1994) found that across a diverse span of organisations grand improvements ranging from fifty to hundred percent resulted from the implementation of teams. Improvements were seen in areas ranging from quality to turnover and included cost savings, increased labour productivity, improvements in quality and service, speed and benefits to human resources such as decreased absenteeism and turnover with increased employee loyalty. All of these benefits aided achievement of organisational goals and a competitive advantage in an otherwise complex and demanding environment. Given the high utilisation of team functioning in organisations and the influence of this functioning on performance, is it necessary to examine how degrees of functioning impact on performance in the meeting context or more specifically the impact on meeting outcomes.

Chavez (1997), Katzenback (1998) and Carr, Fletcher, Atkins & Clarke (2002) illustrate different degrees or levels of collective functioning by distinguishing between teams and groups. Conceptually, these authors express teams and group on the same continuum with one polar end representing high team functioning/ low group functioning, and at the other extreme, high group functioning/ low team functioning. The discussion will continue with an examination of the differences between team and group functioning.

1.6.2 The distinction between teams and groups.

In the research domain, although the majority of researchers recognise that groups and teams may be different, for convenience sake the terms are often used interchangeably (for example, Guzzo and Dickson, 1996). A relatively small number of researchers have begun to explore the differences between teams and groups (Chavez, 1997; Katzenback, 1998; Carr et al., 2002).

Chavez (1997) examined the differences between teams and groups by asking members of the American and Samoan population (n= 62) how a team was different from a group. Chavez (1997) found that teams differ from groups on a number of aspects but most profoundly in relation to goals, leadership and cohesion. More specifically teams are associated with 'common goals', 'distributed leadership' and tight cohesion', where as groups with 'individual goals', 'focused leadership' and 'loose cohesion'. Katzenback (1998) through observation and interaction with organisational teams and groups also suggest that teams fundamentally differ from work groups. Katzenback (1998) suggests that shared leadership, mutual and individual accountability, specific purpose and collective work products to be characteristic of teams. Groups in comparison are likely to have a clearly focused leader, individual accountability, adopt the broader organisation mission and have individual work products. The Chavez (1997) and Katzenback (1998) research findings suggest that teams and groups do differ, therefore, in any organisational analysis such as the evaluation of meetings, care should be taken to differentiate between teams and groups levels of functioning. However, caution needs to be taken when utilising the team and group characteristics identified Chavez (1997) and Katzenback (1998) as these findings were based on American dominated samples and therefore may not replicate in the New Zealand context.

Carr, Fletcher, Atkins & Clarke (2002), have further evaluated the differences between teams and groups utilising a New Zealand sample. In this study, members of the general public and university students (n=250) were asked to free associate ideas that came to mind when they thought of teams and groups. From the free associations dominate themes were identified and were considered to be prototypical features of teams and groups. Having a ‘shared goal’, ‘working together’, ‘sport’ related and ‘closed relationships’ were found to be the most highly prototypical features of teams. The leading prototypical features of groups included, ‘just a collection of people’, ‘working as individual’, ‘larger in size’ and ‘commonalities and similarities’. Overall, findings by Chaves (1997), Katzenback (1998) and Carr et al. (2002) provide support that teams and groups differ, and therefore, care needs to be taken to differentiate between teams and groups. In study two the team and group prototypical features identified by Carr et al. (2002) were utilised as indicators of team and group levels of functioning, enabling the evaluation of the relationship between team and group levels of functioning in the wider organisation and successful and unsuccessful meetings as illustrated in Figure 1. This relationship is therefore further detailed in Figure 2.

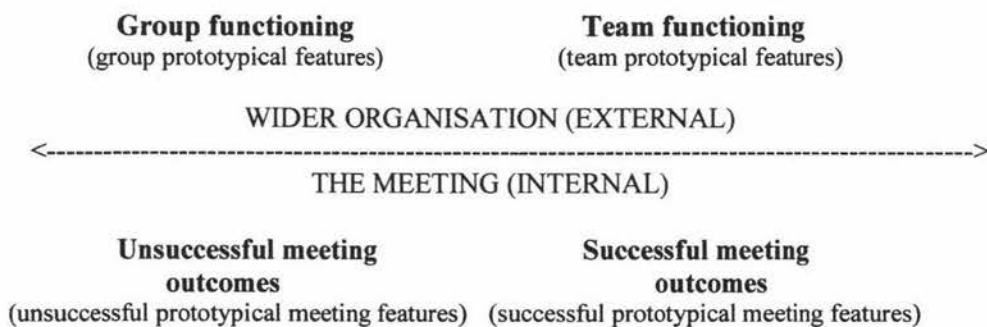


Figure 2. Team and group levels of functioning and meeting outcomes relationship.

In accordance with Figure 2 the following hypotheses were developed:

Hypothesis 1a: Collections of individuals who strongly identify their operation in the wider organisation as characteristic of team prototypical features (team functioning) will also be more likely to describe their meetings in terms of successful meeting prototypical features (successful meeting outcome).

Hypothesis 1b: Collections of individuals who strongly identify their operation in the wider organisation as characteristic of group prototypical features (group functioning) will also be more likely to describe their meetings in terms of unsuccessful meeting prototypical features (unsuccessful meeting outcome).

Given that the teams and groups have been differentiated according to levels of cohesiveness (Chavez, 1997), with cohesion in turn being related to performance (Mullen and Cooper, 1994), cohesion was also examined in relation to meeting outcomes.

1.7 Group cohesion.

Carron, Brawley and Widmeyer (1998) define cohesion as “a dynamic process which is reflected in the tendency for a group to stick together and remain united in the pursuit of its goal and objectives and/or for the satisfaction of member affective needs” (p. 213). Mullen and Cooper (1994) utilised a meta-analytic approach to evaluate the cohesion-performance relationship and found that cohesion (specifically commitment to the task) influences group performance and in turn group performance influences cohesion in a stronger reciprocal relationship. The cohesion-performance relationship has been seen in sport, military, organisation and artificial groups and has been found to be positively moderated by group size, reality (Mullen and Cooper, 1994) and task interdependence (Gully, Devine & Whitney, 1995). Cohesion has also been shown to be related to organisational commitment (Wech, Mossholder, Steel & Bennett, 1998), and lower absenteeism (Zaccaro, 1991). In the context of meetings, low group cohesion has been suggested to lead to decreases in decision-making quality during the meeting when other antecedents conditions of groupthink are present (Janis, 1972). Therefore as illustrated in Figure 1 the relationship between group cohesion outside of the meeting context and successful and unsuccessful meetings was examined. This relationship is further illustrated in Figure 3.

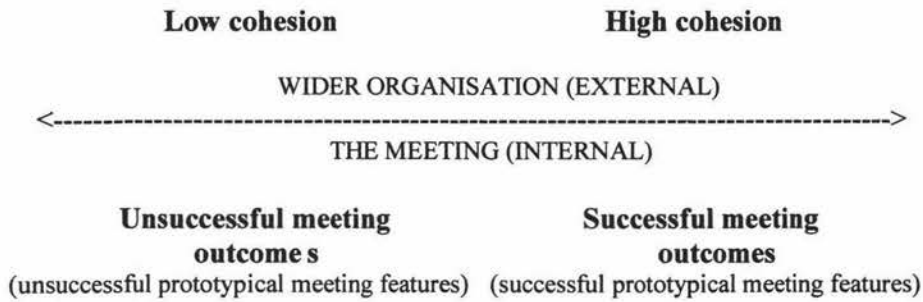


Figure 3. Cohesion and meeting outcomes relationship.

In accordance with Figure 3 the following hypotheses were developed:

Hypothesis 2a: Collections of individuals who describe themselves to be highly cohesive in the wider organisation will be more likely to describe their meetings in terms of successful prototypical features of meetings (successful meeting outcome).

Hypothesis 2b: Collections of individuals who describe themselves to be low in cohesion in the wider organisation will be more likely to describe their meetings in terms of unsuccessful prototypical features of meetings (unsuccessful meeting outcome).

Carron et al. (1998) suggests that cohesion is “process” (p.213) which implies that it changes over time, and further indicates the importance of the developmental process. Therefore the group development process was evaluated in relation to meeting outcomes.

1.8 Group development

Forsyth (1999) states that groups and teams in a sense are alive in that they are continuously changing and developing. Furthermore, Forsyth (1999) states that newly formed groups are rarely productive instantaneously, with productivity related to group maturity. Therefore as illustrated in Figure 1, group development is proposed to be related to meeting performance and ultimately meeting outcomes. Tyson (1998) and Sheard and Kakabadse (2002) illustrate how a collection of individuals may change and develop over time. As illustrated in Figure 4, Tyson (1998) suggests that over a period of time, a group may be transformed ultimately into a team marked by a high degree of structure. Tyson (1998) further suggests that collections of

shown in Figure 1 group development was proposed to influence successful and unsuccessful meeting outcomes. As further detailed in Figure 5 relationship between group development outside of the meeting context and successful and unsuccessful meetings was evaluated.

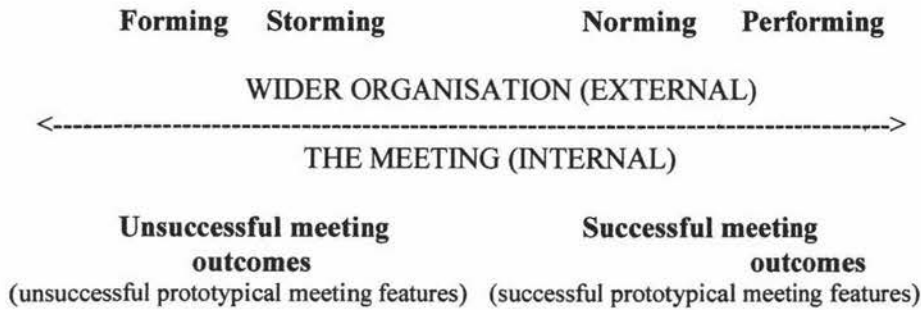


Figure 5. Group development and meeting outcomes relationship.

In accordance with Figure 5 the following hypotheses were developed:

Hypothesis 3a: Collections of individuals who are operating in the norming and performing stages of development in the wider organisation will be more likely to describe their meetings in relation to successful prototypical features of meetings (successful meeting outcome).

Hypothesis 3b: Collections of individuals who are operating in the forming and storming stages of development in the wider organisation will be more likely to identify their meetings in relation to unsuccessful prototypical features of meetings (unsuccessful meeting outcome).

1.9 Teamthink

Teamthink is described as individual's balance between themselves 'me' and the team 'we' that is needed in order to work together as a cohesive unit and perform optimally (Manz, Neck, Mancuso and Manz, 1997). In this sense, collections of individuals who are functioning at a level of Teamthink are not only satisfying their individual needs but also those of the team. Manz et al. (1997) state that individuals operating at a teamthink level are likely to (1) recognise and value other members uniqueness, (2) understand the groups/teams limitations

and threats, (2) encourage differing views, (4) recognise the ethical and moral ramifications of decisions, (5) discount stereotypes (6) practice open expression and (7) seek outsiders views. Consequently teamthink behaviour should be indicative of high performing teams and therefore related to successful meeting outcomes as illustrated in Figure 1. The relationship between teamthink in the wider organisational context and successful and unsuccessful meetings was evaluated as further detailed in Figure 6.

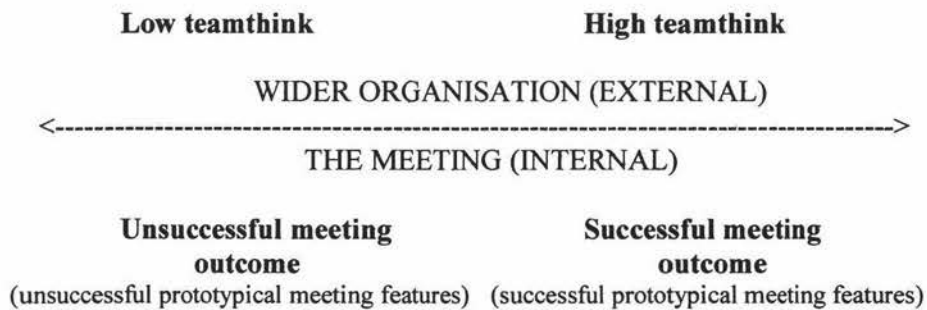


Figure 6. Teamthink and meeting outcomes relationship.

In accordance with Figure 6 the following hypotheses were developed:

Hypothesis 4a: Collections of individuals who identify their operation at a high level of Teamthink in the wider organisation are more likely to describe their meetings in terms of successful prototypical features of meetings (successful meeting outcome).

Hypothesis 4b: Collections of individuals who identify their operation at a low level of Teamthink in the wider organisation are more likely to describe their meetings in terms of unsuccessful prototypical features of meetings (unsuccessful meeting outcome).

1.10 Job-related affect

Dutton (1987) and Lally (1996) both speculate that individuals' emotion is an important element that influences meeting outcomes as is shown in Figure 1. Lally (1996) suggests that individuals emotions need to be read, understood and managed otherwise these emotions may surface during meetings and in terms of negative emotion result in meeting ineffectiveness. Lally (1996) therefore suggests a direct link between job-related emotion/affect that is induced in the wider organisational context and meeting outcomes (as illustrated in Figure 1). As further detailed in Figure 7, it is expected that negative job-related affect to be associated with unsuccessfulness of meetings and positive job-related affect with meeting success.

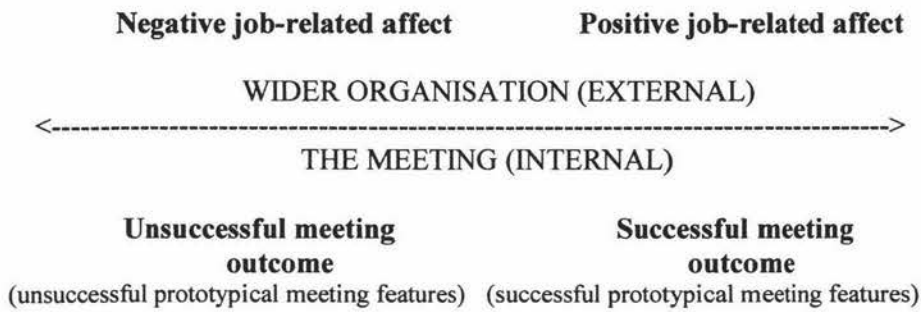


Figure 7. Job-related affect and meeting outcomes relationship.

In accordance with Figure 7 the following hypotheses were developed:

Hypothesis 5a: Individuals who experience positive job-related affect in the wider organisation are more likely to identify their meetings in terms successful prototypical features (successful meeting outcome).

Hypothesis 5b: Individuals who experience negative job-related affect in the wider organisation are more likely to describe their meetings in terms unsuccessful prototypical features (unsuccessful meeting outcome).

In conclusion, the majority of the literature regarding meetings has tended to focus on the internal aspects that influence meeting outcomes. The present research aims to simplify the literature regarding the internal aspects that influence meeting outcomes by identifying the

dominant/prototypical features of successful and unsuccessful meetings. The research will then proceed to examine the external aspects of the meeting context that influence successful and unsuccessful meeting outcomes including: degree of team functioning, group cohesion, group development, teamthink and job-related affect as illustrated in Figure 1.

CHAPTER TWO

Study One Method

Study one of the research aimed to simplify the extensive literature concerning meetings and the complex concepts of successful and unsuccessful meetings by identifying their dominant or highly prototypical features. A free association methodology utilised by Fehr and Russell (1991) was modified for study one of the research. Research participants were asked to list as many words and phrases that came to mind when they thought of either a successful or unsuccessful meeting. The most frequent responses were used as prototypical features of successful or unsuccessful meetings.

2.1 Participants

A total of 180 individuals participated in study one of this research. The sample consisted of Massey University students, business professionals, and members of the general public. Individuals were randomly approached and selected to participate based on their experience in organisational meetings.

2.2 Materials

A short questionnaire approach was chosen for study one of the research. The Questionnaire wording developed by Fehr and Russell (1991) was modified for use in study one of the research (see Appendix A for study one questionnaire forms). Participants randomly received one of the following two instructions:

“Please list as many words or phrases that come to mind when you think of an unsuccessful meeting:”

“Please list as many words or phrases that come to mind when you think of a successful meeting:”

Participation was voluntary, with responses anonymous and completion of the questionnaire implying informed consent.

2.3 Procedure

Individuals were randomly approached and invited to participate in this study if they had experience in organisational meetings. This selection criterion was set to ensure that the responses given would be more closely related with individuals meeting experiences rather than their knowledge from reading the literature. Individuals who accepted invitations to participate were then informed that their responses would be anonymous, participation was voluntary and that completion of the questionnaire implied informed consent.

Participants were asked to list as many words and phrases that came to mind when they thought of either a successful or unsuccessful meeting and to record their responses on a form provided (see Appendix A). The concepts of successful and unsuccessful meetings were treated as separate entities and therefore participants were not asked about both successful and unsuccessful meetings. Participants were only asked about either a successful or unsuccessful meeting to avoid the direct contrasting of the two concepts, resulting in the responding of opposites, for example common goal versus no common goal. Information regarding participants gender, age and ethnicity were not the primary focus of this study therefore this information was not obtained. However, random selection of participants should have owed to a representative sample.

2.4 Data Analysis

Successful and unsuccessful meeting responses were critiqued separately with responses of a similar nature being grouped together. Frequency counts were calculated for each of grouped responses with high frequencies indicating high prototypically in relation to either successful or unsuccessful meetings.

CHAPTER THREE

Study One Results

180 individuals participated in study one of the research (male 86:94 female). From the 180 participating individuals, 180 word lists were collected. Ninety of the 180 sets were related to successful meetings, with the remaining 90 sets related to unsuccessful meetings.

A total of 467 words/phrases relating to successful meetings were collected with a mean of 5.18 responses per individual. In contrast 379 words/phrases relating to unsuccessful meetings were gathered with a mean of 4.41 responses per individual. In total from the 180 sets of responses 864 words/phrases were generated with a mean of 4.80 responses per individual.

A total of 92 prototypical features were generated for successful meetings. Table 3 shows the leading six prototypical features relating to successful meetings with corresponding frequencies and percentages. Features identified by more than 5% of the sample were identified as prototypical features of successful meetings. In total, 23 prototypical features were identified for successful meetings with frequencies ranging from 52-6 or 58%-7% respectively (refer to Table 4 in Appendix C for a full list of the prototypical features relating to successful meetings). The 23 prototypical unsuccessful meeting features may be further categorised according to task and relationship dimensions as illustrated in Appendix C (Table 5).

Table 3.

Leading six prototypical features of successful meetings.

Aspect	Frequency (n=90)	Percentage %
Active group participation with equal interaction	52	57.78
Clear and detailed agenda	41	45.56
Positive outcome	33	36.67
Specific goal/purpose	26	28.89
Efficient communication	25	27.78
Full consensus	20	22.22

A total of 77 prototypical features were generated for unsuccessful meetings. Table 6 shows the leading six prototypical features relating to unsuccessful meetings with corresponding frequencies and percentages. Features identified by more than 5% of the sample were identified as prototypical features of unsuccessful meetings. In total 23 prototypical features were identified for unsuccessful meetings with a frequency range of 26-5 or 29%-6% respectively (refer to Table 7 in Appendix D for a full list of the prototypical features relating to unsuccessful meetings). These 23 prototypical unsuccessful meeting features may be categorised according to task and relationship dimensions as illustrated in Appendix D (Table 8).

Table 6.

Leading six prototypical features of unsuccessful meetings.

Aspect	Frequency	Percentage %
Not all of the necessary attendees were invited or present	26	28.89
Unresolved conflict	24	26.67
Lack of group participation with unequal interaction	23	25.56
To long, not to the point	23	25.56
No outcome	21	23.33
Lack of prior preparation and planning	21	23.33

When comparing the prototypical features for successful and unsuccessful meetings polar opposite features can be observed. For example, 'active group participation with equal participation' was identified as the leading prototypical feature of successful meetings. The direct opposite 'Lack of group participation with unequal interaction' was identified as one of the leading prototypical feature of unsuccessful meetings. With comparison of the successful and unsuccessful prototypical features 15 polar opposite pairs of features were identified (refer to Table 9 in Appendix E for a list). With examination of the full data set, a further 9 polar opposites were identified for the prototypical features, however these polar opposites were identified by less than 5% of the sample (refer to Table 10 in Appendix F for a list). Polar opposite relationships whereby both features were identified by less than 5% percent of the population were also identified (refer to Table 11 in Appendix F for a list). In total, 28 polar opposite pairs of features were identified.

Finally three meeting aspects: all parties were satisfied, agenda was distributed in advance, regular summarising throughout and at the end of the meeting, were selected from a review

of literature as they were frequently identified in the literature however were not found in study one of the research.

The 28 polar opposites, remaining prototypical features, and the three aspects identified from the literature were regarded as highly prototypical features of successful and unsuccessful meetings and were utilised for the questionnaire in study two.

CHAPTER FOUR

Study One Discussion

4.1 General discussion

The aim of study one was to identify the prototypical features of successful and unsuccessful meetings using a free association methodology utilised by Fehr and Russell (1991). The purpose of this study was to simplify the literature regarding meetings and the complex concepts of successful and unsuccessful meetings by identifying their most characteristic features. These prototypical features were then utilised in study two of the research to evaluate the successfulness or unsuccessfulness of meetings.

At an individual level, participants on average generated more words/phrases for successful meetings than unsuccessful meetings. Overall, this resulted in a greater number of words/phrases generated for successful meetings in comparison to unsuccessful meetings.

The higher mean and greater generation of words/phrases for successful meetings over unsuccessful meetings may simply reflect the greater complexity of successful meetings in comparison to unsuccessful meetings. Perhaps more aspects influence successful meetings than unsuccessful meetings with the results reflecting true differences.

The higher mean and greater generation of words and phrases for successful meetings over unsuccessful meetings may otherwise indicate that in general, individuals find it easier to describe successful meetings than unsuccessful meetings. The greater ease in describing successful meetings suggests that individuals may hold a clearer understanding of successful meetings over unsuccessful meetings. This clarity may then result in greater individual ability to recall successful meeting aspects over unsuccessful meeting aspects. Holding this position creates somewhat of a paradox, as the literature suggests that the majority of meetings that individuals attend are unsuccessful (Mosvick & Nelson, 1996), it should therefore be expected that individuals would have greater understanding, clarity and recall for unsuccessful meetings over successful ones.

Perhaps greater clarity and/or recall indicated by the results may have been gained by individuals through their limited experience of successful meetings. The small number of experiences an individual draws upon for successful meetings may result in a clearer understanding of the concept and the greater ability to recall the experiences. Alternatively, the numerous experiences an individual draws upon for unsuccessful meetings may create confusion and ambiguity while hindering recall.

Successful meetings may also create more positive experiences for individuals and result in the submitting of these experiences into the forefront of memory whilst aiding recall. Unsuccessful meetings in contrast may induce negative feelings for individuals with the likelihood these experiences are dismissed from memory or hidden, hindering recall. Tesser and Rosen (1975) discuss an individual phenomenon known as the 'MUM effect' described as the tendency for individuals to avoid or delay giving negative feedback or news to others. In the context of unsuccessful meetings the 'MUM effect' may explain the lower generation of associations for unsuccessful meetings compared to successful meetings. Given that unsuccessful meetings are perceived as negative individuals may have been less comfortable in offering responses resulting in fewer associations for unsuccessful meetings in relation to successful meetings.

Although an individual's actual experience of successful meetings may be limited there may be the tendency to perceive an unsuccessful meeting experience as successful. Given the time and energy put into meetings it would be likely that an individual may view even the most unsuccessful meeting in terms of its successful aspects. Subsequently, individuals may perceive themselves to have had numerous successful experiences resulting in greater understanding and recall. Brockner (1992) outlines a trend known as escalating commitment, the tendency for individuals to increase their commitment to a situation or decision when it shows signs of failure. In order to reduce the dissonance that this failure causes individuals may undergo self-justification, the tendency for individuals to look for reasons to justify the correctness of the poor situation or decision (Staw, 1976). In the context of unsuccessful meetings, individuals in the aim to reduce dissonance an unsuccessful meeting creates may increase their commitment to the meeting process and view the meeting in terms of the positive aspects. Consequently individuals may view even the most unsuccessful meeting in terms of its success.

Finally, perhaps it is not experience that individuals draw upon when describing meetings but rather their knowledge based on the literature which tends to be focused on successful meetings. According to the availability heuristic, individuals are likely to base judgements on information that readily springs to mind with this affecting recall. Due to this availability heuristic and the literatures focus on successful meetings, greater recall and generation of associations would be expected for successful meetings over unsuccessful meetings.

Successful meeting aspects also generated higher frequencies than unsuccessful meeting aspects with percentage frequencies for primary successful meeting features ranging from 58% to 7% (Table 4 in Appendix C) and from 29% to 6% for unsuccessful meeting features (Table 7 in Appendix D). It should be noted that the higher frequencies observed for the concept of successful meetings only relates to three meeting characteristics: 'active group participation', 'clear and detailed agenda' and 'positive outcome'. These higher frequencies suggest that there is greater agreement among our population for the three leading aspects relating to successful meetings. The higher frequencies for the three leading successful aspects may suggest that active group participation, clear and detailed agenda and positive outcome are the most influential and crucial aspects for meeting success. In other words, active group participation, clear and detailed agenda and positive outcome are the most highly prototypical features of successful meetings. The remaining successful meeting aspects are still influential and prototypical of meeting success however to a lesser degree.

The absence of high frequencies for unsuccessful meeting aspects suggests that there are no strong prototypical features relating to unsuccessful meetings but rather a set of moderately prototypical successful aspects that each play a part in an unsuccessful meeting outcome. Furthermore a set of moderately influential features rather than dominant features may indicate that the features of unsuccessful meetings may compound on each other. For example, the occurrence of one unsuccessful meeting feature such as inappropriate attendees may then encourage other unsuccessful meeting features such as lack of participation, conflict and ultimately no outcome. Therefore, although each specific feature may not individually impact on unsuccessful meeting outcomes to any great extent (indicated by its low prototypicality), collectively these features may have an immense impact of unsuccessful meeting outcomes. The identification of dominant features (high prototypical features) for

successful meetings implies that it is these features rather than the compounding effect of a set of features impacts on successful meeting outcomes. Overall, the lower frequencies for the concept of unsuccessful meetings may indicate that there is less clarity as to the features that strongly impact on unsuccessful meeting outcomes.

Examination of the full data set reveals that many of the features characteristic of successful and unsuccessful meetings are polar opposites. For example the level of group participation was found to be associated with both successful and unsuccessful meetings. More specifically a high level of group participation was linked to successful meetings with a low level of group participation linked to unsuccessful meetings. With examination of the full data set 28 polar opposite relationships were identified. These polar opposites were found even though the concepts of successful and unsuccessful meetings were assessed separately, for example, individuals were asked about successful or unsuccessful meetings but not both. Therefore, the polar opposites are not due to a method effect but rather reflect contrasting differences between the concepts of successful and unsuccessful meetings. These polar opposites then suggest that the concept of successful and unsuccessful meetings are not unrelated entities however bipolar extremes of a continuum. Additionally, the distinctive sets of features suggest that individuals hold developed schemas stereotypes for both successful and unsuccessful meetings.

When evaluating the prototypical meeting features in relation to task and relationship dimensions it can be observed that individual tend to identify task rather than relationship-related aspects for both successful and unsuccessful meeting concepts (Table 5 in Appendix C and Table 8 in Appendix D respectively). This would imply that perhaps the task-related aspects are most influential for successful and unsuccessful meeting outcomes.

Finally, all prototypical features that were identified for successful and unsuccessful meetings were related in the internal functioning of meetings. The reliance upon internal features of meetings mirrors the trends found in the review of literature regarding meeting outcomes. Overall, these findings suggest that internal influences of the meeting aspects may have the greatest impact on meeting outcomes. However, this trend may in part be due to an attribution error, as individuals tend to underestimate situational influences.

The discussion will continue with a theoretical evaluation of the leading six prototypical features of successful and unsuccessful meetings and their corresponding polar opposites identified in study one.

4.2 Evaluation of the leading prototypical features of successful and unsuccessful meetings.

Feature 1: Active group participation with equal interaction versus lack of group participation with unequal interaction.

‘Active group participation with equal interaction’ was found to be the leading prototypical feature associated with successful meetings and was identified by 58 % of the sample. In contrast, ‘lack of group participation with unequal interaction’ was identified by 26% of the sample as a characteristic of unsuccessful meetings.

Silberman (1999) also identifies active participation as the single most important factor in successful meetings. Furthermore, Nixon and Littlepage (1992) found that participation of all attendees to lead to meeting success in terms of greater goal attainment and member satisfaction. Ribbink (2002) states that although participation is fundamental to meeting success it is crucial that this participation is focused towards achieving a specific goal.

Participation is believed to be important to the meetings as it aides problem solving and decision making processes. Participation in the problem solving and decision making process often results in the generation of better ideas though a greater evaluation of the problem or decision to be made (Nemeth & Staw, 1989) and greater solution generation and evaluation of solutions (Hoffman, 1965). Participation also aids the implementation of decisions through increased retention of information gained in the meeting (Gilbert, 2002), greater member satisfaction (Nizon & Littlepage, 1992) and greater individual buy-in (Strauss & Milton, 2003). In contrast inadequate participation has been noted to lead to poorer decision making through the decreased quality of group decisions (Zander, 1977).

The studies results indicated that in addition to full participation equal interaction from participants is important for meeting success. In meeting situations certain individuals may

dominate discussions, limiting talk time for other attendees and creating imbalanced interaction between participants (The 3M meeting management team and Drew, 1994). Without the opportunity for all members to contribute, a variety of quality and necessary information, opinions and viewpoints are lost leading to lower quality decisions, reduced group commitment (The 3M meeting management team and Drew, 1994) and overall to the unsuccessfulness of meetings.

Mosvick & Nelson (1996) recommend that rather than equal participation meeting attendees should have equitable talk time. Equitable talk time for a meeting consisting of six members would see that the meeting leader consume 25% of the total talk time with each of the remaining attendees acquiring 15%. If equitable talk time is achieved the discussions will become more balanced with a higher probability of the meeting being productive (Mosvick & Nelson, 1996). Overall, Mosivick and Nelson (1996) are still suggesting equal talk time between attendees (excluding the leader) and therefore their suggestions are still congruent with our finding of equal participation.

Feature 2: Clear and detailed agenda versus lack of or inadequate agenda.

Having a 'clear and detailed agenda' was found to be the second leading prototypical feature of successful meetings and was identified by 46% of the sample. 'Lack of or inadequate agenda' was identified by 21% of the sample as being associated with unsuccessful meetings.

In accordance with the present studies findings, Jay (1976) states that the agenda is the most important document in a meeting however it's worth is often diminished when it is made brief and vague. A clear and detailed agenda has the potential to add focus and clarify to a meeting (Jay, 1976). Without a single focus and clarity, members will mentally think in divergent directions, possibly resulting in greater confusion, heightened tension and lower productivity (Jay, 1976). A structured procedure such as a meeting agenda has also been seen to improve participation through greater information sharing between members, whilst minimising the likelihood of problems associated with decision making such as premature convergence (Mennecke, 1997).

A structured clear agenda may be viewed in essence as a written documentation of the groups' goal. According to Goal Setting Theory (Locke, 1990) individual and group goals

play an important part in determining levels of motivation and consequently direct individual and group behaviour. Therefore a clear and structured agenda that has been agreed upon by attendees is likely motivate individuals and encourage behaviour that is in line with achieving the agenda items, in turn, leading to a more successful meeting.

Feature 3: Positive outcome versus no outcome.

A 'positive outcome' was identified by 37% of the sample as being characteristic of successful meetings. In contrast, 'no outcome' was identified by 23% of the sample as being linked to unsuccessful meetings.

It seems common sense that a successful meeting is one that achieves its set objective or results in a positive outcome. In contrast, an unsuccessful meeting is one that has no outcome or does not achieve any purpose. Haynes (1998) describes the effectiveness of the meeting in relation to the achievement of set objectives, however, studies have illustrated that only 64% of meetings achieve their intended outcomes (Hofstra University and Harrison Consulting Services (n.d., as cited in Chancey and Lyden, 1998). Zander (1971) illustrates that success is related to future success. Individuals who succeed on a difficult task have a greater desire for future group success in turn leading to efficient coordination, greater effort lower strain on interpersonal relations and overall productivity. In relation to meeting success the achievement of a positive outcome may encourage a stronger desire to achieve successful meetings in the future creating an upward spiral for performance.

Feature 4: Specific goal/purpose versus no agreed goal/purpose.

A 'specific goal/purpose' was found to be prototypical of successful meetings and was identified by 29% of the sample. 'No agreed goal or purpose' was identified by 14% of the sample as characteristic of unsuccessful meetings.

Zander (1971) states that an effective group is one that has clear criteria for success. A group with a specific goal or purpose is more likely to have a common direction, the ability to determine when the group reaches its end target, whilst helping the members define roles, coordinated actions and develop sensible work procedures (Zander, 1971).

Larson and La Fasto (1989) in a study of 75 diverse teams found that “without exception, when an effectively functioning team was identified, it was described by the respondents as having a clear understanding of its objective” (p. 27). In comparison, the explanation of team ineffectiveness was commonly described in some relation to the goal inadequacy.

O’Leary-Kelly and Martocchio (1994) in a review of the goal-performance literature concluded that 83% of the studies reviewed showed a positive relationship between goal and performance. Furthermore O’Leary-Kelly and Martocchio (1994) found that groups with goals had a performance level that was almost one standard deviation higher than for groups without goals.

According to Goal Setting Theory (Locke, 1990), the setting of goals may lead to improved performance through the process of increasing individuals and group motivation. Individuals who are highly motivated are more likely to expend effort resulting in higher individual and group performance in terms of meeting success.

Feature 5: Efficient communication versus poor communication

Communication has been described as the “essence of the small group experience and the key to the success of the group” (Patton & Downs, 2003, p. 2). It is then not surprising that 28% of the sample identified ‘efficient communication’ as prototypical of meeting success. In contrast 17% of the sample found ‘poor communication’ as characteristic of unsuccessful meetings.

Larson and La Fasto (1989) study of diverse teams found that the groups communication system was a factor that differentiated successful teams from unsuccessful ones. More specifically a successful team was more likely to have an efficient communication system over an unsuccessful team.

Group communication has been viewed as the most influential aspect for decision making (Hackman & Morris, 1975). Hackman (1990) illustrates that group inputs such as group effort, knowledge/skills and performance strategies influence group decision making through the mediation of group communication.

Feature 6: Full consensus versus partial or no consensus

'Full consensus' was identified by 22% of the sample as prototypical of successful meetings. 'Partial or no consensus' was found to be prototypical of unsuccessful meetings and identified by 7% of our sample.

Silberman (1999) states that "most experts agree that groups should make important decisions by building consensus as opposed to voting" (p. 251). Decisions that are based on strong support such as consensus are not only likely to be of a higher quality due to the incorporation of multiple perspectives but also more likely to generate greater commitment by the members resulting in greater implementation success (Zander, 1994). Dooley, Fryxell and Judge (2000) examined the relationship between consensus and decision making and found that consensus positively influenced decision implementation success through the mediation of commitment.

Consensus has also been documented to result in heightened member satisfaction and greater group unity and therefore viewed as one of the most important team goals (Mosivick and Nelson, 1996).

Straus and Milton (2003) believe that consensus should be the ultimate aim in decision making as the process communicates the organisations commitment to collaborative decision-making leading to employee support even if consensus is not achieved.

Feature 7: The minimum number of appropriate attendees were invited and attended versus not all of the necessary attendees were invited or present.

The results indicated that 'not having the necessary attendees present' at a meeting was the leading prototypical feature of unsuccessful meetings and was identified by 29 % of the sample. Twelve percent of the sample identified 'involving the minimum number of appropriate attendees' in the meeting process as being prototypical of successful meetings.

Studies by Oppenheim (1989, as cited in Romano and Nunamaker, 2001) identified not having the 'right people' as one of the leading causes in unproductive meetings. Furthermore selecting the 'right people' was found to be a factor accounting for team success (Larson & La Fasto, 1989). Doyle and Strauss (1982) recommend the appropriate attendees to invite are

those that have that relevant expertise, those that need to know about the decision, those that are needed for decision implementation and those affected by the problem.

Zander (1994) recommends that the meeting group should be kept to a limited number of individuals preferably between 7-8 individuals. Restricting the number of attendees to 7-8 is believed to increase interaction between attendees whilst giving the individuals greater responsibility heightening their interest. Patton and Downs (2003) reiterate this opinion and state that with increasing group size there is an increase in the number of dominant individuals, leading to imbalanced interaction and participation. Hoffman (1965) states that as a group become larger individuals become more introverted with communication becoming imbalanced.

Finally, as the present studies findings suggest it is important that individuals that are invited to the meeting actually attend. Booher (1994) describes a consequence of reoccurring unproductive meetings being that the busiest people often stop attending. Ironically it may be the busiest people who hold unique knowledge and expertise and therefore are crucial for meeting success.

Feature 8: resolved conflict versus unresolved conflict.

'Unresolved conflict' was found to be the second leading prototypical feature of unsuccessful meetings and was identified by 26% of the sample. In contrast, 'resolved conflict' was identified as characteristic of successful meetings by 2% of the sample.

Leventhal (1970) suggests that individuals behaviour is often the result of a fear reaction. When individuals experience conflict in a meeting a fear reaction is likely to result, in turn individuals are likely to undertake positive behaviours to reduce the fear and in doing so the manage the conflict. In this sense an individual can manifest a negative situation into a positive outcome.

Conflict can be viewed as both detrimental and useful to group functioning. Amason (1995) states that given the inevitability of conflict it is not conflict itself but rather how the conflict is managed that has an influence on group effectiveness. Kowitz and Knuton (1980) discuss how the management of conflict can lead to effective group functioning. Firstly, the

management of conflict can generate higher quality decisions through increased information generation and evaluation. Secondly, managed conflict can give interest to group work promoting excitement that can strengthen group unity and cohesion. Thirdly, managed conflict can clarify issues about group procedures and their effectiveness with inadequacies identified and corrected. Kowitz and Knuton (1980) further state that conflict management may also be used as a tool to clarify the groups' direction and group roles. Finally, lightened personal conflict can help create trust and unity in the group. On the reverse, Kowitz and Knuton (1980) note that the consequences of unmanaged conflicts are extreme such as increasing individual hostility and frustration that may diminish goal attainment, induce premature decision making and create interpersonal conflict.

Amason (1996) describe conflict as a multidimensional concept consisting of two forms, cognitive conflict and affective conflict. Cognitive conflict otherwise termed task conflict is based around how the task is to be achieved. Consequently, cognitive conflict leads to higher quality decision making greater understanding and affective acceptance (Amason, 1996). Affective conflict otherwise known as personal conflict is not related to the task but to the personal relationships within the group. This form of conflict has been shown to lead to lower quality decisions and affective acceptance (Amason, 1996).

In summary it is therefore not only the management of all conflict as the present studies results suggest but also the promotion of cognitive conflict and reduction in affective conflict that is likely to influence meeting success. Conversely, unmanaged conflict with a low incidence of cognitive conflict and high incidence of affective conflict is likely lead to unsuccessful meetings.

Feature 9: To the point/not to long versus not to the point/to long.

'To the point/not to long' was identified by 18 % of the sample as being prototypical of successful meetings. In contrast, 'not to the point/to long' was identified by 26% of the sample as being characteristic to unsuccessful meetings.

La Rooy (1997) states that "too much poorly distilled information can lead to a lack of focus, problems with identifying the more strategic issues and to difficulties with decision making" (p. 40). Therefore to ensure the meeting stays on focus and does not exceed the allocated time

frame it is essential that the information that is communicated is expressed clearly and to the point. Without focus irrelevant matters are likely to be examined and may dominate discussion. Mosivick and Nelson (1996) identify sidetracking from the subject as the most common problem in business meetings. As a rule Wyatt (1996) believes that meetings should be kept short, as after a 45 minute time frame less is achieved per minute.

Feature 10: Prior preparation and planning versus lack of prior preparation and planning

'Lack of prior preparation and planning' was identified by 23% of the sample as being prototypical of unsuccessful meetings. In contrast, 'adequate preparation and planning' was found to be characteristic of successful meetings and identified by 11% of the sample.

Preparation and planning are often viewed as key ingredients to any meeting (Kratlenmaker, 2000). Elsayed-Elkhouly et al. (1997) found that 98% of respondents thought attendee preparation was important for effective meetings however only 32% were actually prepared most of the time. The first step in the planning process is usually undertaken by the meeting leaders and focuses around evaluating the necessity of the meeting. Erickson (1998, as cited in Romano & Nunamaker, 2001) showed that 20-30% of executive meetings are unnecessary. The second step in preparation is the development of an agenda and is usually carried out by the meeting leader however there should be input from meeting attendees as discussed previously. The agenda should be sent out in advance of the meeting to assist individuals in the preparation of the upcoming meeting (Silberman, 1999).

Preparation ensures that the meeting time is utilised to its full potential and the interaction is maximised in order to achieve optimum results such as effective decision making (Tropman, 2003). This in turn will make the meeting more rewarding and enjoyable for the involved participants (Tropman, 2003).

4.3 Summary of the leading prototypical features of successful and unsuccessful meetings.

In conclusion, the prototypical features identified for successful and unsuccessful meeting were those relating to the internal functioning of the meeting. Therefore, the internal meeting

features that were found to have the greatest influence for meeting success were: (1) active group participation with equal interaction, (2) clear and detailed agenda, (3) positive outcome, (4) specific goal/purpose, (5) efficient communication, and (6) full consensus. In contrast the internal meeting features that had the greatest influence on unsuccessful meeting outcomes were: (1) not all of the necessary attendees were invited or present, (2) unresolved conflict, (3) lack of group participation with unequal interaction (4) Too long/ not to the point (5) no outcome and (6) lack of prior preparation and planning.

When collectively examining the six leading successful and unsuccessful prototypical meeting features, the importance and centrality of goals to achieve many of these features becomes apparent. According to Goal Setting Theory (Locke, 1990), individual and group goals influence levels of motivation that in turn impact on individual or group behaviour. Therefore, in the context of meetings, a specific meeting goal/purpose in the form of a structured agenda may aid the motivation of all individuals to actively participate in the meeting, leading to efficient communication, conflict resolution, and full consensus and ultimately to a positive outcome or meeting success. Conversely, the absence of a meeting goal may reduce individual motivation leading to unequal participation of meetings, and further to inefficient communication, unresolved conflict, no or partial consensus and ultimately an unsuccessful meeting. Meeting goals therefore underpin many of the prototypical features of successful and unsuccessful meetings and consequently are a central feature that influences meeting outcomes.

Finally, when examining leading prototypical features for successful and unsuccessful meetings it should be noted that the frequencies and percentages in which these features were identified by the sample were relatively low, especially in relation to the unsuccessful prototypical meeting features (see Tables 3 and 6). These relatively low frequencies and percentages suggest that prototypical features do not explain the full variance in meeting outcomes and that there may be other aspects that influence meeting outcomes. In study two, external aspects to the meeting context, such as functioning in the wider organisation, will be evaluated in relation to their influence on meeting outcomes.

CHAPTER FIVE

Study Two Method

Study two of the research aimed to examine the features external to the meeting context that impact on successfulness and unsuccessfulness of meetings, including: (1) degree of team functioning; the degree to which the collection of individuals are functioning at a team as opposed to a group level, (2) group cohesion; the degree to which the collection of individuals are united, (3) group development; the development stage in which the collection of individuals are operating, (4) Teamthink; the balance between the individual and group forces, and (5) job-related affect; individuals positive and negative emotion experienced on the job. These relationships are illustrated in Figure 1.

5.1 Participants

One hundred and seventy nine individuals from 30 existing organisational groups that performed meetings participated in study two. Organisational groups were simply operationalised as collections of individuals who operate in within the organisational context.

Organisations that were identified as top New Zealand companies in the Deloitte/Management Top 200 Awards (2002), and that were situated in Auckland were invited to participate in study two. The Deloitte survey was used as the first selection criterion based on the assumption that leading New Zealand organisations would be more likely to utilise team-based functioning and therefore have collections of individuals operating at both the team and group levels.

Generalisability of the findings was an objective in this study and was managed in a number of ways. Firstly, organisations from both product and service industries were included in the sample. Secondly, within organisations collections of individuals across numerous departments were assessed. Thirdly, within organisations collections of individuals ranging from company executives to operational staff were included. In total, nine organisations comprising thirty collections of individuals from product or service industries participated in this research.

All organisations internally selected and invited collections of employees to participate, and prepared a list of those collections of individuals with corresponding dates and times of their meetings. In all organisations, the Human Resource Manager (or representative other) approached their employees with the invitation to participate

Participation in study two was voluntary. Participants personal details were not required, therefore anonymity to the extent allowable by law was assured. Completion and return of the questionnaire implied informed consent to participate in the research.

5.2 Materials

The questionnaire consisted of six sections comprising five separate measures and a demographic section. The measures assessed: (1) outcome of the meetings (successful or unsuccessful) categorised by the successful and unsuccessful prototypical meeting features identified in study one (2) team or group level of functioning outside of meeting times, (3) group cohesion outside of meeting times, (4) group stage of development and teamthink demonstrated outside of meeting times and (5) job-related affect in the wider organisational context. An information sheet was attached to the front of the questionnaire (see Appendix B to view information sheet and questionnaire)

The sections within each questionnaire were randomly displayed to reduce order effects and ensure the questionnaires were completed individually.

5.2.1 Demographic questions.

A demographic section in the questionnaire included items relating to gender, age, number of members that belong to the meeting group, and regularity of meetings.

5.2.2 Meeting outcome (successful or unsuccessful).

A 41 item questionnaire was developed based on findings from study one of this research and a review of literature regarding successful and unsuccessful meetings.

A total of 41 prototypical features identified in study one were utilised for this measure. The 41 prototypical features consisted of the 28 polar opposite pairs, additional prototypical features, and the three aspects identified from the literature.

Participants were asked to indicate the degree that their last meeting demonstrated the 41 features using a five point likert scale ranging from 'almost never' to 'almost always'. Collections of individuals indicating high on the successful prototypical meeting features were considered to have a successful meeting. Alternatively, collections of individuals indicating high on the unsuccessful prototypical meeting features were considered to have an unsuccessful meeting.

5.2.3 Team or group levels of functioning

This measure was developed based on the team and group prototypical features identified by Carr et al. (2002). Only the dominant team and group features identified by Carr et al. (2002) were selected for use in study two. Dominant features were selected base on the following criteria: (a) identified by at least one percent of the Carr et al. (2002) sample or had a ratio greater or equal to 4:1 , or, (b) were the corresponding bipolar opposite to a feature identified in (a). A total of 28 features were selected. Twenty-five of the features were relevant to teams and groups at different degrees e.g. a high prevalence of the feature was team related and a low prevalence group related (or vice versa), two features were only team related and one feature was only group related.

All of the 28 prototypical features were validated as either team or group related in a study by Carr, Fletcher, Atkins & Clarke (2003). In this study 120 participants were asked to sort the team and group prototypical features into team and group categories. Eighty three percent of the top prototypical team features and 75% of the prototypical group features were correctly identified by participants as either teams or group related as found in study one (Carr et al., 2003).

Team and group features were randomly ordered with equal numbers of positive to negative worded phrases. Participants were asked to indicate the degree to which there meeting colleagues demonstrated the features outside of meeting times. A five point likert scale

ranging from 'almost never' to 'almost always' was utilised. Collections of individuals indicating high on the team prototypical meeting features were considered to be operating at a team level outside of meeting times. Alternatively, collections of individuals indicating high on the group prototypical meeting features were considered to be functioning at a group level outside of meeting times.

5.2.4 Group cohesion

The Group Environment questionnaire (GEQ) (Carron, Widmeyer and Brawley, 1985) was adopted and modified for use in this study. The phrases: playing time, season, win, play, off-season, practice, games, athlete's, and competition, were changed to: work time, work period, achieve, operation, after work has finished, exercises, individual's and work time respectively. Participants were asked to indicate the degree to which they agreed with each of the items on a nine point likert scale ranging from 'strongly disagree' to 'strongly agree'

The GEQ is based on a strong theoretical framework (Carless & De Paola, 2000) and comprises two bipolar dimensions: individual versus group, task versus social. These two dimensions create four scales include group integration-task (GI-T), group integration-social (GI-S), individual attraction to the group-task (ATG-T), and individual attraction to the group-social (ATG-S). The ATG-T and ATG-S scales were conceptualise at the individual level with GI-T and GI-S at the group level.

The GEQ was initially developed for use with sport teams. Internal consistency, reliability across studies, content validity, and factorial evidence has been obtained for the GEQ in the sport domain (Carron, Widmeyer and Brawley, 1985).

Cota, Evans, Dion, Kilik and Longman (1995) identified the dimensions of individual versus group and task versus social as 'primary dimensions', important to the understanding of cohesion in almost all types of groups. Dion and Evans (1992) suggest that this two-dimensional model on which the GEQ is based may be applicable to a range of different groups. Carless and De Paola (2000) evaluated a modified version of the GEQ in a work setting. Findings did not support a four factor structure, however the dimensions of task cohesion, social cohesion and individual attraction to the group were found as important

aspects of work team cohesion. Chang and Bordia (2001) also evaluated the GEQ in a work setting and found support for the group integration-task and group integration-social variables although the task dimension received low internal consistency. These studies combined provide support for the four factor structure for the GEQ in a work-based setting.

Collections of individuals indicating high on the GEQ were considered to be highly cohesive outside of meeting times. Alternatively, individuals indicating low on the GEQ were considered to be low in cohesion outside of meeting times.

5.2.5 Group stage of development.

The 32 item Teamwork Questionnaire Developed by Clark (1998) was adopted as a measure of a groups development in the context of meetings.

The original questionnaire is based on the Tuckman group development model encompassing the stages of Forming, Storming, Norming and Performing (Tuckman 1965). Evidence in support for each of the group development stages has been given for therapy groups, training groups, natural groups and laboratory groups (Tuckman, 1965).

The questionnaire was modified for use in this study. The term 'team' was removed from the wording of any items, for example 'team leader' became 'leader' as it may not be relevant to groups. The instructions asked participants to indicate the degree to which each of the outlined behaviours was present outside meeting times.

Seven questions were added to the Teamwork questionnaire to assess the degree to which Teamthink behaviour was demonstrated outside of meeting times. Team think is characterised as individuals balance between themselves 'me' and the team 'we' in order to work together as a cohesive unit and perform optimally (Manz, Neck, Mancuso and Manz, 1997). Teamthink therefore could be conceptualised as a stage relating to and in fact extending those of Norming/Performing. Manz et al. (1997) identified seven characteristics of Teamthink. These characteristics were developed into test items for use in study two and staggered throughout the Teamwork questionnaire.

The original Teamwork questionnaire was developed as a training tool and therefore reliability and validity evidence is not been assessed.

Participants were required to respond using a five point likert scaled ranging from 'almost never' to 'almost always'. The highest development subscale score was considered to reflect the dominant development stage that the collection of individuals were operating in outside of meeting times. A total score was calculated for the seven Teamthink questions, with a high score indicating functioning at a high level of Teamthink outside of meeting times.

5.2.6 Job-related Affect.

The Job-related Affective Well-Being Scale (JAWS) developed by Van Katwyk, Fox, Spector and Kelloway (2000) was used in this study. JAWS assess two dimensions pleasure and arousal. The measure incorporates two subscales pertaining to positive affect and negative effect. The measure may be further segmented into four subscales high pleasure-high arousal (HPHA), high pleasure-low arousal (HPLA), low pleasure-high arousal (LPHA), and low pleasure-low arousal (LPLA). The total measure consists of 30 questions and utilises a 5 point likert scale ranging from 'never' to 'extremely often'.

JAWS has advantages for use over other affect measures such as the PANAS (Katwyk et al., 2000). JAWS measures and larger range of emotions assessing emotions along the continuum from low to high arousal. JAWS is also context specific, therefore is directly related to context specific behaviours in the work setting such as job satisfaction.

Internal consistency ($\alpha = 0.95$), concurrent validity (related to PANAS scales), predictive validity (related to work outcomes such as job satisfaction) and factor structure support have been obtained for the JAWS (Katwyk et al., 2000). This evidence was based on a sample of 114 state civil service employees and consequently could be related to other work-based settings.

Collections of individuals indicating high on the positive JAWS items were considered to have experienced high levels of positive emotion outside of meeting times. Collections of

individuals indicating high on the negative JAWS items were considered to have experienced high levels of negative emotion outside of meeting times.

5.3 Procedure

Participating collections of individuals were required to complete a questionnaire following a meeting in which they had just taken part. The researcher did not attend the meeting, as this may have directly influenced the process and outcome of the meeting. The researcher was notified once the meeting had finished and proceeded to the meeting room to hand out the questionnaires. Participants were given a questionnaire with an attached information sheet (See Appendix B) which they were asked to read before proceeding to complete the questionnaire. The six sections within each questionnaire were displayed randomly to reduce order effects. Presence of the researcher while the questionnaires were being completed ensured that all questionnaires were completed individually as per instructions and that any questions could be answered with issues clarified. The questionnaire was completed directly after the meeting to reduce the influence of memory recall problems on response accuracy.

Individuals were informed that their participation was voluntary, and their responses anonymous to encourage the truthfulness of responses and questionnaire completion.

5.4 Data Analysis

Data analysis began with examination of the demographic questions using descriptive statistics. Calculations were made for questions regarding: gender, age, meeting group size and regularity of meetings.

Statistical assumptions including normality, linearity and homoscedesticity were assessed for each of the variables and relationships under study

Exploratory Factor Analysis (EFA) was conducted for the meeting outcomes measure and team and group level of functioning measure. As these two measures were developed for the purposes of this research EFA was appropriate. Items with factor loadings lower than 0.3 and those that loaded on both factors were removed.

Confirmatory Factor Analysis (CFA) was carried out for the group cohesion (GEQ), group stage of development, teamthink and job-related affect (JAWS) measures using Amos 4.01 (Arbuckle, 1999). A means and intercepts estimation was utilised to account for missing data (Bryk & Raudenbush, 1992).

Fit statistics including the comparative fit index (CFI), Tucker-Lewis index (TLI) and the root mean square error of approximation (RMSEA) were calculated to evaluate the degree to which the observed data fitted the hypothesised factor structure. The CFI and TLI are expressed as comparative indexes. As comparative indexes the hypothesised factor structure is contrasted to an independence model where all correlations are zero. The CFI initially derived from the normed fit index (NFI) is appropriate for small sample sizes with values ranging from 0 to 1.00 (Byrne, 2001). Hu and Bentler (1995 as cited in Byrne, 2001) suggest that a value of 0.95 or greater for the CFI indicates that the data adequately fits the hypothesised factor structure. Like the CFI the TLI values range from 0 to 1.00 with values equal or greater than 0.95 indicating the data has a good fit with the hypothesised factor structure (Byrne, 2001). The RMSEA evaluates the degree in which the data fits the hypothesised factor structure taking into account the error of approximation in the population. Precision of the RMSEA were evaluated using 90% confidence intervals. Values less than 0.05 were indicative of good fit, values greater than 0.08 suggested a mediocre fit and values greater than 0.1 signified a poor fit (Byrne, 2001). A closeness of fit index for the RMSEA was also calculated with probabilities values less than or equal to 0.05 indicative of a good fit in the population (Byrne, 2001).

Internal consistency estimates of reliability for each of the measures and corresponding subscales confirmed by the factor analyses were calculated using Cronbach's Alpha.

Each of the variables were categorised by level with individual level variables considered level one and group level variables considered level two (See Table 12 for a review of the level one and two variables and their corresponding subscales).

Table 12.

Individual and group level variables included in study two.

	Measure	Subscales	Reference
Individual level variables (level one)	Job-related Affect (JAWS)	* positive affect * negative affect	Katwyk, Fox, Spector & Kelloway (2000)
	Cohesion (GEQ)	* individual attraction to the group-task (ATG-T) * individual attraction to the group-social (ATG-S)	Carron, Widmeyer & Brawley (1985)
Group level variables (level two)	DEPENDENT VARIABLE Meeting outcome	* Successful and unsuccessful prototypical meeting features	Study one
	Team and group level of functioning	* Team prototypical features * Group prototypical features	Carr, Fletcher, Atkins & Clarke (2002)
	Cohesion (GEQ)	* group integration-task (GIT) * group integration-social (GIS)	Carron, Widmeyer & Brawley (1985)
	Group development stage	* Forming * Storming * Norming * Performing	Clark (1998)
	Teamthink	* Teamthink	Manz, Neck, Mancuso & Manz (1997)

Five of the variables used in the study were conceptualised as group level variables (level two) including: meeting outcome, team and group level of functioning, group cohesion, group stage of development, and teamthink (Table 12). When dealing with group level

variables two considerations should be made. Firstly, consideration of the appropriateness of expressing each of the five independent variables as group level phenomenon should be evaluated. In order for a variable to be expressed as a group level phenomena variation must exist between groups. Moritz and Watson (1998) state that without variation between groups there is no evidence that the construct differs at the group level. Secondly, given that the group level variables were measured at an individual level the appropriateness of aggregating individual responses to assess the variable at a group level should be considered. Evidence of within group agreement should be sought to justify aggregation of individual responses for the group level measures. Moritz and Watson (1998) state without homogeneity among members perceptions a mean collective score based on the aggregation of individual perceptions would not accurately describe the group as a whole

One-way analysis of variance (ANOVA) and intraclass correlations (ICC) were calculated to evaluate between group variability and within group agreement for each of the proposed group level variables/subscales. Prior to the ANOVA and ICC calculations, values were generated for missing data points using an EM (expectation-maximisation) estimation method. Conceptually the EM estimation method estimates the mean vector, covariance matrix and correlation matrix of all items with missing values (Bryk & Raudenbush, 1992).

A one-way analysis of variance (ANOVA) was carried out for each of the five group level variables/subscales. ANOVA's were calculated to evaluate whether there was greater between group variance than within group variance. Moritz and Watson (1998) state that an ANOVA and corresponding F test "indicates whether or not the observed differences between group mean...ratings differ from what would be expected from chance alone" (p. 292). In other words, do the observed patterns in the data represent true differences rather than random error. A significant F value indicates that that there is more variance between collections of individuals than within groups for the given independent variable and provides support for an emergent group level phenomena and for aggregating individual responses.

To evaluate the strength of between group variability and within group agreement Intraclass correlations (ICC) were calculated using the mean squares generated by the ANOVA calculations. Paskevich, Brawley, Dorsch and Widmeyer (1999) describes ICC as an "estimation of whether two people in the same group are more similar than two people who are members of different groups" (p. 218). A significant ICC indicates the degree to which between groups variability is greater than within group variability. More specifically, a

significant F value indicates that individuals from the same meeting group hold similar perceptions (within group agreement) and that those perceptions differ from views held by members of other collections of individuals (between group variability). A significant F value closer to zero suggests indicates that the individuals from one meeting group are no similar than members from other groups (evidence of within group variability and between group homogeneity).

Finally each of the hypotheses were evaluated using a technique suggested by Kenny and La Voie (1995). This procedure was used to estimate the variance explained in the meeting outcomes measure by each of the independent variables whilst controlling for individual and group level effects have been accounted for. Kenny and La Voie (1995) technique is based on the premise that in any group setting both individual and group processes are occurring and therefore both levels need to be considered when analysing group level data. Kenny and La Voie (1995) procedure enables the evaluation of a relationship at one level while controlling for the effects at the other level. For example, the Kenny and La Voie (1995) procedure may be used to evaluate the explained variance or relationship between meeting outcomes and each of the other group level variables (Table 12) whilst controlling for effects at the individual level. This procedure may also be used for evaluating each of the individual level variables (Table 12) whilst controlling for effects at the group level. See Kenny and La Voie (1995) for more details of this procedure.

The individual and group level variance was calculated by the following equations:

$$\text{Individual level variance} = \frac{\text{MCP}_{wxy}}{\text{MS}_{wx} \text{MS}_{wy}} \quad (1)$$

$$\text{Group level variance} = \frac{\text{MCP}_{bxy} - \text{MCP}_{wxy}}{\sqrt{(\text{MS}_{bx} - \text{MS}_{wx})(\text{MS}_{by} - \text{MS}_{wy})}} \quad (2)$$

Where: MCP_{wxy} = Within groups mean cross product for X and Y
 MCP_{bxy} = Between groups mean cross product for X and Y
 MS_{wx} = Within groups mean squares for X
 MS_{wy} = Within groups mean squares for Y
 MS_{bx} = Between groups mean squares for X
 MS_{by} = Between groups mean squares for Y

CHAPTER SIX

Study Two Results

6.1 Demographic statistics

A total of 179 individuals ($n=179$) participated in study two of the research. Of these participants 98 were male, 77 were female and 4 gender was not specified. The average age of the sample was 34.61 years ($sd=9.01$) with a range of 20 to 60 years.

The 179 participants comprised 30 collections of individuals which ranged from 4 to 16 members with a mean of 11 ($sd=3.37$). Approximately 94% of the meetings accessed were identified by the attendees as regular meetings.

6.2 Statistical Assumptions

The individual and group level measures were examined for evidence of normality, linearity and homoscedasticity.

Firstly, histogram plots were utilised to assess normality of each of the study variables. The individual level variables (cohesion subscales: ATG-S, ATG-T and the JAWS subscales: positive affect, negative affect) were found to have normal distributions therefore satisfying the assumption of normality. The group level variables (meeting outcome, team and group level of functioning, cohesion subscale: GI-T, group development stage subscales: forming, norming and performing, and teamthink) were found to have normal distributions, however, showed evidence of range restriction (Appendix G for an example of range restriction in the dependent variable). All of the group level variables were range restricted at the higher ends of the scales indicating that the participating collections of individuals identified themselves along the prototypical features of successful meetings and team functioning and perceived themselves to be high on GI-T, forming, norming, performing and teamthink. Bobko (2001) states that although statistical tests for regression are robust to violations of normality, range restriction may reduce or increase correlations. Bobko (2001) suggests that in range restricted situations correlation correction formulas may be utilised to estimate what the correlations would be in a non-range restricted sample (see equation 6).

Scatter plots were utilised to examine evidence of linearity for each of the relationships under study. The individual level variables (ATG-S, ATG-T, positive affect and negative affect) were plotted against the meeting outcome measure at the individual level. The group level variables (team and group level of functioning, cohesion subscale: GI-T, group development stage subscales: forming, norming and performing, and teamthink) were plotted against the meeting outcomes measure at the group level. All scatter plots showed evidence of linearity (see Appendix H).

Finally, evidence of homoscedasticity (equal error variances) was examined through standardised plots of the residuals for each of the relationships under study. All standardised residual plots showed a normal distribution of errors centred around zero at all values of X, therefore providing support for the assumption of homoscedasticity (see Appendix I).

6.3 Exploratory Factor Analysis

A one factor structure was found to best describe the meeting outcomes measure. Items with factor loading less than 0.3 were removed from analysis. A high score on this measure indicating a successful meeting and a low score indicated an unsuccessful meeting. The meeting outcome factor comprised 36 items with factor loadings ranging from 0.33 to 0.74. The meeting outcome factor items are shown in Table 13.

Table 13.

Factor loadings for the meeting outcome items.

Item	Factor One Λ
17	.74
26	.72
12	.72
9	.69
18	.68
28	.68
10	.65
39	.64
34	.62
13	.61
16	.59
21	.58
14	.56
2	.56
11	.55
6	.55
25	.55
8	.53
4	.58
22	.50
36	.50
27	.48
37	.47
1	.46
5	.46
41	.46
29	.44
35	.41
31	.41
15	.41
40	.36
24	.35
32	.35
7	.35
13	.34
23	.33

Note: Factor 1= meeting outcome

A one factor model was also found to best describe the team and group level of functioning measure. Items with factor loading lower than 0.3 were removed from analysis. A high score on this measure indicating team functioning and a low score group functioning. The team and group level of functioning measure consisted of 22 items with factor loading ranging from 0.35 to 0.73. The items and factor loadings for the team and group level of functioning measure are shown in Table 14.

Table 14.

Factor loadings for the team and group level of functioning items.

Item	Factor One Λ
11	.73
10	.71
14	.70
27	.68
26	.66
13	.66
19	.63
9	.60
24	.60
17	.59
15	.58
4	.57
16	.55
7	.54
18	.53
12	.52
8	.50
25	.47
28	.47
5	.44
2	.37
20	-.35

Note: Factor 1= team/group features

6.4 Confirmatory Factor Analysis

The factor structures of the remaining measures were conducted using Confirmatory Factor Analysis (CFA).

According to Carron et al. (1985), the group cohesion measure is conceptualised as a four factor model incorporating the four subscales: GI-T, GI-S, ATG-T, ATG-S. Item 2 was removed as the critical ratio value was less than 1.97 and not significant ($p \leq 0.05$). The TFI, CFI and RMSEA fit indices indicate a good fit for the four factor model (See Table 15: TFI=0.97, CFI =0.98, RMSEA =0.10).

The group stage of development measure was conceptualised as a four factor model incorporating the four subscales: forming, storming, norming and performing (Clark, 1998). Item 35 was removed from analysis as the critical ratio value was less than 1.97 and not significant ($p \leq 0.05$). The TLI and CFI fit indices indicated good fit with RMSEA suggesting a slightly poorer fit (see Table 15: TLI = 0.92, CFI =0.93, RMSEA =0.12). Taken together these fit indices suggest average to good fit for the four factor model.

The teamthink questions were expressed in a one factor model as they were conceptually assessing one construct (Manz et al., 1997). The fit indices indicated a good fit for the one factor model (See Table 15: TLI = 0.99, CFI = 0.99, RMSEA =0.09).

A two factor model incorporating the two affect subscales (positive and negative affect) was utilised for the job-related affect measure (Van Katwyk et al., 2000). The TLI and CFI indicated a good fit for the model with RMSEA suggesting a slightly poorer fit (See Table 15: TLI =0.94, CFI =0.95, RMSEA =0.10). Overall, the fit indices suggest an average to good fit for the two factor model.

Table 15.
Fit indices for the group cohesion, group stage of development, teamthink and job-related affect measures.

Measure	TLI	CFI	RMSEA	Chi-square	df
Group cohesion (GEQ)	.97	.98	.10	301.58	115
Group stage of development	.92	.93	.12	1501.07	434
Teamthink	.99	.99	.09	36.00	14
Job-related Affective Well-Being Scale (JAWS)	.94	.95	.10	1166.27	404

6.5 Reliability Analysis

The internal reliabilities of each of the measures and subscales in accordance with their supported factor structures were assessed. Cronbach’s Alpha for the forming stage of development was extremely low ($\alpha= 0.23$) therefore this scale was not carried forward for further analysis. With the forming development stage removed Cronbach’s Alpha ranged from 0.54 to 0.93, suggesting that the items were assessing each construct consistently. Therefore, all remaining scales were carried forward for further analysis. Table 16 outlines the internal reliabilities for each of the measures and subscales confirmed by Factor Analysis.

Table 16.

Internal consistency reliabilities for the six variable measures

Measure	Scale	Number of items	α
Meeting outcome	Successful and unsuccessful prototypical meeting features	36	.93
Team and group level of functioning	Prototypical team/group features	22	.89
Group cohesion (GEQ)	ATG-S	3	.70
	GI-T	5	.72
	ATG-T	4	.75
	GI-S	5	.64
Group stage of development	Forming	7	.23
	Storming	8	.54
	Norming	8	.65
	Performing	8	.77
Teamthink	Teamthink	7	.73
Job-related Affective Well-Being Scale (JAWS)	Positive affect	15	.93
	Negative affect	15	.87

6.6 Analysis of Variance

Kenny and La Voie (1995) suggest setting a liberal alpha level of 0.25 when evaluating group effects therefore a probability level of $p \leq 0.25$ were set. With this probability level all ANOVA's excluding those for the GI-S cohesion subscale and the storming development subscale were significant, therefore providing support for within group agreement and the aggregation of individual responses to the group level. The GI-S and storming subscales were eliminated from further analyses. Table 17 shows the one-way ANOVA data F statistics for the group level variables.

The ICC's for the remaining group level variables were calculated and ranged from 0.25 to 0.44. ICC calculations were compared to a critical value of 1.66 ($df=25$ $df=120$) with all ICC calculations found to be significant. Table 17 shows the ICC results. Note, prior to the evaluation of ANOVA's and ICC, values were computed for missing data points using EM estimation method.

Table 17.

Analysis of variance and intraclass correlations for the group level variables.

Measure	Scale	ANOVA F statistic	ICC
Meeting outcome	Successful and unsuccessful prototypical meeting features	2.04*	.34**
Team and group level of functioning	Prototypical team/group features	2.56*	.44**
Group Cohesion (GEQ)	GI-T	2.59*	.44**
	GI-S	1.15 n/s	-
Group development stage	Storming	1.48 n/s	-
	Norming	1.91*	.31**
	Performing	2.33*	.40**
Teamthink	-	1.68*	.25**

Note. * $p \leq 0.25$, ** critical value ≤ 1.66 , n/s = not significant

6.7 Evaluation of the dependent variable relationships.

On examination of the normality plots range restriction in the meeting outcome measure (dependent variable) and all group level independent variables was identified. Hunter and Schmidt (1990) state that in case were there has been selection on the dependent variable (i.e range restriction) and where there is no reason to suggest a additional situational constraint on the independent variable, the range restriction will induce range restriction in other variables in which it is correlated. Given that the participants in our study were informed that the research concerned general meeting outcomes and not told of the specific measures it is reasonable to suggest that there has not been an additional constraint on the independent variables. Therefore the range restriction in the meeting outcome measure was viewed to bring about range restriction in the independent variables. Hunter and Schmidt (1990) state that in the cases such as that detailed above correction formulas may be used to estimate the 'true' correlation when there is no range restriction. The following correction formula was utilised:

$$R_{\text{corrected}} = \frac{r_{xy} (S_x/S'_x)}{\sqrt{1 - r_{xy}^2 + r_{xy}^2 (S_x/S'_x)^2}} \quad (3)$$

Where: x = dependent variable (prototypical meeting features)
 y = independent variable
 r'_{xy} = correlation between x and y with range restriction on x
 s_x = expected variance on the dependent variable without range restriction
 s'_x = variance on the dependent with range restriction.

As the expected variance on the dependent variable without range restriction (s_x) was unknown the variance was estimated using Cohen's ratio (equation 4) and the corresponding tabled standard deviations suggested by (Alexandra, Alliger, & Hanges, 1984).

$$\text{Cohen's ratio} = \frac{sd^2}{(\text{Mean} - x)^2} \quad (4)$$

Where: sd^2 = standard deviation of the range restricted variable
Mean = mean of the range restricted variable
 x = highest observed sample value for the range restricted variable

The expected variance on the dependent variable without range restriction (s_x) was then calculated by the by the following equations:

$$SD_{\text{population}} = \frac{SD_{\text{obs}}}{SD_{\text{tabled}}} \quad (5)$$

$$SD_{\text{population}} = \frac{9.2859}{.886} \quad (5a)$$

$$SD_{\text{population}} = 10.4807 \quad (5b)$$

Where: SD_{obs} = standard deviation of the ranged restricted variable
 SD_{tabled} = tabled standard deviation.

Therefore correlations were corrected using the following formula:

$$R_{\text{corrected}} = \frac{r'_{xy} (9.2859/10.4807)}{\sqrt{1 - r'_{xy^2} + r'_{xy^2} (9.2859/10.4807)^2}} \quad (6)$$

Where: r'_{xy} = correlation between x and y with range restriction on x

Given that there is no known computer program that attenuates correlations for range restriction the estimated population variance on the dependent variable without range restriction and the correlation attenuations were calculated by hand and double checked.

Each of the study hypotheses identified in chapter one were evaluated using a technique suggested by Kenny and La Voie (1995). The variance explained may be interpreted as the uncorrected correlation between the dependent variable and the independent variable with other level effects controlled. Table 18 shows the variance explained and the corrected correlations of the dependent variable with each of the independent variables whilst controlling for effects at the other level. As noted in Table 17, range restriction in the dependent variable tended to inflate correlations with corrections decreasing once corrected for range restriction.

Table 18.

Variance explained and the corrected correlations for each of the independent variables on the dependent variable (meeting outcome).

Level of predictor	Measure	Subscale	Variance explained in prototypical meeting features (uncorrected correlation)	Corrected correlation
Individual level				
variables	Group Cohesion (GEQ)	ATG-S	.6703	.6378*
		ATG-T	.2907	.2766
	Job-related Affective Well-Being Scale (JAWS)	Positive affect Negative affect	.4972 -.5086	.4731* -.4839*
Group level				
variables	Team and group level of functioning	Prototypical team/group features	.7859	.7477*
	Group Cohesion (GEQ)	GI-T	.7155	.6808*
	Group development stage	Norming	.6148	.5850*
		Performing	.8205	.7807*
	Teamthink	Teamthink	.7703	.7329*

Note * $p \leq 0.05$ (df = n-2, 28)

Relationship between prototypical team/group features and prototypical meeting features.

Team and group prototypical features measure was conceptualised as a group level variable. With individual level effects controlled for the corrected correlation between team/group prototypical features and meeting prototypical features was found to be statistically significant at .7477 (refer to Table 18). Therefore, team prototypical features were moderately to strongly related to successful prototypical features (support for hypothesis 1a) and group prototypical features were moderately related to unsuccessful prototypical meeting features (support for hypothesis 1b)

Relationship between group cohesion and prototypical meeting features.

The two subscales ATG-S and ATG-T were conceptualised as individual level predictors. Therefore with group level effects controlled for the corrected correlation between ATG-S and prototypical meeting features was found to be statistically significant at .6378 (refer to

Table 18). The subscale ATG-T was not found to be significantly related to prototypical meeting features.

The subscale GI-T was conceptualised as group level predictor. Therefore with individual level effects controlled for the corrected correlation between GI-T and prototypical meeting features was found to be statistically significant at .6808 (refer to Table 18).

The two subscales ATG-S and GI-T were found to be positively related to prototypical meeting features. Therefore, high ATG-S and GI-T was related to successful prototypical meeting features, with low ATG-S and GI-T relating to unsuccessful prototypical meeting features, providing partial support for hypotheses 2a and 2b.

Relationship between stage of group development and prototypical meeting features.

Stage of group development measure and the corresponding subscales were conceptualised as group level variables. With individual level effects controlled for the corrected correlation between norming, performing and prototypical meeting features was found to be statistically significant at .5850 and .7807 respectively (refer to Table 18). Therefore, norming and performing group development stages were moderately related to successful prototypical meeting features (support for hypothesis 3a).

Relationship between teamthink and prototypical meeting features.

Teamthink was conceptualised as a group level variable. With individual level effects controlled for the corrected correlation between teamthink and prototypical meeting features was found to be statistically significant at .7309 (refer to Table 18). Therefore teamthink was moderately to strongly positively related to prototypical meeting features, with high Teamthink related to successful prototypical meeting features and low Teamthink to unsuccessful prototypical meeting features (support for hypothesis 4a and 4b).

Relationship between job-related affect and prototypical meeting features.

The two subscales positive affect and negative affect were conceptualised as individual level predictors. Therefore with group level effects controlled for the corrected correlation between positive affect, negative affect and prototypical meeting features was found to be statistically significant at .4731 and -.4839 respectively (refer to Table 18). Therefore, positive effect was related to successful prototypical meeting features with negative affect relating to unsuccessful prototypical meeting features (providing support for hypotheses 5a and 5b).

CHAPTER SEVEN

Study Two Discussion

The aim of study two was to utilise the prototypical meeting features identified in study one as indicators of successful and unsuccessful meetings, and examine their relationship with external variables to the meeting context illustrated in Figure 1, including (1) degree of team functioning, (2) group cohesion, (3) group stage of development, (4) teamthink and (5) job-related affect.

7.1 Psychometric properties and Analysis of variance.

Preliminary evaluation of each of the measures including the examination of their psychometric properties and analysis of variance indicated that the group integration- social (GI-S) cohesion subscale and the forming and storming development subscales could not be carried forth for further analysis. The non significant one-way ANOVA for the GI-S subscale suggests that this scale did not exist at the group level and therefore aggregation of individual responses was not appropriate. The finding may be due to the non-relevance of this form of cohesion to the participating collections of individuals. The GI-S subscale examines the individuals' perceptions concerning their groups belief about within group relationships. Unlike sport teams (for which the GEQ was developed) organisational groups are likely to be formed purely for the purposes of achieving tasks and not for social reasons, therefore, the perception of the groups beliefs in terms of the social aspects should not sustain as a group level phenomena in the organisational context.

The forming and storming stages of development were also removed from analysis due to low reliability for the forming subscale and non significant one way ANOVA for the storming subscale. These non significant findings may have been due to a low number of the collections of individuals identifying in the lower development stages. In total, one out of the thirty participating collections of individuals dominantly operated in the forming development stage, and two out of thirty in the storming stage. With few collections of individuals operating in these lower development stages analyses lacked statistical power and may have resulted in the non significant results.

7.2 Observed range restriction.

Examination of the statistical assumptions indicated a violation of normality due to range restriction of the group level variables at the higher ends of the scales. As the participants in our study were informed that the research concerned general meeting outcomes and not told of other specific measures, it is suggested that the range restriction in the meeting outcomes measure (dependent variable) had brought about range restriction in the independent group level variables. In general, all participating collections of individuals identified their meetings according to successful and not unsuccessful prototypical meeting features. This implies that all collections of individuals perceived their meetings to be successful. The range restriction in turn resulted in collections of individuals perceiving themselves to be functioning at team levels, highly cohesive, operating at the norming/performing development stages, whilst operating at a level of Teamthink outside of meeting times.

Range restriction in the meeting outcomes measure (dependent variable) may be due to a number of reasons. The observed range restriction may be due to a sample bias so that the observed range restriction is a true reflection of the sample. Organisations that participated in the research were those identified as top New Zealand companies (Deloitte/Management Top 200 Awards, 2002). Given the importance of meetings for organisational functioning it may be that these organisations became top New Zealand companies as the majority of their meetings were successful. Additionally, as participation was voluntary with general feedback being given to the organisation, collections of individuals within the top New Zealand companies that may be having unsuccessful meetings would be less willing than those having successful meetings to accept the invitation to participate. As a consequence collections of individuals that accepted the invitation to participate in the research were those that were accomplishing successful meetings.

The observed range restriction may also be due to an individual social desirability bias. Zerbe and Paulhus (1987) define socially desirable responding (SDR) as “the tendency of individuals to present themselves favourably with respect to current social norms and standards” (p. 250). SDR consists of two components: (1) self-deception, the unconscious tendency to view oneself favourably with the belief that these views are true, and (2) impression management, conscious effort to portray oneself favourably with knowledge that this portrayal is false (Zerbe & Paulhus, 1987). It is reasonable to suggest that in the

majority of organisations, successful meetings are viewed as desirable and are therefore preferred. With individuals aware that feedback was to be given back to the organisation they may have been likely to consciously present themselves and their meeting favourably (impression management) by placing greater emphasis on successful over unsuccessful meeting aspects and therefore creating a response bias. Consequently, all participating collections of individuals perceived their meetings as successful.

Thirdly, the MUM effect may in part explain the observed range restriction in the dependent variable. The 'MUM effect' suggests that individuals have a tendency to avoid giving negative feedback to others (Tesser & Rosen, 1975). Consequently, the MUM effect may have resulted in individuals dismissing the negative or unsuccessful aspects of their meetings while turning their focus on the successful meeting aspects. In turn, all collections of individuals described their meetings in terms of successful aspects creating range restriction in dependent variable.

Finally, the observed range restriction may be the result of escalating commitment. Escalation commitment, the tendency for individuals to increase their commitment to a failing situation (Brockner, 1992) often creates dissonance for individuals resulting in individuals self justification of the correctness of the otherwise poor situation (Staw, 1976). Escalating commitment may have therefore lead individuals to self justify the unsuccessful meeting by viewing the process in terms of the positive aspects. Consequently individuals may have viewed even the most unsuccessful meeting in terms of its success resulting in the observed range restriction.

7.3 Hypotheses.

The major strength of study two was that each of the study hypotheses were evaluated whilst controlling for multilevel effects. In any group setting both individual and group processes are occurring and these processes may interact, therefore, individual and group levels need to be considered when analysing group level data. Moritz and Watson (1998) state that in group level research studies individual and group level effects are rarely considered and often result in over exaggeration of relationships and research findings. These exaggerations often occur as group level analyses often incorporate effects from the individual level resulting in stronger observed relationships than those expected in the population.

In study two a procedure offered by Kenny and La Voie (1995) was employed to manage individual level, and group level effects. More specifically, the relationships between group level variables were examined whilst controlling for possible effects at the individual level. Conversely, relationships at the individual level were examined whilst controlling for possible effects at the group level (see Table 12 for a categorisation of the individual and group level variables used in study two). With the control of individual and group level effects the relationship findings that are observed in study two will accurately and realistically represent relationships in the population. Please note that the study two relationships discussed are based on correlations corrected for range restriction. Although there is support for correcting corrections affected by range restriction (Bobko, 2001) care needs to be taken in their interpretation as these corrected correlations are only estimates.

Overall, the results indicated that at the group level, team/group prototypical features, group cohesion (GI-T), group development stage (norming and performing), and teamthink were found to be significantly related of prototypical meeting features. At the individual level, cohesion (ATG-S) and job-related affect were also found to significantly predict prototypical meeting features. Each of these relationships will be discussed under the variable headings.

7.3.1 Team and group levels of functioning.

In support for hypothesis 1a and 1b, team and group prototypical features were found to be significantly related to prototypical meeting features. Specifically, collections of individuals that strongly identified their work environment as characteristic of team prototypical features were also likely to describe their meetings in terms of successful prototypical meeting features (support for hypothesis 1a). Conversely, collections of individuals that strongly identified their work environment as characteristic of group prototypical features also described their meetings in terms of unsuccessful prototypical meeting features (support for hypothesis 1b). In other words, collections of individuals that were operating at a team level rather than at a group level were more likely to perform successful than unsuccessful meetings.

This research finding supports the team and group distinctions identified by Carr et al. (2002, 2003). In accordance with suggestions made by Carr et al. (2002, 2003), team and group prototypical features may be utilised to distinguish between teams and groups. Furthermore teams and groups are not only conceptually different and can be distinguished in relation to

the successfulness of the meetings they undertake. Therefore, team and group levels of functioning were found to be an important external feature that impacts on meeting outcomes.

7.3.2 Group cohesion.

At the group level, collections of individuals who identified their group as highly cohesive outside of meeting times (in terms of group integration to the task, GI-T), were more likely to describe their meeting in relations to successful prototypical meeting features. In contrast, collections of individuals who identified their group as low in cohesion outside of meeting times (in terms of group integration to the task, GI-T), were more likely to describe their meeting in terms of unsuccessful prototypical meeting features. Therefore, collections of individuals who were highly cohesive were more likely to perform successful meetings than collections of individuals low in cohesion.

At the individual level, individuals who described themselves to be high in cohesion outside of meeting times (in terms of social attractions to the group, ATG-S), were more likely to identify their meeting as characteristic of the successful prototypical meeting features. In contrast individuals who identified themselves to be low in cohesion outside of meeting times (in terms of social attractions to the group, ATG-S) were more likely to describe their meeting according to unsuccessful prototypical meeting features. These results show partial support for hypothesis 2a and 2b. In other words, collections of individuals that described their functioning in relation to GI-T and ATG-S outside of meeting times were more likely to undertake successful than unsuccessful meetings.

The relevance of the GI-T and inappropriateness of the GI-S subscales at the group level indicated by the present research are in accordance with meta-analysis findings by Mullen and Cooper (1994) who noted that at the group level, task cohesion but not social cohesion were related to work group performance.

In line with the present research findings Carless and De Paola (2000) suggest that both individual and group level effects are important for aspects of cohesion. In accordance with suggestions made by Mullen Cooper (1994) and the present research findings, Carless and De Paola (2000) also identify task cohesion at the group level to be more influential for group performance than social cohesion. Furthermore Carless and De Paola (2000) indicate that

although individual level effects are important for cohesion they do not explain a high proportion of variance in group level characteristics such as group level performance. The present research findings seem to contradict this suggestion as the individual level cohesion subscale ATG-S was found to be moderately related to successful prototypical features.

Overall, the present research findings provide further support for the modification of the GEQ measure and the relevance of the GI-T and ATG-S subscales for use in a work setting. Furthermore, the research findings indicate the relevance of the external aspects of cohesion (specifically GI-T and ATG-S) for meeting outcomes.

7.3.3 Group stage of development

The present research findings indicate that collections of individuals who are operating in the norming and performing stages of development outside of meeting times were more likely to describe their meeting in relation to successful prototypical meeting features (support for hypothesis 3a). Furthermore, collections of individuals who identify low in the norming and performing stages of development are likely to describe their meeting according to unsuccessful prototypical meeting features. Therefore, collections of individuals who are operating in the norming and performing stages of development outside of meeting times are more likely to have successful meetings. Alternatively, collections of individuals who indicate low operation in the norming and performing stages of development outside of meeting times are more likely to have unsuccessful meetings

Group development has been identified as an influencing variable to group effectiveness (e.g. Cox, 1987; Sundstrom, De Meuse and Futrell, 1990) and relevant to team functioning (Tyson, 1998, Sheard and Kakabadse, 2002). However, prior research has not focused on examining the direct link between group development and successful and unsuccessful meetings. The present research is likely one of the first studies to provide support for the importance of group development to meeting performance in terms of successful prototypical meeting features. Overall, the present research findings suggest that norming and performing development stages are important external influences to the meeting context and specifically for successful meeting outcomes.

7.3.4 Teamthink

Teamthink is described as individuals balance between the individual and the team that is needed in order to work together as a cohesive unit and for optimal performance (Manz, Neck, Mancuso and Manz, 1997). Teamthink was therefore expected to be related to high performance in meetings or more specifically successful prototypical meeting features. The results support this expectation as collections of individuals who were functioning at the level of teamthink outside of meeting times were more likely to perform successful over unsuccessful meetings. In contrast, collections of individuals who were functioning at a low level of teamthink outside of meeting times were more likely to perform unsuccessful over successful meetings (support for hypothesis 4a & 4b)

7.3.5 Job-related affect

At the individual level, individuals who perceived themselves to have experienced positive job-related affect in the wider organisational context were more likely to identify their meeting in relation to successful prototypical meeting features (support for hypothesis 5a). In contrast individuals who perceived themselves to have experienced negative job-related affect in the wider organisational context were more likely to describe their meeting according to unsuccessful prototypical meeting features (support for hypothesis 5b). Therefore, individuals experiencing positive emotion outside of the meeting context were more likely to have successful meetings. Conversely, individuals experiencing negative emotion outside of the meeting context were more likely to have unsuccessful meetings

The effect of emotion on the successfulness of meeting has not been exclusively examined, however, Dutton (1987) and Lally (1996) both suggested that individuals' emotion is an important influence for meeting outcomes. Lally (1996) suggests negative emotions may lead to meeting ineffectiveness and therefore the reverse may be assumed. The present research provides support for these suggestions by indicating that positive emotion in the wider organisational context is related to successful meeting outcomes and negative emotion to unsuccessful meeting outcomes.

When collectively examining the corrected correlations for the individual and group level variables (Table 13), it can be seen that in general more variance in meeting outcomes can be explained by the group level variables than the individual level variables. For example, the correlations for the group level variables: team and group level of functioning variable, GI-T

cohesion subscale, performing development stage and Teamthink, are relatively higher than those for the individual level variables: ATG-S, ATG-T and job-related affect. This finding suggests that the group level variables have a larger influence and impact on successful and unsuccessful meeting outcomes than individual level variable and therefore are aspects that should be paid the most attention when performing meetings.

CHAPTER EIGHT

General Discussion

8.1 Internal and external influences on meeting outcomes.

The present research consisted of two studies. The foremost aim of the research was to evaluate the internal and external features that influence successful and unsuccessful meeting outcomes. Figure 8 below illustrates the findings of the present research.

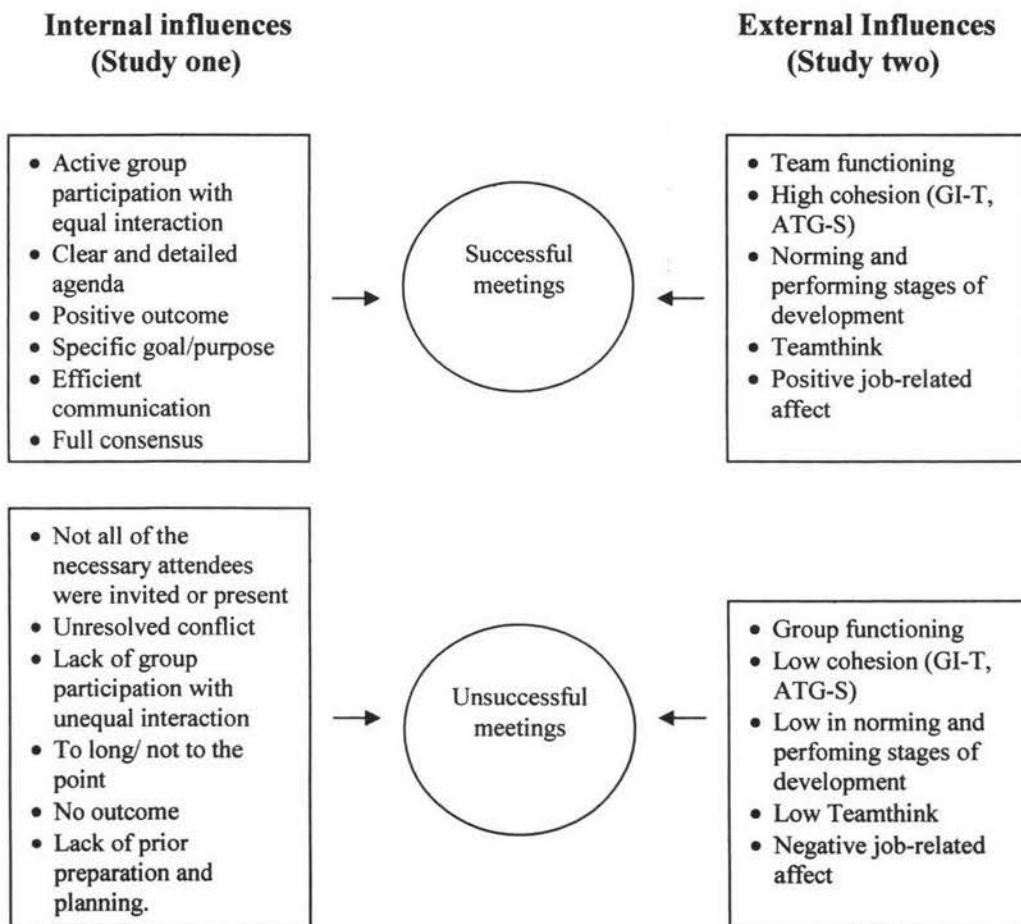


Figure 8: Internal and external influences on successful and unsuccessful meeting outcomes

Study one clarified the dominate features of successful and unsuccessful organisational meetings by drawing on Prototype Theory. All of the prototypical features that were identified in study one were related to the internal operations of the meeting and therefore

were conceptualised as internal features as illustrated in Figure 8. The results indicated that: (1) active group participation with equal interaction, (2) clear and detailed agenda, (3) positive outcome, (4) specific goal/purpose, (5) efficient communication, and (6) full consensus, were the six highly prototypical features of successful meetings. The leading six prototypical features identified for unsuccessful meetings were: (1) not all of the necessary attendees were invited or present, (2) unresolved conflict, (3) lack of group participation with unequal interaction, (4) Too long/ not to the point, (5) no outcome, and (6) lack of prior preparation and planning. The identification of these prototypical features suggests that these aspects are the most highly influential internal aspects on meeting outcomes and therefore should be given the greatest consideration when conducting meetings.

When collectively examining the leading prototypical features identified in study one the relationship between these variables and meeting goals should be noted. Goal Setting Theory (Locke, 1990), suggests that goals impact on individuals and group behaviour through influencing levels of motivation. Therefore, in the context of meetings, a specific meeting goal/purpose in the form of a structured agenda may aid individual and group motivation to actively participate in the meeting, and in turn leading to efficient communication, conflict resolution, and full consensus and ultimately to a positive outcome or meeting success. Alternatively, the absence of a meeting goal may reduce individual and group motivation, leading to unequal participation of meetings, and further to inefficient communication, unresolved conflict, no or partial consensus and ultimately an unsuccessful meeting. Meeting goals are therefore a crucial internal aspect that impacts on many of the leading prototypical features of successful and unsuccessful meetings and ultimately on meeting outcomes.

Study two proceeded to utilise the prototypical meeting features identified in study one and examine their relationship with external variables including: team or group levels of functioning, group cohesion, group stage of development, teamthink and job-related affect. The major strength of this study was the multilevel analysis method used to separate individual and group level effects. This procedure suggested by Kenny and La Voie (1995) enabled the individual and group level effects to be controlled for when evaluating each the study relationships and in doing so lead to more accurate findings and generalisations. The research findings indicated that the group level variables: team level of functioning, high cohesion (in terms of GI-T), norming and performing stages of development, and teamthink; alongside the individual level variables: high cohesion (in terms of ATG-S) and positive job-related affect are external aspects of the meeting that are associated with meeting success.

Conversely, the group level variables: group level of functioning, low in cohesion (in terms of GI-T), low operation in the norming and performing stages of development and low teamthink; alongside the individual level variables: low cohesion (in terms of ATG-S) and negative job-related affect, are external meeting aspects that influence unsuccessful meetings. When collectively examining the external aspects of meetings, the group level variables are seen to explain more variance in meeting outcomes than do the individual level variables. This finding suggests that the group level variable have a greater influence and impact on successful and unsuccessful meeting outcomes than the individual level variables.

Overall, as illustrated in Figure 8 the combined results from study one and two suggest that both internal and external features are important influences for meeting outcomes and therefore need consideration when performing meetings. From the research findings practical recommendations for organisations may be made. For example, organisations are recommended to carry out their meetings in order to enhance the successful prototypical meeting features, with special consideration made to the leading six successful features. With the improvement of meeting processes (in terms of the promotion of the successful prototypical meeting features) collections of individuals will be increasingly likely to function at a team level, have improved group cohesion, higher stages of development and teamthink, and increased positive job-related affect in the wider organisational context. On the reverse, organisations are recommended to promote aspects including: team functioning, group cohesion, group development, teamthink and individual job-related affect in the wider organisational context through various organisational building exercises. Improvements in these areas are likely to result in more successful meetings.

8.2 Trends observed in the research

When looking at the two studies collectively the common trend for individuals and groups to associate with successful meetings over unsuccessful meetings can be observed. In study one it was found that in general, individuals were more able or willing to identify successful prototypical meeting features over unsuccessful prototypical features. Interestingly, in study two, collections of individuals were also more likely to identify with these successful prototypical meeting features than unsuccessful prototypical features which resulted in all meetings being described as successful. Collectively, the findings from these studies may initially suggest that the concept of successful meetings is perhaps simpler than that for unsuccessful meeting as indicated by individuals clarity and recall for successful prototypical

meeting features in study one. Furthermore, the relative simplicity of the successful meeting concept may make successful meetings easier to achieve and possibly explain the high incidence of successful meetings in study two.

Findings from study one and two could also indicate a tendency for individuals and groups to focus on the positive rather than negative aspects in relation to meetings. The 'MUM effect', the tendency to avoid giving negative feedback (Tesser & Rosen, 1975) may be used to support this suggestion. Given that unsuccessful meetings are perceived as negative individuals may have been less comfortable in offering unsuccessful meeting responses resulting in fewer responses generated for unsuccessful meetings in relation to successful meetings (study one). Additionally, in study two, individuals may have avoided reporting the negative aspects of their meeting, whilst focusing on the positive meeting aspects resulting in all meetings being described as successful.

Escalating commitment, the tendency for individuals to increase their commitment to a situation or decision when it shows signs of failure (Bronkner (1992), may also be drawn upon to explain individual and group tendency to focus on the successful rather than unsuccessful meeting aspects. Failure that is associated with unsuccessful meetings often creates a dissonance for individuals, leading individuals to self-justify the correctness of the poor situation (Staw, 1976). In the context of unsuccessful meetings, individuals in the aim to reduce dissonance an unsuccessful meeting creates may increase their commitment to the meeting process and view the meeting in terms of the positive aspects. Consequently individuals may view even the most unsuccessful meeting in terms of its success. Furthermore, it is then these positive aspects rather than negative aspects that are transmitted into individuals long term memory and those more easily drawn upon by individuals when asked to list the features of successful and unsuccessful meetings. Escalating commitment may therefore have explain individuals clarity and ease of identifying successful prototypical meeting feature in study one, and the high incidence of successful meetings in study two.

The focus on positive aspects or successful features of meetings may also be in part due to a social desirability bias. Zerbe and Paulhus (1987) suggest that individuals often respond in ways that describe themselves favourably in relation to social norms. It is reasonable to suggest that in the majority of western societies success is viewed as desirable and is therefore preferred. Individuals may have then responded according to this social norm by

eagerly describing successful over unsuccessful prototypical meeting features (study one) and furthermore, identifying these meetings as successful over unsuccessful.

8.3 Study limitations and future directions

A limitation of the present study was that the group level data was range restricted with individual indicating high in successful prototypical meeting features, team prototypical meeting features, cohesion, norming/performing development stages and teamthink. However this limitation was managed by correcting correlations using correction formulas suggested by Bobko (2001). Although corrected correlations are believed to be more accurate than the uncorrected correlations these corrections are still estimations and care should be taken when expressing these as 'truth'.

As discussed previously the observed range restriction may be due to numerous forces such as: a sample bias, a social desirability bias, the MUM effect and escalating commitment. To limit the effects of such biases future studies should carefully consider the type of organisations approached for research. Perhaps moderately successful companies rather than top management companies should be targeted, as these organisations are likely to have a range of both successful and unsuccessful meetings. Furthermore, organisations who advocate the participation of all employees should be preferred as this would result in the involvement of collections of individuals with unsuccessful meetings. Finally, future studies should consider a form of objective measurement of meetings such as the rating of meeting features by an independent and trained observer.

A second limitation of the research is that each of the measures utilises self-report methods therefore relying upon the accuracy of individual perceptions. In any self report measures there is the possibility for individuals to respond in a way that portrays them favourably or to what is socially desirable in the organisation. In our study, given the questionnaires were completed individually with the results showing evidence of high within group agreement it is unlikely that individuals have responded in any way other than what is reality. However, this does not eliminate the chance that individuals have responded to some small degree inaccurately. Future studies should consider including a social desirability measure such as the Marlowe-Crown scale (1961, cited in Zerbe & Paulhus, 1987) or include an objective measure of each of the study variables.

A third limitation of the research is the research findings may have been biased due to a common methods variance. Podsakoff, MacKenzie and Lee (2003) describe common method variance as the variance that is attributed to using similar methodology rather than that associated to the constructs the measures assess. Using common methods in research can therefore result in inflating the variance on individual measures with this variance representing systematic error rather than true differences (Cote & Buckley, 1987). Furthermore, common methods can influence relationships between variables either inflating or deflating correlations (Cote & Buckley, 1987). In the present study, given that participants completed numerous self-report measures (each consisting of numerous items), at one point in time, the items and measures may have impacted on each other producing artificial covariance among the items and measures, resulting in inflated correlations. Future studies should consider, assessing the measures using a collection of different information sources such as self-report, peer review, experimenter observation and archival records of the meeting minutes, this reducing the effect of a common rater. Furthermore, the measures could be assessed at different points of time reducing the impact they may potentially have on each other. Future studies should consider utilising different response formats such as likert scales, open ended questions, computer aided assessment and pen and pencil formats.

Finally, future studies should consider other external variables to the meeting context that may influence meeting outcomes such as organisational norms and values, organisational structure, and lines of communication in the wider organisation.

8.4 Final Conclusion

This research advances existing meeting-related research in that it is one of few studies that has acknowledged and dealt with the individual and group level effects that occur in any group setting. The management of the unit of analysis is a critical component in the analysis of group data and the use of the technique suggested by Kenny and La Voie (1995) adds to the quality and utility of the results.

Organisational meetings have enormous utility and benefit for the organisation, whilst at the same time are both revenue and time consuming. It is therefore crucial for organisations to plan for and conduct effective meetings to ensure their benefits are achieved and resources are optimally utilised. Additionally, it is vital that organisations understand that the prevalence of unsuccessful meetings may be detrimental to effective functioning of the

organisation and therefore should be prevented. The immense impact that meetings have on organisational functioning therefore signifies the need to understand the features that influence meeting outcomes, in order to promote successful over unsuccessful meeting outcomes. The present research begins this process by identifying the some dominant/prototypical features that internally impact on successful and unsuccessful meeting outcomes, and further identifying some potential external influences to the meeting context. The research findings suggest that both internal and external features impact on successful and unsuccessful meeting outcomes and therefore both needing consideration when planning and conducting meetings.

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Appendix A

Study one questionnaire forms.

Please list as many words or phrases that come to mind when you think of an successful meeting:

1. _____

2. _____

3. _____

4. _____

5. _____

6. _____

7. _____

8. _____

Please list as many words or phrases that come to mind when you think of an unsuccessful meeting:

1. _____
2. _____
3. _____
4. _____
5. _____
6. _____
7. _____
8. _____

Appendix B

Study two information sheet and questionnaire.

Information Sheet

My name is Sarah Jane Clarke, I am a postgraduate student conducting Masters research at Massey University, School of Psychology.

The research project in which you are being invited to participate concerns the structure of meetings and meeting outcomes in the context of wider group dynamics. This research is being conducted under the supervision of Dr Richard Fletcher and Dr Stuart Carr.

Your organisation is one of many organisations that have been invited to participate in this project based upon your involvement in meetings.

The information collected will be used for the thesis project and may be submitted for publication in an academic journal. You will not be asked for any personal information so that your responses are anonymous and you are not identifiable. The data that is obtained will be merged with data gathered from other organisations, analysed together and generalisations made. Your organisation will not be given access to information regarding your individual responses. Data will be securely stored at my personal residence and will be disposed of by the supervisors after a period of five years.

If you choose to participate in this project you will be asked to complete a questionnaire at the end of a meeting where a minimum of five individuals were present. The questionnaire should not require any longer than thirty minutes of your time. At any time you have the right to decline the invitation to participate or to answer any particular question. You may ask questions about the study at any time. You will be given access to a summary of the project findings when the project is completed. Completion and return of the questionnaires will imply your consent to participate.

Please contact my supervisors or myself if you have any questions about this project (09) 414 0800 extension 9077. Thank you for your participation, I look forward to interacting with you and your organisation.

Measure: Prototypical successful and unsuccessful meeting features.

The following statements aim to assess your perception of the meeting you have just taken part in. Please indicate by shading the appropriate circle the degree to which your meeting demonstrated the following aspects.

For each question, fill in one circle completely with black/blue pen or pencil. If you change your mind, put an X through that response, and fill in the one circle you want to be counted.

		Almost never	Seldom	Occasionally	Frequently	Almost always
1	Active group participation.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
2	Unnecessary.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
3	Lack of information and idea sharing.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
4	Motivating.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
5	Unequal interaction from attendees.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
6	Inadequate presentation.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
7	Clear and detailed agenda.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
8	Poor or no leadership.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
9	Positive outcome.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
10	Uninteresting topic.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
11	Agenda was adhered to.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
12	Poor communication.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
13	Specific purpose.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
14	Partial or no consensus.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
15	Inadequate prior preparation and planning.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
16	To the point.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
17	All parties were satisfied.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
18	Unresolved conflict and disharmony.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
19	The minimum number of appropriate people were invited and attended.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
20	Not to long.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
21	Attendees did not work together.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

		Almost never	Seldom	Occasionally	Frequently	Almost always
22	Irrelevant information was discussed.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
23	Start and finished on time.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
24	Uncomfortable or inappropriate surroundings.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
25	Sense of humor.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
26	Members did not listen to each other.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
27	Friendship.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
28	Frustrating.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
29	Innovative.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
30	Multiple material forms were used.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
31	Individual roles or specific actions were not allocated.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
32	Distractions were limited and managed.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
33	Fixed duration.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
34	Encouragement.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
35	Attendees arrived late.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
36	Lapses in concentration.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
37	Misunderstandings.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
38	The agenda was distributed in advance.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
39	Acceptance of others ideas and opinions.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
40	Everyone tried to talk at once.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
41	Regular summarising throughout and at the end of the meeting.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

Demographic questions.

Please indicate your gender by shading the appropriate circle?

Male

Female

Please indicate your age: _____

How many members belong to your meeting group: _____

Do the individuals of your meeting group meet regularly?

Yes

No

Measure: Team and Group levels of functioning.

The following words and phrases are examples of how collections of individuals may function. This questionnaire is to determine how the people with whom you have meetings operate. Shade the appropriate circle indicating the degree to which you and your meeting colleagues demonstrate the following aspects outside of meeting times.

For each question, fill in one circle completely with black/blue pen or pencil. If you change your mind, put an X through that response, and fill in the one circle you want to be counted.

		Almost never	Seldom	Occasionally	Frequently	Almost always
1	Clearly defined roles and role structure.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
2	Members do not work together.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
3	Members are assigned.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
4	Collective tasks and outcomes.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
5	No common goal.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
6	Formal and strict rules.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
7	Stable and reliable.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
8	Unorganised.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
9	Low achievement.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
10	United.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
11	Shared responsibility.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
12	Poor communication.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
13	Low commitment.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
14	Close relationships and bonds.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
15	Social.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
16	Members do not rely upon each other.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
17	Cohesive.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
18	Unpleasant.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
19	More is achieved working together rather than as individuals.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
20	Members do similar tasks.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
21	Membership is voluntary.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
22	Small with a limited number of individuals	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
23	Subgroups	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

		Almost never	Seldom	Occasionally	Frequently	Almost always
24	Initiative	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
25	Just a collection of people	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
26	Identify as 'us'	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
27	Perform problem solving	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
28	High conflict	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

**Measure: Group cohesion, Group Environment
Questionnaire (GEQ) modified.**

The following statements aim to assess your perception of the work environment in which you operate. Please shade the appropriate circle to indicate the degree to which you agree with each of the following statements. There are no right or wrong answers so please give you immediate response.

For each question, fill in one circle completely with black/blue pen or pencil. If you change your mind, put an X through that response, and fill in the one circle you want to be counted.

		Strongly Disagree	Disagree	Neutral	Agree	Strongly Agree
1	I do not enjoy being part of the social activities of this group.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
2	I am not happy with the amount of work time I get.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
3	I am not going to miss the members of this group when the work period finishes.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
4	I am unhappy with my group's level of desire to achieve.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
5	Some of my best friends are in this group.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
6	This group does not give me enough opportunities to improve my personal performance.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
7	I enjoy other parties more than group parties.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
8	I do not like the style of operation in this group.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
9	For me this group is one of the most important social groups to which I belong.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
10	Our group is united in trying to reach its goals for performance.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
11	Members of our group would rather go out on their own than get together as a group.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
12	We take responsibility for any loss or poor performance by our group.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
13	Our group members rarely party together.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
14	Our group members have conflicting aspirations for the group's performance.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
15	Our group would like to spend time together after work has finished.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
16	If the members of our group have problems in exercises, everyone wants to help them so we can be back together again.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
17	Members of our group do not stick together outside of work time.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
18	Our members do not communicate freely about each individual's responsibilities.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

Measure: Group stage of development.

The following questionnaire aims to evaluate how you and your meeting colleagues function. Please shade the appropriate circle to indicate the degree to which each of the following behaviours were displayed outside of meeting times.

For each question, fill in one circle completely with black/blue pen or pencil. If you change your mind, put an X through that response, and fill in the one circle you want to be counted.

	Almost never	Seldom	Occasionally	Frequently	Almost always
1 We had set procedures or protocols to ensure that things were orderly and ran smoothly (i.e. minimise interruptions, everyone gets the opportunity to have their say).	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
2 We recognised and valued member uniqueness.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
3 We were quick to get on with the task on hand and did not spend too much time in the planning stage.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
4 We felt that we were all in it together and shared responsibility for the work group success or failure.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
5 We had through procedures for agreeing on our objectives and planning the way we performed our tasks.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
6 Members were afraid to ask others for help.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
7 We understood our limitations and threats.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
8 We took our work group's goals and objectives literally, and assumed a shared understanding.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
9 The leader tried to keep order and contributed to the task at hand.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
10 We did not have fixed procedures, we made them up as the task or project progressed.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
11 We encouraged differing views.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
12 We generated lots of ideas, but we did not use many because we failed to listen to them and rejected them without fully understanding them.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
13 Members did not fully trust the other members and closely monitored others who were working on a specific task.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
14 The leader ensured that we followed the procedures, did not argue, did not interrupt, and kept to the point.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
15 We enjoyed working together; we had a fun and productive time.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
16 We recognised the ethical and moral consequences of our decisions.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

		Almost never	Seldom	Occasionally	Frequently	Almost always
17	We accepted each other as members of the work group.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
18	The leader was democratic and collaborative.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
19	We were trying to define the goal and what tasks need to be accomplished.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
20	Many of the members had their own ideas about the process and personal agendas were rampant.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
21	We fully accepted each other's strengths and weakness.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
22	We assigned specific roles to members (leader, facilitator, time keeper, note taker, etc.).	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
23	We tried to achieve harmony by avoiding conflict.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
24	The tasks were very different from what we imagined and seemed very difficult to accomplish.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
25	There were many abstract discussions of the concepts and issues, some members were impatient with these discussions.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
26	We were able to work through group problems.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
27	We argued a lot even though we agreed on the real issues.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
28	We overlooked stereotypes.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
29	The work group was often tempted to go above the original scope of the project.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
30	We expressed criticism of others constructively.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
31	There was a close attachment to the work group.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
32	We openly expressed our concerns and ideas.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
33	It seemed as if little was being accomplished with the project's goals.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
34	The goals we had established seem unrealistic.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
35	Although we were not fully sure of the project's goals and issues, we were excited and proud to be in the work group.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
36	We shared personal problems with each other.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

	Almost never	Seldom	Occasionally	Frequently	Almost always
37 There was a lot of resisting to the tasks on hand and quality improvement approaches.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
38 We got a lot of work done.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
39 We sought outsiders views.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

**Measure: Job-related Affective Well-Being Scale
(JAWS).**

Below are a number of statements that describe different emotions that a job can make people feel. Please indicate the degree to which any part of your job (e.g., the work, coworkers, supervisor, clients, pay) has made you feel that emotion in the past 30 days.

For each question, fill in one circle completely with black/blue pen or pencil. If you change your mind, put an X through that response, and fill in the one circle you want to be counted.

		Never	Rarely	Sometimes	Quite often	Extremely often
1	My job made me feel at ease	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
2	My job made me feel angry	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
3	My job made me feel annoyed	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
4	My job made me feel anxious	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
5	My job made me feel bored	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
6	My job made me feel cheerful	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
7	My job made me feel calm	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
8	My job made me feel confused	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
9	My job made me feel content	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
10	My job made me feel depressed	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
11	My job made me feel disgusted	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
12	My job made me feel discouraged	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
13	My job made me feel elated	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
14	My job made me feel energetic	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
15	My job made me feel excited	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
16	My job made me feel ecstatic	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
17	My job made me feel enthusiastic	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
18	My job made me feel frightened	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
19	My job made me feel frustrated	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
20	My job made me feel furious	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
21	My job made me feel gloomy	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
22	My job made me feel fatigued	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
23	My job made me feel happy	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
24	My job made me feel intimidated	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

		Never	Rarely	Sometimes	Quite often	Extremely often
25	My job made me feel inspired	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
26	My job made me feel miserable	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
27	My job made me feel pleased	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
28	My job made me feel proud	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
29	My job made me feel satisfied	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
30	My job made me feel relaxed	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

Appendix C: Prototypical successful meeting features.

Table 4.

Prototypical successful meeting features

Feature	Frequency (n=90)	Percentage
Active group participation with equal interaction	52	57.78
Clear and detailed agenda	41	45.56
Positive outcome	33	36.67
Specific goal/purpose	26	28.89
Efficient communication	25	27.78
Full consensus	20	22.22
To the point, not too long	17	17.78
Attendees work together	16	16.67
Innovative	15	16.67
Start and finish on time	14	15.56
The minimum number appropriate attendees were invited and attended	11	12.22
Interesting	11	12.22
Prior preparation and planning	10	11.11
Encouragement	9	10.00
Comfortable and appropriate surroundings	9	10.00
Quality leadership	9	10.00
Sense of humour	8	8.89
Adequate presentation	7	7.78
Necessary	6	6.67
Fixed duration	6	6.67
Distractions were managed and limited	6	6.67
Agenda was adhered to	6	6.67
Enjoyable	6	6.67

Table 5.

Prototypical successful meeting features categorised by task and relationship.

Task related aspects	Relationship related aspects
<ul style="list-style-type: none"> * Clear and detailed agenda * Positive outcome * Specific goal/purpose * Efficient communication * Full consensus * To the point, not to long * Innovative * Start and finish on time * The minimum number appropriate attendees were invited and attended * Prior preparation and planning * Comfortable and appropriate surroundings * Adequate presentation * Necessary * Fixed duration * Distractions were managed and limited * Agenda was adhered to 	<ul style="list-style-type: none"> * Active group participation with equal interaction * Attendees work together * Encouragement * Interesting * Quality leadership * Sense of humour * Enjoyable

Appendix D: Prototypical unsuccessful meeting features.

Table 7.

Prototypical unsuccessful meeting features.

Feature	Frequency	Percentage
Not all of the necessary attendees were invited or present	26	28.89
Unresolved conflict	24	26.67
Lack of group participation with unequal interaction	23	25.56
To long, not to the point	23	25.56
No outcome	21	23.33
Lack of prior preparation and planning	21	23.33
Lack of or inadequate agenda	19	21.11
Uninteresting	18	20.00
Agenda was not adhered to.	17	18.89
Poor communication	15	16.65
No agreed goal/purpose	13	14.44
Poor leadership	11	12.22
Poor presentation	11	12.22
Discussion of irrelevant information	9	10.00
Everyone tries to talk at once	7	7.78
Unnecessary	7	7.78
Does not start or finish on time	7	7.78
Partial or no consensus	6	6.67
Lapses in concentration	6	6.67
Misunderstandings	6	6.67
Attendees unwilling to accept others ideas and opinions	6	6.67
People arrive late	6	6.67
Attendees do not listen to each other	5	5.56

Table 8.

Prototypical unsuccessful meeting features categorised by task and relationship.

Task related aspects	Relationship related aspects
<ul style="list-style-type: none"> * Not all of the necessary attendees were invited or present * To long, not to the point * No outcome * Lack of prior preparation and planning * Lack of or inadequate agenda * Agenda was not adhered to. * Poor communication * No agreed goal/purpose * Poor presentation * Discussion of irrelevant information * Unnecessary * Does not start or finish on time * Partial or no consensus * Lapses in concentration * Misunderstandings * People arrive late 	<ul style="list-style-type: none"> * Unresolved conflict * Lack of group participation with unequal interaction * Uninteresting * Poor leadership * Everyone tries to talk at once * Attendees unwilling to accept others ideas and opinions * Attendees do not listen to each other

Appendix E: Prototypical features as polar opposites.

Table 9.

Polar opposite pairs of prototypical features.

Successful meeting feature	Frequency (n=90)	Unsuccessful meeting feature	Frequency (n=90)
Active group participation with equal interaction and information and idea sharing	52	Lack of group participation with unequal interaction and a lack of information and idea sharing	23
Clear and detailed agenda	41	Lack of or inadequate agenda	19
Positive outcome	33	No outcome	21
Specific goal/purpose	26	No agreed goal/purpose	13
Efficient communication	25	Poor communication	15
Full consensus	20	Partial or no consensus	6
To the point, not too long	17	Too long, not to the point	23
Start and finish on time	14	Does not start or finish on time	7
The minimum number appropriate attendees were invited and attended	11	Not all of the necessary attendees were invited or present	26
Interesting	11	Uninteresting	18
Prior preparation and planning	10	Lack of prior preparation and planning	21
Quality leadership	9	Poor leadership	11
Adequate presentation	7	Poor presentation	11
Necessary	6	Unnecessary	7
Agenda was adhered to	6	Agenda was not adhered to.	17

Appendix F: Additional polar opposites.

Table 10.

Additional polar opposites for prototypical meeting features (polar opposite identified by less than 5% of the sample)

Prototypical feature	Frequency (n=90)	Polar opposite	Frequency (n=90)
Unresolved conflict	24	Conflicts resolved, harmony	2
Attendees work together	16	No cooperation	1
Innovative	15	Narrow visions	3
Comfortable and appropriate surroundings	9	Inappropriate surroundings	2
Sense of humour	8	No sense of humor	4
Distractions were managed and limited	6	No control of management of interruptions.	1
Enjoyable	6	Frustrating.	4
Misunderstandings	6	Understanding	2
Attendees do not listen to each other	5	Listening	4

Table 11.

Additional polar opposites (both aspects were identified by less than 5% percent of the sample).

Successful meeting feature	Unsuccessful meeting feature
Motivating	Unmotivating
Friendship	No friendship
Allocation of individuals roles or specific actions	Individual roles or specific actions were not allocated
Multiple material forms were used	Lack of material forms

**Appendix G: Range restriction in the meeting
outcomes variable.
(dependent variable)**

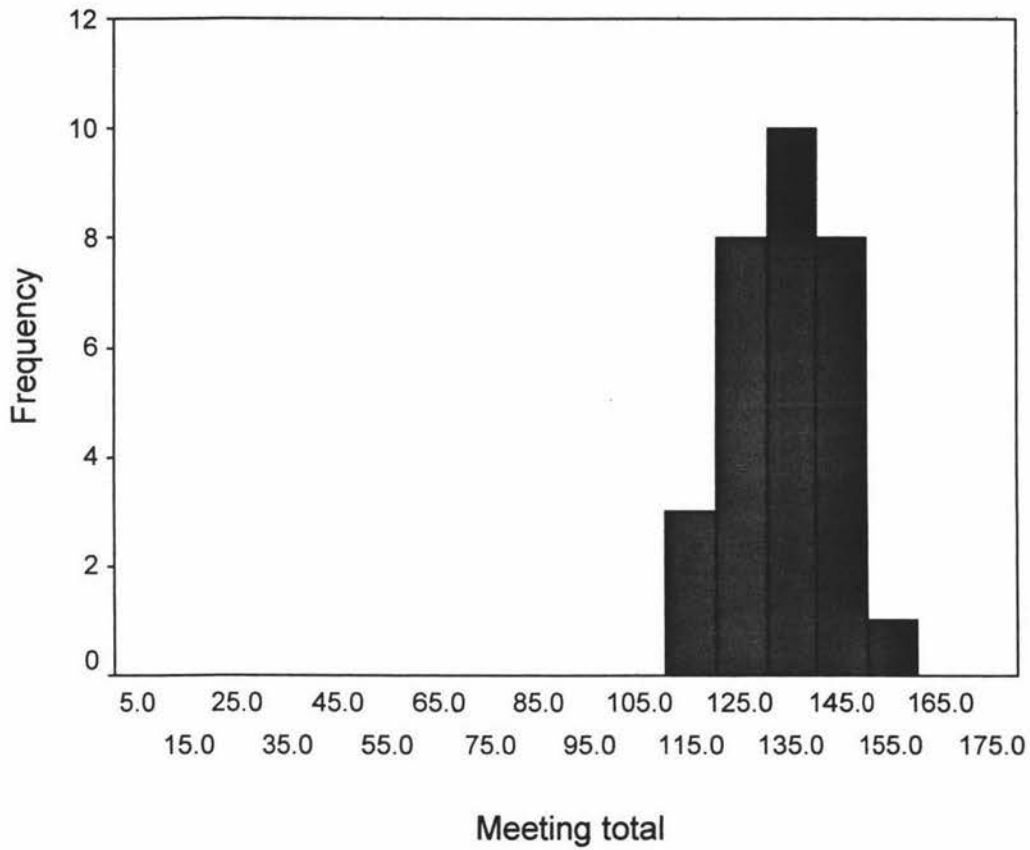


Figure 9.

Histogram showing the range restriction in the meeting outcomes variable at the group level.

Appendix H: Scatter plots indicating evidence of linearity.

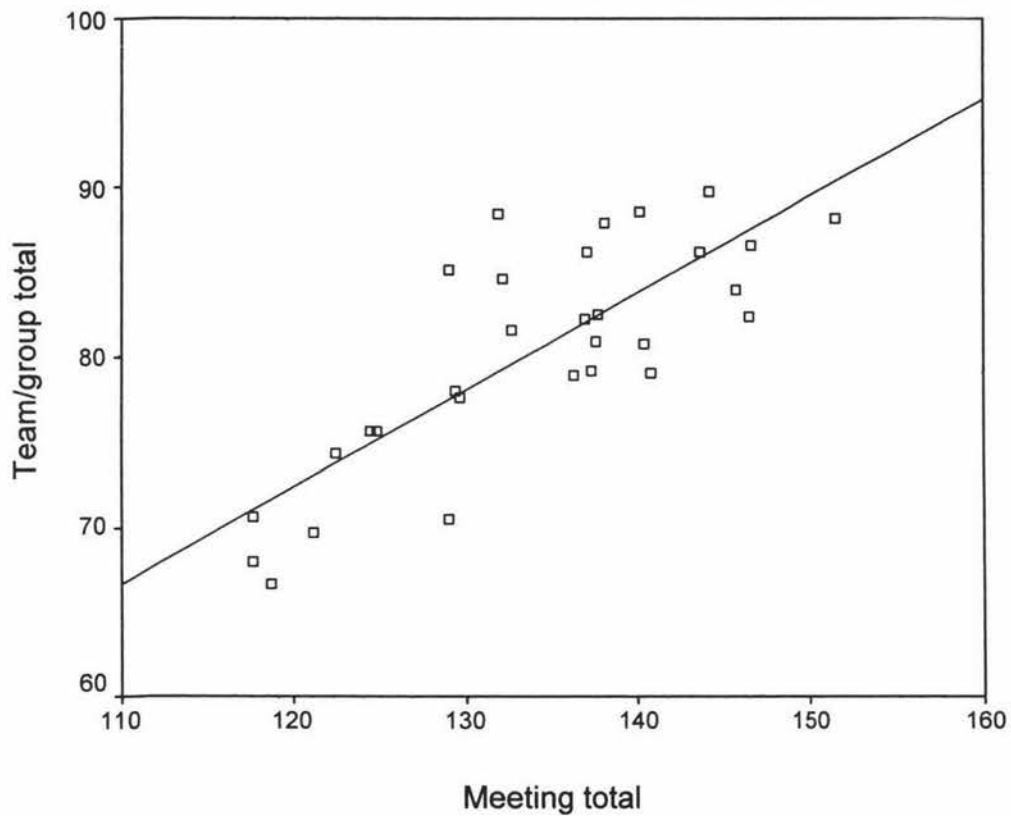


Figure 10.

Scatter plot showing the positive linear relationship between the team and group level of functioning variable and meeting outcomes variable at the group level.

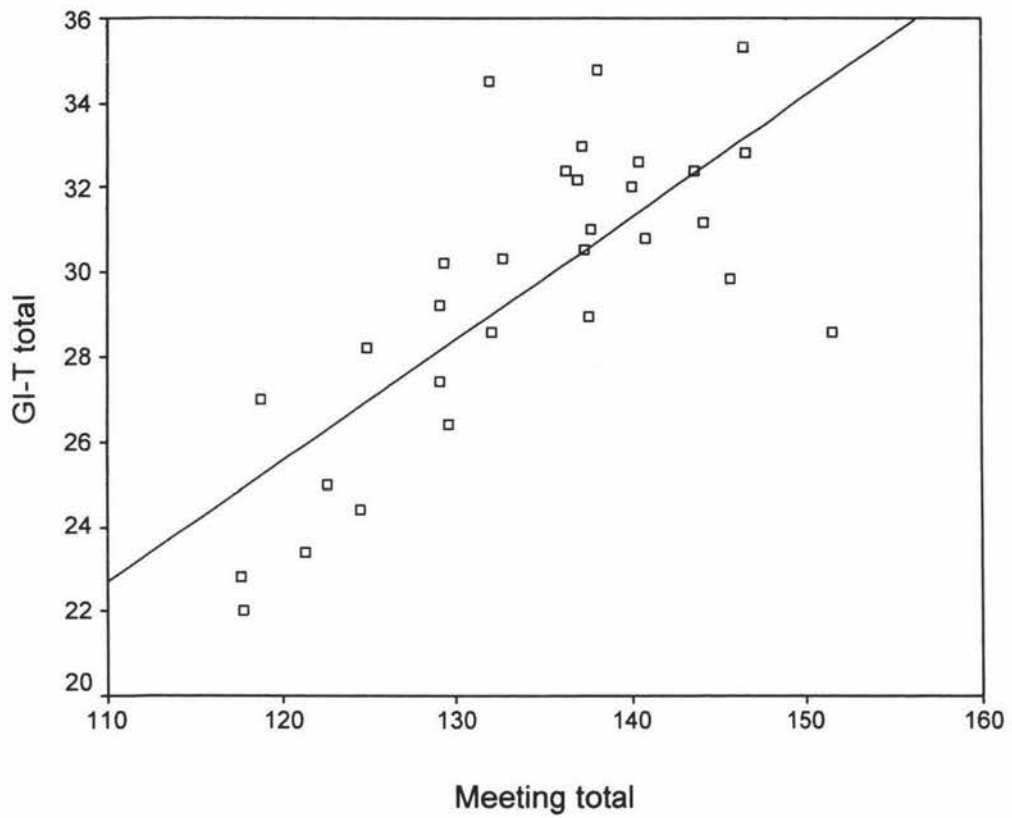


Figure 11.
 Scatter plot showing the positive linear relationship between the GI-T cohesion subscale and meeting outcomes variable at the group level.

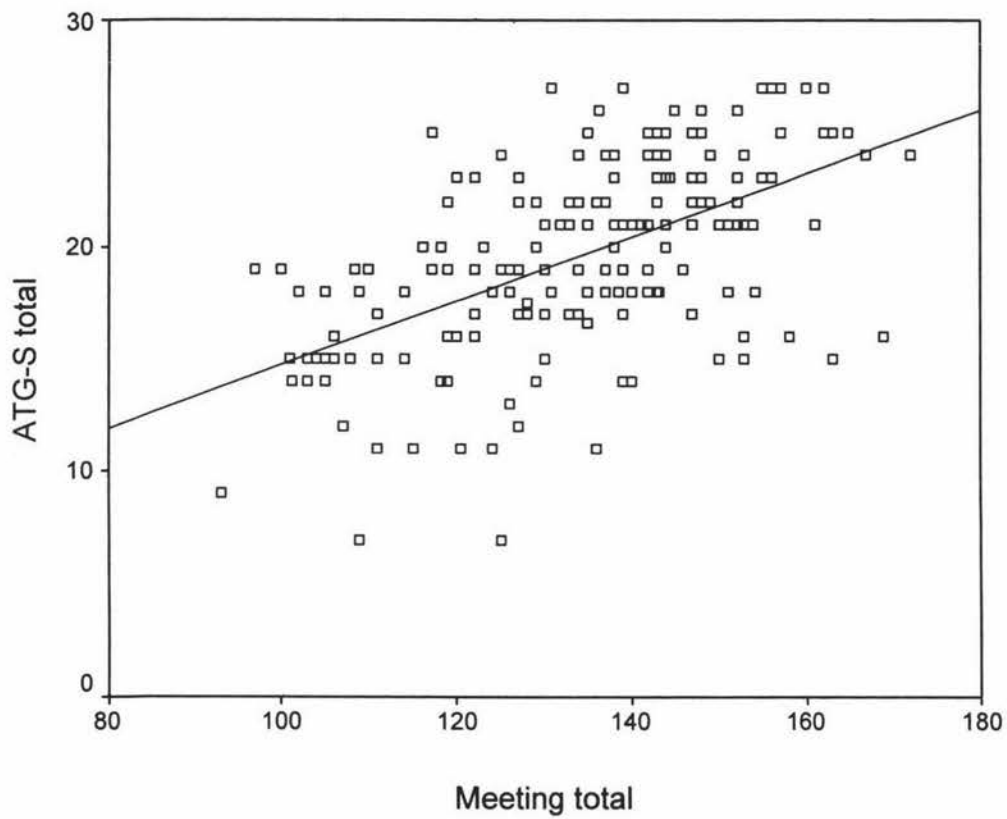


Figure 12.
Scatter plot showing the positive linear relationship between the ATG-S cohesion subscale and meeting outcomes variable at the individual level.

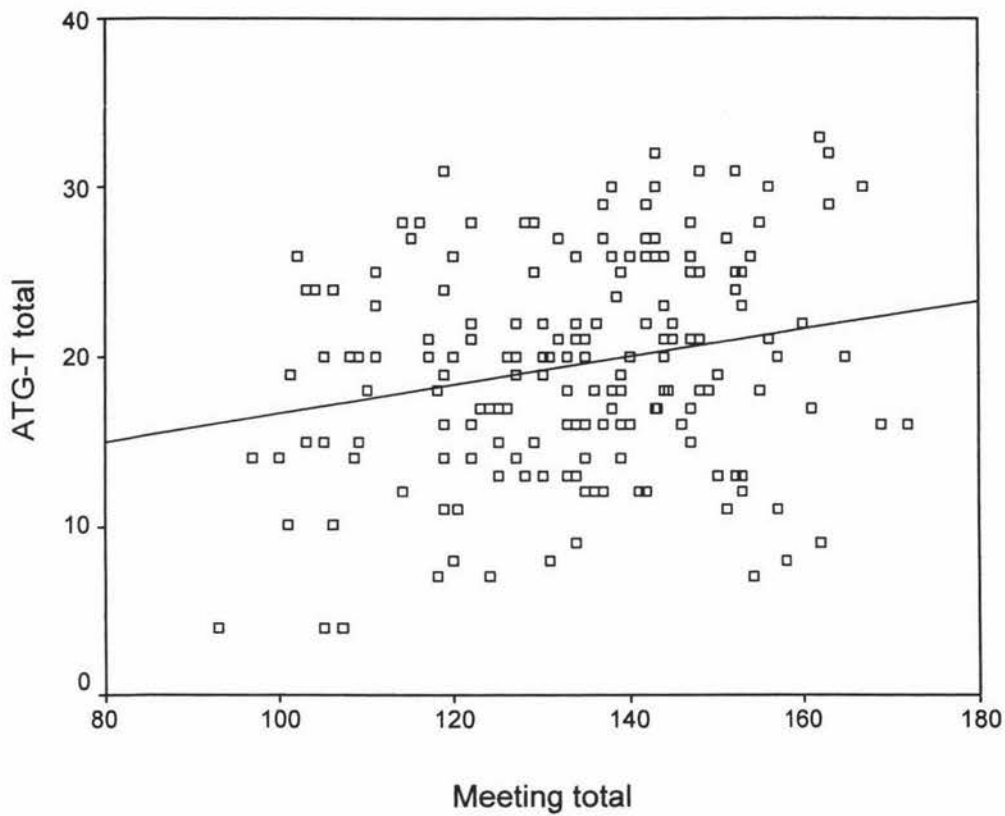


Figure 13.
Scatter plot showing the positive linear relationship between the ATG-T cohesion subscale variable and the meeting outcomes variable at the individual level.

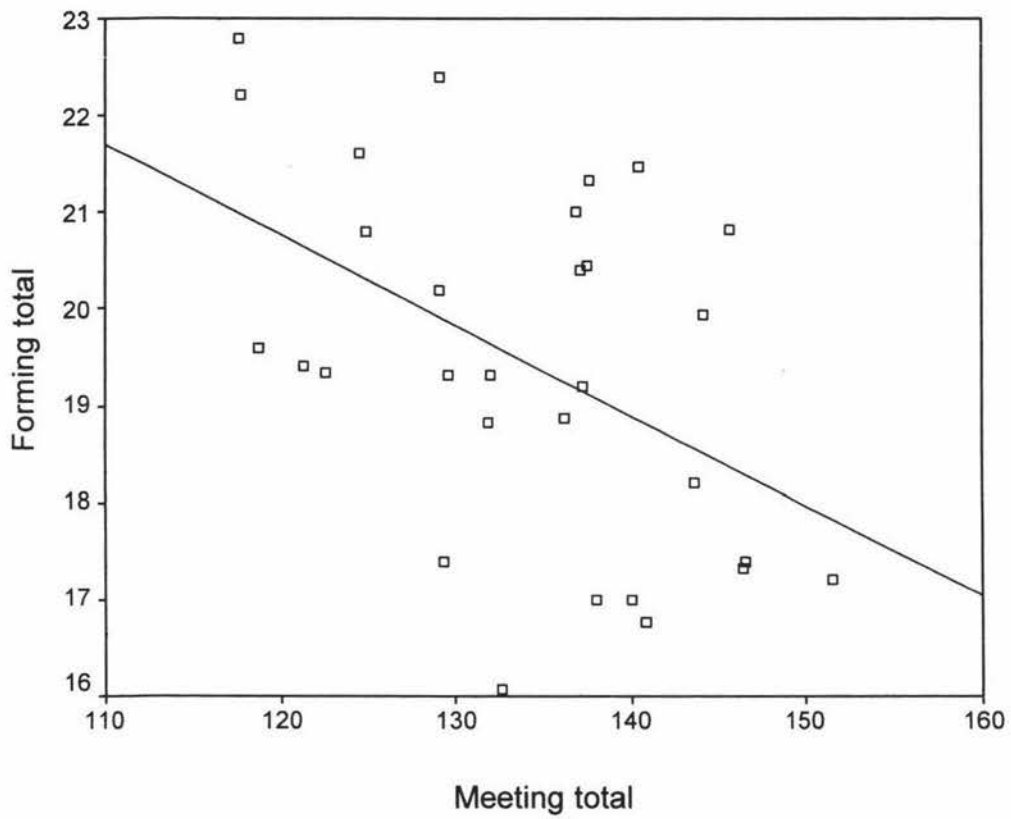


Figure 14.

Scatter plot showing the negative linear relationship between the forming stage of development subscale and meeting outcomes variable at the group level.

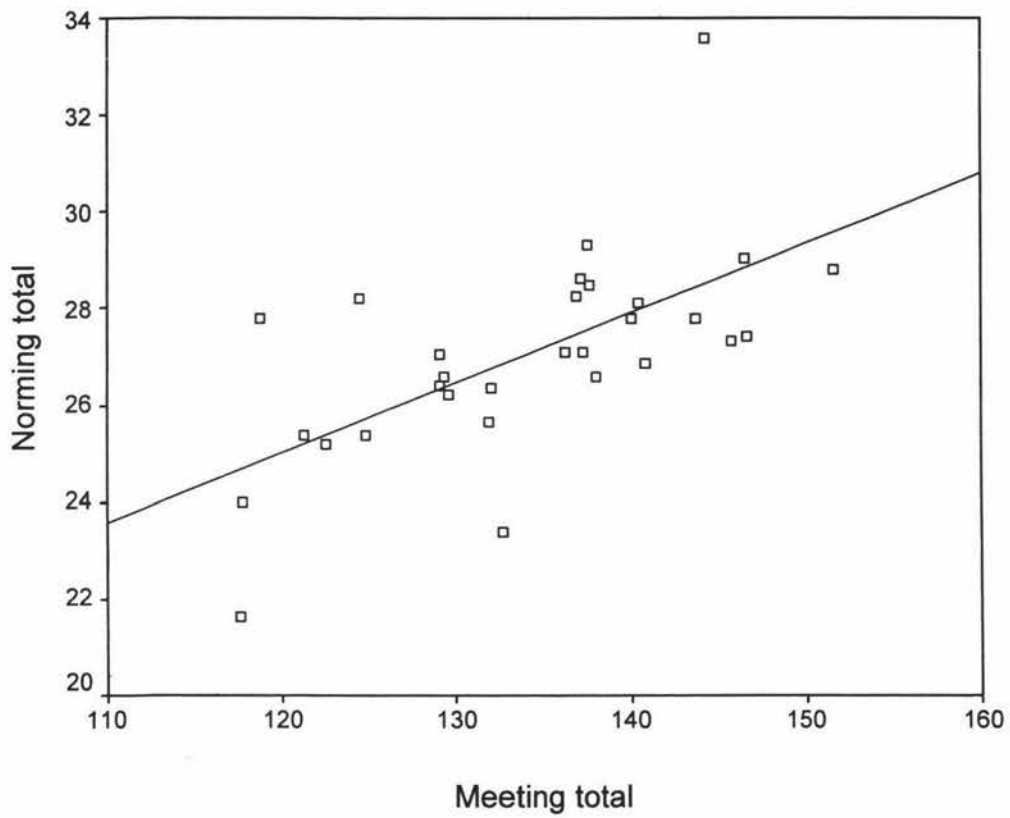


Figure 15.

Scatter plot showing the positive linear relationship between the norming stage of development subscale and meeting outcomes variable at the group level.

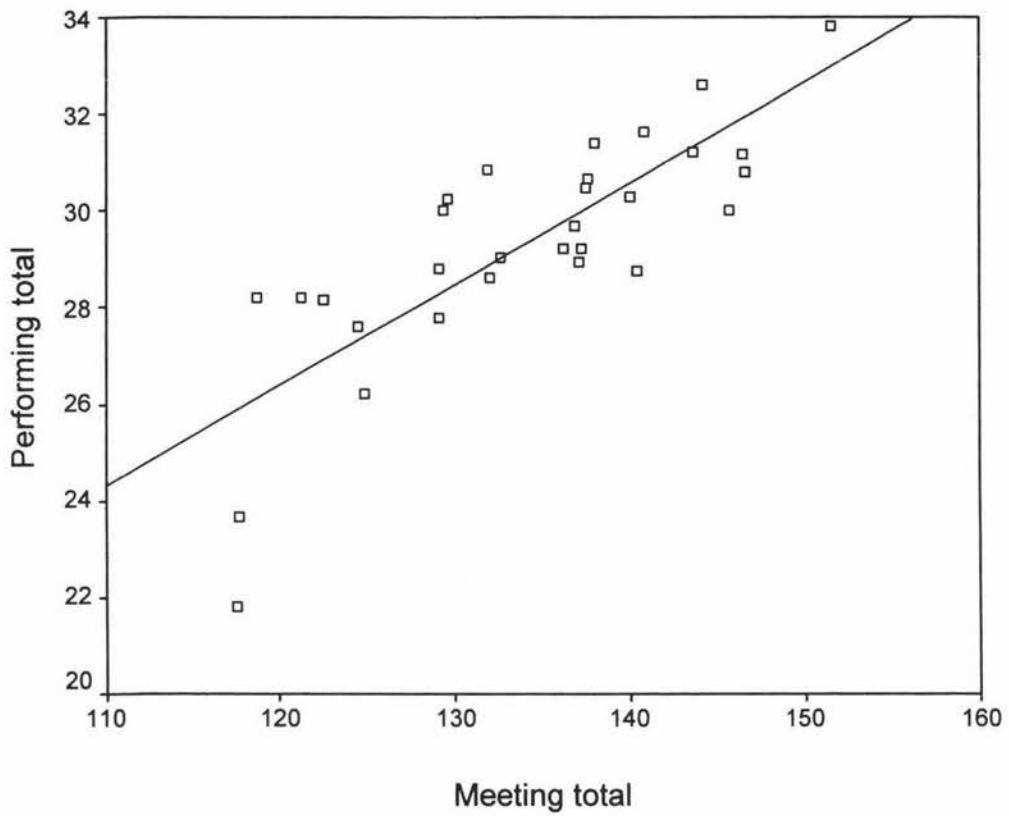


Figure 16. Scatter plot showing the positive linear relationship between the performing stage of development subscale and meeting outcomes variable at the group level.

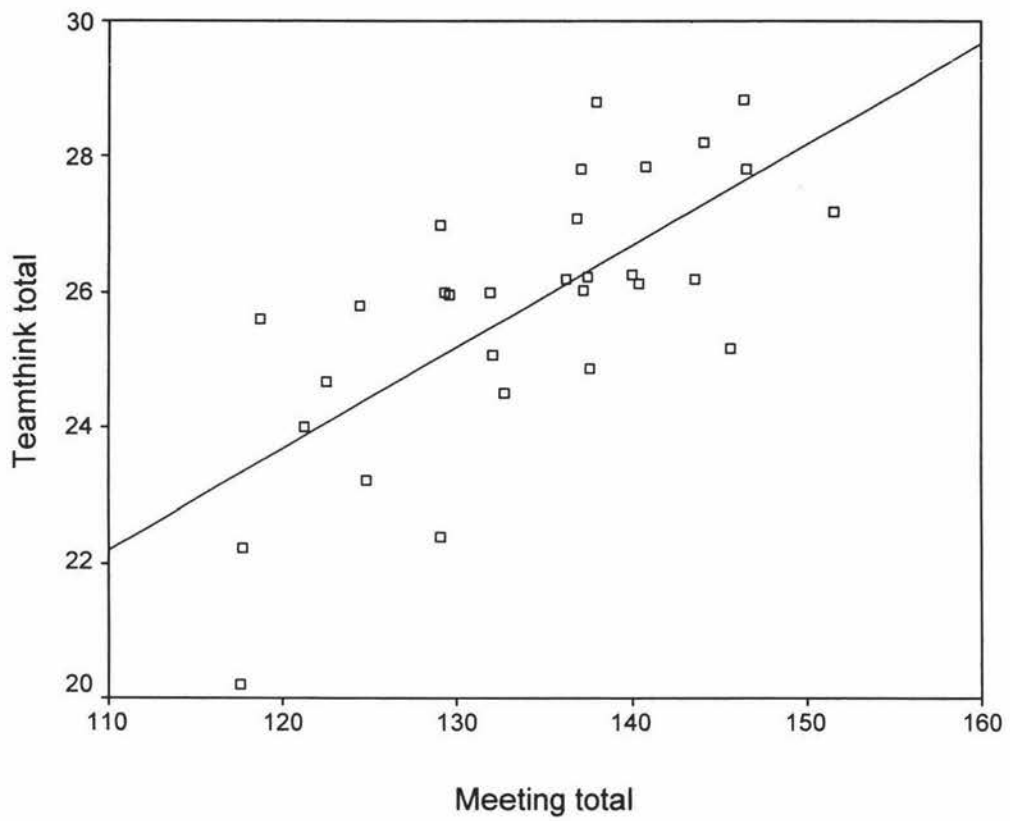


Figure 17.
Scatter plot showing the positive linear relationship between the teamthink variable and the meeting outcomes variable at the group level.

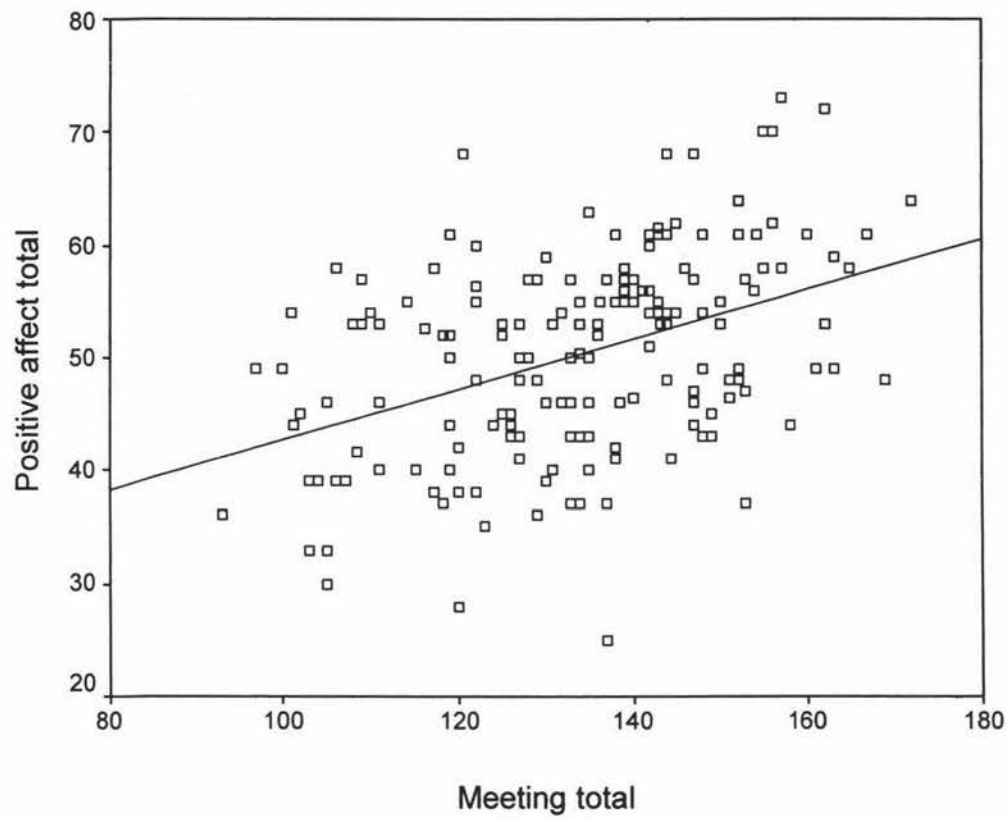


Figure 18.

Scatter plot showing the positive linear relationship between the positive job-related affect subscale and meeting outcomes variable at the individual level.

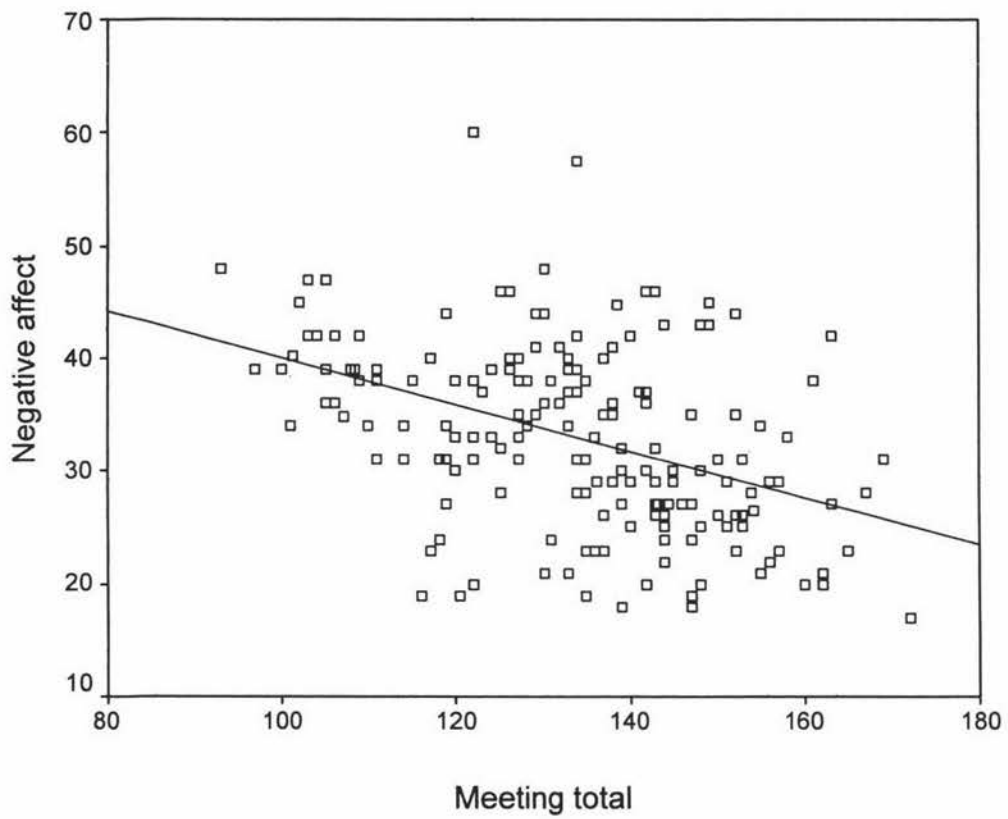


Figure 19.
Scatter plot showing the negative linear relationship between the negative job-related affect subscale and meeting outcomes at the individual level.

Appendix I: Residual plots indicating evidence of homoscedasticity.

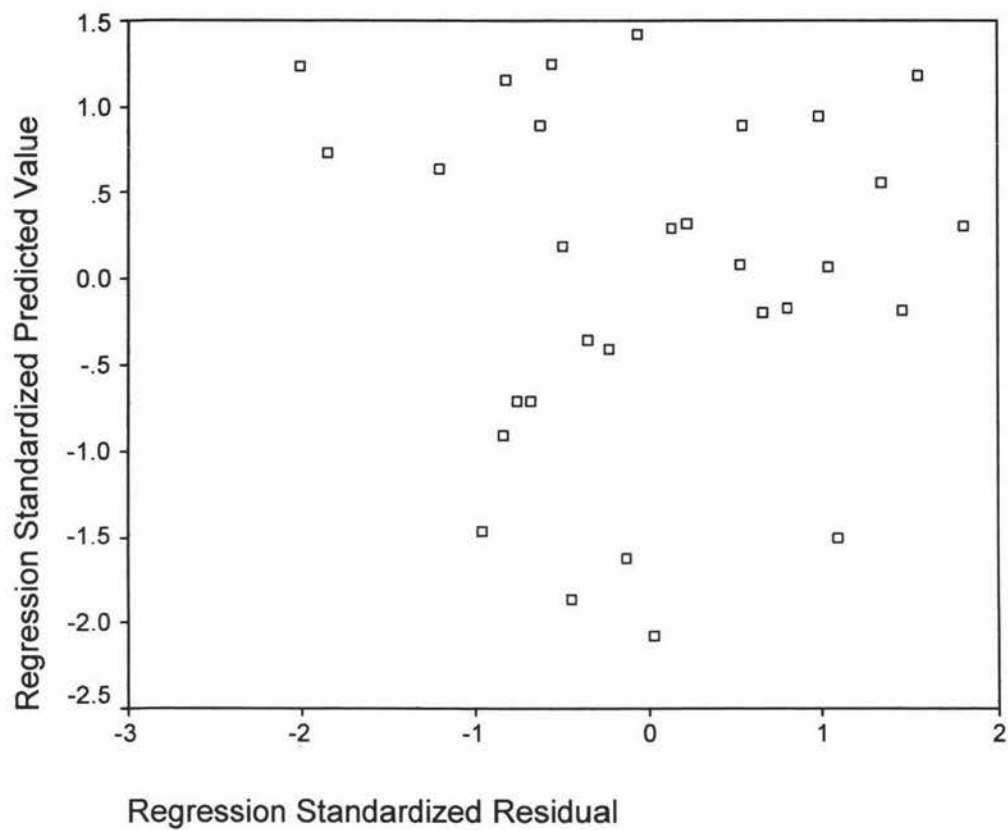


Figure 20.

Standardised residual plot for the team and group level of functioning variable at the group level.

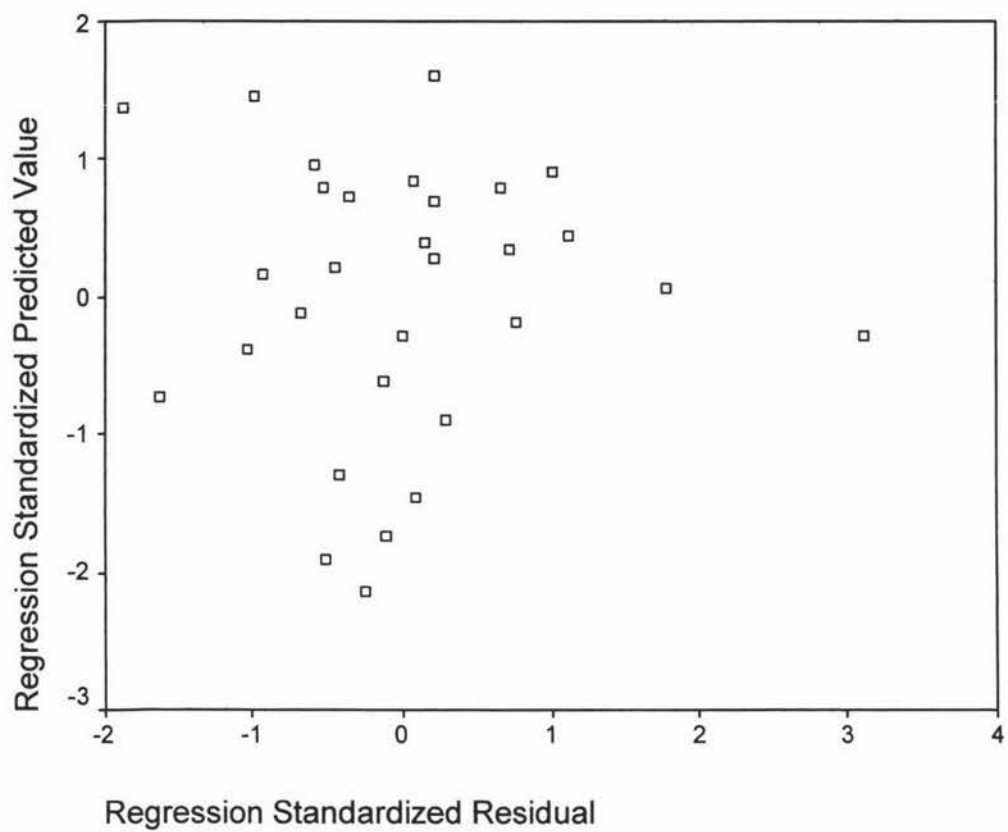


Figure 21.

Standardised residual plot for the GI-T cohesion subscale at the group level.

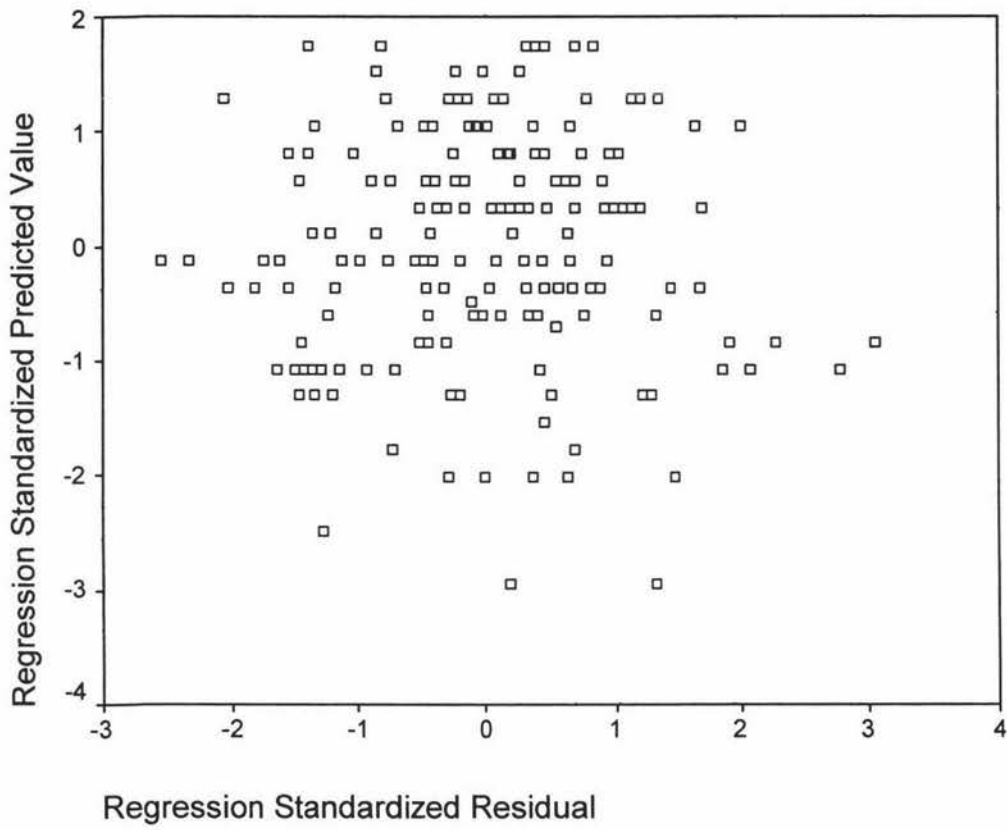


Figure 22.
Standardised residual plot for the ATG-S cohesion subscale at the individual level.

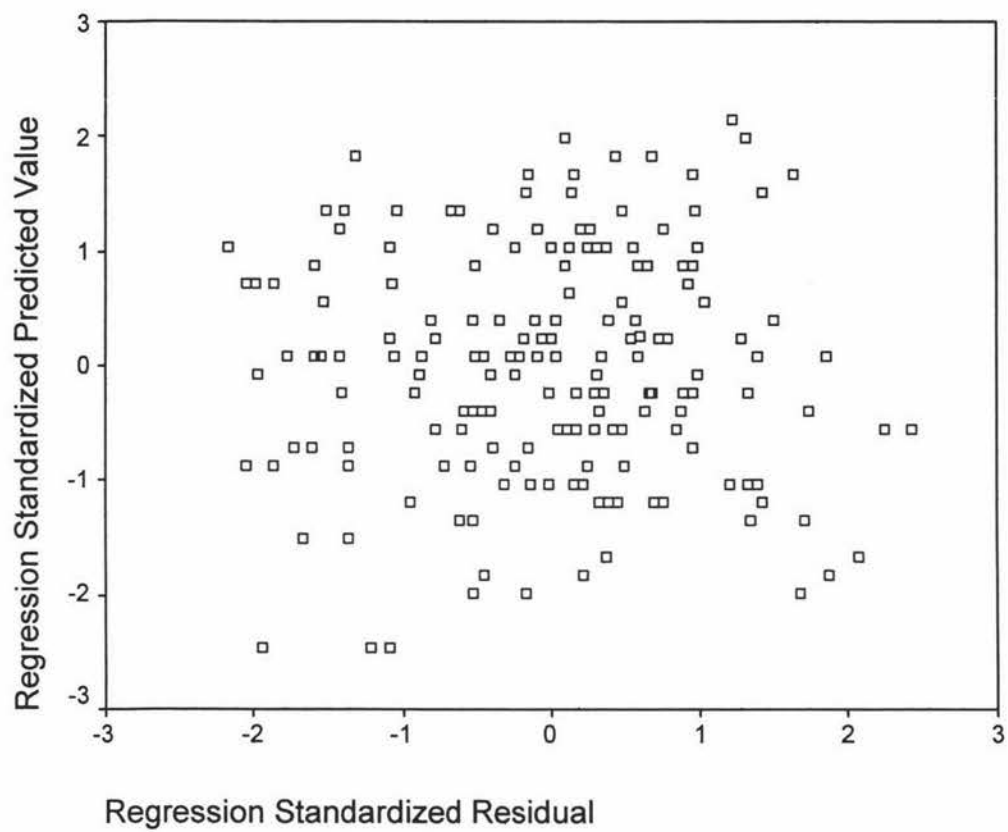


Figure 23.

Standardised residual plot for the ATG-T cohesion subscale at the individual level.

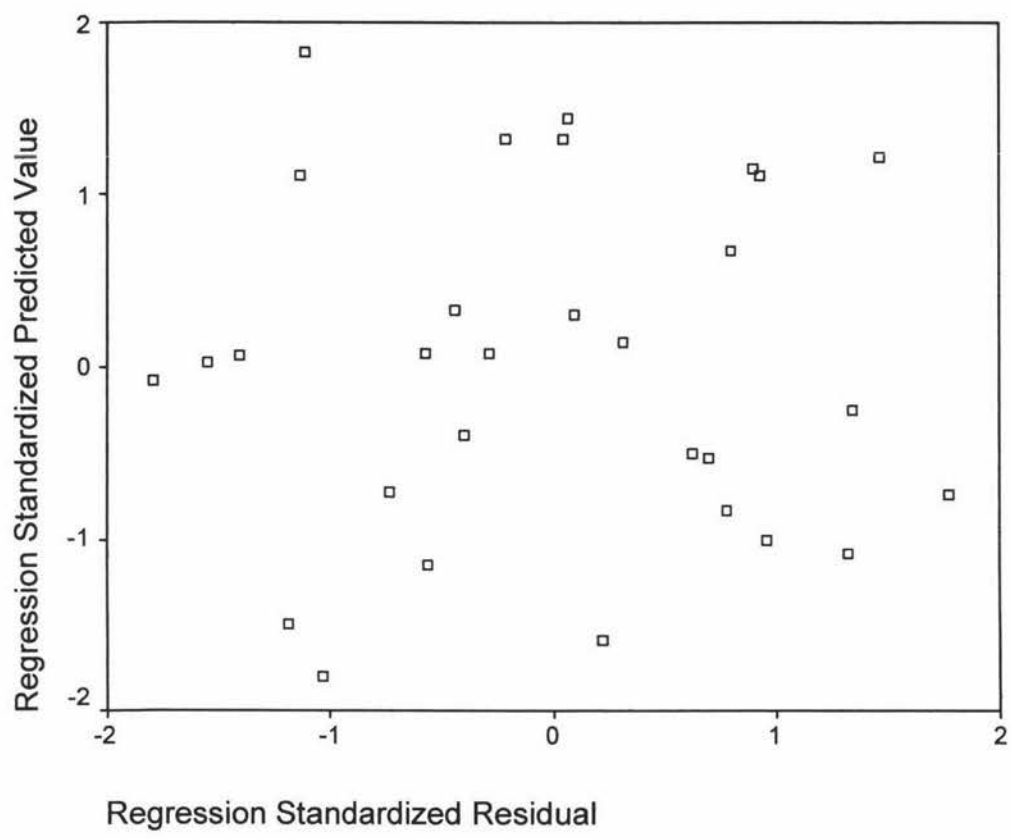


Figure 24.
Standardised residual plot for the forming stage of development subscale at the group level.

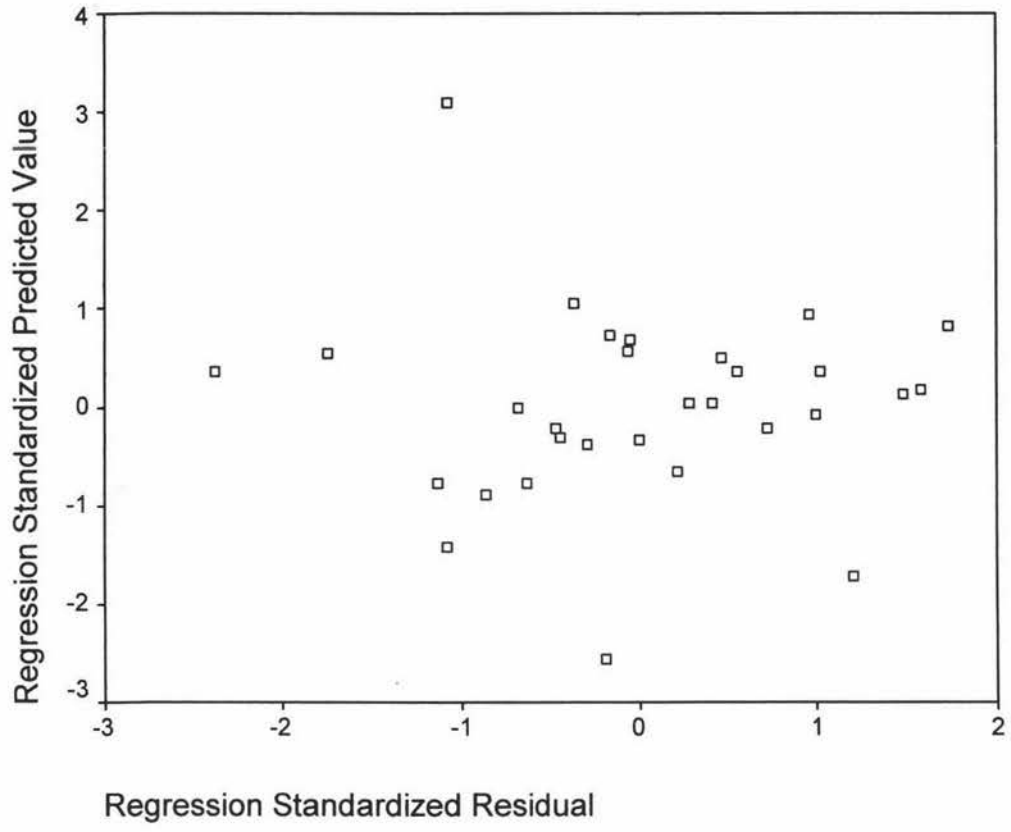


Figure 25.
Standardised residual plot for the norming stage of development subscale at the group level.

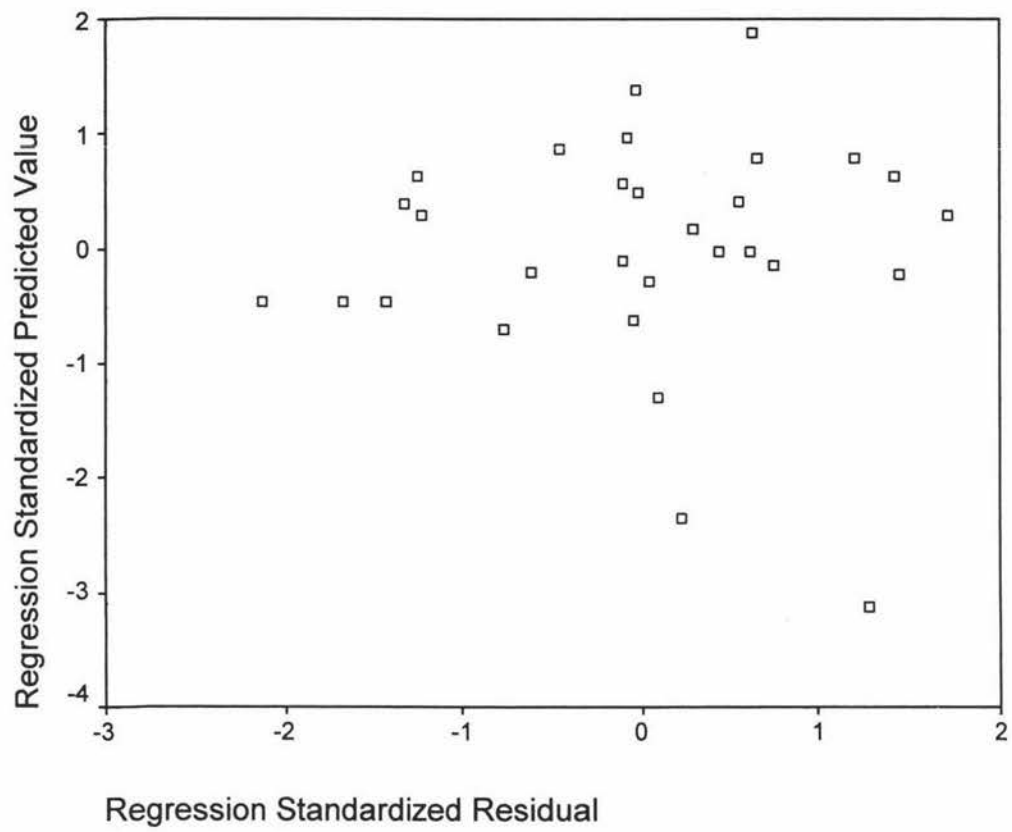


Figure 26.
 Standardised residual plot for the performing stage of development subscale at the group level.

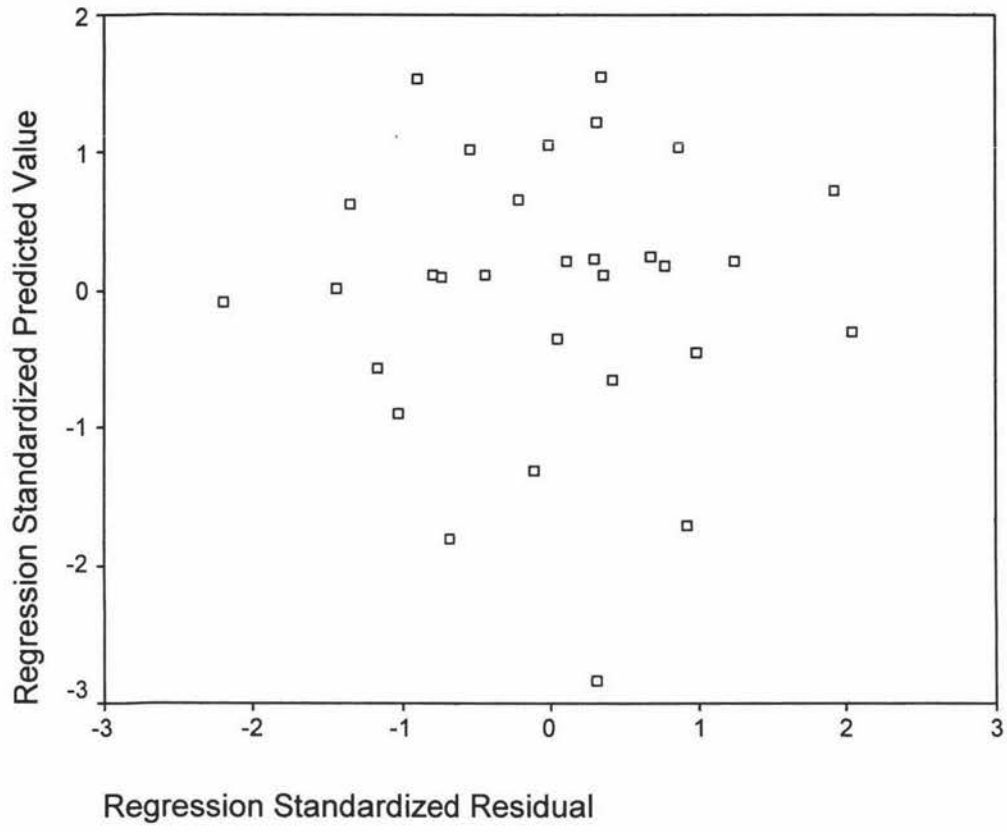


Figure 27.
Standardised residual plot for the teamthink variable at the group level.

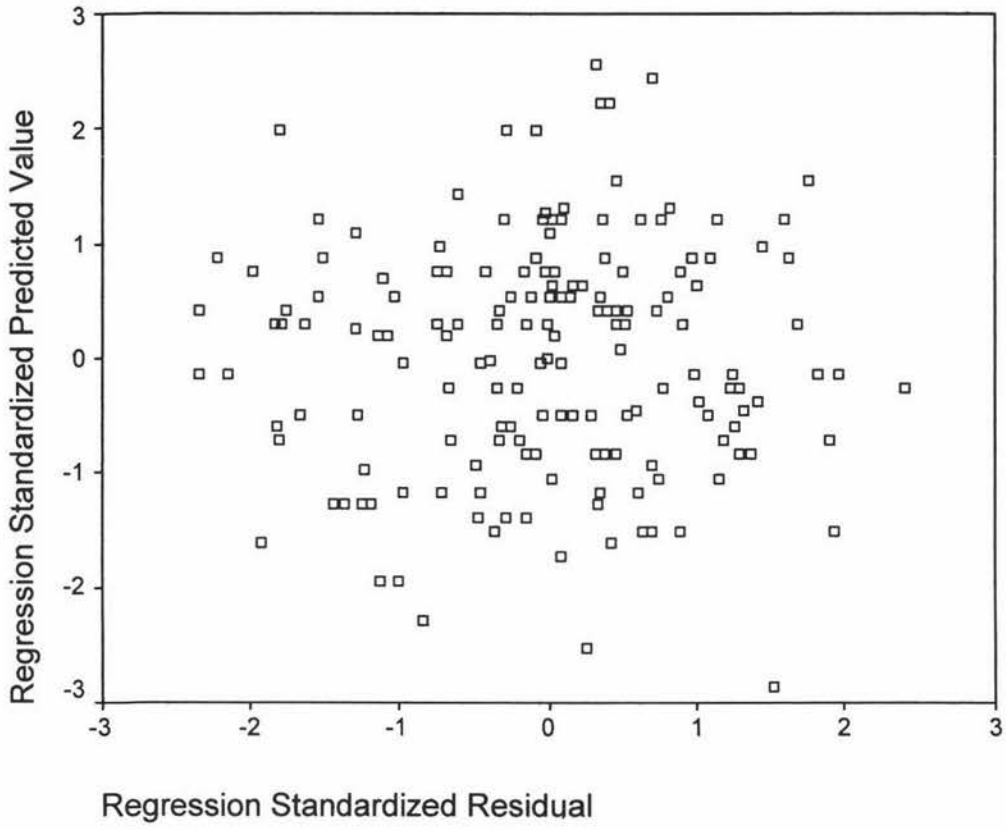


Figure 28.
Standardised residual plot for the positive job-related affect subscale at the individual level.

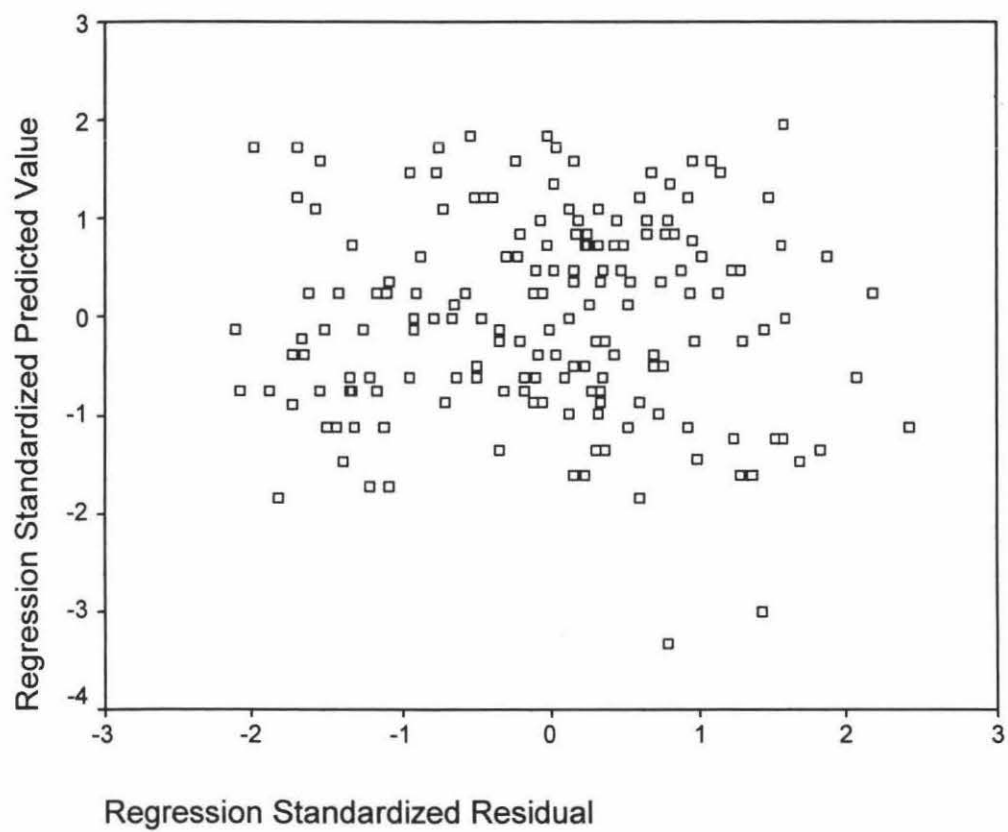


Figure 29.
Standardised residual plot for the negative job-related affect subscale at the individual level.