

**THE ROLE OF ATTRIBUTIONAL STYLE
IN A CALL CENTRE ENVIRONMENT**

Patricia Ann Fulcher

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(Marketing Major).

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ATTESTATION OF AUTHORSHIP

I hereby declare that this submission is my own work and that, to the best of my knowledge and belief, it contains no material previously published or written by another person nor material which to a substantial extent has been accepted for the qualification of any other degree or diploma of a university or other institution of higher learning, except where due acknowledgement is made in the acknowledgments.

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Ethics Approval was granted for this thesis by the Auckland University of Technology Ethics committee on 13th November 2002. The approval number is 02/118.

ABSTRACT

The Role of Attributional Style in a Call Centre Environment

This study explored the relationship between attributional style and the performance of front line service staff in a call centre environment. Attributional style was evaluated using a well recognised method (Seligman's Attributional Style Questionnaire). This was the first time that the Seligman's Attributional Style Questionnaire (SASQ) has been used in a New Zealand context. Performance was calculated using five independent measures. These measures have been used for several years by the company at the centre of our study as an objective measure of Call Centre Representative (CCR) performance. The association between attributional style and performance was then examined using a combination of Analysis of Variance (ANOVA) and correlational analysis.

People have different ways of reacting to adversity such as failure, rejection or a high-pressure situation. The ability to succeed is closely tied to the ability to handle adversity (DeCarlo et al., 1997; Seligman & Schulman, 1986; Boone, 2000). Research has supported the common sense view that optimistic beliefs can be self-fulfilling prophecies (Sujan, 1999a; Porter, 2000; Furnham et al., 1994). Hundreds of studies have revealed the benefits of optimism such as increased motivation, superior achievement (in various areas e.g. work, school and sports), elevated mood and well-being, and better physical health (Seligman et al., 1990; Seligman et al., 1986). Furthermore, individuals can learn to reduce negative ways of thinking and become more optimistic when it is appropriate (Satterfield et al., 1997; Eronen et al., 1999; Bohart, 2002).

Call centres are not new phenomena, however they have become a growth industry in the private and public sector over the last decade (Creagh, 1998). The following definition of call centres was used by Gilmore and Moreland; “A physical or virtual operation within an organisation in which a managed group of people spend most of their time doing business by telephone, usually working in a computer-automated environment.” (2000, pg 4)

Due to the size and the complexity of tasks undertaken within call centres, there is a growing need for empirical findings to broaden understanding of how to best manage call centres and how to optimise the utilisation of human capital (Feinberg et al, 2000). This cross-sectional study assesses the performance of Call Centre Representatives (CCRs) in a New Zealand based call centre and explores whether there is an association with the Seligman’s Attributional Style Questionnaire (SASQ).

It was found that the performance measure for soft skills varied significantly when ranked by a measure of optimism. The performance measures considered in this study focus mainly on technical competency and task efficiency, and were therefore not well explained by attributional style. Future research should investigate pre-testing for soft skills at recruitment, interventionist training on attitude and whether that translates into improved soft skill performance, and the reassessment of current call centre performance measurements.

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CHAPTER I

RESEARCH QUESTION

As the service industry continues to expand, the role of the call centre is becoming more and more crucial. The call centre is a centralised hub of phone activity, where customers interface with the company, perhaps for the first time. It is therefore highly relevant to examine ways in which call centre performance can be improved.

Past research has identified a link between attributional style and performance (Moore, 2000; Dixon et al., 2001; Furnham et al., 1994; Johnston et al., 1994). Attributional style refers to the way in which people explain their successes and failures. This can have a great influence on motivation, expectations, self-esteem, risk-taking behaviour, and even on the actual outcome of our actions (Furnham et al, 1994; Dubinsky et al., 1989; DeCarlo et al., 1997; Rich, 1999). Studies have demonstrated that a pessimistic explanatory style predisposes people to poor performance in sales (Furnham et al, 1994). The same association has been identified across a number of different industries. However, up to this point no-one has examined the relationship between attributional style and employee performance in a call centre environment.

Generally defined, a call centre is a place where telephony activities are centralised, with the aim of cutting costs and improving marketing and customer services. This is a fast growing industry (Crome, 1998) with high staff turnover rates (Crome, 1998; Williams, 1993). Call centre representatives (CCRs) are often under stress to meet targets in a repetitive and technology driven environment (Batt, 1999; Wallace et al., 2000). Performance is automatically measured by their computer software and this data can be used to help improve performance (George, 1996; Batt, 1999).

One of the greatest problems facing call centre management is the unusually high rate of staff turnover (Gilmore et al., 2000; Creagh, 1998; Wallace et al., 2000; Richardson et al., 2000). Turnover inflicts costs in two ways. Firstly, the process of advertising for and selecting new employees is a considerable tax on resources. Secondly, the new employee must be trained, and is unlikely to perform at the same level as the former employee for some time. It is therefore in the best interests of the company to examine ways in which staff turnover can be reduced.

One explanation for the high rate of turnover is stress (Williams, 1993). The heavy use of technology by call centres and the incessant measurement of performance have been found to contribute heavily to the perceived stress of staff. (Burns, 1995; Tyler, 1997; Tyler, 1993) Attributional style or “how the employee sees the world” has been shown to play a role in reducing an employee’s stressors (Rich, 1999).

Staff turnover and the resultant costs of on-going recruitment and training both have a significant impact on a call centre’s bottom line profitability. A link between attributional style and CCR performance would be useful in two ways. Firstly, if attributional style is an indicator of future performance, the SASQ would provide a further tool by which to improve employee selection. That is to say the SASQ could be used to do pre-testing in the recruitment phase in order to identify better suited recruits. Secondly, the SASQ could be used to identify problem areas for current CCRs. A number of training techniques are available to improve attributional style which may translate into improved overall productivity for the call centres without an increase in staff. Furthermore, the SASQ provides specific feedback on six different components of attributional style, identifying specific areas that training should focus on for each employee.

1.1 Hypothesis

The research hypothesis was formulated on the basis of findings from attribution research and previous studies that used Seligman's Attributional Style Questionnaire (SASQ). The SASQ provides a numerical measure of how employees attribute their performance. The hypothesis was formulated to test whether a link could be demonstrated between a CCR's attitude (either optimistic or pessimistic) and their work performance. It was decided to use a directional hypothesis (i.e. that high scores for optimism result in better performance) due to the body of evidence that has found the same association in other industries (Furnham et al, 1994; Dubinsky et al., 1989; DeCarlo et al., 1997; Rich, 1999). Significance was tested on the basis of a two-tailed hypothesis to maintain a high standard of stringency.

H₀: SASQ scores are not related to performance scores for call centre employees.

H₁: An increase in SASQ scores is associated with increased performance ratings.

CHAPTER II

LITERATURE REVEIW

2.1 Introduction

This literature review discusses call centre operations, call centre employees, and attributional style. This includes an overview of the subject company, how CCRs are rated in the call centre industry, the role technology plays in the capture of performance data, the nature of attribution theory, and the use of Seligman's Attributional Style Questionnaire. These key points are then linked together and any relationships explained.

2.2 A Call Centre Industry Overview

2.2.1 Definition

What is a call centre? The following definition for a call centre was taken from Gilmore and Moreland;

“A physical or virtual operation within an organisation in which a managed group of people spend most of their time doing business by telephone, usually working in a computer-automated environment”

(2000, pg 4).

Another definition for call centre is;

“Call centres are offices established by organizations to deliver services remotely over the phone, replacing the need for face-to-face interaction with customers.” (Richardson et al., 2000, pg 358)

Call centres have also been referred to as “sweatshops” (Richardson et al., 2000, pg 363) and “battery farms” (Crome, 1998, pg 13) due to the way CCRs are sat at small work spaces to get as many in one room as possible. This reduces costs for the call centre but increases work-related stress for the CCRs.

Articles about the call centres industry started to appear in 1993 (Tyler, 1993), but initially focussed mainly on the computer technology utilised by call centres. Research articles that examined performance, management and/or employee issues within call centres became more prolific from 1998 (Creagh, 1998).

2.2.2 Call Centre Industry

Call centres have become a growth industry in the private and public sectors over the last decade (Creagh, 1998; Gilmore and Moreland, 2000). While call centres were almost unknown at the beginning of the 1990s, by 1998 there were estimated to be around 12,000 call centres in Europe, hosting around half a million agent positions (Richardson et al., 2000). A UK article cites that the call centre industry is growing at 50% per year (Crome, 1998).

Due to their size, and the complexity of tasks undertaken within call centres (Gilmore and Moreland, 2000), there is a growing need for empirical findings to understand how to best utilise call centres from a management, employee and customer perspective (Feinberg et al, 2000).

Studies on call centres have mainly been done in the United States and United Kingdom, exploring the quality of service provided by call centres as well as customer satisfaction (Gilmore and Moreland, 2000; Tax et al, 1995). A study has also been undertaken in Australia which again focussed on customer satisfaction (Bennington et al, 2000). This study is set in a New Zealand context and investigates the link between call centre representative's attributional style and their performance on a number of task related measures. While the U.S., U.K. and Australian call centre industries all differ to some degree from the operational style of a New Zealand call centre, insights into call centre management in these countries can help structure the way by which the New Zealand call centre industry is examined.

Typically, teleservice operations are concentrated in call centres to save on costs (Richardson et al., 1999). By centralizing telephony operations, property requirements can be reduced and space in existing buildings can be utilized more effectively. Technologies are better utilized through centralization of a larger operation e.g. automated call distribution. Supervisory needs are reduced as monitoring is provided by the systems. It is the cost of labour, however, that benefits the most by concentrating people at one site and increasing output (Richardson et al., 1999; Richardson et al., 2000).

Truly global centers are rare. Most call centers operate within their national market. The Federation of European Direct Marketing suggests cross-border selling amounts to between 3 and 6 per cent of industry

turnover, with most call centers operating nationally (Richardson et al., 1999).

Pollecoff (1995) cites the report entitled *Teleculture 2000*, which estimates that telephone-based business could already be worth as much as £10 billion, and remarks that customers are becoming more comfortable with the phone as a means of contact with banks, offices, and shops. Only 22% of businesses surveyed in the U.K. appear to be sufficiently organized to effectively deal with potential customers on the phone (Pollecoff, 1995).

Many call centers were established in the early 1990's, and as the industry has grown they have found it difficult to attract new staff (Richardson et al., 1999). Richardson (1999) points out that increased competition from other call centers is a contributing factor to the lack of available employees.

The most common services supplied by call centres include travel booking, information lines, computer 'helpdesks', and telephone banking. A number also combine customer service with selling i.e. 'telesales' (Richardson et al., 2000).

Retail, financial services and telecommunications have the most call centres in the North East of England (Crome, 1998).

Telecommunications is the second largest user of call centres in the United Kingdom, the third largest being 'third party' call centres which

undertake work on behalf of other companies (e.g. energy, travel, transport and government service) (Crome, 1998).

2.2.3 Participant Call Centre

The New Zealand call centre used in this study has not been identified for commercial reasons.

The company's American website sells this multinational as a "leader in outsourced customer management services" (reference withheld). It provides services on five continents around the world. The company was founded in 1982 and provides integrated customer relationship management solutions (CRM) for global organisations, predominantly in the telecommunications, financial services, technology, government and transportation industries. It has operations in eleven countries which include Argentina, Australia, Brazil, Canada, China, Mexico, New Zealand, Singapore, Spain, the United Kingdom, and the United States of America.

The company studied is part of a multinational Asia Pacific operation with its headquarters in Sydney. It has sites in Melbourne, Canberra, Auckland, Hong Kong, and Singapore, and currently employs over 2,500 people. In 2000, it was named 10th Best Employer to Work for in Australia by Hewitt Associates, The Australian Graduate School of Management, The Sydney Morning Herald, and The Age.

The New Zealand operation (via its website) claims that it “manages more than three million customer interactions a year across three customer interaction centres which employ over 300 professionals” (reference withheld). It provides a number of services including “complex technical support solution for a leading telecommunications company; enquiry services for a number of government departments; and information services for large utilities” (reference withheld).

2.3 Optimizing Human Capital

2.3.1 Call Centre Human Capital Requirements

The call centre industry has been a strong source of employment opportunities following the rise of white collar jobs in the call centre sector (Richardson et al, 2000). A study carried out in Ireland in 1999 revealed that more than 12,000 people were employed in call centres, and this number was growing at approximately 30 per cent per year (Condon, 2000). It is estimated that by 2005 call centre operations in Ireland will employ in excess of 25,000 people (Condon, 2000). Pollecoff (1995) points out that First Direct services half a million customers with 500 staff in a centralised telebanking facility, whilst the Midland Bank employs 36,000 staff to service 4 million customers. While there are no official figures for call centre operations in New Zealand, it is safe to say that the call centre industry has also undergone considerable growth in the past 10 years.

The average staff turnover rate in call centres typically exceeds 30% per year (Crome, 1998). This leads to a large cost issue in terms of

recruitment and training. A natural question is how can the human capital requirements of a call centre be optimised?

One of the few predictors of long-term profitability is “completely satisfied” customers (Wallace et al., 2000). Satisfied customers increase employee satisfaction, which has been documented in marketing and call centre literature as a factor in employee retention (Wallace et al., 2000; Tax et al., 1998; Feinberg et al., 2002; Bennington et al., 2000; Feinberg et al., 2000).

Staff turnover is seen as a managerial and organisational problem (Gilmore, 2001). The use of a ‘production line’ approach to call centre services decreases employee satisfaction (Richardson et al, 2000). That is not to say that the production line method should be discarded. The production line approach is seen to work well with the tangible aspects of service (Gilmore, 2001). However the more intangible aspects (or soft skills), more suited to improving customer satisfaction, are not suited to this method (Gilmore, 2001; Gilmore and Moreland, 2001).

Burns (1995) stated; “Of these three elements – people, processes and systems – people is the most important” (pg 46). He went on to say that having a well trained, motivated workforce is important in many aspects of a business. This is surely more important at the customer interface, yet “you would be surprised at the number of organizations that see customer service for example as a backwater to park people in” (Burns, 1995, pg 46).

2.3.2 Call Centre Representatives

Academic literature uses several interchangeable terms for call centre employees. One term – Frontline Employee – is used to describe the person that interacts with the customer and presents the face of the organisation. Agent is another term used to describe employees at the front line of a call centre operation. Customer Service Representative (CSR) and Call Centre Representative (CCR) are also used to describe the interactive, organisational face and customer service roles that call centre employees perform. This study will refer to call centre employees as Call Centre Representatives (CCRs). They are the face (or rather the voice) of the company for the customer (Batt, 1999; Burgers, 2000; Tyler, 1997).

Call centers operate across many industries (e.g. banking, airlines, finance, telecommunications, insurance and utilities) (Richardson et al., 1999). They are utilized by a range of services (e.g. helpdesk functions, customer service, sales). So knowledge and skill levels of CCRs differ greatly. The most important attributes for a CCR include; key board skills, customer focus, flexible attitude, high energy, team focus, ability to acquire product knowledge in a short amount of time, and maturity of voice (Richardson et al., 1999; Pollecoff, 1995; Richardson et al., 2000; Gilmore and Moreland, 2001).

Call centre employees in the U.K. are mainly women, typically white collar clerical workers (Richardson et al., 1999). Women are said to have a good telephone manner and therefore call centres like them for their

empathetic skills on the phone. Male CCRs are mainly employed in computer help desk environments. Managers and senior technical staff tend to be male, whilst females fill supervisory roles. As most call centres have a flat management structure, only 3-4 levels exist between the CCR and manager (Richardson et al., 1999). This means that opportunities for promotion are limited.

Call centres see their employees as a means by which to gain an advantage over their competitors. They believe that the right CCRs can create a competitive advantage by enhancing customer satisfaction. Those call centres that use a mass production approach to service delivery reduce the service options available to customers because of the limited discretion given to the CCRs (Batt, 1999).

The stressful aspects of working in a call centre and the high rates of staff turnover are common factors discussed in the present-day research (Crome, 1998; George, 1999; Wallace et al, 2000). Call centre work is stressful due to the monotony and high number of calls taken, especially as a significant number of calls are customer complaints (Wallace et al., 2000). As on an assembly line their work is individualized, repetitive, scripted, and computer-paced (Batt, 1999). This means many call centres use the “Sacrificial HR strategy” (Wallace et al., 2000, pg 175), whereby management rules are results orientated, and burnt-out staff are continually replaced by new, motivated staff.

Wisner and Feist (2001) explain that the benefits of employee satisfaction are improved employee commitment (lower staff turnover), improved productivity, and enhanced customer satisfaction. This can be achieved by “teaming” (pg 58) which is described as a "win-win" (pg 58) strategy for the organization and the employee. Teams are a more effective working method for the organization and enhance job satisfaction for the employee (Wisner and Feist, 2001). Work teams also create empowerment for the CCRs and thereby shift control from managers to employees (Wisner and Feist, 2001).

Batt (1999) illustrates that employee participation in teams leads to better service and sales. This may be because CCRs that work alone lack the support provided by interaction with other employees. Research suggests that teams of CCRs along with group goal-setting, problem solving, and learning, produce better performance results (Batt, 1999).

Originally it was thought that CCRs were more productive if they were employed on a part-time basis, working four hour shifts (Richardson et al., 2000). The industry is now moving towards employing fulltime workers (Richardson et al., 2000). One reason for this is that training is more cost effective for fulltime workers than for part-time workers. Training has consequently become more structured, systematic and product oriented (Richardson et al., 2000; Richardson et al., 1999).

Call centres are touted as a way to improve or deliver customer service (Crome, 1998). However, unless training for call centre operators

focuses upon 'soft skills' (e.g. improving customer relations), high staff churn will result. This in turn leads to more training costs and reduced customer satisfaction. Gilmore (2001) stated that "soft data are those concerned with descriptions of and knowledge about customers' feelings, perceptions and requirements" (pg 154). Due to the intangibility of soft skills, they are difficult to measure and evaluate. It is however important to do so in the context of a service industry such as the call centre business.

2.3.3 The Performance of CCRs

"Whilst managers continue to assess performance by the quantity rather than the quality of the calls, employees will continue to become demoralised" (Gilmore, 2001, pg 153).

According to a study conducted by the now-extinct Office of Technology Assessment (U.S. Congress, 1987), some four to six million office workers are dependent on computer-generated statistics for all or part of their performance evaluations. The report's authors concluded that there are no reliable figures on how extensively employers are using computer-based monitoring, but they estimate that about 20 to 35% of office workers in both the public and private sectors of the U.S. economy were being monitored in 1987. The Wall Street Journal (1992) reported that as many as 26 million U.S. office workers were possibly being monitored through their computers. According to Piller (1993a; 1993b), of the 301 companies that took part in their survey, 22% had

searched employee files (apparently without employee knowledge or permission), including computer files, e-mail, and voice mail.

A number of articles that focus on Service Encounters highlight issues that correlate with performance, but few have been done on Call Centre frontline encounters. One article that does address this issue is Burgers et al., (2000). Burgers et al. investigated the 'service encounter' in a purely phone context, and developed a measurement instrument to identify customer expectations of call centre representatives.

With an intensive and stressful work environment and being constantly monitored by technology, there is little time for CCRs to recover between calls. This can be due to targets and performance measures, and when performance is linked to pay the pressure to perform is constant. The nature of working in a call centre also means that problem calls are a regular occurrence. Management often monitors the quality of the conversations by listening in or audio taping conversations, but the scale they use to measure the performance can be flawed (Burgers, 2000). CCRs must therefore possess the ability to perform front-line work while working under pressurised conditions. Employers should also look for CCRs that have customer service skills along with motivation and resilience (Richardson et al., 1999; Richardson et al., 2000).

When CCRs see customer service as important, the dictum of management stressing productivity is seen by them as a threat to the quality of their work (George, 1996). CCRs are typically underpaid,

under-trained, overworked, and highly stressed (Singh, 2000). So employees must cope with the inherent productivity-quality tension in frontline jobs. Despite its importance, the literature lacks systematic studies of agent performance and productivity (Singh, 2000).

Guidelines for management include; not focussing solely on call answering performance/lost call rates and not using data alone to measure individual performance. Managers also need to ensure that the measurements they are using accurately portray what they are wanting to measure. Different types of conversations (e.g. asking for a brochure versus problem-solving a technical issue) require different weightings for performance measurement (Crome, 1998; Burgers, 2000).

Training is a vital tool for management. Training for motivation, dealing with aggression, stress management, and customer orientation can improve the CCR skills in her contact with the customer (e.g. how to deal with angry customers). In-depth product knowledge, computer knowledge, procedural knowledge and company knowledge also develop the CCR's confidence in any situation.

Customers call for a level of authority from their CCRs (Burgers, 2000). That is to say that the customer requires the CCR to be able to make decisions without referring to management. Most call centres have a flat management structure, which highlights another negative factor for CCRs; the lack of opportunities for promotion (Richardson et al., 1999).

2.3.4 The Role of Technology in Performance Monitoring

Technology is a factor that affects the performance of CCRs (Batt, 1999).

“On average, European and North American call centre IT spends is set to grow by \$1.2bn until 2005.”

(http://techlibrary.commweb.com/data/detail?id=1033745487_231&type=RES&x=1962220913)

Call centres use computer technology to achieve efficiency by electronically monitoring workers and control operations. It is used for the physical concentration of staff, labour scheduling, staff monitoring and monitoring productivity rates. Call patterns can also be analysed in order to establish staff requirements. CCRs can self-supervise, as call information is displayed on screen (Richardson et al., 1999; Wallace et al., 2000; Batt, 1999).

The computer-based functions of call centres have been described by Tyler (1993);

“There are 3 computer-based functions of call centres - automatic call distribution (ACD), voice processing (VP), and computer-supported telephony (CST)”, which is also called computer telephony integration (CTI)” (pg 36).

The Automated Call Distribution System (ACDS) is the heart of the call centres work automation and employee monitoring. It receives and delivers calls. Often it is hooked up to the Computer Telephony

Integration (CTI), so that it delivers details of the customer, and messages to the CCR to sell a particular product based on a computer generated customer profile (Tyler, 1993; Richardson et al., 2000; Richardson et al., 1999; Crome, 1998).

However, along with the efficiency benefits technology provides, technology also places further demands and constraints on employees and along with customers (Burns, 1995; Tyler, 1997; Tyler, 1993). The technology used to automate the work environment in call centres traditionally minimises the social interactions of CCRs. Furthermore, both selling and service require on-going learning and problem-solving which is better accomplished in teams (Batt, 1999).

CCR is one of a range of jobs to which computer based monitoring applies. George (1996) defines computer-based monitoring as the use of computerized systems to automatically collect information about how an employee is performing his or her job. It has been shown to have a direct and significant effect on overall job satisfaction (Gilmore, 2001; Bitner, 1994). Employees' attitudes to monitoring also affect their job satisfaction, which can push them to leave the organisation. Most CCRs whose work is monitored need to use both a computer system and a telephone system to carry out their daily work tasks (George, 1996).

Computer-based information can be gathered and used in a variety of ways. Because employee satisfaction with monitoring depends upon how it is used, it is important to identify whether the performance information is used for pay increases/promotions, or for disciplining

CCRs. Employee satisfaction with monitoring is also dependent on familiarity with the task. CCRs that see their jobs as routine have fewer complaints about monitoring (George, 1996).

CCR satisfaction with monitoring is crucial to their job satisfaction and therefore job retention for the organisation. Research has shown the more tasks that are monitored and the higher the reliance on that monitoring by supervisors for CCR evaluation, the less the satisfied the CCR (George, 1996).

2.4 The Nature of Attribution Theory

In an article by Folkes (1988), a complete review of Attribution Style Theory and its development was presented. Its origins emanate from a book by Heider (1958) entitled *The Psychology of Interpersonal Relations*. Heider is generally considered the ‘father’ of attributional social psychology. It has grown from a number of research streams including naive psychology, self-perception theory, inference work and external attribution, and has become one of the primary paradigms in social psychology. It has also been espoused by marketing scholars (Moore, 2000; Dubinsky et al., 1989; Swanson, 2001).

Attribution theory is a collection of several theories that look at how individuals in social situations use information to find reasons or explanations for events. Research on attribution is concerned with the causal inferences people make, how they arrive at them and what they see as the consequences of those inferences. It looks at the different ways people have of reacting to adversity such as failure, rejection or a high-pressure situation, and the ability to handle adversity or success (Dubinsky et al., 1989; Swanson, 2001).

Causal attributions are made because of a need for prediction and control of a person's environment (Taylor, 1994). Attributional Social Psychology makes a crucial distinction between personal and situational causes, and includes the dimensions of stability and controllability. Specifically, Weiner (1985) defined three dimensions of the causal attribution; the causal locus (whether the cause is internal to the person or external), stability (whether the cause is constant or variable over time), and controllability (whether the cause is under volitional control or not).

Locus involves who or what is blamed. Typically a distinction is made between internal (attributed to the individual) and external (attributed to anything in the environment) factors. Stability refers to the degree to which a cause is seen as being relatively permanent and stable, or alternatively temporary and fluctuating. Controllability refers to the degree to which the cause was under volitional control or choice (Folkes, 1988). It is from this theory that Seligman's Attributional Style Questionnaire (SASQ) was developed.

2.5 Seligman's Attributional Style Questionnaire

This research uses the Seligman's Attributional Style Questionnaire (SASQ), which measures an individual's attitude to adversity. The SASQ was designed by Martin Seligman at the University of Pennsylvania. Seligman has spent over 35 years researching how people explain their failures and successes to themselves.

Seligman's research has shown that people have a consistent way of interpreting the good and bad events that happen to them, what Seligman calls 'explanatory style'. It is the regular way that an individual explains setbacks and failures to themselves. This has been proven to have a direct influence on their future actions and achievement. The

SASQ assesses the extent to which the person who completes the questionnaire has an optimistic or pessimistic explanatory style and outlook on life (Seligman, 1986; Schulman, 1999).

Initially developed through research into the performance of salespeople, the SASQ is now used in employee selection for a broad range of positions. The same attitude competency that leads to success in selling has also been found in people who are successful over a wide range of human endeavors (Seligman, 1986).

SASQ has never been empirically validated in a New Zealand context. Despite a large number of overseas studies, the application of SASQ within a call centre environment has not been investigated.

2.5.1 What does SASQ measure?

When taking the questionnaire subjects imagine themselves in various positive and negative situations, they then write down one major cause of the outcome for each situation, and then rate the cause on separate 7-point scales for the three attributional dimensions (internal, stable, and global) as well as the degree of importance of the situation. By presenting the test-taker with a series of hypothetical failures, the SASQ is able to infer a measure of optimism (Furnham et al, 1994; Schulman, 1999).

The SASQ measure of optimism has been able to distinguish the high performers from the low performers in various domains of achievement. In sports, optimism predicts performance among nationally ranked

college swimmers (Seligman et al. 1990). In academia, optimism predicts college grades and dropping out (Peterson and Barrett 1987).

In the last two decades, over 500 studies conducted around the world using the SASQ have considered the benefits of optimism – increased motivation, superior achievement in various settings (at work, in school, and in sports), and elevated mood and well-being. Research on physical health has found that pessimists have more infectious illnesses than optimists, make more visits to the doctor, and are more likely to die from coronary heart disease (Buchanan 1989; Peterson 1988; Peterson and Seligman 1987).

It is suggested that if the ‘learned optimism paradigm’ is used to teach salespeople to dispute their failures and successes, this will improve their performance and alleviate employee turnover (Sujan, 1999).

2.5.2 What is optimism and positive psychology?

Rich defines optimism using a quote from Peale (1956) as “one's tendency to believe in the best possible outcomes in the face of uncertainty” (1999, pg 54).

A wealth of evidence demonstrates that optimism is related to better outcomes in people's lives, across a variety of situations (Norem & Chang, 2002).

Studies of salespeople have shown that optimistic salespeople sell 35 per cent more insurance than pessimists (Seligman & Schulman, 1986). Other studies showed that pessimists were twice as likely to leave by the end of their first year (Schulman, 1999). A relationship between attribution and sales performance was also found (Schulman, 1999; Seligman et al., 1986).

While optimists take a problem-focused approach and see adversity as something that can be solved, pessimists use an emotion-focused strategy which makes them tend to overlook or try to forget their problems (Rich, 1999).

Positive psychology can be seen in the self-help publishing industry, which is reported to be a US\$563 million a year industry. If this figure includes seminars, CDs, and personal coaching, the self-improvement industry earns US\$2.48 billion a year, and this is predicted to have a double-digit annual growth through 2003 (Satterfield et al., 1997).

Positive psychology was introduced and championed by Seligman. The goal of the positive psychology movement was to change the focus of psychology from mending the worst things in life to building positive qualities (Held, 2002). The most comprehensive attempt to promote positive psychology can be found in the January 2000 Special Issue of the *American Psychologist*, entitled “Happiness, Excellence and Optimal Human Functioning”. Its 16 articles, by seasoned academics, were

intended to introduce the concept of positive psychology, and to identify some of its defining parameters and directions (Cowan & Kilmer, 2002).

2.5.3 Related studies that used SASQ

Schulman describes eight studies on explanatory style in the book *Explanatory Style*, edited by Martin Seligman (Schulman, 1995). These studies used students and sales people. The student studies explored whether SASQ could predict first year college grade point averages (GPAs), first semester GPAs, and dropping out.

In the work by Furnham et al. (1994), the cognitive style of the participants and their attitudes to work were explored. This study used a revised questionnaire called the Occupational Attributional Style Questionnaire (OASQ) to test work attitudes. It related measures of the OASQ to organisational commitment, job satisfaction and involvement. It also had a secondary aim of replicating and extending previous research on attributional style and occupational behaviour, as previous research found that measures of cognitive style, locus of control and attributional style are related to occupational attitudes and behaviour.

Two studies by Seligman and Schulman (1986) tested whether explanatory style predicts work productivity and quitting. They found that individuals, who saw failure as internal, stable, and global initiated fewer sales attempts, were less persistent, produced less, and quit more frequently than those with a more optimistic explanatory style. In a second study individuals who had an optimistic explanatory style when

hired remained in their job twice as long and sold more insurance than CCRs with a more pessimistic explanatory style.

2.6 Linking the key elements: Attribution, SASQ and Performance

This study brings together three elements; attribution theory, Seligman's Attributional Style Questionnaire (SASQ) and performance. It then considers these in a call centre environment. This chapter presents the linkage in the literature between these three elements.

Furnham et al (1994) suggested that attributional style might be of value in assessing behaviour in work contexts. While there is not a lot of research on this, Seligman and Schulman are seen as an exception with their work on life insurance agents (Seligman et al., 1986; Seligman et al., 1990).

Attribution and performance are linked in many studies. Some of the issues addressed are success at work (Silvester, 1997), future performance (DeCarlo et al., 1997; Johnston et al., 1994), team effects (Lepine, 2001), gender differences (Igbari and Baroudi, 1995), recruiting techniques (Ramsay et al., 1997), managers effect (DeCarlo and Leigh, 1996), and the individual's 'street-smarts' (Sujan, 1999).

Findings from studies investigating attributional style and performance in the workplace suggest that "certain patterns of attributions are associated with success at work" (Silvester, 1997, pg 62). Attribution theory has been used in the sales force literature to discuss and explain performance and its impact on future performance (DeCarlo et al., 1997).

The study by Johnston et al. (1994) also demonstrated that when one's sales efforts resulted in success, expectations for future success increased, and therefore how we attribute our performance also changes how we see future outcomes.

Many call centres organise their CCRs in teams or workgroups. Lepine (2001) proposed that low scores for characteristics such as cognitive ability, conscientiousness, and job experience have an effect on peer attributions for low performer behaviour (locus of causality, controllability, and stability). These attributes influence the form of helping intended to benefit the group (compensating, training, motivating, and rejecting the low performer). This model is consistent with empirical work on peer-helping as a response to low-performing co-workers. In teams that have a degree of interdependence, the group's performance is a function of each individual member's performance (Lepine, 2001).

A study on gender differences in performance attribution for information system employees explored the relationship between an employee's gender and the extent to which the supervisor attributes the employee's performance to internal causes. The study focused on whether the supervisors' job performance evaluations for male and female employees are equivalent (Igbari and Baroudi, 1995). Most CCRs work in an information systems environment. A large number of CCRs are women. Igbari and Baroudi (1995) found that the performance of females was less likely to be attributed to ability and effort, and was more likely to be attributed to help and luck, than the performance of male employees.

Improving CCR recruitment techniques could help increase staff retention and also attract higher performing CCRs. In the study by Ramsay et al. (1997) attribution theory was seen to have the potential to extend the understanding of decision making and

information processes within a job interview situation. The study aimed to develop both social rules theory and attribution theory by looking at the communicative processes in the interview.

The manager in a call centre or the supervisor of a team might also influence the performance of CCRs. DeCarlo and Leigh (1996) developed a model to show how a salesperson's task and social attraction affect a sales manager's causal attribution, explaining the salesperson's poor performance, and the manager's corrective feedback based on these attributions. On a sample of 218 sales managers, the results suggested that: 1. causal attribution, cognitive effort, and decision confidence are directly affected by task and social attraction; 2. the effects of task and social attraction on coercive feedback are mediated by internal attributions; and 3. external attributions play a partial, but negative, mediating role for non-punitive feedback. This implies that appraisals are influenced by affect and attributional considerations, not simply bias and inaccuracy in rating task itself.

A great number of call centres provide a sales and customer service function through their CCRs. Sujan (1999) evaluates the nature of salespeople's 'street-smarts'. The study suggests that salespeople's ability to adapt to their environment by selecting to be in a more appropriate environment, or by moulding their environment, contributes significantly to not only their performance but also their happiness (job satisfaction). Optimistic thinking is suggested to be a core individual characteristic that fosters salespeople's street-smarts (Sujan, 1999a). This suggests that in recruiting salespeople, sales management should evaluate the optimistic tendencies of the prospective employee. Furthermore, while training and managing salespeople, sales management

ought to devote considerable effort towards developing optimism amongst their employees.

The choices salespeople make regarding work may also impact on their performance and satisfaction. Salespeople who are able to select their territory and alter the characteristics of the territory are happier and more successful (Sujan, 1999a).

Furthermore, salespeople who select which customers to focus on and which prospects to attempt to make customers find their jobs more pleasant and perform better (Sujan, 1999a). While it is possible for CCRs to choose which call centre they work in, it is unlikely in a call centre environment that territories and customers can be 'chosen' by the CCRs.

CHAPTER III

METHODOLOGY

3.1 Introduction

This exploratory study examined the relationship between attributional style and employee performance in a call centre context. Attributional style was measured using Seligman's Attributional Style Questionnaire (SASQ), which was taken at a given point in time by all the participants. The prior three weeks performance data was averaged for 70 CCRs in a New Zealand call center and then collated. A Kruskal-Wallis test was performed on the two sets of data. Cronbach's Alpha was used to verify the reliability of the SASQ. Figure 1 below shows a diagram of the experimental design.

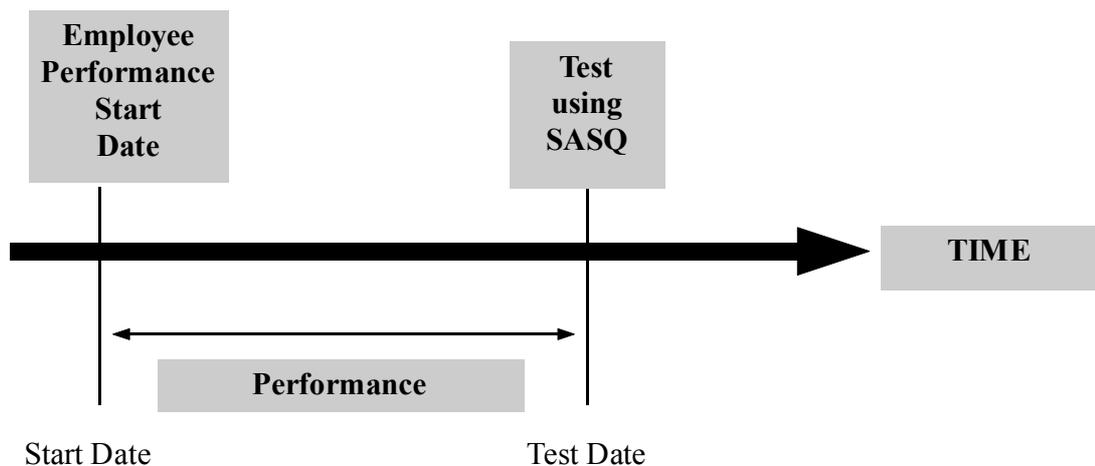


Figure 1: Experimental design used to study the relationship between attributional style and call centre representative performance.

The experimental design for this study was chosen from one of three originally considered. It was chosen in order to identify any wider issues before a longitudinal study would be feasible. The other two design options were longitudinal and were

outside the timeframe for this Masters Program. The availability of data restricted the design, as did the time frame.

The second design involved three SASQ tests over a given period of time. It was to take a number of new recruits, test them using SASQ before they started working, test again after the training course, then test a third time after they had been working on the phones for 3 months. This design was to isolate and explore whether high optimism is related to success and therefore longevity in a work situation. Due to the recruitment timeframes of the subject company, it was not possible to fit this study into the timeframe of the Masters Program.

The third design was to take existing CCRs, test them at point A, put in place interventionist training based on their individual SASQ scores, then test them again after 3 months. Their performance data would have been compared to their SASQ scores at each stage to identify any improvement or changes.

3.2 Subject Identification

The call centre studied operated both inbound and outbound calls. Outbound calls were mainly sales related, while inbound calls dealt primarily with customer support. Staff employed in front line positions (performing outbound calls) were mainly part time. CCRs receiving inbound calls were fulltime and recruited solely to answer customer problems.

Traditionally the call centre has concentrated on computer skills as a predictor of future performance in helpdesk positions. The average profile of these employees is 24 years old, single and male.

The company was concerned at the high level of employee turnover in its fulltime call centre representatives, which in turn led to high costs in recruitment and training.

The purpose of this research was to study the effect of the attributional style of a selected group of employees to see if this affected their performance results.

It was decided to focus on the fulltime staff in the helpdesk positions as this was where the major costs were involved in recruitment and training. Also, a number of these staff had been with the company for more than one year, meaning more performance data was available.

The CCRs were divided into teams and each team had a 'team leader'. The team leaders were consulted regarding the best methods to gain participants. They agreed to advise their team members about the research. For those who decided to participate, full consent was validated by the signing of an agreement to take part in the study.

All participants were issued with individual ID numbers along with passwords. This enabled both the performance and SASQ data for each individual to be matched up without personally identifying them. It also allowed each participant access to the website where they sat the SASQ. The subject company was given the ID numbers and these were allocated randomly to the CCRs.

All participants were given a 'Participant Information Sheet', which is attached in Appendix A. Those willing to participate then signed the 'Consent to Participation in Research' form which is attached in Appendix B.

There were two sources of data used; SASQ test scores and performance data provided by the subject company.

3.3 The SASQ Data

Each participant in the study sat the SASQ at an online website. The resulting scores for each participant were provided using the participant ID number. The results were delivered in excel format, and were taken directly off the website. There were some problems with participants using the same passwords and ID numbers which meant that the original number of one hundred and twenty participants was reduced to one hundred and sixteen.

Pre-testing was done for the SASQ test by the team leaders. Their performance data was not useful however, as only the performance of their entire team was recorded for them, so no individual performance data was available for each of the team leaders.

The SASQ measures optimism by presenting the test-taker with a series of hypothetical failures. The test-taker is then asked to write down the major cause of each hypothetical failure and to assess the cause on each of the three explanatory dimensions- stable/unstable, global/specific, and internal/external-rating each dimension on a scale from 1 to 7.

There are twelve hypothetical failures with three questions per failure making the total number of answers per test thirty-six. Questions 1, 3, 6, 9, 10 and 12 measure success, whilst questions 2, 4, 5, 7, 8 and 11 measure adversity. Two questions within each of success and adversity measure one of each of personalisation, permanence and pervasiveness.

The final scores used in the research for data analysis therefore are broken down to nine scores. These are noted in the table below which shows the abbreviation used and the full name of the score.

TABLE 1: SASQ Data Abbreviations

<i>Abbreviation</i>	<i>Full Description of Test Score</i>	<i>Details</i>
CPCN	Overall Optimism Score	A combination of CP and CN
CP	Overall Success Score	A combination of all 3 success scores
PERSS	Personalisation of Success	
PERMS	Permanence of Success	
PERVS	Pervasiveness of Success	
CN	Overall Adversity Score	A combination of all 3 adversity scores
PERSA	Personalisation of Adversity	
PERMA	Permanence of Adversity	
PERVA	Pervasiveness of Adversity	

3.4 The Performance Data

The corresponding performance data for each participant was provided by the subject company. It was based on the data they kept as part of each CCRs Key Performance Indicators (KPIs). These were the only measures available to identify the CCRs past performance.

Performance data was provided in a series of spreadsheets for each team over a period of one year. These covered weeks 10 to 24 and then a further 3 weeks being weeks 32 to 35. Weeks 25 to 31 were all missing due to a computer problem within the subject company. There were 10 teams in each week with a minimum of 12 CCRs per team. Participants also moved between teams over the time period of data collection.

There were five scores for performance data; attendance, queue time, communications, quality assurance and contacts handled.

The way these were calculated and the targets set by the subject company are listed in the table 2 below.

TABLE 2: Performance Measure Calculations

Performance Measure	Calculation		Target
Attendance	$\frac{\text{Total Hours} - (\text{Leave without pay} + \text{No Shows} + \text{Sick})}{\text{Total Hours}}$		Target is set at 96% as 10 absences a year (80hrs) is deemed excessive absence as per the agent contracts. An agent is scheduled for 2080hours per year, hence $(2080-80)/2080=96\%$
Queue Time	$\frac{\text{Phone Signed in Time}}{\text{Phone Scheduled Time}}$		Target set at 97% as agents had 13 mins time they could use for unexplained off queue activity, e.g. toilet breaks. A standard agent is scheduled to work 450mins per day (8.5hrs less 1hr of breaks), $(450-13/450)=97\%$
Communications	$\frac{\text{Number of cases logged}}{\text{Number of contacts}}$		Essentially ensuring that a record is made of every contact to the centre, target set at 98% to account instances such as when recording system is down
Quality Assurance	No formula	Calculated by compliance to guidelines. The guidelines change depending on the type of call taken but encompass things such as building a rapport, Positive Vocal Image, Use of Resources, Establishing Security, Scripts and Procedures. Basically evaluating the call against what a perfect call should have been. Target of 95% ensures that the quality of service delivery is kept at a high standard for our client.	
Contacts Handled	No Formula	This is an indirect measure of work time. The contractual work time figure is 422 secs per call (higher work times reduce service level). In 1 hr an agent works 60 mins, $(60\text{mins} * 60\text{secs}) / 422 \text{ s} = 8.5$ contacts per hours. The target was set at 8 contacts per hour at the time as work time was a challenge and the 8.5 target seemed unachievable at that point, it was later increased to 8.5.	

There were many absences due to sick leave or annual leave. This meant the number of consecutive weeks able to be used to maximize the number of participants was 3 weeks.

The performance data for each participant was averaged over the three-week period.

This was then divided by the target score to produce a ratio measure of how each participant performed relative to their target goal.

The abbreviations for each performance measure are shown below in table 2.

TABLE 3: Performance Data Abbreviations

<i>Abbreviation</i>	<i>Description</i>
ATTMVTAR	Attendance mean of three weeks over target
QUEMVTAR	Queue time mean of three weeks over target
COMMVTAR	Communications mean of three weeks over target
QUAMVTAR	Quality Assurance mean of three weeks over target
CONMVTAR	Contacts Handled mean of three weeks over target

When the final data was collated there were only three weeks of useable performance data that had no gaps and were consecutive. This reduced the total number of participants able to be used for this research to seventy.

CHAPTER IV

RESULTS

SASQ and performance data was collected on 70 Call Centre Representatives (CCRs) to test the hypotheses;

H₀: SASQ scores are not related to performance scores for call centre employees.

H₁: An increase in SASQ scores is associated with increased performance ratings.

Statistical analysis demonstrated no significant variation within performance measures when ordered by the rank overall SASQ scores. This meant that the null hypothesis was unable to be rejected, that SASQ scores are unrelated to performance scores for call centre employees. The performance measure “quality assurance” was found to vary at the .05 level when grouped by the SASQ component measuring “pervasiveness of success”.

4.1 Descriptive Statistics

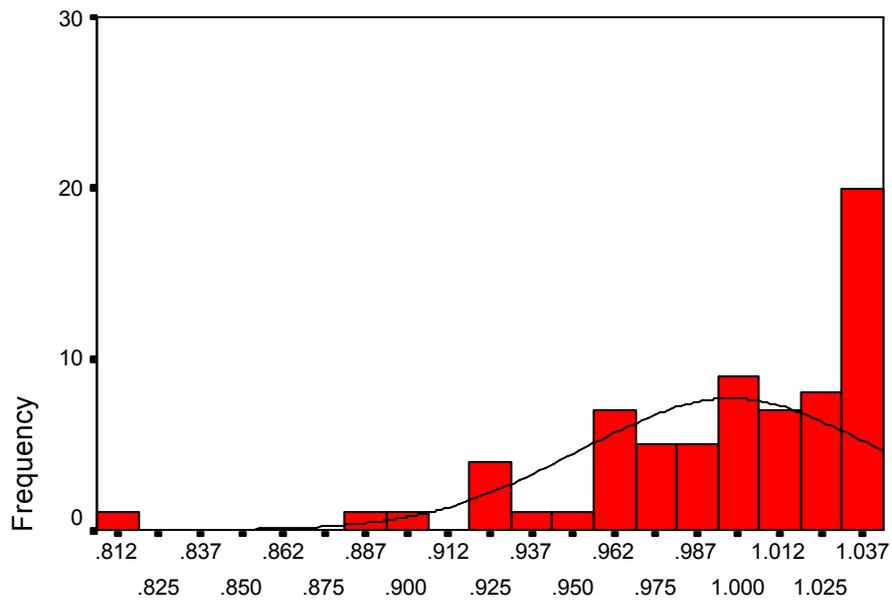
Parametric tests are based on the assumption of normality. By screening the data it established that all but one of the variables deviate from the normal distribution (descriptive statistics are presented in Table 4). Skewness and kurtosis were the most pronounced problems. Skewness refers to the degree of asymmetry of a distribution around the mean. As a rule of thumb, skewness is problematic if its value is greater than two-times the corresponding value for standard error of skewness (see Table 4). Values for skewness exceed the standard error by more than two times for all components of the SASQ, but not the overall SASQ rating. Components of the SASQ are negatively skewed, that is to say that scores are bunched up at the top end of the scale, with asymmetric tails extending towards the negative values.

Examination of the corresponding histograms (Figures 9.7 to 9.14) shows a pattern of skewness to the left. The measures of attendance and quality assurance also have asymmetric tails extending towards the lower end of the scale (see Figures 9.1 and 9.4). Communications has a non-normal distribution with an asymmetric tail extending towards higher values (see Figure 6).

Kurtosis is a measure of how peaked or flat a distribution is. Data sets with high kurtosis tend to have a distinct peak near the mean, decline rather rapidly, and have heavy tails. Data sets with low kurtosis tend to have a flat top near the mean rather than a sharp peak. Once again, if the value for kurtosis exceeds twice the standard error of kurtosis for the same variable, the distribution should be regarded as non-normal. All five measures of performance have large positive values of kurtosis indicating possible leptokurtic distributions - too tall (see Figures 9.1 to 9.5). Similarly each component of the ASQ was found to have high positive values for kurtosis apart from those questions measuring pervasiveness in the face of adversity (see Figure 15).

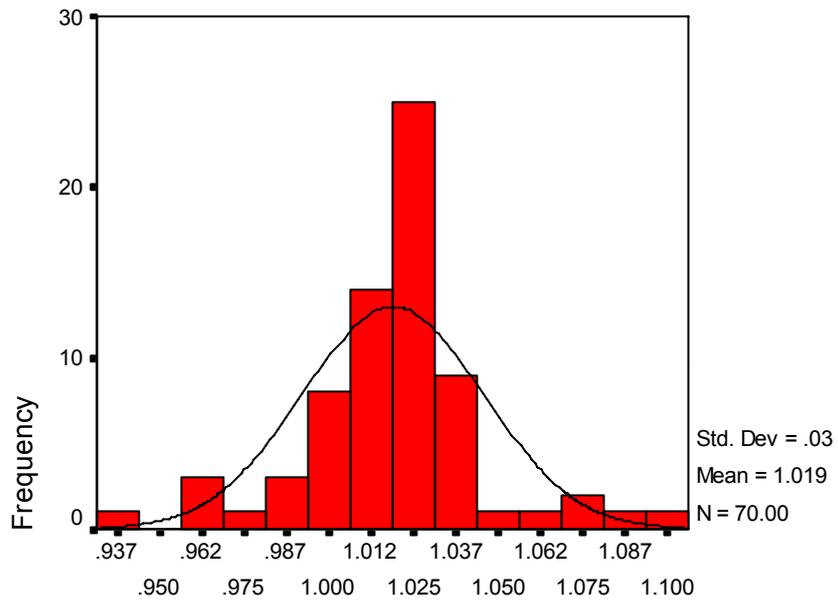
Violations of the assumption of normality are only problematic if using a norm-referenced test, such as analysis of variance (ANOVA), t-tests, and regression analysis. To avoid this problem nonparametric tests were conducted that use information about rank rather than variance.

Figures 2 to 15



Attendance

Figure 2 Distribution of Attendance



Queue Time

Figure 3 Distribution of Queue Time

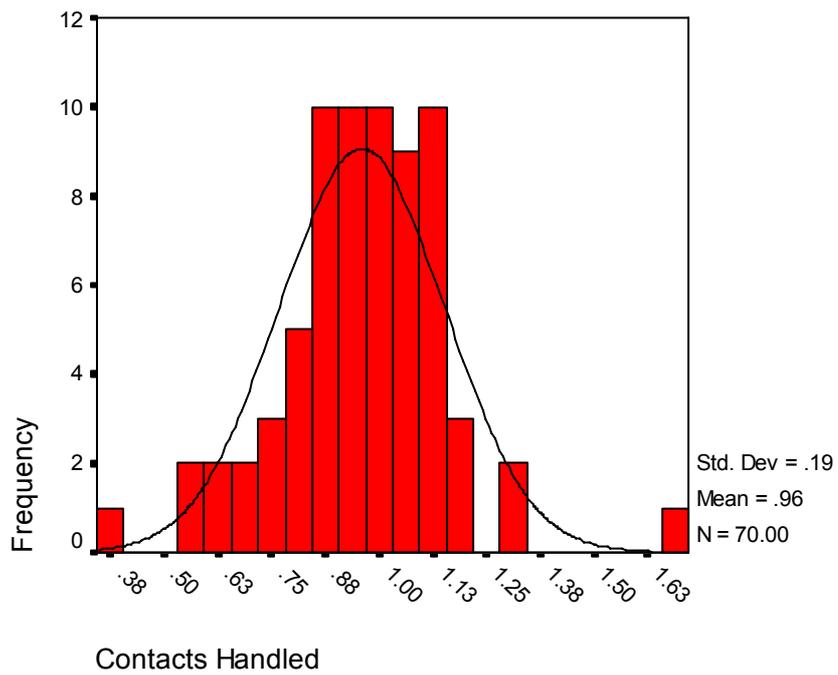
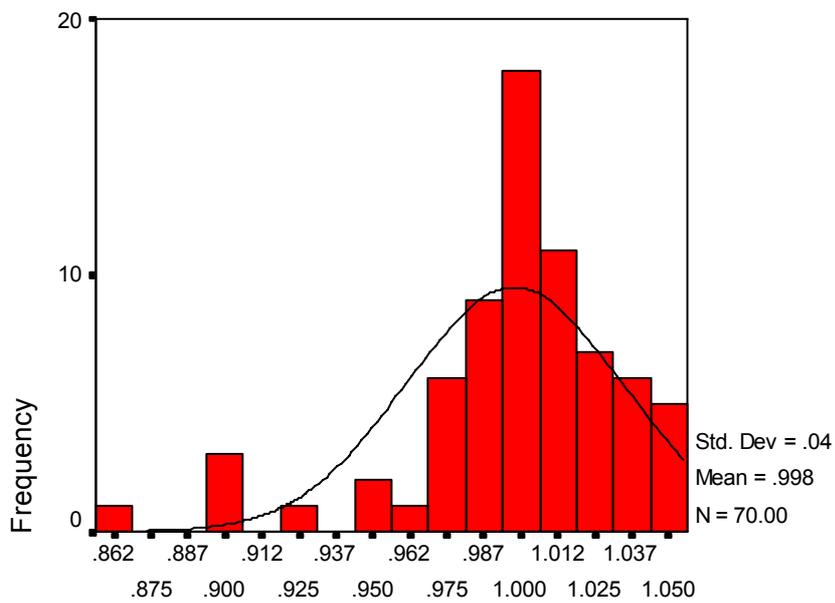


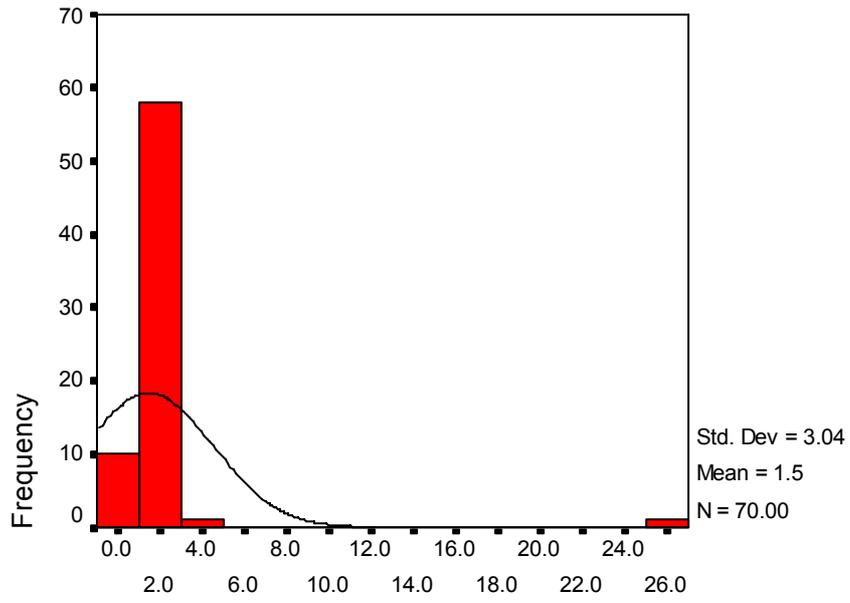
Figure 4 Distribution of number of contacts handled

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Quality Assurance Measure

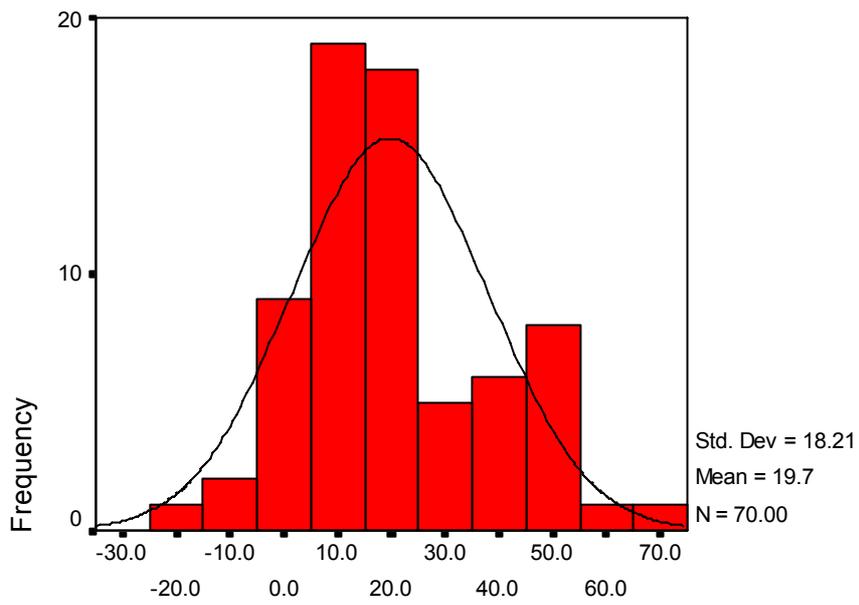
Figure 5 Distribution of Quality Assurance



Communications

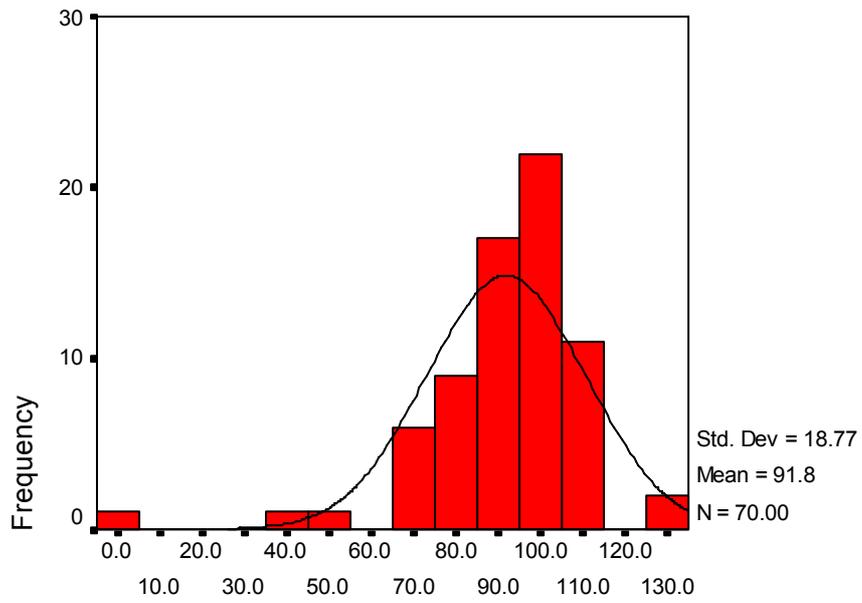
Figure 6 Distribution of Communications

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Overall SASQ Score

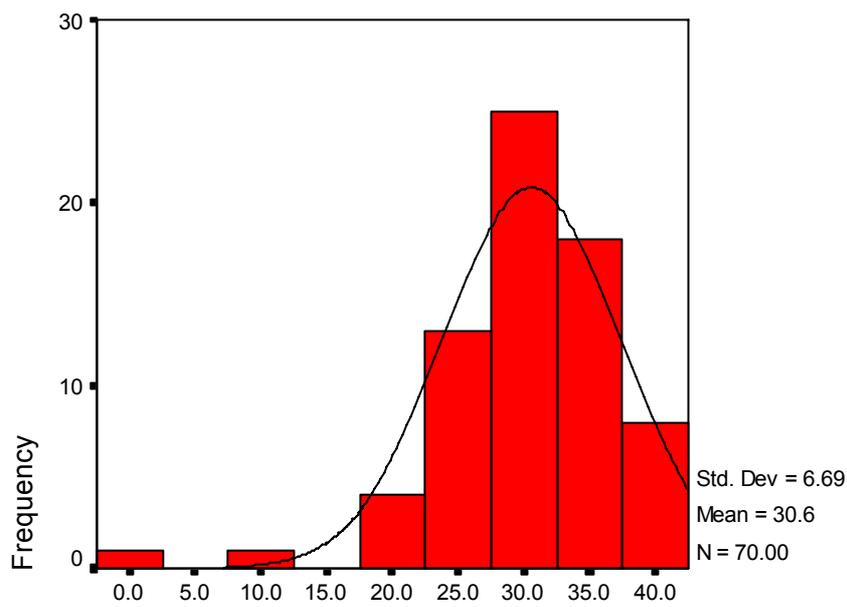
Figure 7 Distribution of Overall SASQ Score



Total Optimism Score

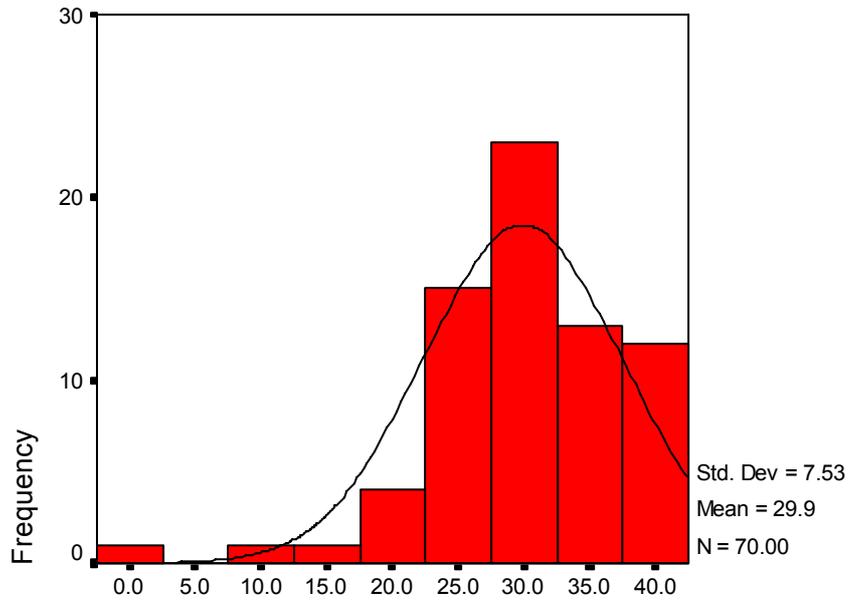
Figure 8 Distribution of Total Optimism Score

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Personalisation of Success

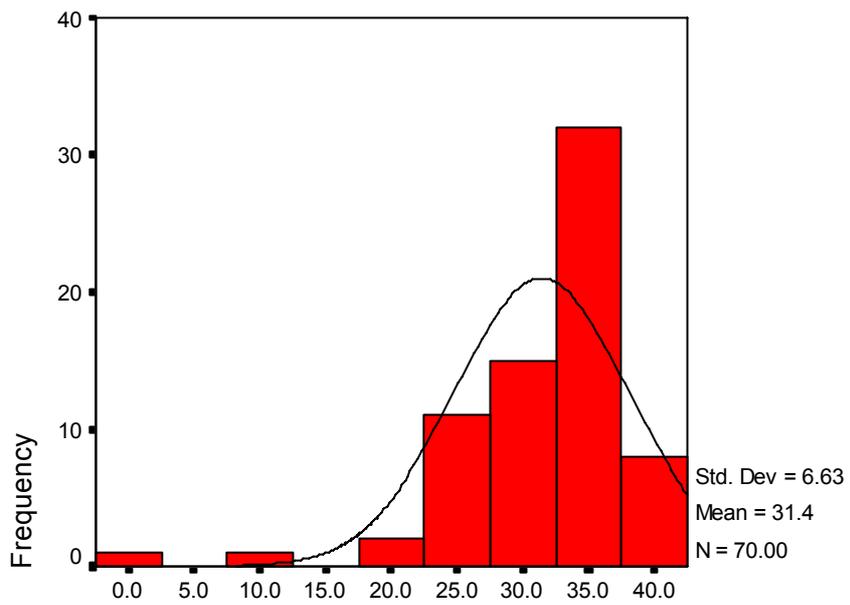
Figure 9 Distribution of Personalisation of Success



Pervasiveness of Success

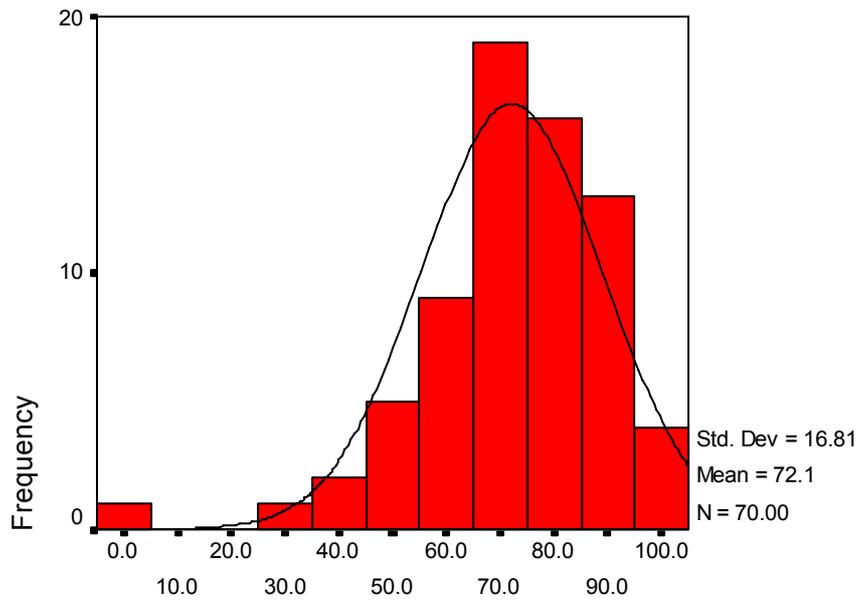
Figure 10 Distribution of Pervasiveness of Success

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Permanence of Success

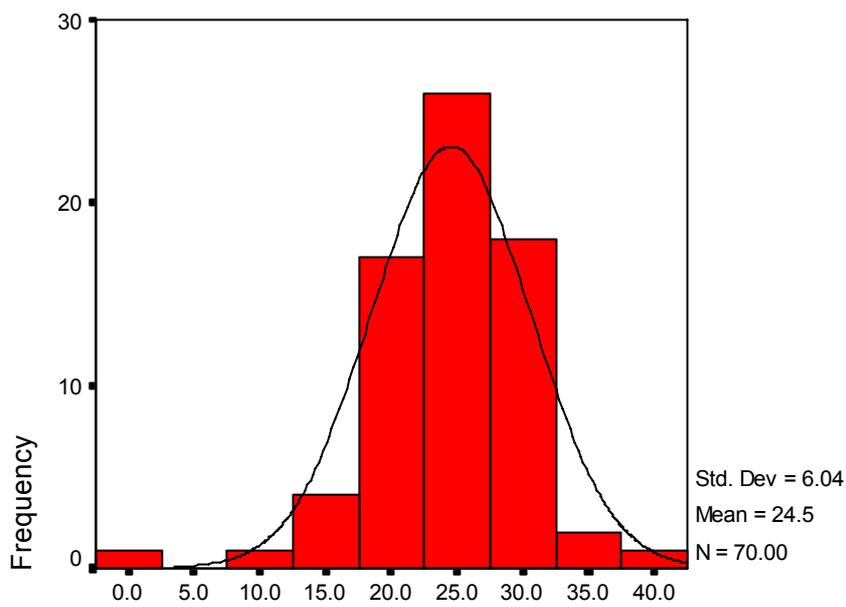
Figure 11 Distribution of Permanence of Success



Total Adversity Score

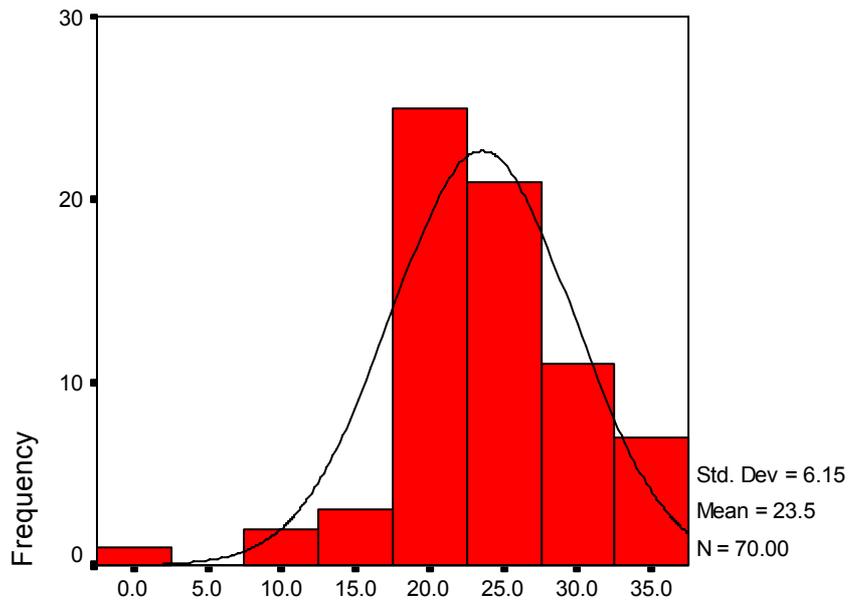
Figure 12 Distribution of Total Adversity Score

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Personalisation of Adversity

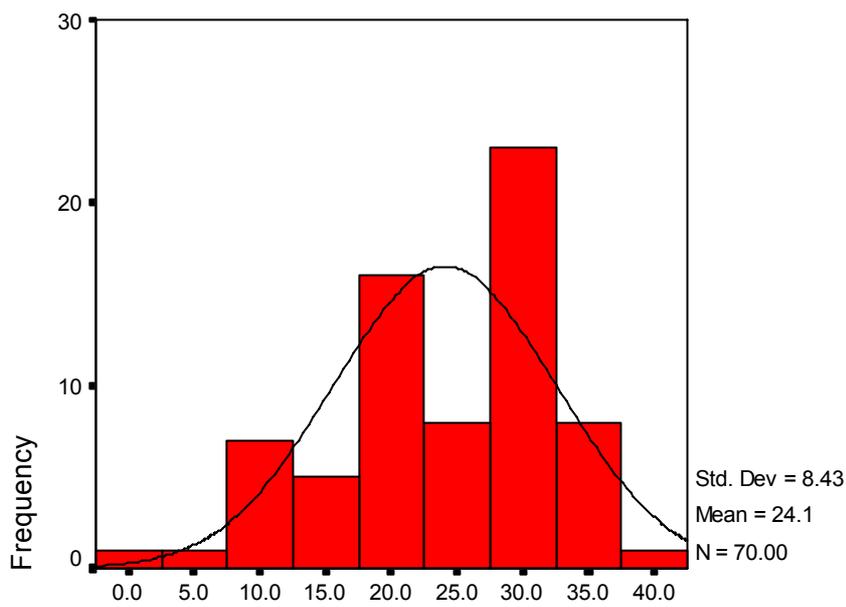
Figure 13 Distribution of Personalisation of Adversity



Permanence of Adversity

Figure 14 Distribution of Permanence of Adversity

Error!



Pervasiveness of Adversity

Figure 15 Distribution of Pervasiveness of Adversity

Table 4: Descriptive Statistics

		ATTMVTAR	QUEMVTAR	CONMVTAR	QUAMVTAR	COMMVTAR
N	Valid	70	70	70	70	70
	Missing	10	10	10	10	10
Mean		0.997592	1.01883	0.959705	0.947881	1.457748
Median		1.00587	1.019925	0.97248	0.950564	1.041149
Mode		1.0417	0.9423	0.3966	0.7192	0.7678
Std. Deviation		0.0452961	0.0267851	0.1923666	0.0347381	3.0431721
Variance		0.0020517	0.0007174	0.0370049	0.001	9.2608965
Skewness		-1.469	0.384	0.131	-1.436	8.208
Std. Error of Skewness		0.287	0.287	0.287	0.287	0.287
Kurtosis		3.052	2.51	2.512	2.947	68.097
Std. Error of Kurtosis		0.566	0.566	0.566	0.566	0.566
Range		0.2297	0.1628	1.2734	0.1792	25.6219
Minimum		0.812	0.9423	0.3966	0.8210	0.7678
Maximum		1.0417	1.1052	1.6701	1.0000	26.3897
Percentiles	25	0.97204	1.007978	0.871553	0.98570	1.02128
	50	1.00587	1.019925	0.97248	1.00059	1.041149
	75	1.041667	1.028317	1.06184	1.01932	1.081482

		CPCN	CP	PERSS	PERVS	PERMS
N	Valid	70	70	70	70	70
	Missing	10	10	10	10	10
Mean		19.71	91.84	30.56	29.89	31.4
Median		16.5	94.5	31	30	33
Mode		0	103	31	29	34
Std. Deviation		18.215	18.773	6.693	7.535	6.632
Variance		331.772	352.424	44.801	56.769	43.983
Skewness		0.491	-2.026	-1.569	-1.195	-2.016
Std. Error of Skewness		0.287	0.287	0.287	0.287	0.287
Kurtosis		0.145	7.894	5.771	3.134	7.285
Std. Error of Kurtosis		0.566	0.566	0.566	0.566	0.566
Range		97	126	42	42	42
Minimum		-25	0	0	0	0
Maximum		72	126	42	42	42
Percentiles	25	7	83.75	26.75	26	28.75
	50	16.5	94.5	31	30	33
	75	30	103.25	34	36	35

		CN	PERSA	PERMA	PERVA
N	Valid	70	70	70	70
	Missing	10	10	10	10
Mean		72.13	24.53	23.54	24.06
Median		73	25	23.5	26
Mode		72	24	21	22
Std. Deviation		16.81	6.038	6.15	8.43
Variance		282.577	36.456	37.817	71.069
Skewness		-1.269	-0.917	-0.709	-0.617
Std. Error of Skewness		0.287	0.287	0.287	0.287
Kurtosis		3.91	3.026	2.211	-0.23
Std. Error of Kurtosis		0.566	0.566	0.566	0.566
Range		103	38	35	39
Minimum		0	0	0	0
Maximum		103	38	35	39
Percentiles	25	63.75	21	20.75	18.75
	50	73	25	23.5	26
	75	83.5	28.25	28	31

a

Multiple modes exist. The smallest value is shown

4.2 Kruskal-Wallis Test

Because parametric assumptions were not met the relationship between employee performance ratings and SASQ scores was evaluated using Kruskal-Wallis Analysis of Variance. The Kruskal-Wallis test allows the examination of possible differences between two or more groups. In this study it was used to examine differences amongst the performance scores when grouped by SASQ ranking. Definitions of these tests and the results of the analysis are below (see Table 5).

No significant difference was found amongst performance ratings in relation to the overall SASQ scores ($\alpha = .05$). This meant the null hypothesis was unable to be rejected; it states that SASQ scores are unrelated to performance scores for call centre employees. At the 0.10 level of significance, the number of contacts handled demonstrated some variation when grouped by overall SASQ scores ($\text{Chi}^2(39) = 51.001$, $p = .094$). Quality assurance was found to vary at the .05 level when grouped by the ASQ component measuring pervasiveness of success ($\text{Chi}^2(24) = 36.573$, $p < .05$).

Table 5: Kruskal Wallis test results for performance measures grouped by SASQ measures.

<i>Grouping Variable</i>		<i>ATTMVTAR</i>	<i>QUEMVTAR</i>	<i>CONMVTAR</i>	<i>QUAMVTAR</i>	<i>COMMVTAR</i>
CPCN	Chi-Square	39.287	37.059	51.003	34.941	49.724
	df	39	39	39	39	39
	Asymp. Sig.	0.457	0.559	0.094	0.656	0.117
CP	Chi-Square	41.545	33.352	32.196	36.629	31.994
	df	39	39	39	39	39
	Asymp. Sig.	0.36	0.725	0.771	0.579	0.779
CN	Chi-Square	35.557	37.632	35.444	37.016	37.298
	df	42	42	42	42	42
	Asymp. Sig.	0.748	0.663	0.753	0.689	0.677
PERSS	Chi-Square	26.381	20.631	26.152	15.835	26.73
	df	23	23	23	23	23
	Asymp. Sig.	0.283	0.604	0.294	0.862	0.268
PERMS	Chi-Square	15.012	16.667	17.218	19.586	22.109
	df	21	21	21	21	21
	Asymp. Sig.	0.822	0.731	0.698	0.548	0.393
PERVS	Chi-Square	24.756	21.179	22.261	36.573	22.556
	df	24	24	24	24	24
	Asymp. Sig.	0.419	0.628	0.564	0.048	0.546
PERSA	Chi-Square	28.429	24.569	18.243	20.173	23.295
	df	22	22	22	22	22
	Asymp. Sig.	0.162	0.318	0.692	0.572	0.385
PERMA	Chi-Square	21.053	23.646	17.21	24.64	24.026
	df	22	22	22	22	22
	Asymp. Sig.	0.517	0.366	0.752	0.315	0.346
PERVA	Chi-Square	35.329	19.722	36.256	29.447	31.455
	df	28	28	28	28	28
	Asymp. Sig.	0.16	0.874	0.136	0.39	0.297

4.3 Correlation Analysis

The primary concern is to determine whether there is an association between SASQ scores and the performance rating measures for call centre employees. Correlation coefficients give a measure of the degree by which the variables co-vary. Correlation analysis provides information as to the direction of the association (whether it is positive, negative or zero), and its strength which varies from zero (no association between the variables) to one (perfect association between variables).

The overall SASQ rating has a moderate, positive association with the performance measures of queue time ($r=.38, p<.01$) and communications ($r=.39, p<.01$). The measure of communications performance also showed a positive correlation with the pervasiveness-of-success component of the SASQ ($r=.24, p<.05$). A weak negative correlation was discovered between the measure of communications performance and the components of SASQ that account for permanence of adversity ($r= -.24, p<.05$). The overall adversity score was also negatively correlated with communications performance ($r= -.24, p<.05$).

Finally a weak negative correlation was observed between queue time and permanence of adversity ($r= -.26, p<.05$). These associations between variables are unremarkable (see Appendix D).

4.4 Cronbach's Alpha

Cronbach's Alpha is a reliability model of internal consistency, based on the average inter-item correlation. A score is computed from each test item and the overall rating, called a 'scale' is defined by the sum of these scores over all the test items. Reliability is defined to be the square of the correlation between the measured scale and the

underlying factor the scale was supposed to measure. Values near 0 indicate low reliability. Values near 1 indicate high reliability (See Cronbach, 1951 and Carmines and Zeller, 1979).

Analysis of the SASQ data revealed a reliability coefficient of .828 for the six components of the Attributional Style Questionnaire. This result strongly supports the assumption that components of the SASQ are measuring the same underlying construct.

Reliability analysis was also performed on the five performance measures to determine whether the rating scales share an underlying performance factor. The resulting reliability coefficient of -.032 provides no evidence for a common performance factor.

CHAPTER V

DISCUSSION

5.1 Relevance of Results

Complete SASQ and performance data was collected for 70 call centre representatives. No specific difference was found amongst employee ratings when grouped by SASQ score which meant I was unable to reject the null hypothesis. The performance measure “quality assurance” was found to vary at the .05 level when grouped by the SASQ component measuring “pervasiveness of success”. A lesser effect was demonstrated for the “number of contacts handled” when grouped by overall SASQ scores. The overall SASQ rating was found to have a positive association with performance measures of “queue time” and “communications”. “Pervasiveness of success” had a positive association with “communications”. The overall score for “adversity” was negatively associated with “communications”, as was the SASQ component “permanence of adversity”. A weak negative association was observed between “queue time” and “permanence of adversity”.

Based on previous studies it was expected that CCR performance would in part be determined by their attributional style. The hypotheses were generated accordingly. The Kruskal-Wallis test demonstrated no significant variation within any of the five performance measures when ranked by SASQ scores. The only variation in results occurred at a component level of SASQ with the performance measure “quality assurance”.

Quality assurance is a subjective measure of guideline compliance. The measure is evaluated by a supervisor or team leader listening to random calls of a CCR and assessing those calls based on rapport building, positive vocal image, use of resources, establishing security, scripts and procedures. The Kruskal-Wallis test revealed a significant difference in quality assurance scores amongst subjects ranked by the component of SASQ “pervasiveness of success”. People with high optimistic pervasiveness scores attribute failure to the specific situation, and believe success is a natural and frequently recurring event.

The quality assurance measure is the most subjective of all the performance measures so it is surprising to find that it varies significantly with a component of the SASQ score. Quality assurance is the only score that doesn’t use a formula for evaluation. It is also the only measure of soft skills that are so important in any customer service and/or sales position (Bitner, 1994; Gilmore, 2000). This effect can be viewed as evidence for the strength of the SASQ in predicting soft skill related performance.

The next strongest evidence of the effect of attributional style on performance can be seen in the number of contacts handled when grouped by overall SASQ score. Interestingly, the number of contacts handled is also, in part, an indirect measure of performance. This effect suggests that attributional style can play a part in predicting the efficiency with which calls are handled.

The overall SASQ score was found to have a significant association with both queue time and communications. Queue time is a formula based on the standard minutes available in a CCRs work day. Those with higher scores for queue time took less time

away from the phones. This was found to vary with level of optimism, meaning CCRs who were more optimistic took fewer breaks from the phone.

Communications tracks the number of cases logged versus the number of incoming calls. It is essentially a record of every contact made to the call centre. CCRs have to record the number of cases they deal with. A more appropriate label for this measure might be 'conscientiousness' and it would be interesting to compare this measure with scores taken from the recruitment tests of CCR candidates in future research. Those with a higher SASQ "pervasiveness of success" score were more likely to record a higher proportion of their cases handled. One explanation may be that optimists want to be seen as successful by outdoing others, and so would record all (or possibly more) contacts that they make.

Those CCRs that scored higher in adversity also scored lower in communications. This means that people who were more pessimistic filed fewer cases than optimists. This can be viewed as evidence that people who expect to do badly, will; an example of a self-fulfilling prophecy. Furthermore those with higher scores in the permanence of adversity component were also less likely to be conscientious in their paperwork. These CCRs see themselves as always failing in this area and may feel unable to change their behaviour.

A further negative correlation was found between permanence of adversity and queue time. This means that CCRs that were more pessimistic spent less time on the phones. Their pessimistic thinking may reduce their desire to be on the phones.

5.2 Limitations

This research covered several fields of study (e.g. sales, marketing, psychology and human resources), which increases the complexity of finding relationships between variables. There are a number of limitations that should be mentioned in connection with this study.

The CCRs in this study all worked on a computer helpdesk where problem solving and angry customers were the norm. This job requires a combination of soft skills and technical competence. One of the most common customer queries, for example, is a forgotten password. Performance in this circumstance is largely based on efficiency. Other studies using SASQ were aimed at sales environments. While sales require a reasonable level of product knowledge, performance is firmly rooted in soft skills such as establishing a rapport and trust with the potential customer. Perhaps then it is not surprising that the soft skill performance measure (quality assurance) was found to vary significantly when ranked by “pervasiveness of success”, while the other measures show less variation when ranked by SASQ components.

The CCRs tested from the subject company were all men except for one woman. This was due to the subject company having a belief that young single men with strong computer skills were best qualified for the position behind an information technology helpdesk. However most call centres employ predominantly women (Richardson et al., 1999). This highlights a number of potential problems. Firstly, the majority of call centres in New Zealand employ predominantly female staff, which brings into question whether these results are relevant to other New Zealand call centres. Secondly, gender has long been recognised as a source of variation in attributional style. In general men are more likely attribute failure to external causes than women (Vaughan & Hogg,

2002), which would suggest the SASQ results may be on average higher than they would be at an average New Zealand call centre. Nevertheless, advocates of Seligman's Attributional Style Questionnaire maintain that gender, age and experience are not significant factors.

The age range of those tested averaged 24 years. Both age and gender may also affect longevity in the workplace, and should certainly be considered as factors contributing to the high level of turnover in the call centre investigated. Perhaps future research could take a sampling from a wider age range.

The performance measures used for the study were designed by the subject company and I therefore had no control over what factors were actually being assessed. Three of the performance measures used in this study focussed solely on targets and were formula driven. Only two of the five had any subjective element. They did not focus on customer satisfaction but on performance measures that were target driven. Much of the literature reflects the need for further investigation on setting meaningful performance measures (Gilmore, 2001; George 1996). Such measures should be in line with selection methods to continually reassess the way in which candidates are chosen and demonstrate that those methods are in fact good predictors of job performance.

There have been a number of studies done on teaming and productivity (Wisner and Feist, 2001) but there is some confusion as to whether teaming has a positive or negative effect. None of this research has focussed on team results, but rather individual results within teams. That is because the members of the teams were moved fairly frequently to new teams so team scores were made up of different members at any one time. Further studies could explore the effects of workgroup relations on

performance and organisational commitment. This may be practical way to reduce staff turnover.

There is some evidence of links between customer satisfaction and employee retention (Gilmore, 2000; Bitner, 1994). However the performance measures used in most call centres do not reward for customer satisfaction. A call centre is the first port of call for many customers as well as a frequently used interface for service buyers and as such could be given more weight. If CCRs were to feel they were having a positive effect with customers, this may lead to improved job satisfaction, which would reduce staff turnover. Further studies could be done to develop performance measures that give positive feedback to CCRs whilst keeping customers satisfied.

The nature of this study precluded longitudinal data collection. Consequently, this prevented the option of measuring the effects of pre-recruitment testing and interventionist training. A further study could compare a control group to a group of CCRs that are trained to improve their optimism.

5.3 Design Measures

Over 500 studies conducted at over 100 universities around the world have studied the use of SASQ as a predictor of performance, wellbeing and motivation (<http://www.waldentesting.com/>). Research has shown that the SASQ predicts sales productivity in many industries (telecommunications, financial services, office products, automotive, banking, and real estate). Furthermore, studies reveal that test-takers cannot "beat the test," even when offered a financial incentive to do so. In other words, it is extremely difficult to cheat on the questionnaire and improve the score obtained.

5.4 Future Directions

This study highlights three areas of relevance for managers within the call centre environment; training programmes designed for existing CCRs, appropriate recruiting of new CCRs and better organisational design of performance measure criteria.

Most call centres have CCRs whose optimism could be improved, especially for certain tasks (Schulman, 1999). These individuals might have the right abilities and the desire to succeed, so in many cases transferring them to other positions would not make sense. Also, even the most optimistic person will occasionally have pessimistic beliefs when exposed to extreme or prolonged stress. These individuals can learn optimism through training programs designed to teach them how to cope with and overcome adversity.

Improving the person-environment fit by selecting more optimists for the high stress call centre positions could lead to improved financial benefits, by increasing productivity, job satisfaction and therefore increasing staff retention. It may also reduce the stress that comes from having individuals in environments where they are less likely to thrive and be successful. SASQ testing should not be the sole basis for a hiring decision, but could be used in conjunction with other valid assessments, such as measures of job related abilities and interviews. One factor that is identified as a possible area for future call centre research is employee conscientiousness. Past research has shown conscientiousness to be the most significant predictor of job performance in a multitude of industries (Aamodt, 2004).

It is suggested that if call centres continue to measure CCR performance in primarily 'hard' terms (e.g. contacts handled per hour), they will continue to have high CCR turnover. An increased focus on designing measures that reward 'soft' skills (Gilmore,

2001) and the use of goal setting theory are means that could be used as a means to enhance CCR performance. By setting high yet achievable goals the job could be made more intrinsically rewarding, resulting in increased productivity and a reduced likelihood of staff turnover.

Improving candidate selection, training and performance measures would empower CCRs in their working environment. This would help access the full potential of human capital within the call centre, as well as help bring the needs of CCRs in line with the needs of the organisation as a whole.

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APPENDICES

Appendix A Participant Information Sheet

Appendix B Consent to Participation in Research

Appendix C Correlation Analysis Results

Appendix A: Participant Information Sheet

Appendix B: Consent to Participation in Research

Appendix C: Correlation Analysis Results

**– AUT Research Project
Participant Information Sheet****Project Title**

The Role of Attribution Style in a Call Centre Environment.

Invitation

This is an invitation for you to participate in an exploratory research study, being conducted as part of a student research project for an MBus degree, looking at issues surrounding working in a call centre environment.

The importance of providing staff with appropriate support at the individual level has been recognised in recent studies and there is a need to develop reliable measures to identify areas where support programmes are needed for staff.

What is the purpose of the study?

The study is designed to identify the linkage between individual attitudes of optimism/pessimism, when working under pressure, and task performance using the well established attribution style questionnaire. By extending research results to the New Zealand context and work situations in a range of industries we will be able to develop a tool that will identify training gaps which could be used as a basis for staff development and support.

What is Attribution Style?

“Attribution style”, or “explanatory style”, can be measured using a questionnaire which provides a score that can be used to predict how a person will respond to adversity and pressure. It measures a person’s ability or capacity to overcome adversity. Our use of attribution style is for exploring whether attribution style is useful for identifying call centre areas which would benefit from training support.

How was a person chosen to be asked to be part of the study?

Two groups of staff have been suggested by [REDACTED] for the initial exploratory study. Firstly inbound call normal hour staff and secondly, part time outbound call operators. The task areas were chosen to test for consideration as they were judged to be areas that might clearly show the usefulness of attribution style in an exploratory study.

What happens in the study?

For the purposes of this study you will be given a identity code and directed to a website. You will use that code to enter the website and complete a questionnaire, the SASQ as described above. The questionnaire takes approximately 20 minutes to complete. The data is then recorded. The same identity code will be used by [REDACTED] to provide performance evaluation data on each person who sits the questionnaire. The questionnaire scores and performance data will be used to measure adaptability to task performance under pressure. The data from both sources will be stored at AUT premises for a period of six years.

What are the benefits?

If the exploratory study establishes a link between ASQ score and task performance then it will be useful for identifying areas where more staff/training support is needed.

How is my privacy protected?

The information you provide and your identity will remain confidential. The researcher will fuse data using your anonymous code and perform the research analysis. A personal report generated from the ASQ questionnaire will be available to individuals, using their confidential code, if they wish.

Neither [REDACTED], the AUT researcher, nor the ASQ website, will be able to identify questionnaire results of individual participants. This information will be collated at the group level.

Participant Concerns

Your participation in this research is voluntary. Any concerns regarding the nature of this project should be notified in the first instance to the Project Supervisor. Concerns regarding the conduct of the research should be notified to the Executive Secretary, AUTEK, Madeline Banda, madeline.banda@aut.ac.nz, 917 9999 ext 8044.

Approved by the Auckland University of Technology Ethics Committee on 13th November 2002.

AUTEK Reference number 02/118.

Project Supervisor

Dr Brett Collins

Associate Professor – Postgraduate Programmes

[Auckland University of Technology](http://www.auckland.ac.nz)

Researcher

Patricia Fulcher

MBus Research Student

[Auckland University of Technology](http://www.auckland.ac.nz)

APPENDIX B

Consent to Participation in Research

Title of Project: **The Role of Attribution Style in a Call Centre Environment**

Project Supervisor: **Dr Brett Collins**

Researcher: **Patricia Fulcher**

- I have read and understood the information provided about this research project.
- I have had an opportunity to ask questions and to have them answered.
- I understand and agree that the researcher will be provided with my performance evaluation data.
- I agree to take part in this research.

Participant signature:

Participant name:

Date:

Project Supervisor Contact Details:

Dr Brett Collins
Associate Professor – Postgraduate Programmes
Faculty of Business
Auckland University of Technology
46 Wakefield St
Ph 917 9999 x 5444

Appendix C
Correlation Analysis Results

		CPCN	CP	PERSS	PERMS	PERVS	CN	PERSA	PERMA	PERVA	ATTMVTAR	QUEMVTAR	CONMVTAR	QUAMVTAR	COMMVTAR
CPCN	Correlation Coefficient	1	0.646615803	0.628307998	0.628145874	0.429770827	-0.465213418	-0.413834125	-0.41423887	-0.308583766	-0.1309416	0.379084349	-0.085147366	-0.067347676	0.386349171
	Sig. (2-tailed)		1E-06	1E-06	1E-06	0.000204879	4.95494E-05	0.00036929	0.000363936	0.009347592	0.279932827	0.00121115	0.483402163	0.579609692	0.000954852
	N	70	70	70	70	70	70	70	70	70	70	70	70	70	70
CP	Correlation Coefficient	0.646615803	1	0.78885901	0.839986563	0.867615879	0.262928367	0.057965115	0.140592143	0.315722257	-0.121776551	0.205507055	-0.035552371	-0.085358173	0.167503998
	Sig. (2-tailed)	1E-06		1E-06	1E-06	1E-06	0.027873924	0.633618653	0.245692641	0.007757869	0.315256149	0.087876819	0.770142078	0.482315868	0.165740937
	N	70	70	70	70	70	70	70	70	70	70	70	70	70	70
PERSS	Correlation Coefficient	0.628307998	0.78885901	1	0.564617097	0.500646949	0.102855682	0.083561361	0.058085315	0.081702955	-0.151458368	0.153837577	-0.058231112	-0.067828678	0.238085717
	Sig. (2-tailed)	1E-06	1E-06		1E-06	1.01614E-05	0.396823496	0.491616189	0.632913649	0.501333416	0.210712016	0.203548387	0.632059038	0.576898694	0.047173224
	N	70	70	70	70	70	70	70	70	70	70	70	70	70	70
PERMS	Correlation Coefficient	0.628145874	0.839986563	0.564617097	1	0.644464195	0.169182211	0.00225291	0.05496271	0.271309793	-0.046058651	0.216199338	0.016282134	-0.083557904	0.204290718
	Sig. (2-tailed)	1E-06	1E-06	1E-06		1E-06	0.161480725	0.985232115	0.651331723	0.023094807	0.704972446	0.072238952	0.893574893	0.49163419	0.089813069
	N	70	70	70	70	70	70	70	70	70	70	70	70	70	70
PERVS	Correlation Coefficient	0.429770827	0.867615879	0.500646949	0.644464195	1	0.42716229	0.136381209	0.24864006	0.469177693	-0.053053178	0.135686189	-0.048664708	-0.079619013	0.058586981
	Sig. (2-tailed)	0.000204879	1E-06	1.01614E-05	1E-06		0.000226073	0.26026234	0.037937298	4.18579E-05	0.662698984	0.262722135	0.689109266	0.512347043	0.629974961
	N	70	70	70	70	70	70	70	70	70	70	70	70	70	70
CN	Correlation Coefficient	-0.465213418	0.262928367	0.102855682	0.169182211	0.42716229	1	0.603311002	0.757134557	0.890229344	0.068789952	-0.212319389	0.024491658	0.031242071	-0.235358
	Sig. (2-tailed)	4.95494E-05	0.027873924	0.396823496	0.161480725	0.000226073		1E-06	1E-06	1E-06	0.571498454	0.077633515	0.84050113	0.797374785	0.049839668
	N	70	70	70	70	70	70	70	70	70	70	70	70	70	70
PERSA	Correlation Coefficient	-0.413834125	0.057965115	0.083561361	0.00225291	0.136381209	0.603311002	1	0.274546713	0.322324991	0.054759882	-0.164999962	0.095640719	-0.065750964	-0.115224712
	Sig. (2-tailed)	0.00036929	0.633618653	0.491616189	0.985232115	0.26026234	1E-06		0.02144525	0.006503641	0.652535439	0.17225033	0.430937976	0.588650525	0.342188716
	N	70	70	70	70	70	70	70	70	70	70	70	70	70	70
PERMA	Correlation Coefficient	-0.41423887	0.140592143	0.058085315	0.05496271	0.24864006	0.757134557	0.274546713	1	0.585692167	0.133094847	-0.25778529	-0.07618656	0.194195583	-0.238506213
	Sig. (2-tailed)	0.000363936	0.245692641	0.632913649	0.651331723	0.037937298	1E-06	0.02144525		1E-06	0.272031397	0.031200238	0.530752718	0.107206285	0.046772797
	N	70	70	70	70	70	70	70	70	70	70	70	70	70	70
PERVA	Correlation Coefficient	-0.308583766	0.315722257	0.081702955	0.271309793	0.469177693	0.890229344	0.322324991	0.585692167	1	-0.020689212	-0.168480232	-0.029224733	-0.015427895	-0.168217421
	Sig. (2-tailed)	0.009347592	0.007757869	0.501333416	0.023094807	4.18579E-05	1E-06	0.006503641	1E-06		0.865010321	0.163252756	0.810205936	0.899128437	0.163919866
	N	70	70	70	70	70	70	70	70	70	70	70	70	70	70
ATTMVTAR	Correlation Coefficient	-0.1309416	-0.121776551	-0.151458368	-0.046058651	-0.053053178	0.068789952	0.054759882	0.133094847	-0.020689212	1	0.005496435	0.144303516	0.133600429	-0.139213562
	Sig. (2-tailed)	0.279932827	0.315256149	0.210712016	0.704972446	0.662698984	0.571498454	0.652535439	0.272031397	0.865010321		0.963980734	0.233323589	0.270198017	0.25039956
	N	70	70	70	70	70	70	70	70	70	70	70	70	70	70
QUEMVTAR	Correlation Coefficient	0.379084349	0.205507055	0.153837577	0.216199338	0.135686189	-0.212319389	-0.164999962	-0.25778529	-0.168480232	0.005496435	1	0.083509751	-0.043533035	0.292870253
	Sig. (2-tailed)	0.00121115	0.087876819	0.203548387	0.072238952	0.262722135	0.077633515	0.17225033	0.031200238	0.163252756	0.963980734		0.491884708	0.720466733	0.013877539
	N	70	70	70	70	70	70	70	70	70	70	70	70	70	70
CONMVTAR	Correlation Coefficient	-0.085147366	-0.035552371	-0.058231112	0.016282134	-0.048664708	0.024491658	0.095640719	-0.07618656	-0.029224733	0.144303516	0.083509751	1	-0.199380606	-0.201609656
	Sig. (2-tailed)	0.483402163	0.770142078	0.632059038	0.893574893	0.689109266	0.84050113	0.430937976	0.530752718	0.810205936	0.233323589	0.491884708		0.09797281	0.094199523
	N	70	70	70	70	70	70	70	70	70	70	70	70	70	70
QUAMVTAR	Correlation Coefficient	-0.067347676	-0.085358173	-0.067828678	-0.083557904	-0.079619013	0.031242071	-0.065750964	0.194195583	-0.015427895	0.133600429	-0.043533035	-0.199380606	1	0.194376394
	Sig. (2-tailed)	0.579609692	0.482315868	0.576898694	0.49163419	0.512347043	0.797374785	0.588650525	0.107206285	0.899128437	0.270198017	0.720466733	0.09797281		0.106873333
	N	70	70	70	70	70	70	70	70	70	70	70	70	70	70
COMMVTAR	Correlation Coefficient	0.386349171	0.167503998	0.238085717	0.204290718	0.058586981	-0.235358	-0.115224712	-0.238506213	-0.168217421	-0.139213562	0.292870253	-0.201609656	0.194376394	1
	Sig. (2-tailed)	0.000954852	0.165740937	0.047173224	0.089813069	0.629974961	0.049839668	0.342188716	0.046772797	0.163919866	0.25039956	0.013877539	0.094199523	0.106873333	
	N	70	70	70	70	70	70	70	70	70	70	70	70	70	70

** Correlation is significant at the .01 level (2-tailed).
* Correlation is significant at the .05 level (2-tailed).