

**THE IMPACT OF ADVERSITY QUOTIENT ON PERCEIVED STRESS OF
NGO SECTOR MANAGERS IN SRI LANKA**

by

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ABSTRACT

Non-Governmental Organisations (NGOs) around the world operate under highly dynamic and volatile conditions creating workplace adversities that lead to stress among employees. This requires NGO employees to possess a broad range of skills, competencies, and abilities to surmount in the face of adversities. Individual differences in the capacity to bounce back from adversities are emphasised under the concept of Adversity Quotient (AQ); the measure of an individual's ability to bounce back and cope with adverse situations.

The aim of this study was to investigate the relationship between levels of perceived stress and AQ among middle-level managers employed in the Sri Lankan NGO sector. The objectives of the study were to determine the influence of demographic factors and type of NGO on AQ, to investigate the association between AQ and perceived stress, to identify whether AQ, demographic factors, and type of NGO explain the variance in perceived stress, and to determine whether AQ has a moderation effect on the relationship between demographic factors and perceived stress.

The study was a positivist cross-sectional study. The study population consisted of middle-level managers representing both Sri Lankan (SLNGO) and International (INGO) NGOs in Sri Lanka. Two-hundred-and-twenty-three valid responses were collected using stratified random sampling method in a questionnaire survey. Data were analysed using Pearson correlation, Independent-samples T-Test, One-Way ANOVA, Hierarchical Regression, and PROCESS Regression tests.

Findings revealed a significant negative association between AQ and perceived stress of middle-level managers. Age, work experience, and academic qualifications were found to significantly influence the level of AQ. However, gender and marital status did not record such influence on AQ. Results further revealed higher AQ levels among INGO managers when compared to SLNGO managers. In addition, the study found that dimensions of AQ predict the variance in perceived stress. However, among demographic factors, only age and marital status explained the variance in perceived stress. The type of NGO was not a significant determinant in explaining the level of stress among middle-level managers. Further, AQ revealed no significant moderation between demographic factors and perceived stress.

Overall the study provided empirical evidence on the significance of AQ in relation to perceived stress. Future research on stress can consider AQ as an important construct in the study models. NGO management could consider AQ as an important factor in training and development, selection process, and performance management.

Keywords: Adversity Quotient, Perceived Stress, Non-Governmental Organisations, Middle-level Managers

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TABLE OF CONTENTS

ABSTRACT	i
ACKNOWLEDGEMENT	iii
TABLE OF CONTENTS	iv
LIST OF TABLES	viii
LIST OF FIGURES	ix
LIST OF ABBREVIATIONS	x
CHAPTER 1: INTRODUCTION	1
1.1. Introduction	1
1.2. Background of the Study	2
1.3. Research Gap	3
1.4. Context of the Study	5
1.5. Objectives of the Study	7
CHAPTER 2: LITERATURE REVIEW	9
2.1. Introduction	9
2.2. Adversity Quotient	10
2.2.1. The Building Blocks of AQ	12
2.2.2. The Four Pillars of AQ	14
2.2.3. AQ in the Organisational Context	15

2.2.4. Demographic Factors and AQ	19
2.3. Employee Stress	20
2.3.1. Sources of Stress	22
2.3.1.1. Environmental Stressors	22
2.3.1.2. Organisational Stressors	24
2.3.1.3. Personal Stressors	25
2.3.2. Outcomes of Stress	26
2.3.3. Demographic Factors and Perceived Stress	27
2.4. Non-Governmental Organisations	30
2.4.1. Sri Lankan NGO Sector	30
2.4.2. Adversities in the NGO Sector	31
CHAPTER 3: METHODOLOGY	36
3.1. Introduction	36
3.2. Theoretical Perspectives	36
3.3. Research Design	36
3.4. Conceptual Framework	37
3.5. Research Hypotheses	39
3.6. Research Instrumentation	42
3.6.1. Adversity Response Profile	43
3.6.2. Perceived Stress Scale	44

3.7. Research Sample, Data Collection, and Data Analysis	45
3.7.1. Sampling Method	45
3.7.2. Sample Size	46
3.7.3. Data Collection	47
3.7.4. Methods of Data Analysis	48
3.8. Ethical Considerations	50
CHAPTER 4: RESULTS AND DISCUSSION	52
4.1. Introduction	52
4.2. Tests of Data Quality and Study Assumptions	52
4.2.1. Results of Data Quality and Scale Reliability	52
4.2.2. Results of Study Assumptions	53
4.3. Descriptive Statistics of the Sample	57
4.3.1. Gender of Managers	57
4.3.2. Age of Managers	57
4.3.3. Academic Qualifications of Managers	58
4.3.4. Work Experience of Managers	59
4.3.5. Marital Status of Managers	60
4.3.6. Distribution by Type of NGO	60
4.4. Inferential Statistics: Hypotheses Testing	60
4.4.1. Relationship between AQ and Demographic Factors	60

4.4.1.1. Gender and AQ of Managers	61
4.4.1.2. Age and AQ of Managers	62
4.4.1.3. Work Experience and AQ of Managers	64
4.4.1.4. Academic Qualifications and AQ of Managers	66
4.4.1.5. Marital Status and AQ of Managers	68
4.4.2. Relationship between AQ and Type of NGO	69
4.4.2.1. Influence of Type of NGO on AQ	69
4.4.3. Association between AQ and Perceived Stress	70
4.4.4. The Impact of AQ, Demographic Factors, and the Type of NGO on Perceived Stress	73
4.4.5. The Moderation Effect of AQ	78
4.5. Limitations of the Study and Recommendations	80
CHAPTER 5: CONCLUSIONS	82
REFERENCES	83
APPENDICES	110
APPENDIX A: PUBLICATIONS AND AWARDS IN SUPPORT OF THIS THESIS	110
APPENDIX B: SURVEY QUESTIONNAIRE OF THE STUDY	111

LIST OF TABLES

Table 4.1 Scale Reliability	52
Table 4.2 Distribution of Data	53
Table 4.3 Collinearity Statistics of the Variables	55
Table 4.4 Distribution of Respondents by Gender	57
Table 4.5 Distribution of Respondents by Age Category	58
Table 4.6 Distribution of Respondents by Academic Qualification	59
Table 4.7 Distribution of Respondents by Work Experience	59
Table 4.8 Influence of Age on AQ	62
Table 4.9 AQ among Age Groups (Post-hoc Test Results)	63
Table 4.10 Influence of Work Experience on AQ	64
Table 4.11 AQ among Work Experience Categories (Post-hoc Test Results)	65
Table 4.12 Influence of Academic Qualifications on AQ	66
Table 4.13 Difference of AQ among Academic Qualifications (Post-hoc Test Results)	67
Table 4.14 Influence of Marital Status on AQ	68
Table 4.15 Association between Adversity Quotient and Perceived Stress	70
Table 4.16 Impact of AQ, Demographic Factors, and Type of NGO on Perceived Stress	74

LIST OF FIGURES

Figure 1. The Three Building Blocks of Adversity Quotient (Stoltz, 1997)	13
Figure 2. Conceptual Framework	39
Figure 3. Scatter Plot of Standardised Predicted Values against Standardised Residuals (zpred vs. zresid)	54
Figure 4. Histogram of Standardised Residuals	56
Figure 5. P-P Plot of Standardised Residuals	56
Figure 6. Scatter Plot of AQ and Perceived Stress	71

LIST OF ABBREVIATIONS

ANOVA	: Analysis of Variance
ARP	: Adversity Response Profile
AQ	: Adversity Quotient
CORE	: Control, Ownership, Reach, Endurance
HR	: Human Resource
INGO	: International Non-Governmental Organisation
LNGO	: Local Non-Governmental Organisation
NGO	: Non-Governmental Organisation
PSS	: Perceived Stress Scale
SD	: Standard Deviation
SLNGO	: Sri Lankan Non-Governmental Organisation
SPSS	: Statistical Package for the Social Sciences
VIF	: Variance Inflation Factor

CHAPTER 1

INTRODUCTION

1.1. Introduction

Organisations of all industries around the globe have witnessed numerous initiatives and developments. Over the past decades, the changing nature of work environment has created a wide range of challenges and risks. Organisations are under pressure to work out new measures to meet these challenges for survival, continuity, and growth. Under such circumstances, the employees are inevitably left with the complexities of both professional and personal lives. Their day-to-day activities and decisions are bounded by limitations of knowledge, skills, capacities, assistance, and resources. When employees perceive this discrepancy between the challenging conditions and their own capacities to fulfil the requirement, occupational stress comes into play. Any change, demand, constraint, or challenge is known as stressors or causes of stress. These affect individual employees both psychologically and physically.

Stress in any sector has become a growing concern since employees encounter a wide range of adversities at work and in personal life. Individual reaction to stressful conditions differs, as does the method of handling them. These individual differences in the capacity to bounce back from adversities is emphasised under the concept of Adversity Quotient (AQ) (Stoltz, 1997), an indicator of an individual's ability to cope with adversity. This study attempts to identify the concept of AQ in relation to stress and the impact AQ has on perceived stress.

This chapter introduces the background to the study and explains the research gap, and the need for the study. It describes the study scope, and the overall and specific

objectives of the study. Further, it provides an outline of the thesis, which will be discussed in the subsequent chapters.

1.2. Background of the Study

Due to demands in a changing world, stress is a growing concern for employees and employers in every field. As stated by Haider and Supriya (2007), occupational stress has become one of the global issues making an impact on all countries, all categories of employees, and all societies. Be it a profit or not-for-profit organisation, the demands are such that the organisational goals are attained under highly volatile and uncertain economic, political, and technological conditions. The Non-Governmental Organisations (NGO) have faced numerous difficulties such as resource limitations including lack of funding and permanent staff, sudden restructuring, political influence, longer hours of work, and increasing role demands. As a result of such pressures and complexities originating from both inside and outside factors of the workplace, employees experience stress which significantly affects their levels of performance and productivity (Musyoka, Ogutu, & Awino, 2013). Hence, it is vital that the NGO sector employees are equipped with higher levels of coping abilities to deal with extraordinary challenges and uncertainties.

AQ is an important concept, which explains how one responds to adverse situations, and how one rises above adversity (Stoltz, 1997). It further indicates that people showing optimal performance in the face of challenges not only learn through such adversities, but are better and faster in responding to adverse situations. Thus, a workforce that consists of employees with higher levels of AQ is characterised as having lower attrition and higher levels of productivity, morale, capacity, and innovation that creates a profound impact on the workplace. For instance, literature

shows that AQ training produces higher quality employees having higher levels of morale, leading to better organisational performance, especially in the service sector (Kanjankaroon, 2011; Styrlund, 2010).

AQ is comprised of four different dimensions under the acronym CORE: Control, Ownership, Reach, and Endurance (Stoltz, 1997). Control refers to the degree of perceived ability to change the adverse situation. Ownership stands for the degree of willingness to take responsibility for improving the situation. Reach refers to how far the difficulty extends into other areas of life. Endurance means the perceived length of time the adversity will last (Stoltz, 2000). A person's level of CORE reflects how the person responds to adversity, or how the person handles stressful situations such as conflicts, deadlines, setbacks, injustice, opportunities, and challenges.

According to Stoltz (1997), AQ is the science of human resilience. AQ provides the tools for improving how people respond and measures one's ability to prevail in the face of adversity. Therefore, enhancement of AQ can help a person to cope better with adversity or challenging situations. In this background, this study empirically investigates the impact of AQ on employee stress.

1.3. Research Gap

AQ is considered as a new paradigm gaining research interest in the organisational context (Ng, 2013; Phoolka & Kaur, 2012) compared to stress which is a thoroughly researched concept in a variety of contexts (Pasca & Wagner, 2011). Limited empirical studies have been conducted on AQ (Song & Woo, 2015). AQ in relation to stress, especially employee stress is less discussed (Shen, 2014). Although a vast amount of research has focused on the risks, determinants, and consequences of

employee stress (Johnson et al., 2005; Motowidlo, Packard, & Manning, 1986), there is a gap in identifying the impact of AQ on stress.

Several studies have explored the overall AQ of a person with only limited studies emphasising the effect of its sub-dimensions (i.e., CORE) with other concepts. For instance, some studies have inquired AQ sub dimensions in relation to Big Five personality traits (Le Thi, 2007), commitment to change (Langvardt, 2007), and demographic factors (i.e. age, and income group) (Paramanandam & Shwetha, 2013). With regard to employee stress, further research is required to understand the effect of CORE dimensions.

Existing literature provides conflicting evidence on the relationship between demographic factors and AQ (Huijan, 2009; Lazaro-Capones, 2004; Paramanandam & Shwetha, 2013; Shen, 2014). Hence, there is a need for further research to clarify the impact of demographic factors on AQ.

According to McMurray et al. (2010), research on non-profit organisations is relatively less when compared with other sectors. This is no difference in the Sri Lankan context (Orujuela, 2005). For instance, only a limited number of studies have examined the stress among employees in the NGO sector (Gorbatenko, 2013). Similarly, studies on AQ in the organisational context have been predominantly based on the corporate sector, paying less attention to the non-profit sector (Langvardt, 2007). The literature on AQ and stress becomes further limited in the Sri Lankan context. Examining the impact of AQ on stress of employees in the Sri Lankan NGO context would serve to fill a gap in the literature.

1.4. Context of the Study

This study was narrow in scope and specifically focused on the impact of AQ on the perceived stress of employees in the NGO sector in Sri Lanka. As explained in Chapter 3, only middle-level managers of selected NGOs (SLNGOs and INGOs) registered in the Colombo District were examined.

As defined by the World Bank, NGOs are groups or institutions that are mainly characterised as having cooperative or humanitarian focus in place of commercial objectives and are completely or largely independent of governments (Ghimire, 2003). NGOs are organised as Local or International (Allard & Martinez, 2008). NGOs which are foreign-based and operating in multiple countries are commonly known as International NGOs while organisations that operate on a national scale are known as Local NGOs (Ghimire, 2003). In this study LNGOs (NGOs that operate only in Sri Lanka) are referred to as Sri Lankan NGOs (SLNGO). Around the world, NGOs play a central role in influencing a society's response to social problems in various sectors such as sociocultural, economic, education, and environment (Ghimire, 2003).

The NGOs operating in Sri Lanka are diverse in character. They provide services in rural and urban areas with special attention to impoverished, women, children, youth, or the community at large. NGO sector employees consist of full-time or part-time professionals as well as volunteers (Ariyaratne, 1997). NGOs are registered in Sri Lanka under the Voluntary Social Service Organisations Act, No. 31 of 1980 (amended by Act, No. 8 of 1998), which defines NGOs as any organisation formed by groups of persons on a voluntary basis and

- (a) is of a non-governmental nature;
- (b) is dependent upon public contributions, charities payable by the government or donations local or foreign, for carrying out its functions;
- (c) has as its main objectives, the provision of such reliefs and services as are necessary for the mentally retarded or physically disabled, the poor, the sick, the orphans and the destitute, and the provision of relief to the needy in terms of disaster and includes a community hostel.

As stated by Priyadarshanie (2014), NGOs have started to play a significant role in the Sri Lankan context along with the socio-economic and political changes that took place in the 1970s. This period was characterised by conditions favourable for NGOs. The emergence of SLNGOs took place subsequently, where some SLNGOs operated with foreign financial assistance. Since the signing of the ceasefire agreement in 2002 and especially after the tsunami devastation in 2004, the number of NGOs operating in Sri Lanka has grown massively (DeVotta, 2005). However, the present status records a considerable decline due to Sri Lanka being considered as a middle-income country, donors' priority shifting to other issues (e.g., Syrian refugee crisis), and opportunistic politics (Akurugoda, Barrett & Simpson, 2017; De Silva, 2016). Hence, it is important to note that the social, economic, and political changes of the recent past have altered the conditions and have significantly affected the NGO sector organisations and employees. Therefore, NGO managers are required to respond better to these adversities in surviving and striving to achieve organisational goals.

1.5. Objectives of the Study

The problem this study sought to investigate was the impact of AQ on stress. It attempts to discover whether AQ can be used to improve employees' ability to cope with stress. Specifically, it probes, is there a relationship between AQ and stress? Can sub-dimensions of AQ predict the variance in stress? Do AQ levels differ due to demographic factors or type of NGO (i.e., SLNGO or INGO)?

The overall objective of the study was to explore the association between AQ and perceived stress among middle-level managers of the Sri Lankan NGO sector. The following specific objectives were identified for the study.

- I. To examine the influence of demographic factors on AQ.
- II. To examine the influence of type of NGO on AQ.
- III. To identify the association between AQ and its sub-dimensions, and stress.
- IV. To ascertain the extent to which AQ explains the variance in stress.
- V. To ascertain the extent to which demographic factors in the presence of AQ explain the variance in stress.
- VI. To ascertain the extent to which type of NGO in the presence of AQ explains the variance in stress.
- VII. To identify the moderation role of AQ on the relationship between demographic factors and perceived stress.

The thesis is organised into five chapters. Chapter 1 elaborates the background of the study and the problem the study addressed. It highlights the research gaps, research objectives and justification to investigate them. Chapter 2 is based on the review of literature on concepts related to the study along with a discussion of previous findings. Chapter 3 is based on the methodology of research hypotheses testing. It

provides a detailed discussion on the research strategy and approach, sampling and data collection methods, survey instruments, and data analysis methods. Chapter 4 presents descriptive statistics, results of hypotheses testing, and a discussion on the findings. Chapter 5 summarises the findings and is based on conclusions derived, their implications, and recommendations for future research.

CHAPTER 2

LITERATURE REVIEW

2.1. Introduction

Contemporary organisations, both profit-based and not-for-profit, face challenges in volatile environments. The changing nature of work place has increased demands on individuals, and concerns about that change, have affected their well-being and health. NGOs especially operate under extreme challenges that affect both individual and organisational levels. NGO staff operates with limited resources, and work for longer hours in highly uncertain environmental circumstances (Hailey & James, 2004). Pressures arising from work such as demands posed by organisational crises, restructuring due to financial limitations, and sudden policy changes, are some factors that create adversities leading to stress. Further, unrealistic demands placed by aid donors through emphasis on tight work schedules, timeframes, and rapid results lead to detrimental effects on credibility, confidence, and ability of NGO employees to pursue work goals (Kaplan, 2002). Stress has become a prevalent factor in many sectors (Haider & Supriya, 2007). Most NGO sector employees are also subject to stress that adversely impacts their physical and psychological well-being. It has a negative effect on their effectiveness which is, in part, subject to conditions encountered in the work environment (Kelleher & McLaren, 1996).

Stress has been identified as subjective (Sathasivam, et al., 2015). A phenomenon perceived as stressful by one individual may not make the same level of impact on another. Ganster and Schaubroeck (1991) have identified individual differences in appraisals and reactions to stressful events. Therefore, the level of perceived stress differs from one individual to another. A wide range of environmental, organisational,

and personal variables are identified as antecedents of stress (Cook & Hunsaker, 2001). As stated by Phoolka and Kaur (2012), people are different in their cognitive capacities. AQ has been introduced as an individual's capacity to face adversities in life in a unique way. It measures an individual's level of response to adversities or challenges. People tackle these adversities in different ways. Stoltz (2000) points out that the focus of AQ is to empower and prepare employees to cope better with adversities they encounter. Overall, AQ is recognised as significantly related to lives and careers (Shen, 2014).

This chapter is an illustration of the review of pertinent literature primarily on AQ and stress. The chapter explores the concept of AQ in relation to its origin and importance, AQ in the organisational context, and delivers a discussion in relation to demographic factors. The concept of stress is explored under nature of stress, antecedents of stress, and outcomes, and is discussed in relation to demographic factors. The chapter also explores the NGO sector and adversities in the NGO sector with special reference to the Sri Lankan context.

2.2. Adversity Quotient

AQ is an indicator of the ability of an individual to cope with adversities (Stoltz, 1997). It is a milestone of the previous quotients such as Intelligence Quotient (IQ) and Emotional Quotient (EQ) that help to gauge the degree of success and accomplishment of employees at a workplace. It is the science of human resilience which stands for the ability of an individual to bounce back and deal with adverse situations (Stoltz, 1997). The concept explains how well an individual responds in the face of misfortunes. Those with higher levels of AQ cope better with adversities by turning obstacles into opportunities (Stoltz, 1997). AQ is the level of a person's

ability to withstand adverse conditions and to prevail in such circumstances (Phoolka & Kaur, 2012). Hence, AQ plays a vital role in measuring, developing or strengthening the capacity of any individual to prevail in the face of adversity. Stoltz (1997) introduces this concept of human ability in the face of life challenges – principles of the theory can be applied to the workplace to measure and improve one's level of AQ that determines success. Stoltz (1997) defines success as the degree of moving forward in life's mission, despite all forms of adversities. The theory was formed after nearly twenty years of research, with more than five hundred studies around the world, and ten years of application. Employees with successful work and personal lives are those with higher levels of AQ, which is also an indicator of occupational success (Stoltz, 2000). An employee cadre with high AQ exhibits characteristics such as lower attrition, higher morale, increased productivity, creativity and innovation, persistence, resilience, health, and capacity. This leads to greater performance. Thus, AQ influences all facets of human performance and capacity (Stoltz, 2000). Especially in the service sector, in the fields of customer service and sales, recruiting and training individuals with higher levels of AQ produces higher quality employees with higher levels of morale that facilitate better organisational performance (Kanjankaroon, 2011; Styrlund, 2010). According to Markman and Baron (2003), AQ significantly and positively influences employees' level of job performance. According to Stoltz (2000), employees who apply AQ exhibit optimal performance in the face of adversity. Such employees not only demonstrate learning through challenges but are better and faster in responding to adversities. Thus, Shen (2014) states AQ as an indicator of talent selection and development for employees and managers in any sector to assign appropriate jobs.

2.2.1. The Building Blocks of AQ

Neurophysiology, psychoneuroimmunology, and cognitive psychology form the base for AQ. According to Stoltz (1997), they are the three building blocks of AQ (Figure 1). Neurophysiology is the science that deals with the functioning of the brain. It elaborates the formation of patterns in the brain which form habits that ultimately result in a person's behaviour. Psychoneuroimmunology is a science based on the interrelationship between the human mind and body. It essentially demonstrates the impact of thoughts and emotions or the emotional health on the physical health of an individual. This establishes a relationship between the feelings of a person and the reactions in the body.

Cognitive psychology is the science of the mind and performance interaction. This deals with the mental health of people, explaining the human need for control and mastery over one's life. It further demonstrates how different cognitive processes establish different ways in which people respond to adverse situations. The responses of people to such adverse situations are a result of their perception. One category of people perceives adversities as permanent, impossible to overcome, personal, and assert it to be their fault. Another category of people perceives adversities as temporary in nature, challenging, and work in order to overcome them. The science provides essential concepts to facilitate the understanding of human performance, effectiveness, and motivation. According to Stoltz (1997) all three disciplines are equally influential to the development of AQ.

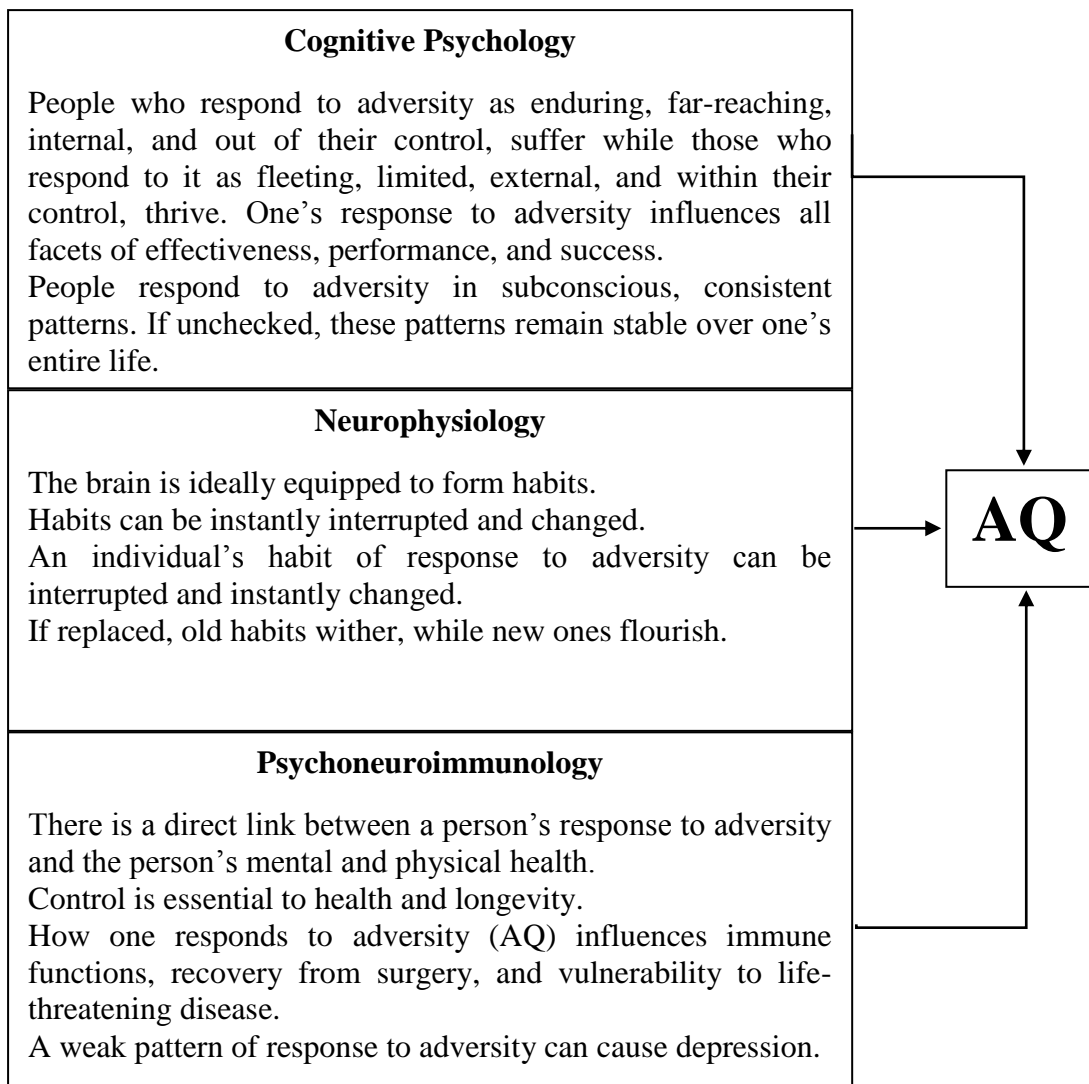


Figure 1. The Three Building Blocks of Adversity Quotient (Stoltz, 1997)

AQ is identified related to several concepts such as hardiness (Maddi & Kobasa, 1991), cognitive models of depression (Abramson et al., 2002), locus of control (Lefcourt, 1992), and learned helplessness (Peterson, Maier, & Seligman, 1993). Hence, Stoltz (1997) suggests AQ is a unifying theory of human behaviour that provides a better understanding of human actions in diverse environments. According to Stoltz (2000) an individual's level of AQ can be developed through a structured training procedure that facilitates consolidation of the acquired skills in the long run.

2.2.2. The Four Pillars of AQ

AQ consists of four dimensions represented by the acronym CORE. The four dimensions: Control, Ownership, Reach, and Endurance measure the level of AQ of an individual (Stoltz, 2000).

Control refers to the degree of influence or control one has over a particular situation or life (Stoltz, 1997). It is the extent to which one perceives oneself as having control over adverse situations. This implies that a person's level of control influences the direction of the action, level of effort, and perseverance level of a person. Those with higher AQ levels perceive higher control over adverse situations. Those who are relatively strong in this aspect tend to be proactive in adverse situations and are capable of turning adversity into opportunity (Stoltz, 2000). Such individuals will exert more effort with higher levels of resilience and perseverance in successfully attaining assigned tasks (Hung & Chin, 2013).

Ownership refers to the degree of accountability one feels to improve the outcome of an adverse situation (Stoltz, 1997). It is the extent to which one feels responsible to improve the current situation. A person with higher level of AQ will own or feel accountable for the adverse situation to face it with responsibility. Such a person will learn from experience, change the strategy of dealing with the situation, and take necessary action to accomplish the task. This indicates the type of people who are responsible for their deeds, and make the outcomes of such events into learning opportunities (Stoltz, 2000). Those with low levels of AQ blame themselves for the cause of the situation. Under extreme conditions, this pattern of thinking can lead to depression and despair.

Reach refers to the degree to which one perceives the impact of adversity into other areas of life (Stoltz, 1997). It is the individual's perception on the extent to which adverse events can influence other areas of life. Those with higher AQ levels do not let adversity reach other facets of life. They consider adversity is specific and limited to one situation. Such individuals are well prepared to deal with adversity for they feel empowered (Stoltz, 2000). People with low AQ tend to allow even the slightest adversities to spread to all aspects of life.

Endurance refers to a person's perception of the duration the cause of adversity and the adversity itself will last (Stoltz, 1997). Those with high AQ perceive adversities as temporary and of having solutions to overcome them. Such individuals are optimistic and energetic in coping with adverse events (Stoltz, 2000). People with low levels of AQ never look forward to an end to such situations. They tend to believe those situations as permanent.

2.2.3. AQ in the Organisational Context

Research on AQ represents various cultures, settings, and samples to investigate the impact of AQ on different aspects of life. According to Phoolka and Kaur (2012), several concepts such as resilience, longevity, performance, persistence, and response to change are found to be predictable with respect to a person's AQ level. AQ research has already been conducted on samples such as teachers, students, managers, psychologists, hospital staff, entrepreneurs, insurance agents, IT staff, political leaders, and has proved to improve performance levels, leadership styles and practices, promotions, retention, optimism, and commitment to change (Phoolka & Kaur, 2012). AQ has been widely investigated in relation to a variety of constructs such as: business and educational sector leadership (Schmidt, 1999), academic

performance or achievement (Huijuan, 2009; Matore, Khairani, & Razak, 2015), performance levels at work (Lazaro-Capones, 2004), commitment to change during organisational transformation (Langvardt, 2007), optimism and sales performance (Johnson, 2005), resilience and job satisfaction (Paramanandam & Shwetha, 2013; Sharksnas & Lynn, 2002), psychological contract breach and turnover intention (Bukhari et al., 2011; Chin & Hung, 2013), personal characteristics and personality-temperament traits (Olila, 2012), job embeddedness (De Gulan, Rosalia, & Caballero, 2013), personal characteristics and job satisfaction (Bantang et al., 2013), demographic factors (Shen, 2014; Tigchelaar & Bekhet, 2015), Big Five personality traits (Le Thi, 2007), and academic self-concept and achievement motivation (Devakumar, 2012).

A comparative study by Schmidt (1999) on AQ levels of leaders from the business context and educational context has noted higher AQ levels among business leaders. The response of business leaders to adverse situations was effective compared with leaders from the educational context. Williams (2003) has identified a positive correlation between adversity response of principals and achievement of students. Principals with higher AQ levels are better at responding to adverse situations. That enhances the school climate to facilitate and improve student achievements (Williams, 2003). AQ levels of individuals were found to be positively associated with career adaptability of student nurses in China (Tian & Fan, 2014). This finding was consistent with the studies by Chin and Hung (2013), and Soresi, Nota, and Ferrari (2012) that identified a relationship between AQ and career adaptability.

A significant correlation between AQ and job satisfaction of managers in the textile industry has been identified in a study by Paramanandam and Shwetha (2013). Shen

(2014) has identified a significant moderating effect of AQ on the relationship between gender roles and job stress among employees of firms in the industrial zones of Taiwan. In a study by Lazaro-Capones (2004) on selected middle-level managers working in Government agencies in Manila, AQ was found to positively associate with the level of performance. Job performance measured by a 360-degree feedback system recorded better results among those with a higher level of AQ. Contrastingly, job performance viewed through the Big Five personality traits has not identified a correlation between overall AQ and the job performance scores of respondents. However, AQ scores have positively associated with emotional stability and extraversion traits. Weak, moderate, and non-significant correlations have been identified between the remaining traits of the Big Five and AQ (Le Thi, 2007).

Resilience measured through the levels of AQ among adult employees, members, and parents of students of a non-profit organisation in California has identified a positive association between resilience and commitment to change during organisational transformation (Langvardt, 2007). Bukhari, Saeed, and Nisar (2011), have identified the moderating role of AQ on the relationship between psychological contract breach and work outcomes of employees. The study notes that employees with higher levels of AQ are more likely to face challenging situations of contract breach.

Johnson (2005) has studied the relationship between optimism and response to adversity, and correlations between each of the constructs and sales performance among sales employees of a leading Fortune 500 company in the computer hardware industry. Results have supported significant correlations between the two constructs (optimism and response to adversity) and sales performance. This highlights that higher sales performances are associated with higher levels of AQ.

A study by Chin and Hung (2013) revealed that AQ moderates the relationship between psychological contract breach and turnover intention of insurance industry workers in Taiwan. Results have revealed AQ as a significant factor that influences feelings and responses of employees to psychological contract breaches that concern relational, transactional, and training and development contracts. The study has emphasised the significance of individual differences in beliefs, and response of employees for violations of psychological contracts with the organisation.

Although above findings validate the importance of AQ in relation to several constructs, some studies have not identified such importance. Olila (2012) has conducted a study to investigate the interrelationship among levels of AQ and personality-temperament traits of educators in selected public and private educational institutions. Findings conclude that AQ does not significantly affect educators' personality-temperament traits such as sanguine, choleric, and melancholy temperaments. De Gulan, Rosalia, and Caballero (2013) has found AQ is not related to openness to group diversity and job embeddedness of call centre agents and team leaders from call centre agencies in Manila. Sharksnas (2002) has studied the relationship between resilience and job satisfaction among mental health care workers of a community mental health centre in North-eastern Pennsylvania. Findings indicate that AQ is not a significant predictor of job satisfaction. Similarly, a study on job satisfaction and AQ of police officers in Manila has concluded that the level of job satisfaction is not significantly related to the level of AQ of the respondents (Bantang et al., 2013).

Several scholars have found the significance of AQ in relation to different aspects in the organisational context such as employee performance, job satisfaction, and

turnover-intentions. However, research is scarce between AQ and stress. Therefore, based on the CORE aspects of AQ, this study aims to fulfil this gap in the literature.

2.2.4. Demographic Factors and AQ

Few sources of literature support findings of significant differences in age, gender, academic qualifications, marital status, and length of service in terms of levels of AQ (Shen, 2014).

Regarding gender, in a study conducted by De Gulan, Rosalia, and Caballero (2013), women were found to have higher mean scores of AQ when compared to men whereas Lin (2001) has identified significantly higher AQ levels among male managers. Huijuan, (2009) has concluded that there is no significant effect of gender on AQ in line with studies by Bantang et al. (2013), and Shen (2014).

According to Shen (2014), AQ increases with age. Similarly, Paramanandam and Shwetha (2013) have found higher levels of AQ in the age group of 50 to 60 years, and lower levels of AQ among respondents in the age group of 30 to 40 years indicating difference in age has a significant effect on AQ. However, most studies suggest that age has no significant influence on AQ (Bantang et al., 2013; Huijan, 2009; Lazaro-Capones, 2004; Olila, 2012).

Most previous findings have concluded influence of work experience on AQ is not significant (Bantang et al., 2013; Huijan, 2009; Lazaro-Capones, 2004; Olila, 2012; Tigchelaar & Bekhet, 2015). On the contrary, Tripathi (2011) and Shen (2014) have identified higher AQ levels among employees with longer work experience.

According to Tripathi (2011), academic qualifications influence AQ level of a person where higher academic qualifications are associated with higher AQ levels. Studies by Bantang et al. (2013), Olila (2012), Shen (2014), and Tigchelaar and Bekhet (2015)

have identified no such influence on AQ. Marital status of a person does not influence the AQ level as concluded by Bantang et al. (2013), Lazaro-Capones (2004), Olila (2012), and Paramanandam and Shwetha (2013).

As mentioned, more studies support the assertion that there is no significant relationship between respondents' level of AQ and personal demographic profile in terms of age, marital status, length of service, gender, and educational qualifications (Bantang et al., 2013; Huijan, 2009; Lazaro-Capones, 2004; Olila, 2012; Shen, 2014; Tigchelaar & Bekhet, 2015). However, further research is required to validate these findings in different contexts. This study aims to investigate the influence of demographic factors on AQ among employees in the NGO sector in Sri Lanka.

2.3. Employee Stress

Stress is a growing concern for employees and employers in every field, worldwide. Various definitions of stress emphasise different aspects of the origin and development of stress. Stress has diverse interpretations from experts, lacking one universally accepted definition.

Lazarus (1966) states that stress originates when an individual perceives coping with demands is impossible to a degree that threatens his/her well-being. This definition emphasises that response to stress is a result of the imbalance between the demands and the ability to cope, especially when the coping is important (Cox, 1978). The aspect of imbalance leading to stress is further brought out through the imbalance between the demands and the resources available to deal with such demands. (Lazarus & Folkman, 1984). Similarly, in occupational settings the cause of negative feelings resulting from adaptation to jobs, due to demands associated with work, work environment, and competency levels of employees is defined as occupational stress

(Caplan & Jones, 1975). According to Cooper and Marshall (1978) occupational stress is linked to individual and behavioural reactions that originate from the direct impact of environmental factors. Pediwal (2011) emphasizes occupational stress as a mismatch between organizational demands and individual employee capabilities. Hence, stress originates with a demand or an opportunity from the environment and ends with the individual's reaction to them (Shah, 2003). It is a person's psychological and physiological response to the perception of demands and challenges (Topper, 2007). According to Robbins (2011) occupational stress is a dynamic condition that occurs when someone encounters an opportunity, a demand, or a resource related to what that person desires, and perceives an uncertain outcome. The conclusion is that stress is an outcome of an emotional response, when incongruence exists between the resources, abilities, and needs of an individual and the demands of a job.

Stress, although seen as detrimental, is shown to have a positive value at times. It offers potential gain and is thus seen as creating opportunity (Cavanaugh et al., 2000). Shen (2014) states that job stress at proper levels triggers work competency. This is defined as 'eustress' and has a functional value (Selye, 1987). The kind of stress that generates motivation is categorised as 'good' stress. 'Bad' stress is the kind that produces negative effects (Bland, 1999). As Stevenson and Harper (2006), point out, individuals experience either positive or negative stress. Selye (1987) defines stress with negative effects as 'distress'.

Stress is conceptualised as a process with several components related to factors in the work environment, which the employee perceives and reacts based on individual appraisal of a stressor as threatening (Lazarus, 1991; Spielberger, Vagg & Wasala,

2003). A similar concept is that work stress has multiple origins. The origins are linked to demanding aspects of the work environment, perceptions and appraisals of those negative aspects, and symptoms of strain: physiological, psychological, and behavioural changes (Baker, 1985; Greenhaus & Parasuraman, 1987). The next section is a discussion on various determinants of stress.

2.3.1. Sources of Stress

Several theories have attempted to explain stress and predict its prevalence (Dollard, 2001). Mino et al. (1999) propose that the stress process originates with exposure to stressors. Literature highlights several categories of stressors. Robbins (2011) points out that stressors can be subdivided into challenge stressors and hindrance stressors. Hindrance stressors include red tape, confusion over job responsibilities, and office politics that keep one from reaching goals. Challenge stressors include pressures associated with workload, tight timelines, and pressures to complete tasks (Robbins, 2013). Researches that compare their roles in overall stress development have indicated that hindrance stressors appear to play a more important role in their effect (LePine et al., 2004). Another categorisation divides stressors as environmental, organisational, and individual stressors (Anderson et al., 2001; Cook & Hunsaker, 2001; Matteson & Ivancevich, 1999). This categorisation is further discussed in the following section.

2.3.1.1. Environmental Stressors

These uncertainties occur due to changes in the economic, political, and technological spheres (Robbins, 2013). Buchanan and Huczynski (2004), state that stress results when an employee perceives an uncertain future. The temporary nature of modern

jobs has altered the characteristics of employment contract, affecting the comfort zones of employees in all sectors, with increased work pressures and levels of perceived stress (Otto & Schmidt, 2007). This situation is highly applicable to the current environment of NGO sector as discussed in subsequent sections.

Implementation of new technology and systems in organisations is another major factor contributing to perceived stress (Hausman, 2001). Employees' existing level of knowledge, skills, and competence quickly become obsolete with technological development. Kendall et al., (2000) state that workplace is subject to rapid changes with globalisation; technological advances force employees to self-manage, acquire new skills, and perform more tasks. Computers, robotics, automation, and similar forms of technological change threaten many employees leading to stress (Robbins, 2013). According to Dunnette (1998) these pressures increase role ambiguity, resulting in higher levels of perceived stress and illness.

Further, organisational downsizing, sudden changes in work and reorganisation, lack of opportunity for participation in decision-making, and lack of employee empowerment are considered as major sources of stress (Harvey & Brown, 2006). Organisational downsizing negatively affects job security and stability of employees (Kendall et al., 2000). Consulting and communicating with employees, especially in a rapidly changing environment, is considered important to prevent feelings of isolation and stress (Kirkcaldy, Trimpoo, & Williams, 2002).

Above discussed factors in the environment have a profound impact on individual employees. Drastic changes in the environment create uncertainties among employees, influencing their abilities to cope with change and leading to increased levels of stress (Rafferty & Griffin, 2007).

2.3.1.2. Organisational Stressors

Stressors available in the organisational context are categorised around task, role, and interpersonal demands at work (Fox et al., 1993). Such factors include work overload, unrealistic goals, pressures to avoid errors, perceived lack of support, unfavourable conditions arising from an insensitive and demanding boss, and unpleasant colleagues. Stressors that arise due to the design of an employee's job (e.g., degree of autonomy, task variety, and degree of automation), working conditions, and physical work layout are defined as task demands (Robbins, 2011). For instance, the speed and intensity of work, and the work environment have a greater impact on perceived stress levels. Further, physically demanding work and emotional labour have a similar effect (Glomb et al., 2004; Otto & Schmidt, 2007). Work overload lowers one's psychological and physical well-being (Greenhaus et al., 1987; Otto & Schmidt, 2007; Roberts et al., 1997). This is considered a major source of stress (Buchanan & Huczynski, 2004; Topper, 2007). Additionally, Buchanan and Huczynski (2004), emphasise inadequate physical working environment, and improper job design as stressors.

Role demands are factors that contribute to stress due to pressures generated by the role employee plays in the organisation (Robbins, 2013). One aspect of role demands is difficult-to-satisfy expectations in the employee role. According to Robbins (2013), unrealistic performance expectations within a limited time frame lead to role overload. Similarly, lack of understanding to perform a task generates stress in an employee. This is termed as role ambiguity (Manshor, et al., 2003). Another stressor is the role conflict. It is the requirement to engage in two or more work roles that work against one another (Roberts et al., 1997). These situational constraints such as

fixed work hours or demanding job responsibilities lower employees' proactive coping behaviours (Fritz & Sonnentag, 2009).

Interpersonal stressors are the pressures that arise from other employees in the organisation (Robbins, 2012). Poor interpersonal relationships, lack of social support and encouragement from one's peers and supervisors, and poor management increase employee stress (Buchanan & Huczynski, 2004; Eugene, 1999; Mirovisky & Ross, 1986). This also includes inadequate guidance, discrimination and favouritism, inadequate training opportunities and development (Kirkcaldy, Trimpoo, & Williams, 2002), bullying, incivility, racial harassment, sexual harassment (Lim et al., 2008), competition, lack of opportunities for promotions, and barriers to career advancement (Harvey & Brown, 2006). Further, findings of Cartwright and Cooper (2002) confirm lack of resources, and inadequate pay and benefits as important stressors. Therefore, demands at work play a major role in employee stress (Brooks & Piquero, 1998; Pienaar & Rothmann, 2003).

2.3.1.3. Personal Stressors

Stress is influenced by personal factors (Matteson & Ivancevich, 1999). Robbins (2012) classifies these stressors as family problems, economic problems, and basic disposition. Challenges, experiences, and problems that employees encounter in personal life can and do spill over to the job (Robbins, 2011). For instance, marital difficulties, breaking of a close relationship, troubles with children (Bland, 1999; Major et al., 2002), and work-life conflict exert a profound impact on personal relationships (Fairbrother & Warn, 2003). Thus, stress has become a spin-off of modern life as a result of balancing the demands of the workplace with personal or family life (Ornelas & Kleiner, 2003). Similarly, personal economic problems due to

exceeding expenses over earning capacity generate stress (Robbins, 2011). For instance, stress due to financial insecurity is widespread among employees (Bland, 1999). Further, Robbins (2012) states that a person's basic disposition that emphasises more on negative aspects of the world, increases stress levels. For instance, personality traits have a potential impact on stress (Deary & Blenkin, 1996; Goldberg, 1993; Snyder & Ickes, 1985). Individuals with Type A personality end up in more demanding jobs, overreacting to work conditions, with high levels of vulnerability to perceived stress. In certain cases, this even leads to coronary heart disease (Cowley, Hager, & Rogers, 1995; Wainwright & Calnan, 2002). Research also has identified factors such as locus of control, self-esteem, hardiness (Ganster & Schaubroeck, 1991; Lind & Otte, 1994; Murphy, 1995), psychological and physical conditions, life stage characteristics, demographic characteristics (Beehr & Newman, 1978), negative affectivity (Payne, 1988), and differences in coping skills (Innes, 1981), that make individuals experience similar situations differently. The following section of the chapter is a discussion on effects of stress.

2.3.2. Outcomes of Stress

Higher levels of perceived stress cause physical, psychological, and even adverse behavioural consequences (Spielberger *et al.*, 2003). As illustrated by Quick *et al.*, (1997), stress is associated with physiological health problems such as heart attacks and hypertension, and with psychological problems such as burnout, depression, and anxiety. Stress is also associated with behavioural problems such as workplace violence, smoking, and alcohol consumption (Dollard & Winefield, 2002).

At work, stress indents massive loss at individual, group, and organisational level performance. Stress results in decreased performance that affects the quality of

products and services. It lowers employee morale, motivation, and job satisfaction. This leads to higher levels of turnover, absenteeism, accidents, miscommunication, and conflicts (McHugh, 1993; Murphy, 1995; Schabracq & Cooper, 2000).

High turnover increases additional costs of selection and recruitment of employees (Ongori, 2007). Equally, financial costs further increase due to loss in productivity, industrial accidents, and the additional costs for return-to-work programs or redeployment (Cooper & Cartwright, 1994; Kendall et al., 2000). Further, job dissatisfaction creates a negative effect on work performance and interpersonal relationships at work (Manshor et al., 2003).

Repetti (1987) states that a stressor in one sphere impacts on other spheres in life. Therefore, stress causes mental and health problems, creating issues related to professional and family life (Kelly, 1995). Even marital cohesion and family life is negatively affected by the spill-over effect of stress (Crouter & Bumpus, 2001; Muchinsky, 2000; Robinson et al., 2001).

2.3.3. Demographic Factors and Perceived Stress

Demographic characteristics influence stress (Beehr & Newman, 1978). For instance, factors such as gender, age, educational qualifications, work experience, hierarchical level, job title, marital status etc. have an impact on the stress levels experienced by individuals (Dua, 1994; Lind & Otte, 1994; Murphy, 1995).

Spielberger and Reliester (1994) state gender results in significant differences in the perception of intensity and frequency of certain stressors. According to Gmelch and Burns (1994) women report higher levels of stress when compared to men. A study conducted among managers in Hong Kong and Taiwan identified higher levels of perceived stress and intentions to quit among female managers (Siu & Spector, 1999).

A similar effect was identified among doctors and nurses in Nigeria (Olatunji & Mokuolu, 2014). Sharpley et al. (1996) have identified lower stress scores in men. According to Shen (2014), gender roles significantly influence levels of job stress. Several other factors such as non-work demands (Ganster & Schaubroeck, 1991), gender stereotyping, and role demands of being a wife, mother, and employee (Gregory, 1990) also contribute to higher perceived stress among women.

According to Wichert (2002), women exhibit psychological symptoms while men display physical deterioration in response to long-term stress. However, the effect of socialisation process is identified as a major reason behind the gender differences in coping with perceived stress (Korabik, McDonald, & Rosin, 1993).

Most literature suggests that females experience higher levels of stress due to gender-specific stressors and differences in interpreting and coping with stress (Pološki Vokić & Bogdanić, 2008). Contrastingly, Kirkcaldy and Furnham (1999), and Winefield et al. (2003) report that there is no significant difference in stress among men and women. Similarly, studies on service sector employees (Aminabhavi & Triveni, 2000; Kumasey, Delle, & Ofei, 2014), academic staff of a private university in Pakistan (Abbas & Roger, 2013), employees in hospitality industry (O'Neill & Davis, 2011), Japanese school teachers (Nakada et al., 2016), and Indian textile managers (Vadivu, 2017) have found no significant relationship between gender and stress.

A person's age has a significant relationship with the level of stress (Jeyaraj, 2013). Younger employees experience higher levels of occupational stress (Dua, 1994). Employees in the age group 31 to 40 years (Sharpley et al., 1996) and age group 31-45 years (Vadivu, 2017) experience higher levels of stress at work. They also tend to experience higher levels of stress in response to job insecurity than the older workers

(Wichert, 2002). Affum-Osei, Agyekum, and Addo (2014), mention that nearly sixty percent of employees above the age of 30 years experience higher levels of stress. However, Sager (1990) concludes that the ability to cope with stress increases with age due to higher work experience. Contrastingly, Aminabhavi and Triveni (2000) report age as a variable that has no significant influence on perceived stress.

According to Manthei and Gilmore (1996), work experience significantly influences perceived stress. A study by Bhagawan (1997) found higher levels of occupational stress among those with less work experience. According to Olatunji and Mokuolu (2014), higher experience on a job reduces the level of stress. In contrast, Jeyaraj (2013) concludes moderate to high levels of stress experienced by employees with more than 15 years of work experience. Vadivu (2017) has not identified a significant difference in stress due to work experience among managers. Similarly, Abbas and Roger (2013) reports that work experience has no significant influence on stress levels among assistant professors and less experienced lecturers.

Educational qualifications have indicated higher stress levels among those with relatively lower qualifications (Affum-Osei, Agyekum, & Addo, 2014). A study by Vadivu (2017) concludes that managers with diploma qualification report higher levels of stress. According to Chand and Monga (2007) employees with higher educational qualifications have better ability to cope with stress. However, certain studies note that there is no significant difference in stress due to educational qualifications (Das & Srivastav, 2015).

Overall, research shows mixed results regarding the relationship between demographic factors and the level of stress. Therefore, further research is required to validate these findings in different contexts. This study aims to investigate the

influence of demographic factors on stress among employees in the NGO sector in Sri Lanka. The next section looks into the NGO context.

2.4. Non-Governmental Organisations

United Nations defines NGOs as non-profit and voluntary groups with common interests, organised on a local, national, or international level (Yogarajah, 2017). According to the World Bank, NGOs are groups and institutions primarily focused on humanitarian or cooperative objectives in place of commercial objectives, and are entirely or largely independent of governments. They are social organisations that function in sectors such as socio-cultural, education, economic, and environment (Ghimire, 2003). Terms such as voluntary organisations, civil organisations, voluntary development organisations, and non-profit associations are some of the interchangeably used terms to identify NGOs.

Around the world NGOs play a central role in society's response to social problems. They make a direct impact on the lives of poor and marginalised people (Kelly, Kilby, & Kasynathan, 2004). The term NGO is broad and consists of different types of organisations (World Bank, 1995). Based on the level of operations, INGOs are headquartered in developed countries with operations in more than one developing country while National/Local NGOs operate in individual developing countries (Allard & Martinez, 2008; World Bank, 1995). The following section is a discussion on the Sri Lankan NGO sector.

2.4.1. Sri Lankan NGO Sector

NGOs have existed since the colonial times in Sri Lanka (Priyadarshanie, 2014). Initially, Sri Lankan NGOs were ecumenical organisations affiliated to the Christian

missionary in the 19th century followed by Buddhist, Hindu, Muslim and nondenominational organisations that eventually led to rural development societies, and other community-based organisations (Perera, 1999). Especially in the immediate post-independence period, NGOs have marked a gradual increase in the numbers with the liberalisation of the economy, relaxations in travel restrictions and exchange controls, and flow of foreign assistance that resulted in rapid growth of a more diversified NGO sector (Perera, 1999; Priyadarshanie, 2014). Consequently, there was an increase in the number of NGOs, activities, and inflow of funds following the outbreak of the civil conflict in 1983, and in the wake of destruction caused by tsunami in 2004 (Asian Development Bank, 2013; Edrisinha, 2010). NGOs play a vital role in development in Sri Lanka, and have contributed to create progress in the social, political, and economic development in the country (Ruwanpura, 2007). The following section looks into the prevailing adversities in the NGO context.

2.4.2. Adversities in the NGO Sector

The NGO sector has been identified as having a highly stressful work environment (Armstrong et al., 2009). These organisations around the world operate under an increasingly volatile environment, facing natural and manmade disasters and economic and social challenges (Aldashev & Verdier, 2009; United Nations Development Program, 2014; Zhang et al., 2016). These challenges cause the NGO employees to engage in highly demanding, complex, and difficult work, often in relatively poor conditions (Harrison, 2013). This is no exception to the SLNGOs and INGOs operating in Sri Lanka.

NGOs around the world are undercapitalized in responding to the growing demands of civil society. They compete for funding sources as well as for experienced and

qualified staff as they function in an increasingly competitive and complex market economy (Trautmann et al., 2007). One of the long-standing and well-known problems for NGOs is the competition for donors (Aldashev & Verdier, 2009). Especially, INGOs face great challenges in gaining international prominence and shares of the aid market, and in satisfying existing donors (Orjuela, 2005). Shortfall of available resources has become a challenge for most of the NGOs worldwide that rely on corporate sponsorship at times. This has increased the dependency and affected the governance of such NGOs (Gray & Kendzia, 2009). This is also applicable to most SLNGOs, as most of them operate under foreign financial assistance and partnerships with INGOs (Priyadarshanie, 2014).

In the Sri Lankan NGO context, a major drop in funding is evident, especially when compared with the post-tsunami period in 2004 and post-war in 2009. For instance, De Silva (2016) notes that Palm Foundation, a leading NGO serving the plantation community in Nuwara Eliya (funds worth Rs. 29 million in 2016 compared to Rs. 56 million in 2015), Future in Your Hands, a leading NGO in Badulla (Rs. 22 million in 2016 compared to Rs. 90 million in 2011), and some NGOs in the North have reported a major fall in their budgets. NGOs such as CandleAid Lanka, Alzheimer Foundation, Foundation for Goodness, Berendina, Women in Need, Association of Social Development (Voluntary), Ceylon Deaf and Blind School, Practical Action, Peace, Dharmavani Foundation, Suriya, Navajeevana, and Indecos have been reported to have left with less institutional funding (De Silva, 2016). The recent decline in funding is due to recognising Sri Lanka as a middle-income country, donors' attention towards man-made and natural disasters (e.g., Syrian refugee crisis), and political influence (Akurugoda, et al., 2017; De Silva, 2016). Due to these conditions, several

NGOs have faced critical downsizing. For instance, Sarvodaya downsized to 600 employees in 2016 in comparison to a staff of over 3000 in 1987. Organisational restructuring or downsizing in particular, often results in increasing workloads for those who remain on the job with concerns for job insecurity as a result of temporary jobs (short-term contracts), and struggles around work-life imbalance (Armstrong, 2009; Harrison, 2013). Moreover, INGOs have reduced direct implementation and increased relying on SLNGOs (Walton, 2008). However, SLNGOs are faced with capacity issues due to less trained workforces. As reported by Nanthagopan, Williams, and Page (2016) SLNGO employees have fewer or lower competencies in project management competencies when compared with INGO employees.

Due to these circumstances, NGO employees tend to join rewarding positions in the private and government sector due to high levels of stress (Armstrong, 2009). This affects the productivity and morale of the remaining employees due to increased workload, and additional costs to recruit and train new employees (Kim & Lee, 2007). Despite funding and resource challenges, SLNGOs face several challenges in operations. The Sri Lankan NGO sector has been criticised and closely scrutinised for several reasons (Herath, 2010). This was especially on INGOs due to acting on foreign interests (Orjuela, 2005). The complementary relationship between the government and the NGOs was affected due to the ideologies of some NGOs that affected national security, ethnic harmony, and which supported terrorism (DeVotta, 2005; Edrisinha, 2010). For instance, some advocacy groups lobbying against Sri Lanka in international fora with the end of the conflict in 2009 led to aggravation of the government's suspicions on some NGOs (ADB, 2013). Subsequently such practices led the government to appoint a parliament select committee during the final

phase of the civil conflict in 2008, to probe into operations of NGOs as well as their impact on social well-being, national security, and state sovereignty. A new legal framework for the regulation and supervision of NGOs was proposed by the committee on registration of NGOs, obtaining foreign visas, and regulations for the conduct of NGOs in general (Edrisinha, 2010). Overall, political influence and consequent policy changes have affected the operations of all NGOs, indirectly creating adverse effects on employees.

Generally, major causes of stress in the NGO sector include longer hours of work, poor employee-supervisor relationships, heavy workload, fewer opportunities for promotion, and lack of involvement in decision-making (Harrison, 2013; Ngeno, 2007; Oyoo, 2016). Moreover, factors such as inadequate resources to meet demands, issues among employees, technological problems at work, and insufficient time for family (Jonge & Dormann, 2006) as most employees are away from home engaged in field work, too contribute as stressful factors. According to Armstrong (2009), lack of flexibility at work and lack of training opportunities ultimately lead to turnover among NGO employees.

As mentioned, work in the NGO sector has been recognised as emotionally and physically demanding with fewer opportunities for career advancement. NGO employees encounter emotionally demanding work that requires daily responding to distressing situations in the civil society. Demands from government agencies and donors mean NGOs are liable for additional reporting. This has placed increased amounts of paperwork on employees to demonstrate successfully completed projects, and to gain and retain funding sources. They are expected to balance competing demands and diverse roles for different circumstances encountered, especially in

aligning organisational vision with donor demands, political sensitivities of the government, and practical needs of the communities. Thus, research indicates the difficult and stressful nature of the work in the NGO sector due to aspects in the job, conditions in the environment, and personal factors. These demands further suggest the requirement of NGO managerial level employees in particular to exhibit a broad range of competencies together with communication and networking skills, emotional sensitivity, and most importantly the ability to surmount in the face of adversity.

CHAPTER 3

METHODOLOGY

3.1. Introduction

This chapter is an illustration of the methodological approaches employed to investigate the research question. The chapter discussion includes theoretical perspectives, research design, conceptual framework, research hypotheses, research instruments, sampling and methods of data collection, and data analysis.

3.2. Theoretical Perspectives

In research reasoning, the positivist approach to scientific investigation is concerned with objectivity. Positivist research relies on knowledge derived under scientific method and is based on sensory experience gained through experiments or comparative analysis (Walliman, 2010). Under this perspective the current study is based on an objective analysis without personal biases. The positivist research is based on deductive reasoning. Deductive reasoning arrives at specific conclusions through logical arguments based on general statements (Walliman, 2010). In deduction, specific reasoning guided by the theories that precede them, can either be confirmed or rejected through observations and experiments (Walliman, 2010). In this study, hypotheses were developed based on existing knowledge and theories in order to test them and obtain results to validate, reject, or refine.

3.3. Research Design

This study followed a cross-sectional design that provides a comprehensive picture of the population at a given point in time. Studies that are cross-sectional in nature, study a given phenomenon at a specific point in time whereas a diachronic or longitudinal

study investigates units of analysis over an extended period of time (Mouton & Marais, 1990).

The research approach and design were primarily based on the research purpose and problem. This study can be explained under several classifications of research based on the nature and purpose of the study. A descriptive study according to Kumar (2005), attempts to systematically describe a phenomenon, problem, situation, program or service, or provides information about living aspects of community, or provides description on attitudes towards any issue. This study is descriptive in nature as it describes the levels of AQ and perceived stress among middle-level managers of the NGO sector in Sri Lanka. An explanatory study clarifies the relationship between two aspects of a phenomenon or situation (Kumar, 2005) and the direction of the relationship between the variables or events (Mouton & Marais, 1990). This study is explanatory in nature as well since it explores the relationship between AQ and perceived stress.

Current research dealt with a quantitative approach with the aim of collecting quantifiable data, analysis of data using statistical methods, and to generalise findings. A quantitative analysis deals with numerical data objectively and use mathematical or statistical operations in investigating study properties (Walliman, 2010).

3.4. Conceptual Framework

The main objective of this study was to identify the impact of AQ on perceived stress. As illustrated in the literature review, AQ indicates the ability of an individual to cope with adversities (Stoltz, 1997). The influence of AQ is less examined in relation to stress (Shen, 2014). Therefore, the current study has narrowed down the scope to investigate the role and impact of AQ. The research variables explored under the

objectives of the study can be identified in the conceptual framework (Figure 2). AQ was considered as the main predictor variable and perceived stress as the dependent variable. The literature shows mixed results in relation to the influence of demographic factors (i.e., gender, age, work experience, academic qualifications, marital status) on AQ (Bantang et al., 2013; De Gulan, Rosalia, & Caballero, 2013; Lazaro-Capones, 2004) and stress (Dua, 1994; Jeyaraj, 2013; Vadivu, 2017). Therefore, this study aims to investigate whether AQ levels of managers differ due demographic factors. Also, the study aims to explain the variance in stress due to demographic factors. In addition, the study explores the influence of type of NGO (international or Sri Lankan NGO) on AQ and stress. Further, the study investigates whether AQ moderates the relationship between demographic factors and perceived stress.

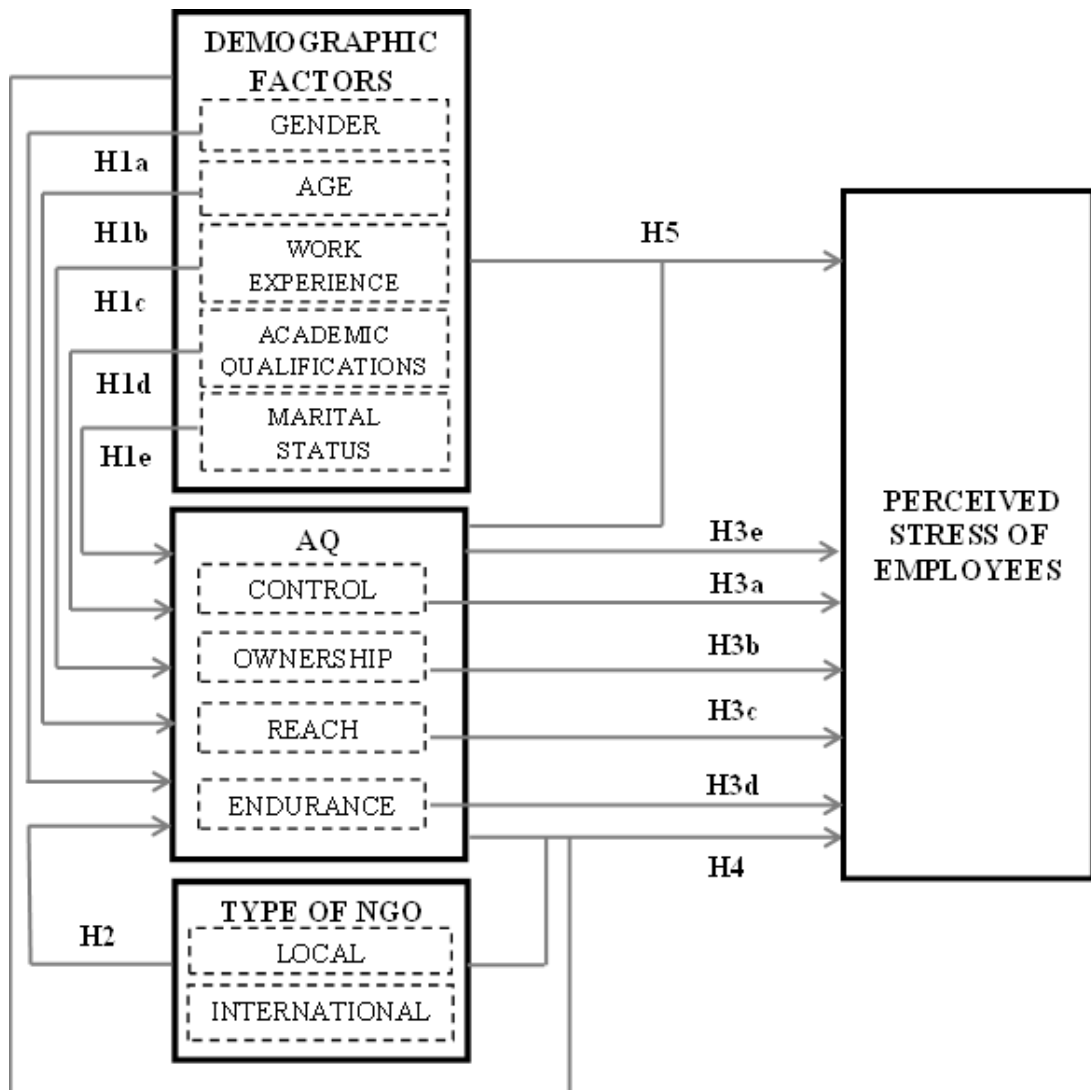


Figure 2. Conceptual Framework

3.5. Research Hypotheses

The five main hypotheses were developed based on the objectives of the study. The first group of hypotheses was based on the objective of examining the influence of demographic factors (gender, age, work experience, academic qualifications, marital status) on AQ as given below.

H1₀: There is no significant difference in respondents' AQ due to gender

H1₁: There is a significant difference in respondents' AQ due to gender

H1b₀: There is no significant difference in respondents' AQ due to age

H1b₁: There is a significant difference in respondents' AQ due to age

H1c₀: There is no significant difference in respondents' AQ due to work experience

H1c₁: There is a significant difference in respondents' AQ due to work experience

H1d₀: There is no significant difference in respondents' AQ due to academic qualifications

H1d₁: There is a significant difference in respondents' AQ due to academic qualifications

H1e₀: There is no significant difference in respondents' AQ due to marital status

H1e₁: There is a significant difference in respondents' AQ due to marital status

The second hypothesis was based on the objective of examining the influence of the type of NGO (international or Sri Lankan NGO) on AQ as given below.

H2₀: There is no significant difference in respondents' AQ due to type of NGO

H2₁: There is a significant difference in respondents' AQ due to type of NGO

The third group of objectives of the study was based on the objective of identifying the association between AQ and its sub-dimensions (Control, Ownership, Reach, Endurance), and perceived stress as given below.

H3a₀: There is no significant association between the 'Control' sub-dimension of AQ and perceived stress of NGO sector middle-level managers

H3a₁: There is a significant association between the 'Control' sub-dimension of AQ and perceived stress of NGO sector middle-level managers

H3b₀: There is no significant association between the 'Ownership' sub-dimension of AQ and perceived stress of NGO sector middle-level managers

H3b₁: There is a significant association between the 'Ownership' sub-dimension of AQ and perceived stress of NGO sector middle-level managers

H3c₀: There is no significant association between the 'Reach' sub-dimension of AQ and perceived stress of NGO sector middle-level managers

H3c₁: There is a significant association between the 'Reach' sub-dimension of AQ and perceived stress of NGO sector middle-level managers

H3d₀: There is no significant association between the 'Endurance' sub-dimension of AQ and perceived stress of NGO sector middle-level managers

H3d₁: There is a significant association between the 'Endurance' sub-dimension of AQ and perceived stress of NGO sector middle-level managers

H3e₀: There is no significant association between AQ and perceived stress of NGO sector middle-level managers

H3e₁: There is a significant association between AQ and perceived stress of NGO sector middle-level managers

The fourth hypothesis of the study was based on the objectives of ascertaining whether AQ, demographic factors, and type of NGO predict the variance in perceived stress as given below.

H4₀: AQ in the presence of gender, age, work experience, educational qualifications, marital status, and type of NGO does not predict the variance in the perceived stress levels of NGO sector middle-level managers

H4₁: AQ in the presence of gender, age, work experience, educational qualifications, marital status, and type of NGO predicts the variance in the perceived stress levels of NGO sector middle-level managers

The fifth hypothesis of the study was based on the objective of identifying whether AQ has a moderating effect on the relationship between demographic factors and perceived stress as given below.

H5₀: AQ does not moderate the relationship between demographic factors and perceived stress levels of NGO sector middle-level managers

H5₁: AQ moderates the relationship between demographic factors and perceived stress levels of NGO sector middle-level managers

3.6. Research Instrumentation

This study utilised survey method using a structured questionnaire to collect data from the sample. Questionnaire pre-testing was conducted prior to data collection to identify any inconsistencies or issues with regard to language or cultural accessibility within the survey instrument (Ferketich, Phillips, & Verran, 1993). Further, aspects such as understandability, readability, length, item wording and sequence, and

appropriateness of instructions were substantiated. Hence, it was identified that the questionnaire need not be translated to local languages as verified through the pretesting. The following section describes the research instruments selected to measure AQ and perceived stress.

3.6.1. Adversity Response Profile

Adversity Response Profile (ARP) was utilised to measure the levels of AQ of respondents (Stoltz, 2000). It is a self-rating questionnaire in a 5-point bipolar scale that consists of twenty scenarios to measure an individual's level and style of response to adverse situations. The instrument determines overall AQ score ranging from 40 to 200 classified under the four dimensions of AQ; Control, Ownership, Reach, Endurance (Tian & Fan, 2014).

ARP has been used in many countries such as Malaysia, China, Canada, Philippines, United States, Taiwan, India, Singapore, and Pakistan. The validity and reliability of the instrument has been ensured as it has been most widely used in relation to diverse constructs: business and educational leadership (Schmidt, 1999), academic performance or achievement (Huijuan, 2009; Matore, Khairani, & Razak, 2015), performance levels at work (Lazaro-Capones, 2004), commitment to change during organisational transformation (Langvardt, 2007), optimism and sales performance (Johnson, 2005), resilience and job satisfaction (Paramanandam & Shwetha, 2013; Sharksnas & Lynn, 2002), psychological contract breach and turnover intention (Bukhari et al., 2011; Chin & Hung, 2013), personal characteristics and personality-temperament traits (Olila, 2012), job embeddedness (De Gulan, Rosalia, & Caballero, 2013), personal characteristics and job satisfaction (Bantang et al., 2013),

demographic factors (Shen, 2014; Tigchelaar & Bekhet, 2015), development of educational programs (Almeida, 2009), Big Five personality traits (Le Thi, 2007), academic self-concept and achievement motivation (Devakumar, 2012).

3.6.2. Perceived Stress Scale

The perceived stress levels of respondents were evaluated using the Perceived Stress Scale (PSS-14) designed to assess the degree to which individuals find their life unpredictable, uncontrollable, and overloaded (Cohen et al., 1983). It is a global measure of stress, and the most widely used psychological instrument for measuring the perception of stress (Cohen, 1986). Questions of the scale are general in nature and thus are relatively free of content specific to any sub population group (Cohen & Williamson, 1988; Kiran, 2015). The self-report scale consists of 14 items on a 5-point likert scale ranging from 'never' to 'very often'. The scores range from 0 to 56 and high scores represent high levels of perceived stress (Andreou et al., 2011; Katsarou et al., 2012; Yin-Fah et al., 2010).

The tool has been used worldwide in a wide range of settings with general and clinical populations (Remor, 2006). For instance, a variety of samples such as students, managers, blue collars, administrative workers, secretaries, technical workers, engineers, pharmacists (Abhay et al., 2011; Lesage, Berjot, & Deschamps, 2012; Smith, Rosenberg, & Haight, 2014; Votta & Benau, 2013) from numerous countries such as Canada, India, Sweden, Pakistan, China, Japan, Spain, United States, Korea, France, Turkey, Greece, Brazil, Mexico have been tested utilising the tool. The PSS has been translated into several languages including European Spanish (Remor, 2006), Mexican Spanish (Ramírez & Hernández, 2007), Swedish (Eskin & Parr,

1996), Japanese (Mimura & Griffiths, 2004), Chinese (Lee & Crockett, 1994; Leung, Lam, & Chan, 2010), Turkish (Örücü & Demir, 2009), Arabic (Chaaya et al., 2010), Korean (Lee et al., 2015; Park & Seo, 2010), Urdu (Pakistan language) (Shamsi et al., 2010), Lithuanian (Malinauskas, Malinauskiene, & Dumciene, 2010), Russian, Polish, Bulgarian, Hungarian, Italian, Hebrew, Sinhala, Danish, and Brazilian (Cohen, 2015). Its application has particular value in cross-cultural studies, since it has been used in a wide range of cultures. The tool has been utilised to evaluate the effectiveness of stress-reduction interventions and also as a benchmark for assessing the validity of other measures of stress (Mimura & Griffiths, 2004). Hence, PSS-14 is utilised as a research instrument in gauging levels of perceived stress in this study based on its inherent appeal as a measurement of perceived stress.

3.7. Research Sample, Data Collection, and Data Analysis

3.7.1. Sampling Method

The sample of the study was selected using stratified random sampling method. Initially, a list of NGOs functioning in Sri Lanka was obtained from the National Secretariat for Non-Governmental Organisations. The list consisted of 96 NGOs registered in Colombo and operating around Sri Lanka including 32 INGOs (stratum1) and 64 SLNGOs (stratum 2). In proportion to the ratio of 1:2, 12 INGOs and 24 SLNGOs were randomly selected for the study. Employees of all levels in the NGOs could not be selected for the survey since they were dispersed around the country engaged in different projects. Hence, the unit of analysis was middle-level managers of NGOs. All middle-level managers of randomly selected 36 NGOs were selected for the study.

Middle-level managers work in between top-level and lower-level managers, and they review work plans and coordinate work across the organisation to fulfil those plans (Ireland, 1992). They play a vital role in communicating an organisation's mission, goals, and priorities, and are responsible for promoting innovation and risk-taking (Hornsby, Kuratko, & Zahra, 2002). It was difficult to derive a general definition for middle-level managers due to diversity among and within INGOs and SLNGOs. The two differ based on job profile factors such as major duties and responsibilities, qualifications, scope, span of control, and pay and benefits. Hence the study defined middle-level managers as employees who function in between the top-level and lower-level management. They receive broad and overall policies, objectives, and strategies from the top management, and translate them into specific plans and objectives for lower-level or first-line managers to implement. The middle-level managerial cadres of both the INGOs and SLNGOs in general included job titles such as area project coordinator, senior project manager, zonal manager, project lead, and divisional head. Middle-level managers were identified according to the specifics of each organisation after consultation with Human Resource (HR) personnel of selected NGOs.

3.7.2. Sample Size

The sample size is a pivotal aspect of any research since a sample represents the population from which it is drawn to obtain true inferences about the population (Israel, 1992). Generally, the selection of sample size depends on research questions, objectives, planned statistical analysis, and feasibility of the study in terms of availability of money, manpower, and other resources (Binu, Mayya, & Dhar, 2014). Green (1991) suggests a sample of $N > 50 + 8M$ (where M equals number of

independent variables) is acceptable for regression analysis. In this study, four sub-dimensions of AQ, gender, age, work experience, academic qualifications, marital status, and type of NGO were considered as the independent variables for the regression analysis. Accordingly, as per the formula by Green (1991), sample size for this study should be greater than 130 ($N > 50 + 8*10$) for regression analysis. Israel (1992) points out that for more precise evaluations a sample size of 200-500 can be considered for multiple regression, log-linear analysis, or analysis of covariance. This study collected 223 valid responses from the survey. A total of 255 middle-level managers were identified from the selected 36 NGOs. Only 232 middle-level managers responded and 223 responses were found usable as 9 were incomplete.

3.7.3. Data Collection

The data collection was conducted using a structured questionnaire consisting of PSS-14, ARP, and a separate section for demographic information of respondents. Approval was obtained from responsible personnel of HR Department of selected organizations. The survey was conducted on a face-to-face basis with middle-level managers of certain organisations that gave a specific time slot to meet the participants and conduct the survey. In few organisations where the middle-level managers function in outstation projects, a responsible person of the HR department was assigned from each organisation to coordinate with the participants and obtain the responses. Those assigned officials were well-informed about the survey. The procedures to ensure confidentiality of respondents were discussed, and responses were obtained without compromising their anonymity and confidentiality of findings. This was ensured by providing sealed envelopes and a sealed drop box to return the questionnaires. The assistance of respective HR personnel of organisations was

obtained to collect the completed questionnaires within a time period of 15 days from the respondents.

3.7.4. Methods of Data Analysis

The data analysis was conducted using the Statistical Package for the Social Sciences (SPSS) version 21.0. The data analysis included descriptive analysis, correlational statistics, mean difference and regression analysis.

In conducting data preparation, data cleaning was conducted and the data set was checked for missing values and outliers. Further, the measures of central tendency, dispersion, and distribution were examined. The normal distribution of data was confirmed. To assess whether the instruments produce stable and consistent results, the reliability of research instruments was tested. Data analysis checked the descriptive statistics of the sample and hypotheses were tested using inferential statistics.

The first set of hypotheses of the study was investigated using Independent-samples T-Test and One-Way Analysis of Variance (ANOVA) to determine a significant difference in AQ due to demographic factors. An important assumption of the Independent-samples T-test and ANOVA is homogeneity of variances which is tested using the Levene's test for equality of variances.

For the second hypothesis, in order to determine a significant difference in AQ due to the type of NGO, Independent-samples T-Test was utilised.

Pearson Product-Moment correlation test was used in testing the third set of hypotheses to measure the strength and direction of the linear relationship between the

variables. The test is based on certain assumptions: variables should be in a continuous form, there should be a linear relationship between variables, there should be no significant outliers, and data should be normally distributed. The study variables (i.e. perceived stress and AQ) were measured as continuous, and assumption of normality was attested.

In investigating the fourth hypothesis, hierarchical regression analysis was conducted to determine whether AQ, demographic factors, and the type of NGO predict the variance in perceived stress. Hierarchical regression determines the proportion of the variation in the dependent variable explained by the addition of new independent variables, and determine the degree of change in the dependent variable due to a unit change of an independent variable.

The following assumptions are important for hierarchical regression.

1. A linear relationship between the predictor variables and the dependent variable.
2. Homoscedasticity of residuals (equal error variances).
3. No multi-collinearity.
4. Errors (residuals) are normally distributed.

The first assumption was tested for linearity that verifies whether the dependent variable is linearly related to the combined effect of independent variables. The second assumption was verified for homoscedasticity (homogeneity of variances) to identify whether the residuals are equal for all values of the predicted dependent variable. Both the first and second assumptions were checked by examining the

scatterplot that was created using standardised residuals (zresid) against standardised predicted values (zpred). A funnel shaped plot indicates the data to be heteroscedastic and any curves in the plot demonstrate the data to be non-linear (Field, 2009).

Multi-collinearity occurs when there are two or more independent variables that are highly correlated with each other. First, the strength of relationships was examined through the correlation coefficients matrix of the SPSS output, to verify that relationships do not have a correlation more than 0.70. It partly assures that there is no multi-collinearity (Field, 2009). More importantly, Tolerance and the Variance Inflation Factor (VIF) values confirm this assumption. A tolerance value of less than 0.1 (making VIF greater than 10) shows multi-collinearity among variables (Field, 2009).

The fifth assumption was tested to check whether the errors (residuals) were normally distributed through histograms and the P-P plots.

In investigating the fifth hypothesis, regression-based PROCESS moderation was conducted to determine whether AQ has a moderating effect on the relationship between demographic factors and perceived stress.

3.8. Ethical Considerations

The survey was conducted only after the consent of all organisations and participants. Participation of respondents in the study was voluntary and they were given autonomy either to accept or refuse to take part in the survey. The study deployed necessary procedures to ensure that the privacy and confidentiality of respondents and respective organisations are met. A letter was provided with the survey questionnaire mentioning the purpose of the study and the confidentiality of their involvement in the

study. Personal information related to respondents and names of organisations were kept in strict confidentiality.

CHAPTER 4

RESULTS AND DISCUSSION

4.1. Introduction

The aim of this chapter is to discuss the study findings. The first section of the chapter has presented results of the data quality, and the descriptive statistics in the second section. The third section has examined the inferential statistics used to test hypotheses of the study.

4.2. Tests of Data Quality and Study Assumptions

4.2.1. Results of Data Quality and Scale Reliability

Data set was checked for missing values, outliers, and scale reliability. Two hundred and twenty-three responses out of 232 middle-level managers were found usable whereas 9 were incomplete. Data were entered into SPSS and no missing values were recognised. The visual analysis of boxplot did not reveal any outliers. As indicated in Table 4.1, Cronbach Alpha values above .70 confirmed scale reliability (Field, 2009).

Table 4.1 Scale Reliability

Variable	Scale	Cronbach's Alpha
Perceived Stress	Perceived Stress Scale (PSS-14)	0.91
Adversity Quotient	Adversity Response Profile	0.90

4.2.2. Results of Study Assumptions

As discussed in chapter 3 (section 3.7.4) relevant assumptions in statistical testing were verified prior to data analysis. Normal distribution of data was examined and as indicated in Table 4.2, skewness and kurtosis for all variables were within the accepted range of ± 2 indicating normal distribution of data (George & Mallery, 2010). Normal distribution of data was further confirmed by the Shapiro-Wilk test of normality. Perceived stress recorded a significant value of 0.06 and AQ recorded a significant value of 0.36, confirming the normal distribution of data. A significant value above 0.05 indicates normal distribution of data (Field, 2009). Hence, all the variables were assumed to be normally distributed.

Table 4.2 Distribution of Data

Variable	Skewness	Skewness z-score	Kurtosis	Kurtosis z-score
Perceived Stress	0.005	0.030	-0.633	-1.953
Adversity Quotient	0.004	0.024	-0.528	-1.629
Control	-0.147	-0.901	-0.384	-1.185
Ownership	-0.245	-1.503	-0.341	-1.052
Reach	-0.207	-1.269	-0.491	-1.515
Endurance	-0.055	-0.337	-0.644	-1.987

N=223 for all variables / Std. error of Skewness =0.163 / Std. error of Kurtosis =0.324

A linear relationship between the independent variables and the dependent variable, and homoscedasticity were checked by examining the scatterplot (Figure 3) that was created using standardised residuals (zresid) against standardised predicted values

(zpred). The scatterplot in Figure 3 shows that the data have approximately met the assumptions of linearity because the residuals form a horizontal band. It has also met the assumption of homoscedasticity because the spread of the residuals has not drastically increased or decreased across the predicted values (Field, 2009).

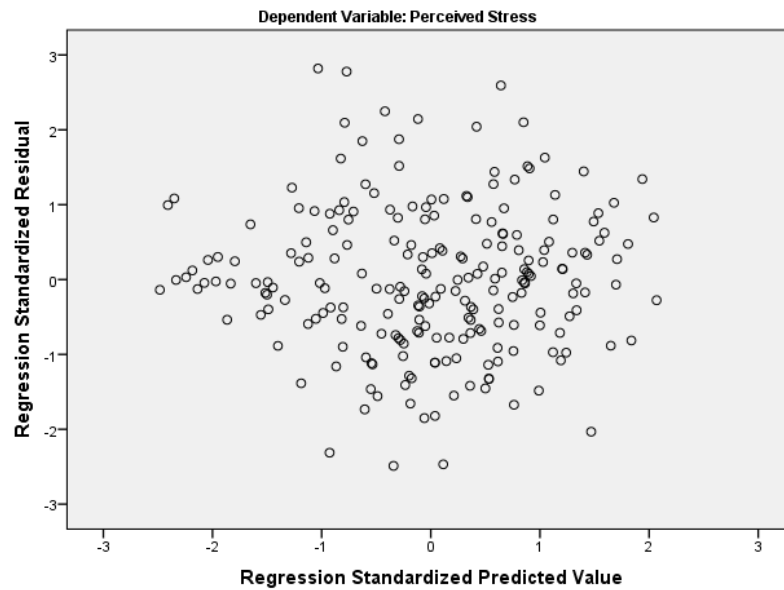


Figure 3. Scatter Plot of Standardized Predicted Values against Standardized Residuals (zpred vs. zresid)

The assumption of multicollinearity between variables was checked using Tolerance and the Variance Inflation Factor (VIF) values. According to the test results (Table 4.3), data had no multicollinearity issue as the tolerance values were higher than 0.1.

Table 4.3 Collinearity Statistics of the Variables

Variable	Collinearity Statistics	
	Tolerance	VIF
Control	0.480	2.084
Ownership	0.408	2.451
Reach	0.497	2.012
Endurance	0.474	2.108
Gender	0.918	1.089
Age	0.279	3.585
Experience level	0.309	3.238
Single (Marital status)	0.848	1.179
Divorced (Marital status)	0.933	1.072
Widowed (Marital status)	0.958	1.043
Secondary Qualification	0.461	2.170
Graduate Qualification	0.247	4.042
Postgraduate Qualification	0.239	4.183
NGO Type	0.781	1.280

In the next assumption it was checked whether the errors (residuals) were normally distributed through histogram and the P-P plot. The histogram of standardised residuals (Figure 4) illustrates that the data contained approximately normally distributed errors. The P-P plot of standardised residuals (Figure 5) indicated that points are approximately running closer to the diagonal line indicating that errors are normally distributed.

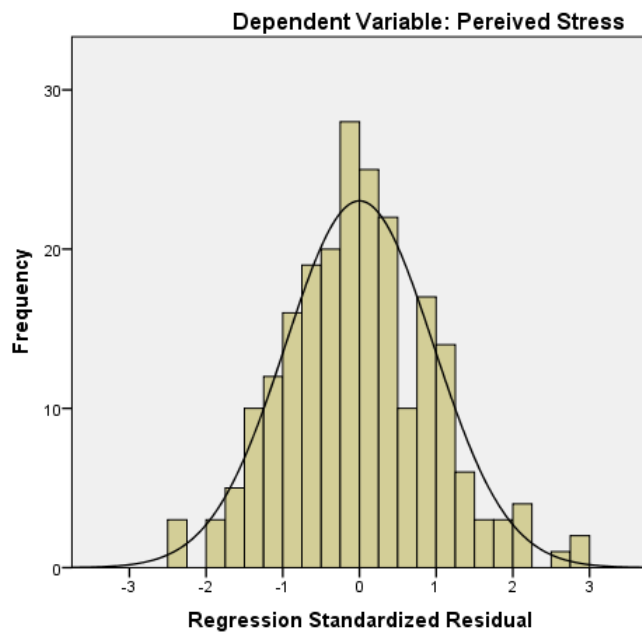


Figure 4. Histogram of Standardised Residuals

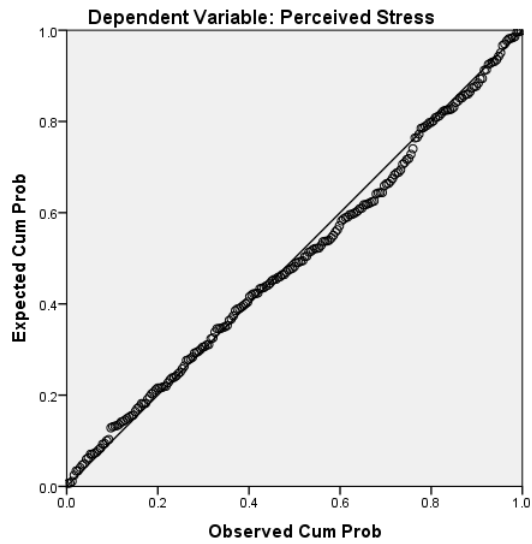


Figure 5. P-P Plot of Standardised Residuals

4.3. Descriptive Statistics of the Sample

This section reports the descriptive analysis of the sample and its characteristics. Respondents recorded a mean value of 26.92 for perceived stress from a maximum score of 56 with a standard deviation (SD) of 10.10. A mean value of 134.31 from a maximum score of 200 with an SD of 25.26 was scored for AQ. In the following section, distribution of the demographics is discussed.

4.3.1. Gender of Managers

As shown in Table 4.4, the distribution of respondents consisted of 159 men (71.3%) and 64 women (28.7%). The majority was men in both INGOs and SLNGOs.

Table 4.4 Distribution of Respondents by Gender

Type of NGO	Gender	Frequency	Percentage
INGO	Women	33	30.84
	Men	74	69.16
SLNGO	Women	31	26.72
	Men	85	73.28
Total	Women	64	28.70
	Men	159	71.30

4.3.2. Age of Managers

Overall age of respondents varied from 28 to 57 years. As presented in Table 4.5, distribution of respondents by age indicated that the majority (45.3%) of middle-level managers belonged to the age group of 35-44 years. The second highest percentage of 32.7% was recorded by the age category 25-34 years, whereas the lowest percentage

(4.5%) was represented by the age category of 55 and above. The findings indicate that young and middle-aged middle managers were higher in number.

Table 4.5 Distribution of Respondents by Age Category

Age category (Years)	Frequency	Percentage
25-34	73	32.7
35-44	101	45.3
45-54	39	17.5
55 and above	10	4.5
Total	223	100.0

4.3.3. Academic Qualifications of Managers

As indicated in Table 4.6, the distribution of respondents by academic qualifications showed that the majority (58.7%) of middle-level managers in the NGO sector has a bachelor's degree, whereas 24.2% had postgraduate qualifications. The lowest percentage (7.6%) represented middle-level managers who hold only a professional qualification. Middle-level management of NGOs was highly educated as nearly 83% held graduate and/or postgraduate qualifications.

Table 4.6 Distribution of Respondents by Academic Qualification

Academic qualification category	Frequency	Percentage
Secondary Qualification	21	9.5
Professional Qualifications	17	7.6
Graduate Qualification	131	58.7
Postgraduate Qualification	54	24.2
Total	223	100

4.3.4. Work Experience of Managers

As presented in Table 4.7, the distribution of respondents based on work experience recorded that the highest percentage (58.3%) of middle-level managers represented the experience category of 1-10 years. The work experience category of 11-20 years recorded 37.7% followed by the lowest percentage of 4% by the category of 21-30 years. It can be assumed that the percentage of middle-level managers declines with the increase of experience due to managers with higher experience moving up to top-level positions.

Table 4.7 Distribution of Respondents by Work Experience

Work experience category (Years)	Frequency	Percentage
1-10 years	130	58.3
11-20 years	84	37.7
21-30 years	9	4.0
Total	223	100.0

4.3.5. Marital Status of Managers

The distribution by marital status recorded that the majority (64.6%) of the respondents was married while a lesser percentage (29.6%) was single. Further, 4% of respondents was divorced and 1.8% was widowed.

4.3.6. Distribution by Type of NGO

Fifty-two percent of the middle-level managers was representing SLNGOs, while 48% represented INGOs. The sample of the study consisted of middle-level managers from 24 SLNGOs and 12 INGOs. The number of middle-level managers was almost equal in both SLNGOs and INGOs.

4.4. Inferential Statistics: Hypotheses Testing

Hypotheses of the study were tested using inferential statistics. The first hypothesis was investigated using Independent-samples T-test and one-way ANOVA to examine whether AQ differs due to demographic factors. The second hypothesis examined the influence of the type of NGO on AQ using Independent-samples T-test. The third hypothesis investigated the association between AQ and its sub-dimensions, and perceived stress using Pearson's r correlation. The fourth hypothesis examined whether AQ, demographic factors, and the type of NGO predict the variance in perceived stress using hierarchical regression analysis. The fifth hypothesis explored whether AQ has a moderating effect on the relationship between demographic factors and perceived stress using regression-based moderation analysis.

4.4.1. Relationship between AQ and Demographic Factors

The first group of hypotheses explored the influence of demographic factors (gender, age, work experience, academic qualifications, and marital status) on AQ.

4.4.1.1. Gender and AQ of Managers

The relationship between the gender of respondents and their AQ was examined.

H1_{a0}: There is no significant difference in respondents' AQ due to gender

The Independent-samples T-test was used to identify whether there was any significant difference in AQ among male and female middle-level managers. The assumption of homogeneity of variance was met as the Levene's test for equality of variances value 0.60 was greater than the level of significance ($p > 0.05$). Males indicated greater level of AQ ($M = 135.93$, $SE = 1.96$) than females ($M = 130.28$, $SE = 3.29$). This difference was not significant $t(221) = -1.51$, $p > 0.05$; however, it represented an effect of $r = 0.01$. It can be concluded that there is no significant difference in respondents' AQ regardless of being male or female. Therefore, the null hypothesis cannot be rejected.

Results indicated that AQ of male middle-level managers was not significantly different from that of the females. Effect of gender on AQ has mixed findings in literature. De Gulan, Rosalia, and Caballero (2013) have found women to have higher mean scores of AQ compared to that of men. Contrastingly, Lin (2001) has identified significantly higher AQ levels among male managers. Findings of this study confirmed the majority of previous findings that indicated gender has no significant influence on the level of AQ of an individual (Bantang et al., 2013; Huijuan, 2009; Shen, 2014). A possible assertion is that AQ is a mental capacity that extends beyond the masculine and feminine traits of people.

4.4.1.2. Age and AQ of Managers

The relationship between the age of respondents and their AQ was examined.

H1b₀: There is no significant difference in respondents' AQ due to age

One-way ANOVA test was conducted to identify whether there was a significant difference among the mean values of different age groups. As indicated in Table 4.8 the assumption of homogeneity of variance was met as the Levene's test for equality of variances value 0.221 was greater than the level of significance ($p > 0.05$). The p -value of one-way ANOVA test was lower than the level of significance ($p > 0.05$). It can be concluded that there is a significant mean difference in AQ due to age. Therefore, the null hypothesis could be rejected.

Table 4.8 Influence of Age on AQ

	Age (Mean)				F-Value	P-Value (Sig.)	Levene's Test for Equality of Variances (Sig.)
	25-34 Years (n=73)	35-44 Years (n=101)	45-54 Years (n=39)	55 Years & Above (n=10)			
Adversity Quotient	120.10	133.96	152.97	168.80	28.93	0.000	0.221

The analysis of means recorded the highest mean as 168.80 for the age group 55 years and above (refer Table 4.8). According to results of Tukey-Kramer post-hoc test (refer Table 4.9), the highest significant mean difference was recorded between the age groups 25-34 years and 55-64 years (48.69), and the second highest mean difference (34.83) between 35-44 years and 55-64 years age groups, followed by significant

mean differences between the age groups 25-34 years and 45-54 years (32.86), 35-44 years and 45-54 years (19.01), and between the age groups 25-34 years and 35-44 years (13.85).

Table 4.9 AQ among Age Groups (Post-hoc Test Results)

Age Group (Years)	Mean Difference
25-34 and 35-44	13.85*
25-34 and 45-54	32.86*
25-34 and 55 and above	48.69*
35-44 and 45-54	19.01*
35-44 and 55 and above	34.83*

Note. * $p < 0.05$ significant mean differences

This study revealed that the level of AQ of middle-level managers has increased with the increase in age. Some studies have indicated that age has no significant influence on AQ (Bantang et al., 2013; Huijan, 2009; Lazaro-Capones, 2004; Olila, 2012). Findings of this study indicated that the age group of 25 to 34 years had the lowest AQ levels while the age group 55 to 64 years had the highest levels of AQ. This finding was consistent with the findings of Paramanandam and Shwetha (2013) who found increase of AQ with age. Shen (2014) also found age to have a significant effect on AQ with the conclusion that AQ increases with increasing age. It can be assumed that employees in higher age categories (with more exposure and experience overtime) have developed AQ abilities. Experiences and encounters have possibly made them more resilient and better able to cope with adversity, and thus superior to

that of those in younger age groups. According to Stoltz (1997), the more hardships a person experiences, the more that person learns how to deal with them.

4.4.1.3. Work Experience and AQ of Managers

The relationship between the work experience of respondents and their AQ was examined.

H1₀: There is no significant difference in respondents' AQ due to work experience

One-way ANOVA test was conducted to identify whether there was significant mean difference in AQ among different work experience groups. The assumption of homogeneity of variance was met as the Levene's test for equality of variances value was greater than the level of significance of $p > 0.05$ (refer Table 4.10). The p -value of one-way ANOVA test was lower than the level of significance ($p > 0.05$). It can be concluded that there is a significant difference of AQ due to work experience. This results in the rejection of the null hypothesis.

Table 4.10 Influence of Work Experience on AQ

	Work Experience (Mean)			F-Value	P-value (Sig.)	Levene's Test for Equality of Variances (Sig.)
	1-10 Years (n=130)	11-20 Years (n=84)	21-30 Years (n=9)			
Adversity Quotient	125.78	144.04	166.66	25.70	0.000	0.277

The highest mean of 166.66 was recorded for the work experience category 21-30 years. Results of the Tukey-Kramer post-hoc test (Table 4.11) revealed that there

were significant differences of AQ among the work experience categories between 1-10 years and 11-20 years (18.26), 1-10 years and 21-30 years (40.88), and 11-20 years and 21-30 years (22.61).

Table 4.11 AQ among Work Experience Categories (Post-hoc Test Results)

Work Experience Category (Years)	Mean Difference
1-10 and 11-20	18.26*
1-10 and 21-30	40.88*
11-20 and 21-30	22.61*

Note. * $p < 0.05$ significant mean differences

Results revealed that AQ levels of middle-level managers increase as work experience increases. This finding is contrasting to majority of previous findings that have concluded influence of work experience on AQ as not significant (Bantang et al., 2013; Huijan, 2009; Lazaro-Capones, 2004; Olila, 2012; Tigchelaar & Bekhet, 2015). Shen (2014) has similar findings as this study that revealed difference in seniority results in a significant effect on levels of AQ indicating higher AQ levels for workers with longer work experience. It is probable that working in a particular context over a long period of time shapes an employee through training and extensive exposure. Shen (2014) states that ability to deal with adversities accumulates through life experience as well. These can result in the development of AQ capacity over the experience gained through years of service.

4.4.1.4. Academic Qualifications and AQ of Managers

The relationship between the Academic Qualifications of respondents and their AQ was examined.

H1d₀: There is no significant difference in respondents' AQ due to academic qualifications

One-way ANOVA test was conducted to identify whether there was a significant mean difference in AQ due to academic qualifications. As indicated in Table 4.12, the assumption of homogeneity of variance was met as the Levene's test for equality of variances value was greater than the level of significance ($p > 0.05$). The p -value of one-way ANOVA test was lower than the level of significance ($p > 0.05$). It can be concluded that there is a significant difference in AQ due to academic qualifications. The null hypothesis could be rejected.

Table 4.12 Influence of Academic Qualifications on AQ

	Academic Qualification (Mean)				F- Value	P- Value (Sig.)	Levene's Test for Equality of Variances (Sig.)
	Secondary (n=21)	Graduate (n=131)	Postgraduate (n=54)	Professional Qualifications (n=17)			
Adversity Quotient	128.00	131.87	148.25	116.58	10.25	0.000	0.422

As presented in Table 4.12, AQ of respondents recorded the highest mean of 148.25 for holders of postgraduate qualifications. Results of the Tukey-Kramer post-hoc test (Table 4.13) revealed that there were significant differences of AQ between

postgraduate and secondary qualifications (20.25), postgraduate and graduate qualifications (16.38), and postgraduate and professional qualifications (31.67).

Table 4.13 Difference of AQ among Academic Qualifications (Post-hoc Test Results)

Academic Qualification	Mean Difference
Postgraduate and Secondary	20.25*
Postgraduate and Graduate	16.38*
Postgraduate and Professional Qualifications	31.67*

Note. * $p < 0.05$ significant mean differences

This study revealed that academic qualifications have a significant effect on AQ where higher AQ levels were recorded for middle-level managers with higher academic qualifications. This finding strengthened the findings of Tripathi (2011) that identified a significant difference in AQ based on academic qualifications whereas studies by Olila (2012), Bantang et al. (2013), Shen (2014), and Tigchelaar and Bekhet (2015) identified no such influence on AQ. Individuals must be highly committed, exert greater effort, and believe in themselves to face challenges and pursue higher academic qualifications. Afari, Ward, and Khine (2012) state pursuing academic achievements involves positive self-esteem and self-efficacy. Those with higher academic qualifications may have developed their cognitive capacity to deal with challenging situations. Those who excel in the academic field are also intelligent in dealing with adversities (Matore, Khairani, & Razak, 2015). It can be assumed that AQ levels are higher among those with higher levels of education compared to that of lower levels of education.

4.4.1.5. Marital Status and AQ of Managers

The relationship between the marital status of respondents and their AQ was examined.

H1e₀: There is no significant difference in respondents' AQ due to marital status

One-way ANOVA test was conducted to identify whether there was a significant difference in AQ due to marital status. As indicated in Table 4.14, the assumption of homogeneity of variance was met as the Levene's test for equality of variances value 0.748 was greater than the level of significance ($p > 0.05$). The p -value of one-way ANOVA test was above the level of significance ($p > 0.05$). It can be concluded that there is no significant mean difference in AQ due to marital status. Therefore, the null hypothesis cannot be rejected.

Table 4.14 Influence of Marital Status on AQ

	Marital Status (Mean)				F-Value	P-Value (Sig.)	Levene's Test for Equality of Variances (Sig.)
	Married (n=144)	Single (n=66)	Divorced (n=9)	Widowed (n=4)			
Adversity Quotient	134.43	133.93	136.5	136.5	0.146	0.965	0.748

Findings revealed that marital status does not have a significant effect on AQ level of NGO managers. This strengthened the findings of studies by Lazaro-Capones (2004), Olila (2012), Bantang et al. (2013), and Paramanandam and Shwetha (2013) that

concluded marital status of a person does not influence AQ. It is probable that AQ as a capability of a person to handle adversities across vast areas of life is not determined by the marital status of a person (Bantang et al., 2013; Kumar, 2016).

4.4.2. Relationship between AQ and Type of NGO

The second hypothesis of the study explored whether AQ levels differ among respondents due to the type of NGO (SLNGO/INGO) they work in.

4.4.2.1. Influence of Type of NGO on AQ

H₂₀: There is no significant difference in respondents' AQ due to type of NGO

The Independent-samples T-test was used to identify whether there was any significant difference in AQ among SLNGO and INGO middle-level managers. The assumption of homogeneity of variances was violated, as assessed by Levene's test for equality of variances ($p < 0.45$). Therefore, the results of the Welch t-test were interpreted. INGO managers indicated greater level of AQ ($M = 141.86$, $SE = 2.51$) compared to SLNGO managers ($M = 127.34$, $SE = 2.08$). This difference was significant $t(210) = -4.44$, $p > 0.05$ and represented an effect of $r = 0.28$. It can be concluded that there is a significant difference in AQ between SLNGO and INGO middle-level managers. Therefore, the null hypothesis can be rejected.

Results revealed a significant difference in AQ in terms of the type of NGO. INGO middle-level managers indicated a higher mean of 141.86 for AQ compared to middle-level managers of SLNGOs. A possibility could be the difference between the two types of NGOs in terms of operations. World Bank (1995) and Ghimire (2003) have highlighted that INGOs and SLNGOs differ based on level of operations where the former category is headquartered in developed countries having operations both

locally and in multiple countries, while the latter category operates on a national scale. According to Nanthagopan, Williams, and Page (2016), employees in SLNGOs have lower or fewer competencies in managing projects compared to those who work in INGOs in Sri Lanka. This leads to the assumption that employees in INGOs deal with local and international situations, and hence are exposed to diverse opportunities to gain versatile experience in facing adversities. This could work as an opportunity for INGO employees to learn and develop their AQ capacities compared to SLNGO employees. Although literature lacks evidence on the relationship of this classification with AQ, this finding contributes to enrich and provides new insights to AQ literature by exploring these two types of organisations in the same sector.

4.4.3. Association between AQ and Perceived Stress

The third hypothesis of the study was based on the objective of identifying the association between AQ and its sub-dimensions (control, ownership, reach, endurance), and perceived stress. The results of the Table 4.15 are used to discuss the sub-hypotheses of the third hypotheses.

Table 4.15 Association between Adversity Quotient and Perceived Stress

Adversity Quotient	Perceived Stress
Control	-0.656 ^{**}
Ownership	-0.730 ^{**}
Reach	-0.643 ^{**}
Endurance	-0.648 ^{**}
Adversity Quotient	-0.795 ^{**}

Note. ** $p < 0.01$

H3_{e0}: There is no significant association between AQ and perceived stress of NGO sector middle-level managers

Scatter plot was produced to visualise the relationship and linearity between the two variables. As presented in Figure 6, the scatter plot shows that there is a strong linear relationship between AQ and perceived stress. Pearson correlation was calculated to determine the degree of association between AQ and perceived stress. Table 4.17 depicts a Pearson r score of -0.795 indicating a strong negative association between the two variables. Therefore, the null hypothesis can be rejected.

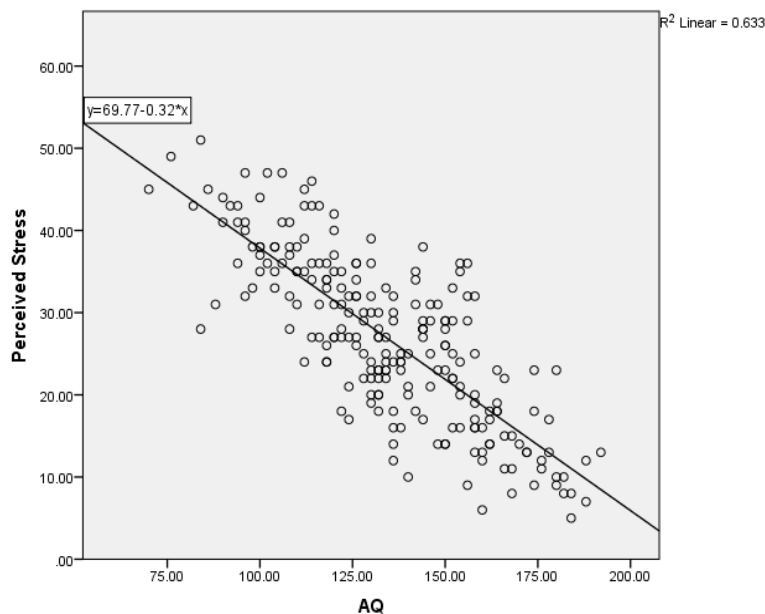


Figure 6. Scatter Plot of AQ and Perceived Stress

The strong negative association ($r = -0.795$) between perceived stress and AQ implied that employees with higher levels of AQ have a low level of stress. This result made the theoretical assertions of the study tenable. One possible reason for this association could be that, managers who have developed AQ skills are able to overcome adversities that can result in lower levels of stress. When they have higher levels of

control, they tend to be proactive in facing adverse situations and are capable of turning adversity into opportunity. This is evident from the finding that control aspect shows a strong negative relationship with perceived stress ($r = -0.656$). The negative association of ownership ($r = -0.730$) implies that middle-level managers with high AQ levels tend to own or feel accountable to improve the adverse situations and face them with responsibility. They also seemed to learn from each situation and change their strategy of dealing with stressful situations. Individuals with high AQ levels do not let adversities to reach other areas of life and they face stressful events with a mind-set that limit the negative effects to that particular situation. This is confirmed by the negative relationship between reach and perceived stress ($r = -0.643$). Similarly, as indicated by the negative relationship between endurance and perceived stress ($r = -0.648$), individuals with high AQ tend to find adversities as temporary and of having solutions to overcome them.

As stated by Chin and Hung (2013), higher levels of AQ will result in better performance in the face of adversity. This was evident in this study with higher AQ levels accompanying lower levels of stress.

4.4.4. The Impact of AQ, Demographic Factors, and the Type of NGO on Perceived Stress

H₄: AQ in the presence of gender, age, work experience, educational qualifications, marital status, and type of NGO does not explain the variance of the perceived stress levels of NGO sector middle-level managers

In investigating the fourth hypothesis, hierarchical regression analysis was conducted to determine whether AQ, demographic factors, and the type of NGO predict the variance in perceived stress. Table 4.16 provides the summary of the hierarchical regression results.

Table 4.8 Impact of AQ, Demographic Factors, and Type of NGO on Perceived Stress

Model	Unstandardized Coefficients		Standardised Coefficients
	<i>Beta</i>	<i>Std. Error</i>	<i>Beta</i>
Model 1			
(constant)	69.434	2.233	
Control	-0.279	0.077	-0.205**
Ownership	-0.483	0.079	-0.366**
Reach	-0.237	0.074	-0.182**
Endurance	-0.269	0.078	-0.193**
Model 2			
(constant)	76.024	3.268	
Control	-0.213	0.073	-0.157**
Ownership	-0.415	0.077	-0.314**
Reach	-0.186	0.069	-0.142**
Endurance	-0.170	0.075	-0.122**
Age	-0.323	0.102	-0.223**
Single (Marital status)	-3.033	0.899	-0.137**
Model 3			
(constant)	75.764	3.293	
Control	-0.217	0.073	-0.159**
Ownership	-0.414	0.077	-0.314**
Reach	-0.185	0.069	-0.141**
Endurance	-0.163	0.075	-0.117**
Age	-0.315	0.102	-0.217**
Single (Marital status)	-3.071	0.901	-0.138**

Note. $R^2 = 0.64$ for Step 1, $R^2 = 0.71$ for Step 2, $R^2 = 0.71$ for Step 3, * $p < 0.05$, ** $p < 0.01$

As indicated in Table 4.16, *Model 1*, which consisted of the sub dimensions of AQ explained 64.3% ($R^2 = 0.643$) of the variation in perceived stress and the model was

significant ($p < 0.05$). The addition of demographic factors (gender, age, work experience, academic qualifications, marital status) led to an increase in the predictability power of the model to 71% ($R^2 = 0.710$) as indicated in *Model 2*. The *Model 3* – full model that included sub dimensions of AQ, demographic factors (gender, age, work experience, academic qualifications, marital status) and the type of NGO explained 71.1% ($R^2 = 0.711$) of variation in perceived stress. However, the addition of the type of NGO in *Model 3* did not significantly improve the variance explained.

As indicated in Table 4.16, results of the overall model (model 3) shows that when ‘control’ increases by one standard deviation (SD) unit, it results in decrease in perceived stress of a middle-level manager by 0.16 SD units. Similarly, increase of ‘ownership’ by one SD unit will cause a decrease of 0.31 SD units in perceived stress, ‘reach’ will cause 0.14 decrease in SD units of perceived stress, and ‘endurance’ will cause decrease in perceived stress by 0.11 SD units. All relationships were found to be statistically significant at 0.05 level. However, except for age and single (marital status), all other variables (gender, work experience, academic qualifications, and type of NGO) had no statistically significant impact ($p > 0.05$) to explain the variance in perceived stress.

The results indicated that the four dimensions of AQ could explain 64.3% of the variance in perceived stress of middle-level managers. However, besides age and marital status (i.e. single), other variables including gender, work experience, academic qualifications, and type of NGO did not explain the variance in perceived stress. Therefore, the null hypothesis cannot be rejected.

Prakaew and Leesattrupai (2017) in a study conducted among students in Bangkok also have concluded that increase in AQ by one SD unit decreases stress by 0.66 SD units. Further their study concluded that AQ significantly predicts 44% ($R^2 = 0.440$; $p < 0.01$) of variance in stress. This study indicates a strong correlation between AQ and perceived stress of NGO sector middle-level managers. Further their perceived stress can be significantly predicted through their AQ. This implies that higher AQ levels lead to lower stress levels. Stress come in to play when the individual perceives an incongruence between own capacities and the demands (Pediwal, 2011). As stated by Shen (2014), AQ develops the attitudes and capability of an individual to deal with stressful situations. Stoltz (2000) claims that individuals with higher AQ levels are able to control events that create adverse circumstances, have sense of accountability towards the outcome of the adverse situation, not allow the effect of adversities to reach other areas in life, and see adverse events as temporary. Therefore, it is probable that there is a strong inter-linkage between AQ level and perceived stress of middle-level managers as found by this study.

Results further indicated that increase in age by one SD unit will cause 0.21 units decrease in perceived stress of middle-level managers. This finding is consistent with the study by Trevisani (2015) on undergraduates that concluded increase in age by one standard deviation causes 0.22 decrease SD units of perceived stress of students. Age has been identified as an influential factor on stress (Dua, 1994; Jeyaraj, 2013; Wichert, 2002). This study also identified that ability to deal with stressful events increases as age increases – indicating lower levels of perceived stress as age increases. In contrast, younger employees are found to experience higher levels of occupational stress since they are concerned about factors that determine the career

ahead of them (Dua, 1994; Sharpley et al., 1996). The negative impact of age on stress can be a result of life and work experience of a person (Sager, 1990; Shen, 2014).

Results also indicated that compared to those who are 'married', perceived stress of 'single' middle-level managers is less by 0.13 SD units. Additionally, perceived stress of 'divorced' middle-level managers is less by 0.02 SD units whereas 'widowed' middle-level managers experience more perceived stress by 0.01 SD units in comparison to perceived stress of 'married' middle-level managers. Nonetheless, results indicated that difference between 'married' and other groups of marital status ('divorced' and 'widowed') as not significant ($p > 0.05$). However, all other variables viz., gender, work experience, and education qualifications, and also the type of NGO had no statistically significant impact ($p > 0.05$) to explain the variance in perceived stress of middle-level managers.

Influence of marital status on stress has been identified in previous studies (Mohamad, Ali, Noor, & Baharum, 2016; Nagaraju & Nandini, 2013). This finding of single employees experiencing lower stress compared to married employees has been highlighted by Vadivu (2017) who concluded that married managers experience higher levels of stress compared to single managers which supports the findings of this study. It can be assumed that those married have different life patterns, commitments, roles, and work/life obligations (Parveen, 2009) which could account for married middle-level managers to experience higher stress. The circumstances such as insufficient time for family, more field work, longer working hours (Jonge &

Dormann, 2006; Pocock, 2003) can have a negative impact on personal lives of NGO sector middle-level managers.

In line with the finding of this study, O'Neill and Davis (2011), Ebrahimi (2013), Abbas and Roger (2013), Nakada et al. (2016), and Vadivu (2017) also have concluded that there is no significant effect of gender, work experience, and educational qualifications on stress in their respective studies. Although literature lack evidence on the effect of type of NGO on perceived stress, this study enriched existing literature by revealing there is no significant effect on perceived stress of middle-level managers due to the type of NGO.

4.4.5. The Moderation Effect of AQ

H5₀: AQ does not moderate the relationship between demographic factors and perceived stress levels of NGO sector middle-level managers

In investigating the fifth hypothesis, regression-based PROCESS moderation was conducted to determine whether AQ has a moderating effect on the relationship between demographic factors and perceived stress. The moderation analysis was conducted for demographic factors (gender, age, work experience, academic qualifications, and marital status) and stress. In the previous hypotheses, the direct effect of demographic factors on perceived stress was reported.

Results revealed that the *p-value* of the moderation effect or the interaction between AQ and demographic factors was not significant ($p > 0.05$). Further, the moderation did not contribute to the overall model of explaining perceived stress level (R^2 change = 0.003, $p > 0.05$). It can be concluded that AQ does not moderate the relationship

between demographic factors and perceived stress. Therefore, the null hypothesis cannot be rejected. As an additional analysis, moderation of AQ was tested between each demographic factor and perceived stress. However, none of the relationships was significant.

As verified in the previous hypothesis, AQ and some demographics factors showed a direct effect on stress. This study has extended the existing literature by investigating the moderation effect of AQ. This implies that the effects of demographic factors and AQ should be considered separately in explaining perceived stress level of a person. Further, AQ does not change the direction of the relationship between demographic factors and perceived stress. For instance, even though an increase in age reduces the perceived stress level of a person (hypothesis 4), AQ neither changes the amount of stress reduced by age nor does it change the direction of that relationship.

This chapter provided empirical evidence on the extent to which AQ associates with perceived stress in the NGO context of Sri Lanka. The chapter was organised based on measures of distribution, reliability, and descriptive and inferential statistics. Study found significant difference in AQ due to age, work experience, and academic qualifications while gender did not indicate such influence. Further, a significant difference in AQ levels between INGO and SLNGO middle-level managers was identified. Results also revealed that AQ is negatively associated with perceived stress. Further, AQ along with age and marital status explained the variance in perceived stress of NGO middle-level managers. Moreover, the results revealed that AQ has no moderation role between demographic factors of managers and their perceived stress.

4.5. Limitations of the Study and Recommendations

The following limitations can be identified in the study.

1. This study was cross-sectional, and provides only a snapshot of AQ and perceived stress at single point in time.
2. In addition to the variables of this study, there could be other intervening or extraneous variables, such as personality traits, organisational factors, or other mental abilities, which can affect the perceived stress levels of managers.
3. This study focused only on the middle-level managers of the NGO sector.

In the light of the research findings the following directions are proposed for future research.

1. The current study can be extended to investigate other layers of management for deep insights.
2. An integrated study among NGO, private, and public sector organisations can be conducted. This will also facilitate the comparison of results among different sectors or industries.
3. Future research can conduct longitudinal studies to investigate the impact of AQ on perceived stress.
4. Further insights can be gained from extending this study for both managers and subordinates. For instance, it would be beneficial to understand the influence of work conditions that affect the level of AQ and stress among all employees within project teams.

5. Future studies can examine the impact of AQ on other outcomes such as job performance and job satisfaction.

CHAPTER 5

CONCLUSIONS

Following conclusions were arrived from the findings of the study.

1. AQ levels of managers are not determined by gender and marital status. Nonetheless, AQ level increases with the increase in age, work experience, and academic qualifications. Hence, organisations can invest on training and development for young, inexperienced, and less-educated employees to develop their AQ capacities to cope with stress.
2. Managers in INGOs have higher AQ level compared to SLNGO managers. Hence, SLNGOs can incorporate AQ development strategies into human resource management practices such as training and development, and performance management.
3. Managers with higher level of AQ operate with lower levels of stress. Research on stress can consider AQ as an important construct in their models. Practitioners will benefit by realising the significant role AQ can play in coping with adversities encountered at work. Organisations can conduct programmes to enhance AQ dimensions that would reduce the level of stress among employees. The level of AQ can be considered as a selection criterion.
4. AQ was not able to change the strength or the direction of the relationships found between demographics factors and perceived stress. This emphasises the direct effect of AQ on stress compared to its interaction effect.

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APPENDICES

APPENDIX A: PUBLICATIONS AND AWARDS IN SUPPORT OF THIS THESIS

Journal Articles

Somaratne, C. S. N., Jayawardena, L. N. A. C., & Perera, B. M. K. (2017). Impact of adversity quotient on stress levels of middle-level managers of Non-Governmental Organisation (NGO) Sector. *Tropical Agricultural Research*, 29(1), 45-54.

Awards and Achievements

Best Presentation: 29th Annual Congress of the Postgraduate Institute of Agriculture, University of Peradeniya, 16-17 November, 2018. Paper: Impact of adversity quotient on stress levels of middle-level managers of Non-Governmental Organisation (NGO) Sector. Session: Communication technologies and social sciences.

APPENDIX B: SURVEY QUESTIONNAIRE OF THE STUDY

Research on Adversity Quotient and Perceived Stress

Thank you for taking part in this survey. I, C.S.N. Somaratne is a student reading for the Masters Degree in Organizational Management at the University of Peradeniya for which a research on *Adversity Quotient and Perceived Stress in the NGO Sector* is conducted. Your responses will be kept in the strictest confidentiality. Organisational and individual identity will be anonymous and confidential. Kindly answer all questions as honestly as you can.

Part 1 - Demographic Information

1.1. Gender – Male Female

1.2. Age in years (at last birthday) –

1.3. Educational qualifications –

Secondary Education Graduate

Postgraduate Professional Qualification

Other:

1.4. Record of employment (present and previous)

From	To	Institution	Designation

1.5. My full experience in the current field -

1.6. Marital status

Single Married Divorced Widowed

1.7. You work for : International Non-Governmental Organisation

Local Non-Governmental Organisation

Part 2 – Instructions

- Make sure your selected answer most accurately reflects **your feelings and thoughts about your personal life in the past six months**.
- Your answer should represent how **OFTEN** you felt or thought in a certain way.
- Although some of the questions look similar, there are differences between them and hence, **treat each one as a separate question**.
- Use a \surd to mark the response.

1= *Never* 2= *Almost Never* 3= *Sometimes* 4= *Often* 5= *Very Often*

	1	2	3	4	5
2.1 How often have you been upset because of something that happened unexpectedly?					
2.2 How often have you felt that you were unable to control the important things in your life?					
2.3 How often have you felt nervous and “stressed”?					
2.4 How often have you dealt successfully with day to day problems and annoyances?					
2.5 How often have you felt that you were effectively coping with important changes that were occurring in your life?					
2.6 How often have you felt confident about your ability to handle your personal problems?					
2.7 How often have you felt that things were going your way?					

3.5 The high-priority project you are working on gets cancelled*The consequences of this situation will:*

Affect all aspects of my life 1 2 3 4 5 Be limited to this situation

3.6 Someone you respect ignores your attempt to discuss an important issue*To what extent do you feel responsible for improving this situation?*

Not responsible at all 1 2 3 4 5 Completely responsible

3.7 People respond unfavorably to your latest ideas*To what extent can you influence this situation?*

Not at all 1 2 3 4 5 Completely

3.8 You are unable to take a much-needed vacation*The consequences of this situation will:*

Last forever 1 2 3 4 5 Quickly pass

3.9 You rush to an important appointment*The consequences of this situation will:*

Affect all aspects of my life 1 2 3 4 5 Be limited to this situation

3.10 After searching hard, you cannot find an important document*The consequences of this situation will:*

Last forever 1 2 3 4 5 Quickly pass

3.11 Your workplace does not have enough staff*To what extent do you feel responsible for improving this situation?*

Not responsible at all 1 2 3 4 5 Completely responsible

3.12 You miss an important appointment*The consequences of this situation will:*

Affect all aspects of my life 1 2 3 4 5 Be limited to this situation

3.13 Your personal and work responsibilities are out of balance*To what extent can you influence this situation?*

Not at all 1 2 3 4 5 Completely

3.14 You never seem to have enough money*The consequences of this situation will:*

Last forever 1 2 3 4 5 Quickly pass

3.15 You are not exercising regularly when you know you should be*To what extent can you influence this situation?*

Not at all 1 2 3 4 5 Completely

3.16 Your organisation is not meeting its projected goals*To what extent do you feel responsible for improving this situation?*

Not responsible at all 1 2 3 4 5 Completely responsible

3.17 Your computer crashed for the third time this week*To what extent can you influence this situation?*

Not at all 1 2 3 4 5 Completely

3.18 The meeting you are in is a total waste of time*To what extent do you feel responsible for improving this situation?*

Not responsible at all 1 2 3 4 5 Completely responsible

3.19 You lost something that is important to you*The consequences of this situation will:*

Last forever 1 2 3 4 5 Quickly pass

3.20 Your boss strictly disagrees with your decision*The consequences of this situation will:*

Affect all aspects of my life 1 2 3 4 5 Be limited to this situation

Thank you for your valuable time and input in completing the questionnaire.