



**THE RELATIONSHIP BETWEEN WORK-FAMILY CONFLICT AND BURNOUT
AMONGST CALL CENTRE EMPLOYEES: OPTIMISM AS A MODERATOR**

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Compulsory Declaration

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Abstract

This study examined work-family conflict as a predictor of burnout as well as the moderating role that optimism and pessimism may have had on this relationship. Participants were call centre employees from a financial institution in Cape Town ($N = 94$). Cross-sectional data was collected via electronic self-report questionnaires. Exploratory factor analysis demonstrated the unidimensionality of work-to-family conflict despite the two-dimensional model that was expected. Bivariate regression analysis showed that work-to-family conflict explained a significant proportion of the variance in both dimensions of burnout – emotional exhaustion and cynicism. Contrary to what was expected, the results of the moderation analyses were not significant. Optimism and pessimism did not moderate the relationship between work-to-family conflict and burnout. The results show that work-to-family conflict negatively affects call centre employees' well-being. The results are discussed and implications for management and suggestions for future research are presented.

Keywords: burnout, call centre employees, optimism, pessimism, South Africa, work-to-family conflict

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Introduction

Background

Call centres have become an increasingly valuable resource for organisations to manage customer relations, however, they have also developed a reputation for being a high-stress work environment. Visser and Rothman (2008) report that the call centre agent role is regarded to be one of the most stressful jobs in the present-day global economy. The call centre work environment has been associated with reduced employee well-being due to the nature of the work which has been linked to increased occupational stress, disengagement, burnout, absenteeism, and employee turnover (Tuten & Neidermeyer, 2004; Dhanpat, Modau, Lugisani & Phiri, 2018; Hauptfleish & Uys, 2006; Wang, Liu, Liao, Gong, Kammeyer & Shi, 2013).

Call centres have become a popular channel of service delivery due to its cost-cutting benefits to companies that make use of them (Visser & Rothmann, 2008). The use of call centres to manage customer relationship management eliminates dependency on expensive and extensive branch networks that employ face-to-face interaction. This ultimately explains why growing amounts of people are employed in call centres (Visser & Rothmann, 2008). The number of call centre agents who engaged in sales and service interactions grew at an annual rate of 20% in the 1990s in the United States (Wilk & Moynihan, 2005). A global study that focused on the employment and management practices within 2500 call centres across 17 different countries revealed that call centres across all participating countries appear to look similar with flat structures. Results have shown that managers comprise 12% of staff and that 71% of the staff complement appears to be female (Janse van Rensburg & B. Boonzaier 2013). Call centres have been found to differ according to the laws, customs and norms of the specific county in which it operates (Janse van Rensburg & B. Boonzaier 2013).

In South Africa, call centres first appeared in the 1970s and experienced exponential growth towards the latter part of the 1990s which was attributed to a combination of decreased telecommunication costs and improved computer technology. It has been estimated that there are around 1 500 call centres in the country (Banks & Roodt, 2011). The number of employees within

the call centre sector in South Africa increased from 50 000 to 180 000 from 2005 to 2010 (Dhanpat et al., 2018). South Africa has also been earmarked as an ideal location for international call centres in recent years which has contributed towards the rapid growth of call centres within the country (Hauptfleisch & Uys, 2006). Gordi (2006) proposes multiple reasons as to why this is the case – a favourable exchange rate between dominant international currencies and the South African Rand produces low operational costs; South Africa possesses a suitable amount of skilled labour with relatively neutral accents, and the country experiences a similar time zone to various European countries.

Common call centres stressors include performance monitoring, job control, job opportunity, role ambiguity, and work-family conflict. *Performance monitoring* makes use of technology to access and track agent interaction with customers whereby supervisors assess employees' customer service skills, telephonic etiquette, and call-durations. The feedback of which is supposedly intended to reduce role ambiguity and increase employee satisfaction with the performance monitoring system (Mellor et al., 2015). However, performance monitoring in call centre environments has had the opposite effect as it is often perceived as unpleasant and pervasive by call centre employees and has been associated with increased depression, stress, decreased activity and burnout (Mellor et al., 2015; Sprigg, Stride, Wall, Holman & Smith, 2007).

Job control represents the extent of autonomy call centre employees have over their work tasks (Mellor et al., 2015). Due to the repetitive nature of call centre work, many call centres require workers to adhere to strict procedures such the use of scripts and adherence to call durations. This perceived lack of job control has been positively associated with emotional exhaustion, and negatively associated with job satisfaction (Mellor et al., 2015; Holdsworth & Cartwright, 2003; Visser & Rothman, 2008). *Job opportunity* refers to growth potential and opportunities within a company (Mellor et al., 2015). This is a huge concern for call centre employees due to the relatively flat structure of call centres and the bottleneck effect upon reaching a team leader or supervisory role. Lack of career advancement has also been associated with decreased feelings of personal accomplishment (Visser & Rothman, 2008). *Role ambiguity* is a result of employees' uncertainty of what is expected of them, or if they have received feedback on

their performance that is not sufficient to reduce their ambiguity. Increased levels of role ambiguity has been linked to burnout, occupational stress, and turnover intent (Mellor et al., 2015).

Work-family conflict results when an individual's compliance with work responsibilities hinders his or her family commitments. Research suggests that employees experience increased stress and a tendency to quit when work roles obstruct a higher-valued family role, in which case employees will seek employment that matches the favoured family role (Mellor et al., 2015). One of the most significant concerns in today's day and age, for individuals and organisations alike, is the challenge of balancing both work and family demands (Valcour, 2007). Balancing work and family life has received substantial scholarly attention in recent years due to globalization, flexible work trends, and technological advancements which have aggravated work demands and have left employees with a sense of increasing pressure, and a constant battle to manage responsibilities in their work and family lives (Beham & Drobnič, 2010). Demands arising from the family domain have also experienced an increase due to rises in the number of single-parent families, dual-earner couples, and families experiencing concurrent eldercare and childcare demands, as well as a cultural shift aimed at intensive parenting styles. These changes suggest that work and family life can no longer be regarded as separate domains (Valcour, 2007; Beham & Drobnič, 2010). Therefore, how to achieve a suitable balance between the two domains has become an essential organisational value for many employees, and an important question for organisations (Valcour, 2007).

Work-family conflict has been associated with quitting intent, job stress and psychological strain such as irritability and nervousness (Dhanpat et al., 2018) . The call centre environment, in particular, is characterised by high pressure and increased workloads which warrant employees to work long and irregular hours to meet deadlines. It is suggested that these aspects of call centre work may interfere with work-family balance, thereby leading to burnout and increased employee turnover (Dhanpat et al., 2018; Potgieter & Barnard, 2010; Mellor et al., 2015). Thus, it is crucial to determine what the outcomes of work-family conflict amongst call centre employees are and whether there are variables that moderate this relationship in order to develop strategies that can be used to mitigate negative outcomes.

Aims of the Research

This study aims to examine the relationship between work-family conflict and burnout amongst call centre employees. Additionally, the extent to which optimism and pessimism moderates this relationship will be investigated, to which the research question is: Does optimism moderate the relationship between work-family conflict and burnout amongst call centre employees?

Structure of the Dissertation

This section presented the unique context of the research problem as well as the research aims. In order to formulate plausible propositions, the next section will provide a review of existing literature and applicable theory. Thereafter, the method section describes the research design that is most suitable to the current study as well as the sample, procedure, ethical considerations, measures, and data analysis process. The findings are presented in the results section. Subsequently, the findings are discussed in greater detail followed by a concluding discussion which provides suggestions based on limitations and practical implications of the findings.

Literature Review

This section presents the literature search procedure used to identify the relevant literature to be reviewed. Thereafter, findings from previous studies investigating the relationship between work-family conflict and burnout, as well as optimism as a moderating variable will be reviewed. This is followed by the formulated propositions of the present study which will be examined in order to answer the research question.

Literature Search Procedure

A literature search procedure was conducted through electronic databases such as Academic Search Premier, PsycINFO and PsycTESTS which were found on Ebscohost. Google Scholar was also utilized in the search process. The literature search took place over a span of 11 months between March 2019 and January 2020. The search terms used to yield results for work-family conflict were 'work-family conflict', 'work-family interface', 'work interference with family' and 'negative spillover'. Terms such as 'burnout', and 'emotional exhaustion' were used for burnout. Search terms used for optimism and pessimism included 'optimism', 'pessimism', and 'life orientation'.

Work-Family Conflict

Work-family conflict is defined as a form of role conflict in which role demands and pressures from both the family and work domains are jointly incompatible (Kahn et al., 1964; Greenhaus & Beutell, 1985). Therefore, an individual's involvement in a family role is made complicated by his or her involvement in a work role. Greenhaus and Beutell (1985) suggest that work-family conflict is a multidimensional model consisting of three components, namely: *time-based*; *strain-based*; and *behaviour-based* resources. The model proposes that any role trait that impacts upon an individual's time involvement, behaviour or experience of strain within that given role will produce conflict between this and other roles. According to the model, the experience of work-family conflict is likely to be intensified when both family and work roles are highly valued by the individual or are central to his or her self-concept (Greenhaus & Beutell, 1985).

Dimensionality. *Time-based conflict* arises when demands in both family and work domains compete for an individual's time. Therefore, time devoted to activities in one domain cannot be expended on activities in the other domain (Greenhaus & Beutell, 1985). For example – individuals have a limited timeframe to meet both work and family demands in a single day. When work schedules, sick children, job deadlines and family commitments compete – this constrains the amount of time individuals have to meet pressures in each domain and is likely to be associated with impaired well-being (Turner et al., 2014). Work-family conflict has been positively associated with the number of hours worked, as well as the frequency of working overtime (Greenhaus & Beutell, 1985). This is consistent with findings that show that higher levels of work-family balance were reported amongst women working part-time, as opposed to women who work full-time in a study that focused on professional women (Hill, Martison, Ferris & Baker, 2004). Similarly, in a study that investigated satisfaction with work-family balance amongst call centre operators, it was found that the number of hours worked was negatively associated with satisfaction with work-family balance (Valcour, 2007).

Strain-based conflict occurs when strain arising from one role affects an individual's performance in other roles. Essentially, the roles are contradictory as the strain produced in one role makes it difficult for the individual to meet the demands of another role. This has been termed 'negative spillover' in the work-family literature (Greenhaus & Beutell, 1985; Nohe, Meier, Sonntag & Michel, 2015). Within the literature, strains have been typically classified according to three categories, namely: family-related strain, such as parental stress; work-related stress, such as burnout; and strain which is domain-unspecific, such as depression and somatic complaints (Nohe et al., 2015; Amstad, Meier, Fasel, Elfering & Semmer, 2011). An example of how strain arising from the work domain could affect performance in the family domain would be an employee who exerts a significant amount of effort at work which results in him or her experiencing burnout, sleep complications and fatigue – which in turn will hinder his or her interaction with family members (Nohe et al., 2015). Findings by Barling, MacEwen, Kelloway, and Higginbottom (1994) support the strain-based conflict component as occupational stress was shown to affect marital satisfaction and functioning amongst full-time employed individuals in a study focusing on elder-care-based role conflict.

Behaviour-based conflict is likely to occur when certain role-specific behaviour is incompatible with behavioural expectations in another role. Greenhaus and Beutell (1985) utilize the example of a managerial male stereotype that is typically characterised as emotionally stable, aggressive, self-reliant and objective. On the other hand, family members of this individual may expect him to be emotional, warm, and nurturant in his involvement with them. This individual is likely to experience conflict if he is unable to adjust his work behaviour to the behaviour expected of him in the family domain. Limited research has been conducted on this component of work-family conflict. In fact, Kelloway, Gottlieb, and Barham (1999) state that behaviour-based conflict has been challenging to operationalise, coupled with the limited empirical evidence to validate its existence. As a result, behaviour-based conflict was omitted from their study. Similarly, Carlson, Kacmar, and Williams (2000) concur that more in-depth research be conducted on behaviour-based conflict. In support of the omission of the behaviour-based conflict dimension, it has been contended that strain-based and time-based conflict are consistent indicators of work-family conflict in both the work-to-family and family-to-work directions (Frone, Yardley & Markel, 1997). Therefore, behaviour-based conflict will be excluded from the current study as a dimension of work-family conflict based on the above findings that it has been difficult to operationalise and is conceptually redundant.

Directionality. Work-family conflict, by specific definition, is bidirectional in its conceptualization in that it distinguishes between family interfering with work (i.e. family-to-work conflict), and work interfering with family (i.e. work-to-family conflict) (Greenhaus & Beutell, 1985; Frone, Russell & Cooper, 1992; Dahm, Glomb, Manchester & Leroy, 2015). However, despite this distinction, the majority of work-family literature emphasises the impact of work-to-family conflict on well-being and organisational outcomes. Frone et al. (1992) revealed that working individuals reported experiencing work-to-family conflict approximately three times more frequently than they experienced family-to-work conflict. Consistent with these findings is research which shows that work-to-family conflict has a stronger association with organisational outcomes such as job satisfaction, organisational stress, and turnover intention in comparison to family-to-work conflict (Dahm et al., 2015). Therefore, work-family conflict in the family-to-work

direction will be omitted from this study, and work-family conflict will be measured solely in terms of work interference with family (work-to-family conflict).

Work-Family Conflict and Gender

Various bodies of work-family literature suggest that women and men experience work-family interactions differently. It has been found that even though women expend the same amount of time in paid employment as men do, they continue to commit more time partaking in domestic labour activities (Valcour, 2007). Scott and McClellan (1990) report that women also tend to take responsibility for reacting in response to unplanned or unique family demands, such as leaving work during business hours to collect a sick child from school, taking off work to stay home with a sick child, or frail or sickly parents. These demands have been associated with increased absenteeism amongst women in comparison to men (Valcour, 2007). Similarly, Maume and Houston (2011) found that women in male-dominated careers are more likely to experience increased negative spillover between family and work obligations due to social controls which expect them to oversee family care. However, their findings show that women in management positions within male-dominated careers experienced lower levels of negative spillover as opposed to women in lower positions. This could have been because women in senior positions possess more benefits that are considered to be family-friendly, such as the option to work from home, higher-income which could be used to secure childcare services, and increased flexibility over work schedules (Maume & Houston, 2011). In essence, these findings suggest that the level of authority within an organisation mediates the association between gender and the experience of work-family conflict.

Theoretical Framework

Work-family conflict has been predominantly explained by role theory and the scarcity of resources hypothesis which posits that the demands in one role will deplete an individual's personal resources, thereby resulting in insufficient resources to be allocated to other roles. This hypothesis has been useful in explaining conflict between family and work domains.

Role theory and Scarcity hypothesis. Role theory is a predominant theoretical paradigm that has been used to explain the association between work-family conflict and well-being. Kahn, Wolfe, Quinn, Snoek and Rosenthal's (1964) role stress theory argues that role overload and psychological conflict are created if sets of select social roles enforce conflicting role expectations on an individual. This type of role conflict can affect crucial finite resources such as energy, time and commitment which has the potential to drain individuals – thereby resulting in psychological strain (Turner, Hershcovis, Reich & Totterdell, 2014; Greenhaus & Beutell, 1985; Bolino and Turnley, 2005). Family and work roles are of high importance in the lives of many individuals. Therefore, finding a balance between the demands of each role is a constant struggle. Work-family conflict is a result of the imbalance between the two domains (Turner et al., 2014; Nohe, Meier, Sonntag & Michel, 2015).

The scarcity of resources hypothesis insinuates that the negative outcomes of multiple role involvement create demands in one domain of life which reduces individuals' attempts to meet demands in other domains due to a lack or depletion of resources (Goode, 1960; Boyar & Mosely, 2007; Nohe et al., 2015). Therefore, an individual's attempts at balancing demands in both roles become a challenge as arising demands compete for the same limited resources. For example – an employee who has a taxing client who requires swift turnaround times and contacts him or her frequently during out of office hours is likely to experience a resource loss, such as energy, time and work-family conflict as scarce resources are allocated to the work domain thereby resulting in insufficient resources to be allocated to the family domain. This role conflict is likely to have a negative impact on well-being (Matthews et al., 2014).

Antecedents of Work-Family Conflict

Previous studies focused on the work-family interface have identified various antecedents of work-family conflict, of which the most common are role involvement, lack of social support, work and family characteristics and personality. *Role involvement* refers to the level of connection or attachment an individual has to his or her family and work roles (Frone, 2003). An individual high in role involvement is cognitively preoccupied with a specific role. Thus, role involvement is considered to be an antecedent of work-family conflict as an individual with higher levels of

psychological involvement in one role may experience greater difficulty engaging in activities of an opposing role (Frone et al., 1992).

Social support refers to the emotional concern and instrumental aid of others that contribute to an individual's increased feelings of self-importance (Carlson & Perrewé, 1999). Sources of social support within the work domain include support received from colleagues, an immediate supervisor or the organisation as a whole. Whereas, sources of social support in the family domain may include one's spouse or the family as a whole. Social support experienced in either work or home domains may lead to a reduction of energy, time and attention an individual needs to perform that particular role (Michel, Kortba, Mitchelson, Clark & Baltes, 2010). Therefore, social support experienced in one role may lead to the reduction of cross-domain conflict in which case a lack of social support received in either domain may contribute towards increased cross-domain conflict. For example – employees in work environments with low social support experienced greater negative consequences in their family life (Galinsky, 1994).

Work and family characteristics refer to features of each domain that impact upon an individual's role performance (Morgenson & Campion, 2003). Within the work domain, characteristics include organisational tenure, job type, task variety, and job autonomy. Whereas characteristics in the family domain include family structure (i.e. working spouse) and family income. Work and family characteristics are considered to be antecedents of work-family conflict as they impact both role performance and pressures. For example – a higher status job may afford the individual increased flexibility and control over job tasks and therefore allow him or her to attend to family responsibilities, in comparison to a lower status job in which an individual has limited flexibility and control and may experience more cross-domain conflict (Michel et al., 2010).

Personality refers to coordinated cognitive processes and mental structures that determine an individual's behavioural and emotional changes to his or her environments (Millon, 1990). Internal locus of control as a component of personality refers to the extent to which an individual feels that an outcome is caused by himself or herself, or is a result of external variables (i.e. chance) (Michel et al., 2010). Internal locus of control is hypothesised to be an antecedent of work-family

conflict as it has been directly related to work and life stress. For example – research has shown that a high internal locus of control was negatively related to work-family conflict (Noor, 2002). Neuroticism and negative affect have also been suggested to be antecedents of work-family conflict as they impact upon how individuals perceive situations in both life and work domains (Carlson, 1999). For example – individuals with high neuroticism and negative affectivity may experience greater anxiety, dissatisfaction and psychological distress across work and family domains (Michel et al., 2010).

Outcomes of Work-Family Conflict

Burnout. Burnout is a syndrome characterised by feelings of emotional exhaustion, cynicism which was originally referred to as depersonalization, and reduced personal accomplishment otherwise known as professional inefficacy (Maslach, Schaufeli & Leiter, 2001). *Emotional exhaustion*, which is often regarded as the most prominent feature of burnout, refers to the experience of feeling emotionally drained. Emotional exhaustion is thought to lead to *cynicism*, which refers to employees' development of negative, impersonal, and cynical attitudes towards their clients. Lastly, cynicism is proposed to lead to perceptions of *reduced personal accomplishment* which refers to employees' inclination to view their accomplishments as well as themselves in a negative light (Rupert, Stevanovic & Hunley, 2009; Maslach et al., 2001; Rod & Ashill, 2013). Burnout is viewed as a stress response that is characterised by gradual feelings of loss experienced by employees over an extensive period. The onset of burnout is predicted to transform one's energetic, engaged and positive relationship with work to reduced commitment, disengagement, and an overall sense of ineffectiveness – which ultimately takes the form of reduced personal accomplishment over time (Maslach & Leiter, 1997).

Previous work on the work-family interface has identified burnout to be a common outcome of work-family conflict in employees. For example, a meta-analytic review of work-family conflict identified approximately 67 quantitative research studies consisting of diverse samples (such as teachers, executives, service employees, and healthcare workers) which examined the association between work-family conflict and a variety of stress-related, work-related and nonwork-related outcomes. Findings revealed that work-family conflict was related to

decreased life and job satisfaction, and increased levels of psychological burnout (Rupert et al., 2009). Similarly, research in psychological burnout amongst nursing staff in Canada revealed that nurses who reported greater levels of work to family conflict also indicated increased levels of cynicism and emotional exhaustion, thereby indicating a positive relationship between work-family conflict and psychological burnout (Burke & Greenglass, 2001). Rupert et al. (2009) reported similar findings in their research focused on psychological burnout and work-family conflict amongst practicing psychologists in the United States. It was found that the component of professional inefficacy tends to develop separately from emotional exhaustion and cynicism (Lee & Ashforth, 1996; Schaufeli & Bakker, 2004). In addition, it was also shown that professional inefficacy has a weak relationship with the other two components. It has also been argued that professional inefficacy is more of a personal resource than it is a measure of psychological burnout (Avey, Patera & West, 2006). In light of the above, professional inefficacy will be omitted from the current study, and psychological burnout will be measured using only the emotional exhaustion and cynicism dimensions.

Hobfoll's (1989) Conservation of Resources (COR) theory has been used to explain the onset of stress and burnout. The theory proposes that individuals are driven to acquire and maintain resources. When these resources are either threatened, lost or just simply inadequate – stress is the result. When applied to burnout, the theory posits that acquiring adequate resources to meet constant work demands is crucial in preventing burnout. These resources could be related to family life – such as social support and intimate relationships; work-life – such as support and autonomy, or personal attributes – such as self-esteem and coping strategies (Rupert et al., 2009; Rod & Ashill, 2013). Therefore, according to the theory – burnout is the result of a loss of resources.

Moderating Variables

Optimism and pessimism. Optimism refers to how individuals anticipate or assess outcomes (Scheier & Carver, 1985). For example, an optimist will expect a desirable, positive outcome as a result of his or her efforts. In contrast, a pessimist is likely to anticipate a negative or neutral outcome. There are two approaches taken to explain the nature of optimism. The state-like approach regards optimism as an adaptable state which is subject to change over time and across

situations. Whereas, the trait-like approach views optimism to be a relatively stable disposition which is constant over time and across situations (Lu, Xie & Guo, 2018).

Optimistic and pessimistic orientations influence individuals' subjective experiences when confronted by challenges, and influences the actions individuals take in an attempt to deal with these challenges (Carver & Scheier, 2002). For example – when confronted by adversity, optimists generally expect a positive outcome which results in a relatively positive mixture of feelings. Whereas, pessimists generally expect a negative outcome which results in a greater tendency towards experiencing negative feelings (Rothmann & Essenko, 2007). According to Carver and Scheier (2002), individuals who are confident about the future are likely to exert sustained effort even when faced with adversity, whereas individuals who are doubtful about the future are more likely to avoid adversity as though it can be escaped. Thus, optimists have been associated with the use of active coping strategies such as problem-solving or seeking social support (Scheier, Weintraub & Carver, 1986). In contrast, pessimists have shown a preference for passive coping strategies such as denial and avoidance. These differences in coping may contribute towards poor health outcomes and greater distress experienced by pessimists (Dougall, Hyman, Hayward, McFeeley & Baum, 2001).

According to Carver and Scheier (2002), optimism and pessimism can be understood by an expectancy-value approach. There are two conceptual components of the expectancy-value approach, the first of which is behaviour directed towards the pursuit of goals. Goals represent the *value* component in an expectancy-value approach and are qualities that individuals view as either desirable or undesirable. According to the expectancy-value approach, individuals will fit their behaviour to what they deem as desirable, and stay clear from what they deem as undesirable. The more important the goal is to the individual, the more valuable it will be with regards to his or her motivation (Carver & Scheier, 2002). The second component of the expectancy-value approach is *expectancy* which refers to a sense of doubt or confidence surrounding goal attainability. There will be no action if an individual lacks confidence, however effort will continue to be displayed even when faced with adversity if an individual is confident (Carver & Scheier, 2002).

With regards to optimism and well-being, Carver and Scheier (2002), found that optimism presents a resistance towards depressive symptoms in individuals and contributes towards subjective wellbeing during major life changes. Luthans, Avolio, Avey & Norman (2008) also found that optimism was positively associated with employee outcomes such as career success, job performance, and psychological well-being. Similarly, in a study focusing on burnout experienced by information service workers, results revealed that employees' optimistic dispositions were related to decreased levels of burnout under conditions with fewer resources (Riulli & Savicki, 2003). Chang, Maydeu-Olivares, and D'Zurilla (1997) also report that optimism moderated the association between life stress and life satisfaction amongst undergraduate university students in a study focusing on perceived stress and psychological well-being. A hierarchical multiple regression analysis conducted by Fry (1995) found that optimism significantly moderated the association between burnout, daily stressors, physical illness and self-esteem maintenance amongst female business executives. In addition, in examining call centre stress, Tuten and Neidermeyer (2004) found that pessimists reported higher levels of stress in response to work and nonwork conflict, thereby suggesting that pessimists may experience greater levels of work-family conflict as a result of their orientation as opposed to their optimistic counterparts. In light of the above, it is suggested that optimism may reduce the intensity and levels of stress experienced by employees (Scheier & Carver; 1985).

Research Objectives and Propositions

The main aim of this study is to examine the relationship between work-family conflict and burnout amongst call centre employees, as well as the moderating role of optimism and pessimism on these relationships. In light of the above, the following propositions were developed:

Proposition 1. Work-to-family conflict has two dimensions (time-based and strain-based conflict).

Proposition 2 a. Work-to-family conflict explains a significant proportion of the variance in emotional exhaustion.

Proposition 2 b. Work-to-family conflict explains a significant proportion of the variance in cynicism.

Proposition 3 a. Optimism will moderate the relationship between work-to-family conflict and burnout, such that the relationship between work-to-family conflict and burnout will be weaker.

Proposition 3 b. Pessimism will moderate the relationship between work-to-family conflict and burnout, such that the relationship between work-to-family conflict and burnout will be stronger.

Method

This section details the nature of the research design, participants and sampling method, procedure, ethical considerations, measures and data analysis employed to assess the propositions of the present study.

Research Design

This study employed a descriptive research design as descriptive studies are aimed at describing phenomena accurately through the measurement of relationships (Terre Blanche, Durrheim & Painter, 2006). A quantitative approach was adopted to guarantee that the data collected could be measured and analysed numerically. This approach was best suited to the study as it enabled the researcher to make inferences from the sample across to the population (Hair, Babin & Samouel, 2003). A cross-sectional research dimension was utilized to study the variables of optimism, work-family conflict, burnout and commitment based upon participants' responses gathered at one specific point in time. A cross-sectional design enabled the researcher to measure and compare numerous variables simultaneously, thereby providing a snapshot of a single moment in time (Hair et al., 2003; Rosnow & Rosenthal, 2013). Data was collected via electronic self-report questionnaires. The collection of quantitative data was best suited to the study as it is cost-effective and enabled the researcher to survey a large sample of participants within a short time period (Terre Blanche et al., 2006). This method was also selected so that participants would be more likely and willing to disclose sensitive data (Babie & Mouten, 2002).

Participants and Sampling

The study was conducted within a national financial institution. The population under investigation was call centre employees who are currently employed within the participating organisation as it also happens to be the organisation in which the researcher is employed. Due to the aforementioned time constraints, this study was limited to participants in Cape Town. A non-probability purposive sampling method known as judgemental sampling was used to recruit participants employed in the call centre of the selected organisation. Judgemental sampling is

considered to be a branch of convenience sampling and is typically used to obtain data from a specific group of people who possess the characteristics of interest (Tyrrer & Heyman, 2016). Given the unique characteristics of the population and practical time and cost constraints, judgemental sampling was the most appropriate sampling method as it enabled the researcher to select certain groups of people who were more likely to experience levels of work-family conflict, for example – those who frequently work irregular shifts.

A total of 103 participants responded to the questionnaire. Nine participants were removed as they failed to complete a minimum of at least one of the scales included in the questionnaire. The final sample consisted of 94 call centre employees.

The frequency of demographic variables of participants is presented in Table 1. Forty-seven percent of the sample had between one to two children living at home that they were responsible for. In addition to childcare, forty-five percent of the sample had between one to two dependents (other than children) living at home that they were responsible for. The average age of participants in the sample ranged from 18 to 44 years old ($M = 1.80$; $SD = .56$; $N = 93$). Thirty-seven percent of the sample have been employed in the organisation for between 4 to 5 years. On average, participants worked between 40 to 49 hours per week ($SD = .31$; $N = 92$), and 11% of the sample worked overtime regularly. In addition to hours worked weekly, the average amount of hours spent on childcare or household activities ranged from 0 to 40 hours or more ($M = 2.13$; $SD = .82$; $N = 94$). It is interesting to note that more than half of the sample (56%) were single, and the majority of the sample (90%) did not have domestic support. This suggests that many participants who were not in a relationship (married or in a domestic relationship) still had to play a family role in terms of childcare or caring for dependents other than children living at home whilst not having paid domestic support. These findings suggest a high rate of parents or breadwinners trying to balance work with family responsibilities at home.

Table 1.*Frequency of Demographic Variables of Participants*

Demographic	Variables	Frequency	Percentage (%)	Total
Gender	Female	18	20	93
	Male	74	80	
	Other	1	1	
Marital status	Single	53	56	94
	Married	28	30	
	In a domestic relationship	11	12	
	Divorced	1	1	
	Widowed	1	1	
Paid domestic support	Yes	9	10	94
	No	82	90	
Frequency working night shift	Never	69	74	94
	Rarely	10	11	
	Occasionally	8	9	
	Often	5	5	
	Always	1	1	
Reporting to an immediate supervisor	Yes	91	97	94
	No	3	3	

Procedure

The researcher made use of Qualtrics to create an electronic questionnaire. Prior to the commencement of data collection, the researcher conducted a pilot study amongst approximately 6 participants in order to detect formatting issues, ambiguous wording and errors before the questionnaire could be made available to the rest of the participants. The participants provided positive feedback on the interpretation of the questionnaire in the pilot study.

However, one item was identified to be ambiguous and was worded differently. Specifically, the item which read “How many children do you have living at home?” was changed to “How many children (under 18 years old) do you have living with you at home for which you are responsible?” in order to avoid misinterpretation.

Once the necessary corrections were made, the researcher met with the respective departmental heads to outline the data collection process and procedure to be followed. Thereafter, the researcher emailed the link to the questionnaire to the respective organisational representatives who then forwarded the link to the selected employees. Data collection took place over a period of approximately 7 weeks between 19 August 2019 and 07 October 2019.

Ethical Considerations

Ethical clearance was granted from the Commerce Faculty Ethics in Research Committee at the University of Cape Town as well as permission from the respective organisation to commence data collection. The first page of the online questionnaire detailed the confidential and voluntary nature of the study (refer to Appendix A). Participants were made aware that they would be able to withdraw from the study at any point. The first page also included a description of the study as well as asked respondents for consent to participate in the study. Respondents were also made aware that participation in the study would not pose related risks or benefits.

Measures

Work-to-Family Conflict. Work-to-family conflict was measured using an adapted version of a Work-Family Conflict (WFC) scale which was developed by Carlson et al. (2000). The scale contains 6-items that measure strain-based and time-based conflict in the direction of work-to-family. Hence, this measure was chosen as it represents the dimensions of work-to-family conflict under investigation. The items were rated on a 5-point Likert scale which ranges from '1' (strongly disagree) to '5' (strongly agree). An example of a time-based work-to-family conflict item is "My work keeps me from my family activities more than I would like", and an example of a strain-based work-to-family item is "I am often so emotionally drained when I get home from work that it prevents me from contributing to my family" (refer to Appendix B). The scale reported good internal consistency as the Cronbach alpha coefficient surpassed the conventional acceptance level of .70 (Field, 2013), time-based work to family conflict = .87, and strain-based work to family conflict = .85 (Carlson et al., 2000).

Burnout. Burnout was measured using the Maslach Burnout Inventory – General Survey (MBI-GS) (Schaufeli & Buunk, 1996) which was developed from Maslach and Jackson's (1981) original Maslach Burnout Inventory (MBI). The MBI-GS was included in the present study as it can be used across all occupations, whereas the MBI was developed for use across human service occupations. Two of the original three subscales were used to measure psychological burnout, namely exhaustion, and cynicism. An example of an item measuring each subscale is as follows: "I feel drained when I finish work" (exhaustion – 5-items), and "I have become less enthusiastic about my work" (cynicism – 5-items) (refer to Appendix C). The items were scored along a 7-point frequency rating scale which ranges from '0' (never) to '6' (daily). High scores on exhaustion and cynicism are indicative of burnout (Schutte, Toppinen, Kalimo & Schaufeli, 2000). Leiter and Schaufeli (1996) reported Cronbach alpha coefficients which ranged from .84 to .90 for the exhaustion subscale and .74 to .84 for the cynicism subscale.

Optimism and pessimism. Optimism and pessimism were measured using the Life Orientation Test-Revised (LOT-R) scale which was developed by Scheier, Carver, and Bridges (1994). The scale consists of 10-items which assesses generalised expectancies of positive versus

negative outcomes. The scale comprises of three subscales which measure optimism (3-items), pessimism (3-items) as well as 4 filler items. An example of an item measuring optimism is “In uncertain times, I always expect the best”. An example of an item measuring pessimism is “If something can go wrong for me, it will”. Items are scored using a 5-point Likert scale ranging from ‘0’ (strongly disagree) to ‘4’ (strongly agree). Scheier, Carver, and Bridges (1994) reported a Cronbach alpha of .78, thereby demonstrating acceptable internal consistency.

Demographics. In order to understand the composition of the sample, demographic items were included in the questionnaire. The 12-items included gender, age, marital status, number of children living at home, average hours spent on childcare/household activities per week, paid domestic support, average hours spent at work per week, amount of years employed by the organisation, whether they report to an immediate supervisor, how often they work overtime and how often they work night shift.

Data Analysis

Data collected from the electronic self-report questionnaires were downloaded into an Excel spreadsheet. The data was cleaned and coded in preparation for statistical analyses to be conducted. The researcher made use of IBM Statistical Package for Social Scientists (SPSS) version 25 to run reliability and validity analyses on the various scales. Descriptive statistics, as well as correlation and regression analyses, were conducted to test the propositions.

Results

This section presents the findings of the study. The construct validity of the scales were assessed by means of exploratory factor analysis and scale internal consistency was evaluated using Cronbach's coefficient alpha. Thereafter, the descriptive statistics of each scale is presented followed by the results of the bivariate regression analyses. Lastly, the interaction effects of optimism and pessimism as potential moderators are presented.

Exploratory Factor Analysis (EFA)

EFA was conducted in order to determine whether the scales actually measure the variables they are theoretically intended to measure (Field, 2013). Principal axis factor analysis (PAF) was used to extract factors. This method of extraction was selected as it identifies latent variables and focuses on the shared variance between scale items, whereas principal component analysis (PCA) reduces multiple variables into fewer components and is therefore better suited as a data reduction method (Osborne & Costello, 2009). In order to account for the degree of correlation between factors, direct oblimin oblique rotation was used as a rotation method.

Prior to conducting PAF on the three scales, two assumptions were evaluated. Firstly, the data should be adequately distributed to warrant EFA. This is indicated by the Kaiser-Meyer-Olkin (KMO) measure which is greater than .50 (Kaiser, 1974). Secondly, Bartlett's test of sphericity determines whether scale items are correlated. This test should be significant ($p < .05$) in order for EFA to be appropriate (Tabachnick & Fidell, 2014). Factors with eigenvalues greater than one were extracted based on Kaiser's (1960) criterion. Factor loadings greater than .30 were considered to be acceptable (Field, 2013).

Work-to-Family Conflict scale. PAF with direct oblimin rotation was conducted in order to test the proposition that work-to-family conflict has two dimensions (time-based and strain-based conflict). The KMO value of .86 combined with a significant Bartlett's Test of Sphericity ($X^2_{15} = 524.78, p < .001$) indicated that it was suitable to run a PAF with direct oblimin across the 6 items.

The 6 items loaded strongly onto one factor (all factor loadings greater than .84) with an eigenvalue of 4.63 accounting for 72.58% of the total variance. Therefore, the dimensions of time-based and strain-based conflict did not emerge as initially proposed. Thus, work-to-family conflict is considered to be unidimensional and proposition 1 was not supported. Refer to Table 2 for factor loadings.

Table 2.

Factor Loadings for the Work-to-Family Conflict Scale

Item Number	Item Description	Factor 1
3	My work keeps from my family activities more than I would like.	.87
1	The time I must devote to my job keeps me from participating in household responsibilities and activities.	.86
4	I have to miss family activities due to the amount of time I must spend on work responsibilities.	.86
5	When I get home from work I am often too frazzled to participate in family activities/ responsibilities.	.84
6	I am often so emotionally drained when I get home from work that it prevents me from contributing to my family.	.84
2	Due to all the pressures at work, sometimes when I come home I am too stressed to do the things I enjoy.	.84
Eigenvalue		46.63
% Variance		72.58
Cumulative Variance		72.58

Notes. Extraction method: Principal Axis Factoring; 5 iterations required.

Maslach Burnout Inventory – General Survey (MBI-GS). The KMO value (.87) and a significant Bartlett’s Test of Sphericity ($X^2_{45} = 1007.76$, $p < .001$) warranted PAF across the 10-items.

PAF with direct oblimin rotation extracted two factors with eigenvalues greater than 1, which account for 65.22% and 9.10% of the total variance respectively. These findings confirmed that burnout has two distinctive dimensions, namely emotional exhaustion and cynicism which is

in line with the literature. Items 6 -10 loaded significantly onto Factor 1 (cynicism), and items 1-5 loaded significantly onto Factor 2 (emotional exhaustion). All factor loadings were greater than .67. Table 3 reflects the factor loadings across two factors.

Table 3.

Factor Loadings for the MBI-GS

Item Number	Item Description	Factor 1	Factor 2
9	I doubt the significance of my work.	.97	
10	I can't really see the value of my work.	.93	
8	I feel increasingly less involved in the work I do.	.92	
7	I have become less enthusiastic about my work	.76	
6	I have become less interested my work.	.70	
2	I feel drained when I finish work.		.82
3	When I finish work I feel so tired I can't do anything else.		.82
5	I feel used up at the end of a work day.		.81
1	I find it hard to relax after a day's work.		.74
4	It is getting increasingly difficult for me to get up for work in the morning.		.67
Eigenvalue		6.76	1.19
% Variance		65.22	9.10
Cumulative Variance		65.22	74.32

Notes. Extraction method: Principal Axis Factoring; Rotation method: Direct Oblimin with Kaiser normalisation; Rotation converged in 9 iterations.

Life Orientation Test-Revised (LOT-R). The KMO value of .69 and a significant Bartlett's Test of Sphericity ($X^2_{45} = 200.61, p < .001$) indicated that it was appropriate for PAF with direct oblimin rotation to be conducted across the 10 items.

Three factors were extracted with eigen values greater than 1 which account for 44.53% of the variance collectively. These results confirm the three-dimensional structure of the measurement scale. Items 2, 4, 1 and 10 loaded significantly onto Factor 1 (optimism). Item 2 “*It’s easy for me to relax*”, a filler item loaded significantly together with items measuring optimism. Items 9, 7 and 3 loaded significantly onto Factor 2 (pessimism). Item 3 cross-loaded across two factors, however the absolute loading difference between factors was greater than .25 which is not considered to be indicative of cross-loading (Tabachnick & Fidell, 2014). Thus, item 3 was retained. Items 6 and 8 loaded significantly onto Factor 3 (filler items). Item 5 (factor loading = .28) did not load significantly onto any of the factors and was thus removed from further analyses. Refer to Table 4 for factor loadings across three factors.

Table 4.

Factor Loadings for the LOT-R

Item Number	Item Description	Factor 1	Factor 2	Factor 3
2	It's easy for me to relax.	.67		
4	I'm always optimistic about my future.	.63		
1	In uncertain times, I usually expect the best.	.61		
10	Overall, I expect more good things to happen to me than bad.	.45		
9	I rarely count on good things happening to me.		.69	
7	I hardly ever expect things to go my way.		.68	
3	If something can go wrong for me, it will.		.60	
6	It's important for me to keep busy.			.96
8	I don't get upset too easily.			.33
Eigenvalue		2.91	1.86	1.10
% Variance		24.24	13.54	6.75
Cumulative Variance		24.24	37.78	44.53

Notes. Extraction method: Principal Axis Factoring; Rotation method: Direct Oblimin with Kaiser normalisation; Rotation converged in 7 iterations.

Reliability Analysis

The internal consistency of the measurement scales was assessed using Cronbach's coefficient alpha (α). Alpha values between .60 and .70 were considered to demonstrate adequate internal consistency, whereas alpha values below .50 were considered to demonstrate unacceptable internal consistency (Nunnally, 1978). Corrected item-total correlations were analysed in order to determine whether or not items needed to be excluded from a scale in order to increase its internal consistency. Corrected item-total correlations above .20 were retained (Bagby, Parker, & Taylor, 1993).

The Cronbach coefficient alpha values for the work-to-family conflict scale and the MBI-GS surpassed the level of acceptance and displayed strong corrected item-total correlations (refer to Table 5).

Table 5.

Results of Reliability Analyses

	Cronbach's alpha (α)	Corrected item-total correlations
Work-to-family conflict	.94	.80 < r < .84
Burnout	.95	.61 < r < .87

The LOT-R had a Cronbach coefficient alpha of .71. Items 7 and 9 had low corrected item-total correlations of .13 and .10 respectively, and were thus removed from further analyses in order to increase the internal consistency of the scale. The new 7-item scale had a Cronbach coefficient alpha value of .72 and adequate corrected item-total correlations (refer to Table 6).

Descriptive Statistics

Descriptive statistics for each of the scales used in this study are provided in Table 7 and Table 8. The means (M) and standard deviations (SD) of each scale were computed in order to

examine each variable's distribution of scores. The skewness and kurtosis values reported in Table 8 were used in order to determine whether the data was distributed normally (Field, 2013).

Table 6.

Item-total Statistics for the new 7-item LOT-R

Item Number	Item Description	Corrected Item-total Correlation	Cronbach's Alpha (<i>a</i>) if Item Deleted
1	In uncertain times, I usually expect the best.	.54	.66
2	It's easy for me to relax.	.50	.67
3	If something can go wrong for me, it will.	.30	.72
4	I'm always optimistic about my future.	.50	.67
6	It's important for me to keep busy.	.53	.67
8	I don't get upset too easily.	.22	.74
10	Overall, I expect more good things to happen to me than bad.	.47	.68

The emotional exhaustion dimension of burnout mean score ($M = 4.33$; $SD = 1.40$) was above the scale midpoint of 3.5 on a 6-point scale and represented the highest mean score, whereas the cynicism dimension of burnout represented a lower mean score ($M = 3.10$; $SD = 1.77$) that was below the scale midpoint. This demonstrates that participants experienced above average levels of emotional exhaustion and reduced levels of cynicism. Participants generally experienced above average levels of work-to-family conflict as the mean score ($M = 3.68$; $SD = 1.04$) was above the scale midpoint of 3 on a 5-point scale. On average, participants experienced moderate levels of optimism as the mean score ($M = 3.44$; $SD = .84$) was slightly above the scale midpoint of 3. The pessimism mean score ($M = 2.40$; $SD = .72$) was below the scale midpoint indicating that participants experienced below average levels of pessimism.

Correlational Analysis

Pearson product-moment correlation analysis was conducted in order to explore the relationships between the variables of interest. Cohen's (1988) guidelines were adopted to interpret the strength of the relationships. A correlation coefficient of: .01 – .29 represents a weak relationship; .30 – .45 represents a moderate relationship and .50 – 1.0 represents a strong relationship. The correlation matrix is represented diagonally in Table 7.

Emotional exhaustion was strongly correlated to work-to-family conflict ($r = .68, p < .01$). This positive relationship between emotional exhaustion and work-to-family conflict proved to be the strongest relationship. The second strongest relationship was between cynicism and work-to-family conflict ($r = .55, p < .01$). These findings indicate that there is a strong positive relationship between burnout and work-to-family conflict. There was a weak relationship between optimism and emotional exhaustion ($r = -.23, p < .05$) as well as optimism and cynicism ($r = -.44, p < .01$). This indicates that optimism is negatively associated with burnout. There was no significant relationship between optimism and work-to-family conflict. Similarly, no significant relationships were found between pessimism and work-to-family conflict or between pessimism and the two dimensions of burnout.

Table 7.

Mean, Standard deviation and Correlation Analysis for Indicators

Variable	M	SD	1	2	3	4	5
1. Work-to-family conflict	3.68	1.04	-				
2. Burnout (emotional exhaustion)	4.33	1.40	.68**	-			
3. Burnout (cynicism)	3.10	1.77	.55**	.71**	-		
4. Optimism	3.44	.84	-.15	-.23*	-.44**	-	
5. Pessimism	2.40	.72	-.11	-.13	-.05	.26*	-

Notes. * $p \leq 0.05$; ** $p \leq 0.01$; M = mean; SD = standard deviation.

Table 8.*Descriptive Statistics for Summary Scales*

Variables	N	SE	Skewness	Kurtosis
Work-to-family conflict	94	.11	-.42	-.72
Burnout (emotional exhaustion)	94	.14	-.39	-1.07
Burnout (cynicism)	94	.18	.27	-1.37
Optimism	94	.09	-.72	.64
Pessimism	93	.08	-.77	-.70

Notes. N = Number of respondents; SE = standard error of mean.

Bivariate Regression Analysis

Bivariate regression analysis was conducted to assess the outcome variables of work-to-family conflict in order to test propositions 2a and 2b. The purpose of this analysis was to establish the total variance in emotional exhaustion and cynicism that was explained by work-to-family conflict.

Prior to running the analyses, the following assumptions were evaluated in order to determine whether bivariate regression was appropriate for the data:

Level of measurement. In following Field (2013), predictor variables (IVs) should be measured using categorical or interval data, whereas the criterion variable (DV) should be measured on interval or ratio scales. Work-to-family conflict, burnout, optimism and pessimism were measured using interval scales. Therefore, the requirement of level of measurement was satisfied.

Adequate sample size. According to Tabachnick and Fidell (2007), an adequate sample size can be calculated using the formula, $N > 50 + 8(m)$ where 'm' is the number of IVs. Therefore, the required sample size for the regression model is 58 participants as there is only one IV within a bivariate regression model. Thus, assumption of adequate sample size was satisfied seeing as how the current sample size is 94.

Additivity and linearity. This assumes that a linear relationship should exist between the DV and the IV, as well as each of the IVs collectively within a multiple regression model (Osborne & Waters, 2002).

Independent errors. This assumes that errors (residuals) in the regression should not correlate with errors next to them, therefore there should be no autocorrelation. This assumption is assessed using the Durbin-Watson statistic which varies between 0 and 4 where values less than 1 and values greater than 3 are problematic (Field, 2013). Values close to 2 indicate no correlation which fulfils the assumption of independent errors. This assumption was fulfilled as the Durban-Watson statistic for both bivariate regression models was 2.0.

Homoscedasticity. This implies that the errors should have equal variance across each value of the IV. This was tested using scatterplots in which data points were evenly and randomly dispersed which indicates homoscedasticity (see Appendix D, Figure D1 – D2).

Normally distributed errors. Histograms were used to depict the normal distribution of errors in each model (see Appendix E, Figure E1 – E2).

Non-zero variance. This assumes that the standard deviations of the IVs and the DV should be above 0.

Model 1. Bivariate regression was conducted to predict emotional exhaustion (DV) based on scores of work-to-family conflict (IV). The simple correlation (R) was .68 and the regression model was significant ($F_{1,92} = 77.38, p < .001$). The adjusted R^2 value indicated that 46% of the variance in emotional exhaustion is explained by work-to-family conflict

Work-to-family conflict was a significant predictor of emotional exhaustion ($\beta = .68, t = 8.97, p < .001$). The unstandardized coefficient ($r = .91$) indicated that each unit of work-to-family conflict will translate into a .91 change in each unit of emotional exhaustion meaning that an

increase in levels of work-to-family conflict with translate into increased levels of emotional exhaustion (refer to Table 9). Therefore, proposition 2a was supported.

Model 2. Bivariate regression analysis was conducted with cynicism (DV) and work-to-family conflict (IV). A simple correlation (R) value of .55 along with a significant regression model was found ($F_{1,92} = 40.17, p < .001$). The adjusted R^2 value indicated that 30% of the variance in cynicism is explained by work-to-family conflict. The findings show that work-to-family conflict was a significant predictor of cynicism ($\beta = .55, t = 6.36, p < .001$). The unstandardised coefficient of .92 indicated that an increase in levels of work-to-family conflict will translate into increased levels of cynicism (refer to Table 10) Thus, proposition 2b was also supported.

Table 9.

Bivariate Regression Summary for Dependent Variable: Emotional Exhaustion

Predictor	B	SE(B)	95% CI	β	t	P
(Constant)	.99	.39	[.22 , 1.76]		2.55	.01
Work-to-family conflict	.91	.10	[.71 , 1.11]	.68	8.97	.000

Notes. $R^2 = .46$; B = unstandardised beta coefficient; SE(B) = standard error of the unstandardised beta coefficient; CI = confidence interval for the unstandardised beta coefficient; N = 94.

Table 10.

Bivariate Regression Summary for Dependent Variable: Cynicism

Predictor	B	SE(B)	95% CI	β	t	P
(Constant)	-.31	.56	[-1.41 , .80]		-.55	.59
Work-to-family conflict	.92	.15	[.63 , 1.21]	.55	6.36	.000

Notes. $R^2 = .30$; B = unstandardised beta coefficient; SE(B) = standard error of the unstandardised beta coefficient; CI = confidence interval for the unstandardised beta coefficient; N = 94.

Moderation Analysis

The purpose of a moderating variable is to identify conditions under which a particular predictor is associated to an outcome (Aiken & West, 1991). Moderation infers an interaction effect in which the introduction of a moderating variable will alter the magnitude or direction of a relationship between variables (Aiken & West, 1991).

Moderation analyses were performed using the PROCESS macro in SPSS which was developed by Hayes (2013). An additional bivariate regression model was used including the interaction effect of work-to-family conflict and optimism (refer to Table 11). This moderation analysis was conducted to determine whether optimism moderated the relationship between work-to-family conflict and burnout. According to Field (2013), moderation is indicated by a significant interaction.

In step one of the bivariate regression analysis, work-to-family conflict and optimism were entered. The variables explained a significant proportion of variance in burnout as the R^2 value was .50 ($F_{2,91} = 47.10, p < .001$). In step two, the interaction term between work-to-family conflict and optimism was entered. The results indicated that the interaction effect was not significant ($R^2 = .51, p = .85$). Therefore, optimism did not moderate the relationship between work-to-family conflict and burnout. Based on the above findings, proposition 3a was not supported.

A bivariate regression model including the interaction effect of work-to-family conflict and pessimism was also used in order to determine whether pessimism moderated the relationship between work-to-family conflict and burnout (refer to Table 12).

In step one, work-to-family conflict and pessimism were entered into the regression model. The variables accounted for 42% of the variance in burnout ($R^2 = .42$) and the model was statistically significant ($F_{2,90} = 34.62, p < .001$). In step two, the interaction term between work-to-family conflict and pessimism was entered. Similarly, the interaction effect was not significant ($R^2 = .44, p = .85$). Thus, it was found that pessimism did not moderate the relationship between work-to-family conflict and burnout. Therefore, proposition 3b was not supported.

Table 11.*The Interaction Effect of Work-to-Family Conflict and Optimism*

	B	SE B	t	P
Constant	3.71	.12	30.96	.000
Work-to-family conflict	.86	.12	7.03	.000
Optimism	-.49	.21	-2.37	.02
Work-to-family conflict × Optimism	-.04	.21	-.19	.85

Notes. $R^2 = .51$; Dependent variable = optimism; B = unstandardised beta coefficient; SE B = standard error of the unstandardised beta coefficient

Table 12.*The Interaction Effect of Work-to-Family Conflict and Pessimism*

	B	SE B	t	P
Constant	3.73	.12	30.92	.000
Work-to-family conflict	.92	.13	6.85	.000
Pessimism	-.03	.22	-.14	.89
Work-to-family conflict × Pessimism	-.04	.24	-.18	.85

Notes. $R^2 = .44$; Dependent variable = pessimism; B = unstandardised beta coefficient; SE B = standard error of the unstandardised beta coefficient.

Summary of Results

The results of this study found that work-to-family conflict was unidimensional as opposed to having two dimensions (time-based and strain-based conflict). Results of the bivariate regression analyses found that work-to-family conflict explained a significant proportion of the variance in both dimensions of burnout – emotional exhaustion and cynicism. Lastly, results of moderation analyses found that optimism and pessimism did not moderate the relationship between work-to-family conflict and burnout.

Discussion

This study aimed to examine the relationship between work-family conflict and burnout amongst South African call centre employees, as well as whether optimism and pessimism moderated this relationship. This section presents the discussion of the results with particular reference to the formulated propositions of the study. This is followed by the limitations of the study, suggestions for future research and lastly, practical implications.

The Dimensionality of Work-to-Family Conflict

Proposition 1 states that work-to-family conflict has two dimensions (time-based and strain-based conflict). Exploratory factor analysis showed that work-to-family conflict was unidimensional as the dimensions of time-based and strain-based conflict did not emerge as expected. Thus, proposition 1 was not supported. Time-based and strain-based conflict have been regarded as two separate dimensions in which time-based conflict occurs when demands in both family and work domains compete for an individual's time. Whereas, strain-based conflict arises when strain resulting from one role begins to affect an individual's performance in an opposing role (Greenhaus & Beutell, 1985). The unidimensional work-to-family conflict scale indicated that respondents did not experience time-based and strain-based conflict as distinctly different constructs within the work context. This finding has been supported by Martins, Kimberly and Veiga (2002) who found that both time-based and strain-based conflict loaded onto one factor during exploratory factor analysis and Demerouti, Geurts and Kompier (2004) in their study on positive and negative work-home interaction. Demerouti et al. (2004) explain that this may have been the case as time-based and strain-based conflict are both forms of role strain in which individuals are not likely to discern the difference between workplace time pressures (i.e. work schedules, deadlines and amount of hours worked) and workplace strain pressures (i.e. role ambiguity and role pressure), but rather experience an all-inclusive sense of pressure arising from within the work domain. Thus, the current findings may be aligned with this explanation in that call centre employees do not experience a difference between time pressures and strain pressures at work which lends support to the unidimensional work-to-family conflict scale.

An additional explanation as to why the work-to-family conflict construct could have been viewed as unidimensional is acknowledged by Greenhaus and Beutell (1985). They suggested that lengthy-time involvement within a certain role can produce symptoms of strain. For example, overtime and inflexible work hours may indirectly produce both time-based and strain-based conflict. Thus, even though time-based and strain-based conflict are regarded as conceptually distinct constructs, it is likely that the constructs share multiple common sources (Greenhaus & Beutell, 1985).

Work-to-Family Conflict as a Predictor of Burnout

Proposition 2a states that work-to-family conflict explains a significant proportion of the variance in emotional exhaustion; and proposition 2b states that work-to-family conflict explains a significant proportion of the variance in cynicism. Two dimensions of burnout were identified during exploratory factor analysis, namely emotional exhaustion and cynicism. This is supportive of Lee and Ashforth (1996) and Schaufeli and Bakker (2004) who confirmed burnout to be a two-dimensional scale within their respective research contexts. A two-dimensional scale of burnout was expected in support of previous studies which found that emotional exhaustion is the most notable feature of burnout which from which cynicism develops (Maslach et al., 2001; Rupert et al., 2009; Rod & Ashill, 2013).

The results of the bivariate regression analyses indicated that work-to-family conflict explained a significant proportion of the variance in both emotional exhaustion and cynicism. Thus, propositions 2a and 2b were supported.

The relationship between work-to-family conflict and burnout can be explained using the Conservation of Resources theory (COR) (Hobfoll, 1989). The theory posits that individuals aim to acquire, retain and protect resources that they value. When an individual is forced to expend all of his or her resources on work, he or she will have significantly fewer resources available to spend on his or her family. This may cause the individual to enter into negative states of wellbeing during the process of trying to juggle both work and family roles simultaneously which may lead to elevated stress and burnout (Wright & Cropanzano, 1998). The COR theory (Hobfoll, 1989)

further proposes that the more conflict experienced in one role will result in fewer resources available to the individual to fulfil demands in the other role (Hobfoll, 2001).

Emotional exhaustion. The results showed that respondents experiencing emotional exhaustion are unable to relax after the work day or feel so drained at the end of the work day that they are incapable of doing anything else such as seeing to family responsibilities. This occurrence can be understood in light of the COR (Hobfoll, 1989) theory, such that respondents' valued resources such as energy and time are depleted in the process of trying to balance both work and family demands which results in the experience of feeling emotionally drained with no more resources to spare (Maslach et al., 2001).

Bivariate regression analysis indicated that work-to-family conflict explained greater variance in emotional exhaustion than in cynicism. This is supportive of research which identified emotional exhaustion to be the key component of burnout (Cordes, Dougherty & Blum, 1997). This may be the case as research has shown that emotional exhaustion is the most stable component of burnout from which the other two constructs, namely cynicism and reduced feelings of personal accomplishment are derived (Maslach et al., 2001). Another explanation as to why work-to-family conflict is responsible for predicting greater variance in emotional exhaustion dimension is provided by Lee and Ashforth (1996) who confirmed that job demand variables are more strongly associated with emotional exhaustion, whereas cynicism and reduced feelings of personal accomplishment are more strongly associated to resources. Therefore, seeing as how work-to-family conflict is a demand placed upon the individual, it has proven to be a greater predictor of the emotional exhaustion dimension of burnout.

Cynicism. The results indicated that respondents experiencing feelings of cynicism reported feeling less enthusiastic and interested in their work, and doubted the significance of it. Once again, this occurrence is explicable using the COR theory (Hobfoll, 1989) whereby respondents expend their valued resources at work which leaves them with limited or no resources to spend on their families. This ultimately resulted in the development of negative, cynical and impersonal attitudes towards their work.

Bivariate regression analysis identified work-to-family conflict to be a predictor of variance in cynicism, albeit a greater predictor of variance in emotional exhaustion. Cynicism has been identified as a form of defensive coping which is more strongly associated with resources within the stress-coping self-evaluation process as resources assist the individual to disregard the need for defensive coping and enhances his or her self-efficacy (Lazarus & Folkman, 1984; Lee & Ashforth, 1996). Therefore, as work-to-family conflict is considered to be a demand and not a resource, this explains why it predicted less of the variance in cynicism.

Overall, the results suggest that respondents who reported experiencing greater levels of work-to-family conflict also experienced greater levels of burnout as excessive work demands resulted in them feeling drained with less time and energy to fulfil family responsibilities at home. These findings are consistent with previous work-family conflict research conducted in South Africa which found work-to-family conflict to be a predictor of burnout, particularly emotional exhaustion (Koekemoer & Mostert, 2006; Mostert, Peeters & Rost, 2011). With regards to the context of call centre employees, these findings are supported by Maslach and Jackson (1981) who argued that burnout occurs more frequently amongst occupations who are required to work with people, especially clients who are hostile or unwilling to cooperate. This is further explained by Wang et al. (2013) who propose that employees who are required to uphold positive relations with customers at all times are likely to take on tremendous emotional burden and experience severe consequences such as emotional exhaustion and absenteeism.

The Moderating Role of Optimism and Pessimism

Proposition 3a states that optimism will moderate the relationship between work-to-family conflict and burnout, such that the relationship between work-to-family conflict and burnout will be weaker. Proposition 3b states that pessimism will moderate the relationship between work-to-family conflict and burnout, such that the relationship between work-to-family conflict and burnout will be stronger. Moderating variables are intended to provide additional insight into the association between variables of interest by altering the relationship between the independent and dependent variables by either strengthening or diminishing the relationship (Allen, 2017). Optimism was expected to moderate the relationship between work-to-family conflict and burnout,

such that the relationship between work-to-family conflict and burnout will be weaker. This proposition is based on studies which found that optimism significantly moderated the relationship between sources of stress and negative health outcomes (Chang et al., 1997; Fry, 1995). Optimistic orientations have also been associated with decreased burnout (Riulli & Savicki, 2003), psychological well-being and improved job performance (Luthans et al., 2008). On the other hand, pessimism was expected to moderate the relationship between work-to-family conflict and burnout, such that the relationship between work-to-family conflict and burnout will be stronger as pessimists reported experiencing greater levels of stress in response to work and nonwork conflict (Tuten & Neidermeyer, 2004). Pessimistic orientations have been associated with greater depressive symptoms and life dissatisfaction (Chang & Farrehi, 2001).

However, the results of the moderation analyses indicated that optimism and pessimism did not moderate the relationship between work-to-family conflict and burnout as expected. This may have been due to several reasons, first of which is that 'optimism' and 'pessimism' may have been concepts that the sample was not able to comprehend fully. Although feedback received during the pilot study did not present concerns for the optimism and pessimism scale, the sample may have experienced difficulties in responding to the items. For example – the negatively worded items in the scale may have been misinterpreted. Negatively worded items are intended to require more cognitive resources from respondents, therefore respondents may experience increased difficulty in responding to these items as opposed to positively worded items, especially those who are fatigued (Merrit, 2011). Thus, it could have been possible that respondents may have overlooked the negative wording of the items whilst reading the items.

Another explanation as to why optimism and pessimism did not have a moderation effect on the relationship between work-to-family conflict and burnout could be due to the South African context. Optimism has been identified as a key factor in mental and physical health especially for those experiencing stress (Bosman, Buitendach & Rothman, 2005). For example, it was shown to moderate the relationship between stress and life satisfaction amongst American university students (Chang et al., 1997). Optimism also moderated the relationship between daily stressors, burnout and physical health amongst Canadian business executives (Fry, 1995). However, these findings may have not have been generalisable to the current South African sample as the

antecedents to individual differences in respondents' perceived stressors (such as work-to-family conflict) may not have been the same as those in Western contexts.

These results could have also been due to the internal consistency of the optimism and pessimism scale. During reliability analysis, two items were removed from the scale due to low corrected item-total correlations. This may have impacted upon optimism and pessimism's interactions with the other variables which resulted in a moderation effect that was not significant.

Although optimism and pessimism did not moderate the relationship between work-to-family conflict and burnout, correlation analyses indicated that optimism was negatively associated with both dimensions of burnout, namely emotional exhaustion and cynicism. Similar findings were also reported within a South African context in which it was found that optimism did not moderate the relationship between job characteristics (such as job demands and lack of resources) and burnout amongst support staff in higher education, however, optimism was associated with decreased levels of burnout, particularly emotional exhaustion (Rothman & Essenko, 2007). Rothman and Essenko (2007) explained their findings by drawing on Nelson and Simmons (2003), who suggest that optimism may be associated with wellness promotion as optimistic individuals are likely to form positive appraisals of workplace challenges that are presented by a lack of resources.

Limitations and Suggestions for Future Research

The cross-sectional nature of the study was the most practical design due to its time and cost-effective properties, however, it prevented the researcher from making causal inferences regarding the links between work to family conflict, burnout, optimism, and pessimism (Mouton & Babbie, 2001). A longitudinal research design would have been ideal as it focuses on collecting data from a sample of participants at multiple points over a specific time period in order to assess the stability of the associations between variables as time passes (Rosnow & Rosenthal, 2013). Longitudinal data also has the potential to detect changes or developments in the characteristics of the sample which can be generalised to the population in order to allow the researcher to establish a sequence of events (Terre Blanche et al., 2006).

Secondly, non-probability judgemental sampling further limited the generalisability of the results as the sample did not accurately represent the population of interest as randomisation was not employed (Terre Blanche et al., 2006). For example, 80% of the sample were men. A sample that is more representative of the population may have yielded interesting findings regarding gender differences and work-family conflict. However, judgemental sampling was selected as the most appropriate sampling method due to time and cost constraints. That being said, probability sampling techniques may prove to be more useful (Rosnow & Rosenthal, 2013). The sample used was call centre employees, therefore the results of this study are limited to this context and cannot be generalised across other occupations. Although the sample size of 94 participants was deemed to be adequate, this may have also limited the generalisability of the results. Thus, a larger sample is recommended to maximise the accuracy of findings and generalisability (Mostert et al., 2011).

An additional limitation was the use of self-report data which may have introduced bias as respondents may have felt inclined to respond in a socially desirable way due to the sensitive nature of the constructs (Greenhaus & Powell, 2006). For example, the sensitive nature of burnout and work-to-family conflict may have influenced respondents to answer in a way that is socially desirable coupled with the fact that data was collected at their place of work. This could have increased the chance of biased data (Greenhaus & Powell, 2006). Thus, in future the use of self-report measures could be supplemented with an additional source of data to decrease the likelihood of biased data. For example – with regards to the work-family context and negative health outcomes such as burnout – absenteeism records, sick leave records and medical certificates from call centre employees could be analysed in conjunction with self-report data (Clays, Kittel, Godin, De Bacquer & De Backer, 2009).

This study has highlighted the negative outcomes of work-family conflict for the individual as well as the organisation in the context of call centres. Thus, future research should focus on the antecedents of work-family conflict across occupations in South Africa which may differ considerably from Western contexts due to the country's historically unequal past which has impacted upon family roles and structures as well as socio-economic status (Patel, Govender, Paruk & Ramgoon, 2006). Determining the antecedents of work-family conflict in South Africa

may be useful in being able to reduce levels of work-family conflict before it leads to negative health outcomes (Frone, 2000). It may also be beneficial in the design and implementation of work-family interventions catered specifically for a South African workforce. Research has been conducted on the outcomes of work-family conflict, however limited research has focused on the antecedents within a South African context.

Optimism did not have the expected moderating effect on the relationship between work-to-family conflict and burnout. Therefore, it is recommended that future research be conducted on the combined effect of optimism and other positive constructs such as resilience, hope, and self-efficacy as it has been found that the combined effect of these constructs has had a positive impact on employees and may produce more meaningful results (Luthans et al., 2008). It may also be beneficial for future research to focus on the moderating effect of demographic variables such as paid domestic support and socio-economic status on the relationship between work-family conflict and its health outcomes given the unique context of South Africa (Mostert, 2009). This may provide additional insight into the nature of work-family conflict experienced within the country. It is also recommended that personality traits such as the Five-Factor Model (Costa & McCrae, 1992) be examined in relation to work-family conflict and its outcomes as they may moderate the effects of health outcomes and its impact on organisational outcomes. This may be beneficial in determining which personality traits are more susceptible to negative health outcomes (Mostert, 2009).

More research should also be conducted on the work-family enrichment component of the work-family interface. The vast majority of work-family research focuses predominantly on work-family conflict and its outcomes. Work-family enrichment has been associated with beneficial work and nonwork outcomes such as life satisfaction, job satisfaction and wellbeing (McNall, Nicklin & Masuda, 2009). Therefore, research conducted in this area may be beneficial in determining positive health and wellbeing outcomes that may deter stress as a result of work-family conflict. Practically, findings could be used in the development of workplace strategies such that encourage enrichment across work and family domains (McNall, et al., 2009).

Practical Implications

The findings of this study are indicative of conflict originating in the work environment which spills over into the family domain (i.e. work-to-family conflict) which is associated with negative health outcomes such as burnout within the call centre environment. Therefore, these findings may be useful in educating human resource practitioners in call centres on the threats of employee multiple role involvement. Work-family conflict, namely in the direction of work-to-family has been identified as a significant stressor within call centre research (Mellor et al., 2015). However, interventions which have been successful in alleviating the effects of work-to-family conflict and improving performance (such as the introduction of job sharing and working remotely) may not be practical and cost-effective within a call centre environment due to the nature of the job (Netemeyer & Boles, 2004). Therefore, it may be useful for call centre managers to incorporate coping strategies into the organisational culture of the call centre such as adopting family-friendly workplace policies and creating a work environment that is supportive of multiple role involvement (Mellor et al., 2015). For example, supportive workplace benefits such as flexible work scheduling has been shown to decrease the occurrence of work-family conflict (Allen, 2001). Management should also consider implementing therapeutic and preventative interventions within call centres for employees dealing with negative health outcomes as a result of work-family conflict, such as Employee Assistance Programmes (EAPs) (Hammer, Cullen, Neal, Sinclair & Shafiro, 2005). It has been suggested that EAPs should include a component that focuses on the interrelationship between work and family roles such as programmes that not only identify ways to decrease work-family conflict but also enhance positive spillover between work and family roles as a means of improving wellbeing (Hammer et al., 2005).

In order to minimise the occurrence of work-to-family conflict, it may also be useful for call centre human resource practitioners to examine potential issues of work-family conflict such as living arrangements, family support, and personal values within the recruitment and selection process in an attempt to identify any possible issues that may be presented by hiring potential employees. For example, hiring employees who are more attuned to working irregular hours and shift work may experience less work-to-family conflict, or may not be as susceptible to its negative outcomes (Mechanova, 2013).

The findings of this study are supportive of research that characterises call centre work as emotionally demanding which is commonly associated with burnout (Wilk & Moynihan, 2005). Organisations may be able to mitigate the negative outcomes of call centre work by training supervisors on how their attitudes and actions towards employees may cause additional strain and contribute towards emotional exhaustion (Wilk & Moynihan, 2005). Supervisor training may also be beneficial in equipping supervisors with the knowledge and skills to better create a work environment that is supportive of multiple role involvement and encourages positive spillover between work and home roles (Mellor et al., 2015).

The results of this study also found that optimism was associated with decreased burnout. This is supportive of research which suggests that optimism forms a key component of call centre employees' resources as their optimistic disposition towards challenging and stressful situations may have a positive influence on wellbeing and work-related goal attainment (Simons & Buitendach, 2013). Thus, it is recommended that greater emphasis be placed on optimism training within organisational wellness training programmes as it is suggested that optimism as a personal resource can be trained and developed which may have favourable organisational outcomes (Simons & Buitendach, 2013). Organisational wellness programmes which focus on developing employees' personal resources may also be vital in contributing to psychological wellbeing and increased motivation. Positive organisations can capitalise on this by encouraging employees to be proactive in terms of their personal development (Harry, 2015).

Conclusion

Given the inherently stressful nature of call centre work and the rapid growth of call centres within South Africa, the subsequent aim of this study was to examine the relationship between work-family conflict (specifically in the direction of work-to-family) and burnout experienced by call centre workers as well as whether optimism and pessimism moderated this relationship.

The findings indicate that work-to-family conflict is a significant predictor of variance in both dimensions of burnout, namely emotional exhaustion and cynicism. Optimism and pessimism did not have a moderating effect on this relationship as initially expected. However, the results show that optimism is negatively associated with both dimensions of burnout. This is noteworthy as it suggests that optimism may be related to reduced negative health outcomes amongst call centre employees.

Despite the limitations of the present study, the findings may provide valuable insights into the nature of work-to-family conflict experienced within South African call centres as well as its associated negative health outcomes. These findings may be used in the development and implementation of workplace strategies that aim to reduce levels of work-to-family conflict and its subsequent health outcomes by incorporating positive psychology training into organisational wellness programmes within call centres. This may prove to be useful in the long term by supporting multiple role involvement, encouraging positive spillover between work and family roles as well as promoting health and wellbeing within South African call centres.

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Appendix A



Dear Participant

I invite you to partake in a research study, which aims to investigate the relationship between work-family conflict and burnout amongst call centre employees, as well as optimism as a moderating variable.

This study requires you to complete an online questionnaire which should take approximately 10 - 15 minutes to complete.

This research study has been approved by the Commerce Faculty Ethics in Research Committee. Participation in this study is voluntary and you may withdraw at any time. You are not required to identify yourself, thereby ensuring anonymity. Your responses will remain confidential, thereby ensuring confidentiality of the data.

Your consent to participate in this study will be recorded by the completion and submission of this questionnaire. Participation in this study will not pose related risks or benefits.

Your responses will be recorded and used solely for the purposes of this study. Following the completion of the study, the data collected from participants will be stored on a password-protected device to which only I will have access to.

Should you have any questions or concerns regarding the completion of the questionnaire or about your participation in this study, please feel free to contact me at plljay010@myuct.ac.za.

Your time and participation is appreciated.

Kind regards,
Jayde Pillay
Organisational Psychology Masters Student

Appendix B

Work-to-Family Conflict Scale (Carlson et al., 2000)

Time-based work-to-family conflict

1. My work keeps me from my family activities more than I would like.
2. The time I must devote to my job keeps me from participating in household responsibilities and activities.
3. I have to miss family activities due to the amount of time I must spend on work responsibilities.

Strain-based work-to-family conflict

4. When I get home from work I am often too frazzled to participate in family activities/ responsibilities.
5. I am often so emotionally drained when I get home from work that it prevents me from contributing to my family.
6. Due to all the pressures at work, sometimes when I come home I am too stressed to do the things I enjoy.

Appendix C

Maslach Burnout Inventory – General Survey (MBI-GS) (Schaufeli & Buunk, 1996)

Exhaustion

1. I find it hard to relax after a day's work.
2. I feel drained when I finish work.
3. When I finish work I feel so tired I can't do anything else.
4. It is getting increasingly difficult for me to get up for work in the morning.
5. I feel used up at the end of a work day.

Cynicism

6. I have become less interested my work.
7. I have become less enthusiastic about my work
8. I feel increasingly less involved in the work I do.
9. I doubt the significance of my work.
10. I can't really see the value of my work.

Appendix D

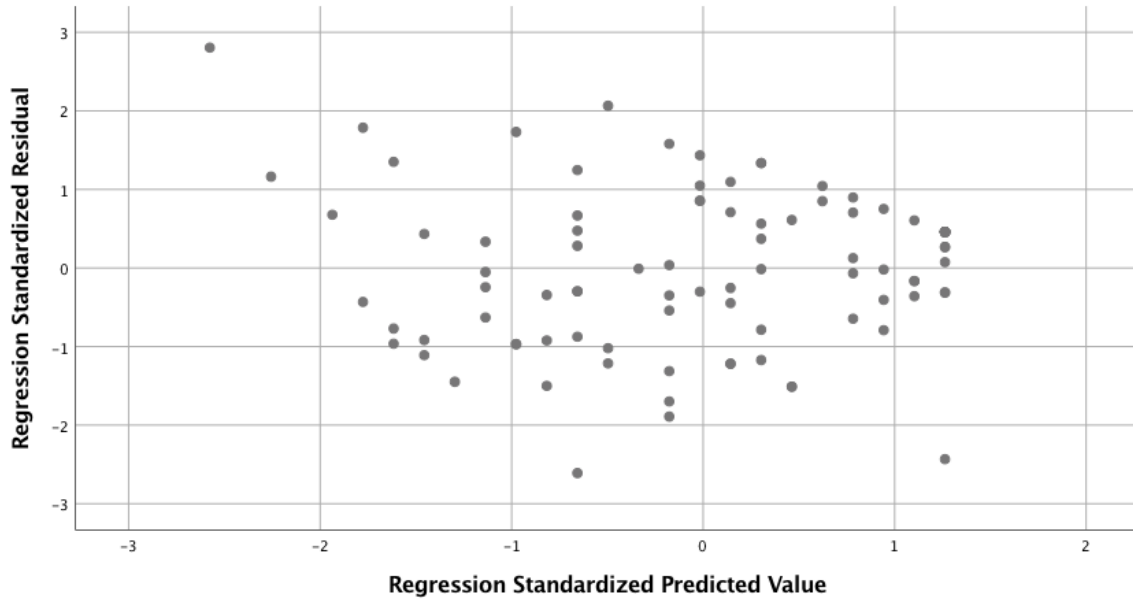


Figure D1. Scatterplot of Standardised Observed Residuals and Standardised Predicted Residuals for Model 1

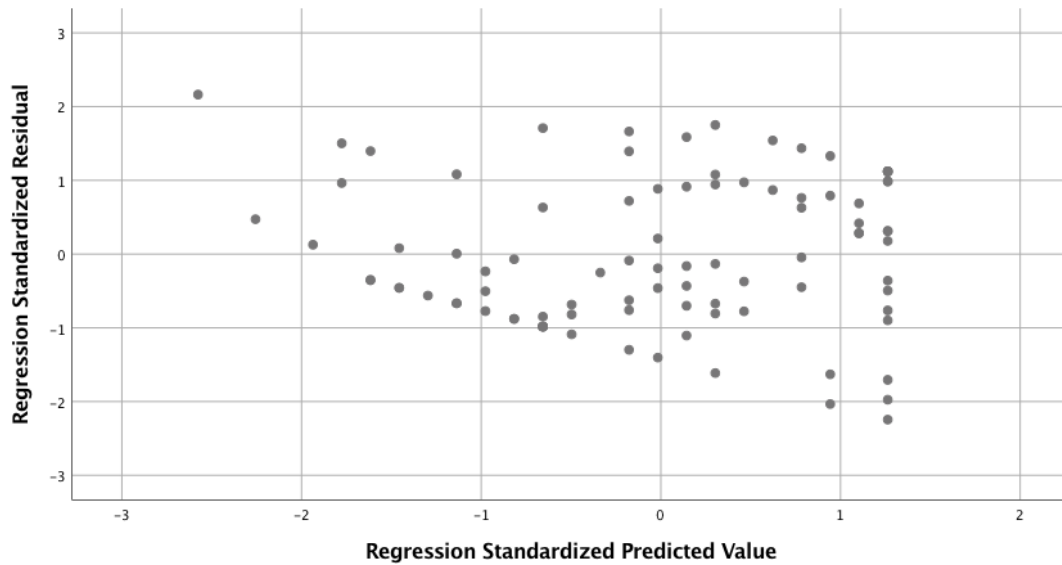


Figure D2. Scatterplot of Standardised Observed Residuals and Standardised Predicted Residuals for Model 2

Appendix E

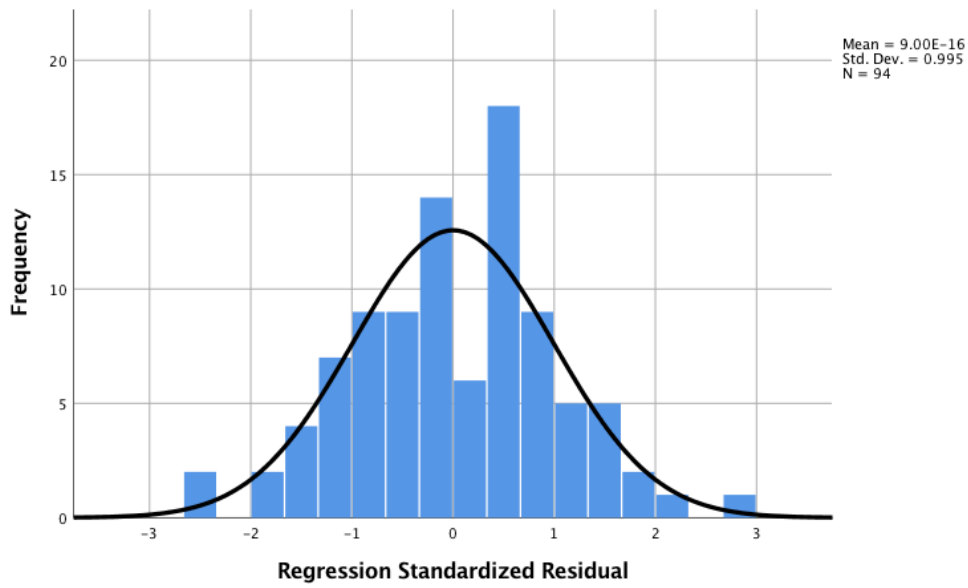


Figure E1. Histogram showing normally distributed residuals for Model 1

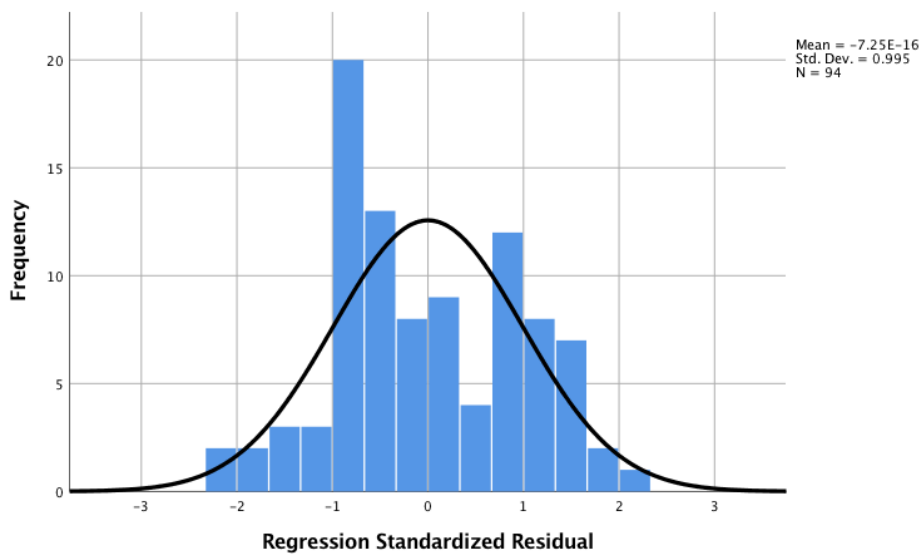


Figure E2. Histogram showing normally distributed residuals for Model 2