The relationship between basic need satisfaction at work, stress, coping and resistance to change

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Abstract

The frequency and complexity of organisational change makes it a challenging issue for organisations. Employees are required to readily adapt to change, however accounts of resistance to change are more prevalent than accounts of employees embracing change. To implement change organisations rely on employee motivational and behaviour needs, the Self Determination Theory as it pertains to need satisfaction was used in the study. Organisational change can result in employees experiencing stress, uncertainty and fear about coping with the situation. This study examined the relationship between need satisfaction, stress, coping and resistance to change. 90 participants completed an online questionnaire. Results from a mixed-method survey design showed that need satisfaction did not predict resistance to change. Relationships were found between need satisfaction, coping and stress, and between coping and stress and resistance to change levels. In conclusion, results are useful in explaining the interactions between coping, stress and resistance to change.
1. Introduction

Organisational change is pervasive. The growing frequency and complexity of organisational change requires employees to adapt to change without hesitation, however resistance to change is far more prevalent than accounts of people readily embracing change (Caldwell, Herold, & Fedor, 2004, p. 868). People differ in how they respond to change, some actively seek it out, whereas others tend to avoid or resist it. The challenge for companies is to create a work environment in which employees accept rather than resist change (Iverson, 1996, p. 123). A large body of literature in management and organisational psychology indicates that people have a strong tendency to resist change (Parish, Cadwallader & Busch, 2008, p.33), however there is a notable lack of research on employee resistance to change across the literature.

In order to realise change effectively, organisations must rely on individual employee motivation and behaviour. Previous research has indicated that more attention should be given to motivational and behavioural needs in order to understand resistance to change (Heuvel, Demerouti, Bakker & Schaufeli, 2013, p.12). Various scholars throughout the ages have also suggested that needs are the fundamental determinants of human behaviour (Broeck, Vansteenkiste, Witte, Soenens & Lens, 2010, p.981). In the Self Determination Theory (SDT) (Deci & Ryan, 1985; Ryan & Deci, 2000) basic psychological need satisfaction is assumed to underlie the motivational mechanisms which stimulate and direct people’s behaviour (Deci & Ryan, 2000, p.227). The SDT, as it pertains to basic needs satisfaction, provides a useful framework for the current study in order to analyse the relationships between basic need satisfaction and resistance to change.
1.1 Self-Determination Theory (SDT)

The Self Determination Theory (SDT) (Deci & Ryan, 1985; Ryan & Deci, 2000) is a macro-theory of human motivation. The theory focuses on the process of internalising goals and values, and examines the degree to which human behaviours are self-determined. The theory proposes the existence of three innate universal basic psychological needs, which are the need for: autonomy, competence and relatedness. Unlike Maslow’s (1943) hierarchy of needs, the three basic needs are not assumed to be organised hierarchically. All three needs are considered equally important and therefore none can be ignored in order to experience well-being and growth (Sheldon & Niemiec, 2006, p.332).

Autonomy refers to the need to engage in chosen activities which are in line with the authentic self, it is hypothesised to underlie the processes of self-determination and involves acting with a sense of volition (Gagné & Deci, 2005, p. 333). The need for competence refers to an individuals need to interact effectively with the environment, and to master skills required to produce desired outcomes and prevent undesired events. Whereas relatedness is the need to feel connected to and accepted by others socially (Deci and Ryan, 2002, p. 298). The SDT assumes that these needs are innate rather than learned, with several studies providing evidence consistent with this view (Deci et al., 2001, p. 931).

Psychological need satisfaction can therefore help explain why some behaviours produce positive outcomes, whereas others do not (Deci & Ryan, 2008, p.183). If these basic needs are developed then people will tend to align behaviours with their values, beliefs and interests (Kinsler, 2014, p.98), and behaviour will become more self-determined (Kinsler, 2014, p.102). According to the SDT, satisfaction of the basic needs is essential for
psychological growth, optimal functioning, and well-being (Ryan & Deci, 2000). A central principle of the SDT is that satisfaction of the three needs will lead to favourable outcomes, as the satisfaction of something which is essential cannot lead to an unfavourable outcome (Deci & Ryan, 2000). Previous research has found support of a positive relationship between need satisfaction and favourable employee attitudes towards change, such as acceptance of change and readiness to change (Broeck et al., 2010, p. 984). The current study seeks to elaborate on such findings by exploring the influence basic need satisfaction has on resistance to change, an unfavourable outcome for organisations.

1.2 Basic Need Satisfaction

Previous field and lab studies have found that supporting the basic needs of autonomy, competence and relatedness facilitates internalisation of the value of engaging in a task, with the support for autonomy being the most important for facilitating internalisation (Gagné & Deci, 2005, p. 339). Research has shown that increasing autonomy support promotes internalisation of the value of engaging in a task, even if that task is deemed to be boring or tedious (Gagné, Koestner, & Zuckerman, 2000, p.1844). Cross-sectional and longitudinal studies have shown that supporting the development of autonomy facilitates acceptance of change (Gagné et al., 2000, p.1849). Notably managerial support of autonomy is expected to promote satisfaction of all three basic psychological needs (Deci et al., 2001, p. 932). The importance of the role which autonomy plays in an organisational change context is documented widely (Gagné, et. al, 2000, p.1844). If supporting the development of autonomy facilitates acceptance of change, it is hypothesised in the current study that the satisfaction of autonomy needs will be related with resistance to change
Similarly factors shown to facilitate need satisfaction in the workplace, such as: communication, empathy, participation and involvement, have also been shown to promote acceptance of organisational change (Gagné et al., 2000, p.1844). Research to date has shown that good and effective work relationships are important in determining attitudes towards organisational change (Vakola and Nikolaou, 2005, p.160). It is therefore expected that relatedness needs will play an important role in an organisational change context and hence will be associated with resistance to change in the current study. To date little research has fully investigated the role of competence needs within organisational change. In addition the effectiveness of the satisfaction of all three basic needs (autonomy, relatedness and competence) within an organisational change context has not been systematically evaluated to date. The unique contribution of this study to the existing literature is that it investigates the role which all three basic needs play within organisational change context, specifically investigating resistance to change.

1.3 The Social Environment

Psychological needs can be satisfied or thwarted by different aspects of the social and work environments (Ntoumanis, Edmunds & Duda, 2009, p. 252). Work environments which allow satisfaction of the three basic psychological needs facilitate positive outcomes, such as: work related well-being, job satisfaction and organisational commitment (Deci et al., 2001, p. 930). Such results have been found across different job levels, job sectors and cultures, and is therefore in line with the claim that satisfaction of these needs yield universal positive outcomes (Deci et al., 2001, p.930). Furthermore environmental conditions which satisfy basic needs have been found to facilitate intrinsic motivation and personal growth, whereas
conditions which impede need satisfaction thwart intrinsic motivation and growth (Greguras & Diefendorff, 2009, p.466).

When the social environment enables need satisfaction, behaviour is usually self-determined. If the social environment undermines the development of the three basic needs, behaviour often indicates low or no self-determination (Ntoumanis et. al., 2009, p.252). The social environment therefore influences the development of intrinsically healthy, self-determined behaviour and the satisfaction of the three basic needs (autonomy, relatedness and competence) (Hefferon & Boniwell, 2011, p. 139). It is expected that more self-determined individuals will be better equipped to take advantage of change (Parker, Jimmieson, & Amiot, 2016, p. 2), and hence will display less resistance to change. In the current study by considering whether the basic needs are satisfied or thwarted in the work environment, it will be possible to predict the impact of needs satisfaction on outcomes such as resistance to change.

1.4 Stress and Organisational Change

Occupational stress and organisational change are widely accepted as two major issues in the workplace today (Vakola & Nikolaou, 2005, p.160). Organisational change can be defined as an attempt to modify an organisations structure, goals, technology or work tasks (Carnall, 1986). Organisational change is an uncontrollable job related stressor, as it challenges the way things are done, and as a result employees may experience stress, uncertainty and fear about coping with the situation (Oreg et al., 2008, p. 936). Lazarus & Folkman (1984) conceptualised stress as a person-environment relationship, where stress is determined by person-environment fit. Organisational change represents the person-environment relationship investigated in the current study. Past studies have shown that when
faced with organisational change, individuals may perceive important shifts in aspects of their person-environment fit (Caldwell et. al., 2004, p. 876). A shift in person-environment fit is expected to influence not only basic need satisfaction but also how individuals perceive and cope with stress at work in the current study.

Lazarus and Folkman’s (1984) transactional model has previously been used to investigate the impact of organisational change on stress and coping from a number of perspectives. Lazarus and Folkman (1984) identified a number of properties of situations that can have a negative impact on individuals such as, the imminence, duration and uncertainty of an event. Many researchers have found that an important outcome of organisational change is employee uncertainty (Rafferty & Griffin, 2006, p. 1155). Uncertainty about a situation can result in it being harmful or negative for the individual, and what makes organisational change potentially damaging or negative for individuals is how unpredictable it is (Rafferty & Griffin, 2006, p. 1155). When changes are frequent employees are likely to feel fatigued by change and experience stress and anxiety due to the unpredictable nature of change (Rafferty & Griffin, 2006, p. 1155). Research carried out by Parker, Jimmieson, and Amiot, (2013, p.177) found that individuals low in self-determination experienced stress reactivity to changes in work-load, even if the workload increased or decreased. In contrast, when individuals high in self-determination were faced with the same change, they could use the change to their advantage. The present study seeks to extend upon the work of Parker and colleagues’ by exploring the relationship which exists between need satisfaction, stress and resistance to change.

1.5 Coping
According to Lazarus and Folkman (1984) different appraisals of stressful events can lead to different coping strategies. Folkman and Lazarus (1980, p.223) define coping as “the cognitive and behavioural efforts made to master, tolerate, or reduce external and internal demands and conflicts”. Coping is viewed as having two major functions, the regulation of emotions or distress, called emotion-focused, and problem-focused coping strategies (Taylor, 2015, p.113). Previous research has indicated that need satisfaction and self-determination can result in the use of more adaptive and less maladaptive coping strategies (Amiot, Blanchard, & Gaudreau, 2008), as well as less defensive coping and self-handicapping (Parker et al., 2016, p. 3). Previous research indicates that a sense of control and social support are central in shaping how people cope (Deci & Ryan, 2002, p. 297). It is therefore anticipated in the current study that relatedness needs will be associated with how individuals cope. Making efforts to cope with challenges has also been shown to promote a sense of competence and autonomy, which is required to internalise activities within the self (Thompson & Gaudreau, 2008, p. 273). Hence the use of adaptive or task-oriented coping may produce a significant increase in self-determined motivation and basic need satisfaction in the current study.

The use of different coping strategies to deal with stress and organisational change is therefore expected to depend on an individual’s motivation and self-determination, and hence need satisfaction in the current study. Prior research has also demonstrated that self-determined motivation, as opposed to non-self-determined motivation, acts as an antecedent to predicting how individuals cope with change (Amiot, Blanchard & Gaudreau, 2008). It is also suggested that self-determined individuals will be more resilient to change and will use more task-oriented coping strategies, such as planning and active coping strategies (Parker et al., 2013, p.176). Whereas non-self-determined motivation was found to be positively related
with disengagement as a coping mechanism (Amiot, Gaudreau & Blanchard, 2004). The process of autonomy has been shown to be central to the study of coping (Deci & Ryan, 2002, p. 298). However at this present time the contribution of autonomy to the study of coping is not fully realised (Deci & Ryan, 2002, p. 298). To date little empirical attention has been allocated to mechanisms which could explain the relationships between basic need satisfaction, stress and coping (Thompson & Gaudreau, 2008, p.283). Therefore this research aims to extend upon previous research by exploring the contribution of all the three basic needs of autonomy, relatedness and competence to the study of both stress and coping within an organisational change context.

1.6 Resistance to Change

Resistance to change is typically regarded in the organisational behaviour literature as an obstacle or barrier to change (Kotter and Schlesinger, 1979). Resistance to change is a socially constructed phenomenon which is generated and defined through interaction (Van Dijk & Van Dick, 2009, p. 143). Individuals differ in their personal orientation towards change, and this influences how an individual responds to specific organisational changes (Nov & Ye, 2008; Oreg, Nevo, Metzer, Leder, & Castro, 2009). Reasons for resistance to change include fear of the unknown, mistrust, anxiety about the future benefits, and a desire to keep things the way they are (Gagné et. al., 2000, p.1844).

The personality trait of dispositional resistance to change comprises of four dimensions, including: routine seeking, emotional reaction, short-term focus, and cognitive rigidity (Oreg, et al., 2008, p. 936). Routine seeking refers to an individual who enjoys and seeks stable and routine environments. Emotional reaction is the extent to which individuals
feel emotional, stressed and uncomfortable in response to change (Oreg, et al., 2008, p. 936). Short-term focus involves how much an individual focuses on the short-term inconvenience as opposed the long-term benefits of change. Cognitive rigidity is a form of stubbornness and unwillingness to consider alternative ideas or perspectives (Oreg, et al., 2008, p. 936). The different dimensions become salient in different contexts and situations. Those who are dispositionally resistant to change are less likely to initiate changes and more likely to form negative attitudes towards change (Oreg, et al., 2008, p. 936). Only recently have studies begun to explore resistance to change from an individual difference perspective (Oreg, 2003, p. 680).

1.7 Current Study Rationale

In order to implement change effectively, it is posited that organisations need to rely on individual employee motivation and behaviour determined by the satisfaction of the three basic needs of: autonomy, competence and relatedness. The key contribution of this study to the existing literature is that it investigates the role which all three of the basic psychological needs play in terms of predicting resistance to change within an organisational change context. In particular the need for autonomy is expected to play an important role in terms of influencing resistance to change (Gagné et. al, 2000, p.1844). Research has repeatedly shown that satisfaction of the basic psychological needs is associated with positive outcomes (Hofer & Busch, 2011, p. 1147), and in particular acceptance of organisational change (Gagné et. al., 2000, p.1849). The present study therefore assumes that if basic needs are not satisfied, it could lead to unfavourable outcomes for organisations, such as resistance to change. Although little empirical evidence is available on the relationship between need satisfaction at work and resistance to change, it would be reasonable to assume based on a review of the
literature that if employee’s basic needs are not satisfied it may result in an unfavourable outcome for organisations, such as resistance to change. However, fewer studies have empirically validated this assumption (Trépanier, Fernet, & Austin, 2015, p. 106), and this assumption will therefore be explored further in the current study.

The work environment is expected to play an important role in terms of satisfying basic needs. In the current study, basic needs satisfaction at work will be measured in order to validate if a work environment conducive to need satisfaction, can predict outcomes such as perceived stress, coping mechanisms and levels resistance to change. Aspects of the work environment being validated in the current study includes the: size of company, job-level, and the length of time the participant is in the job.

Stress and coping as they both pertain to need satisfaction and resistance to change will also be investigated in the current study. Both of these constructs are shown in the literature to have indicative relationships with basic need satisfaction (Parker et. al., 2013), and also attitudes towards organisational change (Gagné et. al., 2000, p.1849). The current research will investigate the specific relationships which exist among these interrelated constructs within an organisational change context. Therefore this study takes an underexplored path by examining the role of need satisfaction in predicting resistance to change and aims to explore if need satisfaction can help facilitate organisational change, by influencing resistance to change. The study will also examine the role which basic needs satisfaction at work plays in predicting coping strategies and stress, and also the important interaction which takes place between both coping and stress. Figure 1 presents the model unique to this study which is being tested.
1.8 Hypotheses

This study aims to explore the following hypotheses:

H1: There will be a significant relationship between basic need satisfaction at work (autonomy, competence and relatedness) and resistance to change.

H2: There will be a significant relationship between need satisfaction at work (autonomy, competence and relatedness) and coping.

H3: There will be a significant relationship between coping and resistance to change.

H4: There will be a significant relationship between coping and perceived stress.

H5: There will be a significant relationship between perceived stress and resistance to change.

H6: There will be a significant relationship between need satisfaction at work (autonomy, competence and relatedness) and perceived stress.
H7: There will be a significant difference between participant’s levels of perceived stress and resistance to change depending on their job level (manager or non-managers) within the organisation.
2. Methodology

2.1 Participants

A total sample population of 97 full-time private sector employees participated in the online study. Extensive missing data was identified for 7 participants who were thus removed from further analysis. This resulted in a total sample size of 90 (n = 90; 50 male, 40 female) individuals who completed the online study. Inclusion factors for participation required that individuals were in full-time employment, in the private sector and were at least 18 years old. Participants were recruited for the online study by using purposive and convenience in the current and past workplaces of the researcher. In addition a snowball sampling technique was deployed where social media contacts shared the survey with individuals who met the inclusion criteria. The social networking sites Facebook (www.facebook.com) and LinkedIn (www.linkedin.com) were used to circulate the survey which pointed participants directly to an electronic link to access the Survey Monkey questionnaire. Participation in the study was voluntary and anonymous, and each individual was asked to provide consent in order to participate in the study at the beginning of the online questionnaire. In addition participants were also asked to confirm that they meet the required inclusion criteria.

The participants were from organisations ranging in different sizes, in various job levels within the organisation, and for varying lengths of time. The original survey response classifications for these items were grouped together to form new higher level groupings of the data for data analysis purposes. Under the new groupings were organised from 9 into 3 new categories for company size: 1-499 employees, 500-9,999 employees and companies greater than 10,000 employees. Participant job levels were organised from 5 groups into 2 groups: managers and non-managers, and the length of time participants were in their current job role was rearranged from 6 groups into 4: 0-2 years, 2-5 years, 5-10 years and more than
10 years. Based on the new grouping data, the majority of participants were found to be in management positions (n=56), in a company with more than 10,000 employees (n=34), and were in their job for between 2-5 years (n=31). It is important to note that age was not measured in the current sample. This was to avoid participants known to the researcher being identifiably by age, and thereby allowing participants freedom to answer the questions as truthful as possible.

2.2 Design

This study used a mixed method research design involving both quantitative and qualitative research methods. The primary component of the study involved quantitative research using a cross-sectional research design to analyse correlations and differences between groups. The quantitative research design was extended upon by using a basic qualitative design in the format of three open-ended questions. A mixed methods design was used to provide a more complete and comprehensive understanding of the research problem. Mixed data collection took place online, and Survey Monkey (www.surveymonkey.com) was the online tool used to design the survey. The predictor variables used to test the hypotheses include: basic need satisfaction at work (autonomy, competence and relatedness), coping style and perceived stress. The criterion variable is resistance to change. Hypotheses 1 to 6 are correlational hypotheses in nature, with Hypothesis 7 being an investigation of differences between groups (managers and non-managers).
2.3 Materials

2.3.1 Demographics

A demographic questionnaire was included at the start of the online questionnaire and included: gender, length of time in the current job, job level within the organisation and the size of the company (see appendix B).

2.3.2 Basic Need Satisfaction at Work

Satisfaction of the basic needs of autonomy, competence and relatedness were measured using a 21 item self-report questionnaire (Deci, et. al., 2001) (see Appendix C). Participants were asked to rate how true each of the statements were for them given their experiences on the job using a 7-point likert scale ranging from 1 (not true at all) to 7 (very true). In total seven items pertained to the measurement of autonomy, six to competence and eight to relatedness. Sample items are as follows for autonomy, “I am free to express my ideas and opinions on the job”; for competence, “I do not feel very competent when I am at work”; and relatedness, “I get along with people at work”. After nine items were reversed scored (item numbers 3, 5, 7, 11, 14, 16, 18, 19, 20), the three subscale scores were calculated by averaging item responses. Scores range from 1 to 7, and the higher the score the greater the amount of need satisfaction is being experienced. The reliability and validity of the scale has been shown to be strong with a Cronbach’s alpha coefficient for autonomy (α=.79), competence (α=.73) and relatedness (α=.84) reported (Deci, et. al., 2001, p.934).

2.3.3 Brief COPE

The Brief COPE (Carver, 1997) scale is a self-report questionnaire used to assess a broad range of coping responses which individuals use in order to cope with stressful events
in their lives (see appendix D). The measure consists of 28 items which are divided into 14 subscales. Each subscale constitutes a particular type of coping mechanism which comprise of 2 items per subscale. All 14 subscales were administered for this research. The 14 coping dimensions assessed by the subscales are: self-distraction; active coping; denial; substance use; use of emotional support; use of instrumental support; behavioural disengagement; venting; positive reframing; planning; humour; acceptance; religion; self-blame.

Participants were asked to complete the questionnaire based on how they have been coping with stress generally in life. They were advised not to respond based on whether or not the strategy appeared to be working, just whether or not they were doing it. For the 28 items listed participants were asked to use a 4-point likert scale ranging from 1 (I haven’t been doing this at all) to 4 (I’ve been doing this a lot) to rate how frequently they have been doing what the item states. Examples of items include for self-distraction “I’ve been turning to work or other activities to take my mind off things”, for venting “I’ve been saying things to let my unpleasant feelings escape”, and for religion “I’ve been praying or meditating”.

No items were required to be reverse coded, and the 14 subscale scores were computed by adding together the subscale paired item responses which provided a score for each coping strategy for each participant. For example, adding items 4 and 11 together gave a total score for ‘substance use’ as a means of coping. Scores range from 2 to 8, and the higher the score the stronger the reliance is on a particular coping mechanism. Previous reports to establish the reliability and validity of the scale indicate a strong Cronbach’s alpha value for some domains such as religion (α=.82) and substance use (α=.90). Other subscales indicated low however acceptable values of Cronbach’s alpha coefficient. They are active coping (α=.68), planning (α=.73), positive reframing (α=.64), acceptance (α=.57), humour (α=.73),
use of emotional support ($\alpha=.71$), use of instrumental support ($\alpha=.64$), self-distraction ($\alpha=.71$), denial ($\alpha=.54$), Venting ($\alpha=.50$), behavioural disengagement ($\alpha=.65$) and self-blame ($\alpha=.69$) (Yusoff, Low & Yip, 2010, p.41).

2.3.4 *Perceived Stress Scale*

The Perceived Stress Scale (PSS) (Cohen, Kamarck, & Mermelstein, 1983) was used to assess the degree to which people perceive their lives as stressful (see appendix E). Participants were asked about their thoughts and feelings over the past month. The scale consists of 10 items where participants used a 5-point Likert scale ranging from 0 (“never”) to 4 (“very often”) to indicate how often they felt or thought a certain way. Sample items include, “In the last month, how often have you felt confident about your ability to handle your personal problems?”; “In the last month, how often have you been able to control irritations in your life?”; “In the last month, how often have you felt that you were on top of things?” Four items were required to be reverse coded (item numbers 4, 5, 7, 8). The reverse scores were then added together with the scores of the remaining items to give a total perceived stress score, with scores ranging from 0 to 40. The higher the overall total score the greater the amount of perceived stress the person is experiencing. The reliability and validity of the scale is strong with an average Cronbach’s alpha coefficient of .85 reported (Cohen et al., 1983, p. 390).

2.3.5 *Resistance to Change*

The Resistance to Change (RTC) scale (Oreg, 2003) is a 17 item self-report questionnaire designed to measure an individual’s dispositional inclination to resist change. The scale was used to assess participant’s general beliefs and attitudes about organisational
change (see appendix F). Participants were asked to describe themselves as they generally are now, not as they wish to be in the future. Participants indicated the degree to which they agreed or disagreed with each of the 17 items by using a 6-point Likert scale ranging from 1 (strongly disagree) to 6 (strongly agree). For use with employees, item numbers 6 and 9 were required to be reworded slightly from a school to a work related context, as per the measure guidelines. The scale consists of 4 subscales: routine seeking, emotional reaction, short-term focus and cognitive rigidity. In total 5 items pertain to the measurement of routine seeking behaviours, 4 to emotional reaction, 4 to short-term focus, and 4 to cognitive rigidity. Sample items are as follows for routine seeking, “I’ll take a routine day over a day full of unexpected events any time”; for emotional reaction, “when I am informed of a change of plans, I tense up a bit”; for short-term focus “changing plans seems like a real hassle to me”, and for cognitive rigidity “I don’t change my mind easily”.

After reversing the scores of items 4 and 14, an overall RTC score was calculated by averaging all 17 item responses. The 4 subscale scores were then calculated by averaging item responses for each subscale. Scores range from 1 to 6, the higher the score the greater the amount of resistance to change person displays. The scale’s total reliability and validity was reported as strong with an overall reported Cronbach’s alpha coefficient of .92 (Oreg, 2003, p.682). The Cronbach’s alpha coefficient for the routine seeking subscale (α=.89), emotional reaction subscale (α=.86), the short-term focus subscale (α=.71) were acceptable, while the cognitive rigidity subscale (α=.68) is marginally acceptable (Oreg, 2003, p.683).

2.3.6 Qualitative Questions

Three open ended questions were posed to participants at the end of the questionnaire. The first question asked the participant to provide details about how they cope with change at
work. The second question explored how participants cope with stress at work, and the final question asked the participant to describe change at their current workplace. The purpose of the qualitative questions was to provide a greater insight into how participants perceive, explain and describe their way of coping and dealing with stress and change on a day to day basis.

2.4 Procedure

Survey monkey was used to create the online questionnaire which was distributed via the social networking websites Facebook and LinkedIn. On these websites participants were pointed directly to the Survey Monkey questionnaire via an electronic link. Once participants accessed the questionnaire link, they were required to read the cover letter which clearly stated that the purpose of the study was to investigate the relationship between basic need satisfaction at work, coping, stress and resistance to change. Participants were advised about the important nature of the research which is aimed to help organisations implement change effectively which may lead to positive effects for employees. Upon reading the cover letter all participants were informed that participation in the study was voluntary and anonymous, and that the participants had the right to withdraw from the study at any time either before or during questionnaire completion. However due to the anonymous nature of the survey participants were advised that it would not be possible to withdraw after the survey was submitted. Participants were also provided with the contact details of the researcher and the supervisor should they have any questions or wish to discuss the study further.

The questionnaire began by asking the participant their gender, the length of time the participant has been in their current job, the job level and the size of the company. Next, the Basic Need Satisfaction at Work scale was administered, followed the Brief COPE, Perceived
Stress and the Resistance to Change scales. Finally the participants were presented with 3 opened ended qualitative questions. At the end of the questionnaire contact details were provided for a number of agencies and organisations who support employees in particular with dealing with stress in the workplace. The support contact details provided were for: Carecall (http://www.carecallwellbeing.ie), The Samaritans (http://www.samaritans.org/), My Mind (https://mymind.org), and Aware (http://www.aware.ie/). The full questionnaire can be viewed in the appendices. It took on average 15 minutes to complete the questionnaire. The data was collected in the time period from the 21st December 2015 until the 15th January 2016.
3. Results

3.1 Descriptive Statistics

Descriptive statistics were used to establish frequencies, percentages, means and standard deviations across the independent and dependent variables. Participants (n = 90) were 50 males (56%), and 40 (44%) females who met the inclusion criteria of being in full time employment in the private sector, and being over 18 years of age. From the total number of participants (n = 90), 56 (62%) were managers, and 34 (38%) were non-managers in their current job levels. Furthermore descriptive analysis was performed on the length of time participants were in their current job. Figure 2 provides an overview of the length of time participants were in their current job roles. It was found that the majority of participants 31 (34%) were in their job for between 2-5 years, with a relatively even spread of participants across the remaining time categories.

Figure 2: Length of Time Participants were in their Current Job Role
Figure 3 provides details on how many participants worked across companies of varying sizes. As shown in figure 3 there was a relatively even distribution of participants from companies of differing sizes, with the majority of participants 34 (39%) working in a company with more than 10,000 employees. 3 participants chose not to disclose their company size.

![No. of Participants by Company Size](image)

**Figure 3: Breakdown of number of participants by company size**

Next table 1 summarises the mean, standard deviation, minimum and maximum values, skewness and kurtosis for all the psychological measures, including their subsequent subscales.
Table 1: Descriptive Statistics of Psychological Measures

<table>
<thead>
<tr>
<th>Variables</th>
<th>Mean</th>
<th>SD</th>
<th>Min</th>
<th>Max</th>
<th>Skewness</th>
<th>Kurtosis</th>
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</thead>
<tbody>
<tr>
<td><strong>Basic Need Satisfaction</strong></td>
<td></td>
<td></td>
<td></td>
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<td></td>
<td></td>
</tr>
<tr>
<td>Autonomy Needs</td>
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<td>2.71</td>
<td>6.57</td>
<td>-.15</td>
<td>-.09</td>
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<tr>
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<td>7.00</td>
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<td>-.27</td>
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<tr>
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<td>7.00</td>
<td>-.39</td>
<td>.24</td>
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<td><strong>Perceived Stress</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>17.38</td>
<td>7.57</td>
<td>4.00</td>
<td>39.00</td>
<td>.82</td>
<td>.19</td>
</tr>
<tr>
<td><strong>Resistance to Change</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Routine Seeking</td>
<td>2.84</td>
<td>.66</td>
<td>1.41</td>
<td>4.88</td>
<td>.97</td>
<td>1.76</td>
</tr>
<tr>
<td>Emotional Reaction</td>
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<td>1.00</td>
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<td>1.13</td>
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<td>5.50</td>
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<td>.02</td>
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<td>Cognitive Rigidity</td>
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<td>.97</td>
<td>1.00</td>
<td>5.25</td>
<td>.84</td>
<td>.41</td>
</tr>
<tr>
<td><strong>Brief COPE</strong></td>
<td></td>
<td></td>
<td></td>
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<td></td>
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</tr>
<tr>
<td>Self-distraction</td>
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<td>8.00</td>
<td>.36</td>
<td>-.51</td>
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<tr>
<td>Active coping</td>
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<td>8.00</td>
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<td>-.62</td>
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<tr>
<td>Denial</td>
<td>2.58</td>
<td>1.13</td>
<td>2.00</td>
<td>8.00</td>
<td>3.03</td>
<td>11.27</td>
</tr>
<tr>
<td>Substance use</td>
<td>2.70</td>
<td>1.45</td>
<td>2.00</td>
<td>8.00</td>
<td>2.19</td>
<td>4.22</td>
</tr>
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<td>Emotional support</td>
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<td>-.96</td>
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<td>Instrumental support</td>
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<td>1.69</td>
<td>2.00</td>
<td>8.00</td>
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<td>-1.03</td>
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<td>-.40</td>
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<td>Positive reframing</td>
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<td>1.57</td>
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<td>8.00</td>
<td>-.06</td>
<td>-.34</td>
</tr>
<tr>
<td>Planning</td>
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<td>8.00</td>
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<tr>
<td>Humour</td>
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<td>2.00</td>
<td>8.00</td>
<td>.46</td>
<td>-.77</td>
</tr>
<tr>
<td>Acceptance</td>
<td>5.28</td>
<td>1.53</td>
<td>2.00</td>
<td>8.00</td>
<td>-.24</td>
<td>-.48</td>
</tr>
<tr>
<td>Religion</td>
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<td>2.00</td>
<td>8.00</td>
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<tr>
<td>Self-blame</td>
<td>4.09</td>
<td>1.60</td>
<td>2.00</td>
<td>8.00</td>
<td>.46</td>
<td>-.79</td>
</tr>
</tbody>
</table>
3.1.1 Distribution of Data

Prior to testing the hypotheses normality tests were carried out to designate the use of parametric or non-parametric testing. The skewness and kurtosis values presented in table 1 were used to establish normality. Based on these values it can be deducted that the data has a slightly skewed and kurtotic distribution. In addition a Shapiro Wilk’s test \( p > .05 \) and a visual inspection of the histograms, normal Q-Q plots and box plots indicated that the data was approximately normally distributed. Therefore parametric analyses was assumed appropriate.

3.1.2 Reliability Analysis

Table 2 summarises the results of the reliability analysis conducted in this study. The Cronbach’s alpha coefficient in the majority of cases showed a result of .7 or above, which is considered satisfactory. A number of stronger results of above .8 and .9 were reported for the resistance to change, and substance use scales respectively. However it is noted that 5 scales reported a Cronbach’s alpha coefficient of below the satisfactory level, hence demonstrating a lower internal reliability for those scales. Scales with a lower than satisfactory internal reliability were the: autonomy needs \( (\alpha=.69) \), competence needs \( (\alpha=.60) \), self-distraction \( (\alpha=.69) \), venting \( (\alpha=.68) \) and acceptance \( (\alpha=.65) \) scales.
Table 2: Cronbach’s Alpha Coefficient Results for all Psychological Measures

<table>
<thead>
<tr>
<th>Variable</th>
<th>Cronbach’s Alpha</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Basic Need Satisfaction</strong></td>
<td></td>
</tr>
<tr>
<td>Autonomy Needs</td>
<td>.69</td>
</tr>
<tr>
<td>Competence Needs</td>
<td>.60</td>
</tr>
<tr>
<td>Relatedness Needs</td>
<td>.82</td>
</tr>
<tr>
<td><strong>Perceived Stress</strong></td>
<td></td>
</tr>
<tr>
<td></td>
<td>.88</td>
</tr>
<tr>
<td><strong>Resistance to Change</strong></td>
<td></td>
</tr>
<tr>
<td>Routine Seeking</td>
<td>.78</td>
</tr>
<tr>
<td>Emotional Reaction</td>
<td>.81</td>
</tr>
<tr>
<td>Short-term Focus</td>
<td>.89</td>
</tr>
<tr>
<td>Cognitive Rigidity</td>
<td>.71</td>
</tr>
<tr>
<td><strong>Brief COPE</strong></td>
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<tr>
<td>Self-distraction</td>
<td>.69</td>
</tr>
<tr>
<td>Active coping</td>
<td>.76</td>
</tr>
<tr>
<td>Denial</td>
<td>.81</td>
</tr>
<tr>
<td>Substance use</td>
<td>.95</td>
</tr>
<tr>
<td>Emotional support</td>
<td>.83</td>
</tr>
<tr>
<td>Instrumental support</td>
<td>.81</td>
</tr>
<tr>
<td>Behavioural disengagement</td>
<td>.88</td>
</tr>
<tr>
<td>Venting</td>
<td>.68</td>
</tr>
<tr>
<td>Positive reframing</td>
<td>.77</td>
</tr>
<tr>
<td>Planning</td>
<td>.78</td>
</tr>
<tr>
<td>Humour</td>
<td>.87</td>
</tr>
<tr>
<td>Acceptance</td>
<td>.65</td>
</tr>
<tr>
<td>Religion</td>
<td>.88</td>
</tr>
<tr>
<td>Self-blame</td>
<td>.70</td>
</tr>
</tbody>
</table>
3.2 **Inferential Statistics**

The main objective of this study was to determine if a relationship exists between basic needs satisfaction at work (autonomy, competence and relatedness), coping, perceived stress and resistance to change. To determine this a number of parametric tests including: Pearson correlation coefficient, multiple regression analysis and t-tests were used to analyse the subsequent hypotheses.

3.3.1 **Hypothesis 1- Need Satisfaction at Work and Resistance to change**

Hypothesis 1 investigated if there was a significant relationship between basic need satisfaction at work (autonomy, competence and relatedness) and resistance to change. To test this hypothesis multiple regression analysis was used. Results found that satisfaction of the basic needs of autonomy, competence and relatedness did not significantly predict resistance to change. The results of multiple regression analysis indicate that the three predictors (autonomy, competence and relatedness) accounted for 0% of the variance ($R^2 = -.00, F(3, 73) = .97, p = .411$).

It is important to note that a number of assumptions for multiple regression analysis were not met in this analysis. Firstly a weak Pearson correlation was recorded between the independent variables (autonomy, competence and relatedness) and dependent variable (resistance to change). Collinearity diagnostics results were loaded strongly against the needs of autonomy and competence. However no outliers were detected in the current sample.
3.3.2 Coping, Need Satisfaction at Work, Stress and Resistance to change

All 14 coping strategies were measured as per the Brief COPE scale. Pearson correlation analysis was used to determine which coping styles were significant for further investigation in the current study. In total 8 of the 14 coping strategies were found to be significantly correlated with one or more of the variables of interest: basic need satisfaction (autonomy, competence, and relatedness), resistance to change or perceived stress. The 8 significant coping strategies were: denial, self-distraction, substance use, behavioural disengagement, venting, self-blame, religion and acceptance. Table 3 depicts the correlation values and results for the relationships which exist between need satisfaction at work (autonomy, competence, and relatedness) and all 14 coping strategies. Table 4 shows the correlation values and results for the relationships which exist between resistance to change, perceived stress and all 14 coping strategies.

Notably Pearson correlation analysis found that 6 of the 14 coping strategies did not have significant relationships with any variables. The 6 non-significant coping strategies were: active coping, emotional support, instrumental support, positive reframing, planning and humour. Based on the correlation results in both table 3 and table 4, only the significantly correlated coping strategies will be used in multiple regression analyses to test hypotheses 2, 3 and 4. This decision ensures that the sample size (n=90) was adequate for the number of predictor variables being used in multiple regression analysis.
Table 3: *Pearson Correlations for Coping and Need Satisfaction at Work Variables*

<table>
<thead>
<tr>
<th>Variables</th>
<th>Autonomy Needs</th>
<th>Relatedness needs</th>
<th>Competence Needs</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Brief COPE</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Self-distraction</td>
<td>-.34**</td>
<td>.04</td>
<td>-.19</td>
</tr>
<tr>
<td>Active coping</td>
<td>.078</td>
<td>.02</td>
<td>.15</td>
</tr>
<tr>
<td>Denial</td>
<td>-.23*</td>
<td>-.04</td>
<td>-.23*</td>
</tr>
<tr>
<td>Substance Use</td>
<td>-.33**</td>
<td>-.14</td>
<td>-.23*</td>
</tr>
<tr>
<td>Emotional Support</td>
<td>-.16</td>
<td>-.14</td>
<td>-.13</td>
</tr>
<tr>
<td>Instrumental Support</td>
<td>-.13</td>
<td>-.07</td>
<td>-.06</td>
</tr>
<tr>
<td>behavioural</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>disengagement</td>
<td>-.22*</td>
<td>-.03</td>
<td>-.27*</td>
</tr>
<tr>
<td>Venting</td>
<td>-.29**</td>
<td>-.16</td>
<td>-.21</td>
</tr>
<tr>
<td>Positive</td>
<td>.11</td>
<td>.00</td>
<td>.04</td>
</tr>
<tr>
<td>Reframing</td>
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<td></td>
<td></td>
</tr>
<tr>
<td>Planning</td>
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<td>-.01</td>
<td>.05</td>
</tr>
<tr>
<td>Humour</td>
<td>-.05</td>
<td>.03</td>
<td>-.13</td>
</tr>
<tr>
<td>Acceptance</td>
<td>.01</td>
<td>-.06</td>
<td>-.08</td>
</tr>
<tr>
<td>Religion</td>
<td>.01</td>
<td>.05</td>
<td>-.12</td>
</tr>
<tr>
<td>Self-blame</td>
<td>-.24*</td>
<td>-.09</td>
<td>-.29**</td>
</tr>
</tbody>
</table>

*Correlation is significant at .05 level (2-tailed), ** Correlation is significant at .01 level (2-tailed)*
Table 4: *Pearson Correlations for Coping, Resistance to Change and Stress Variables*

<table>
<thead>
<tr>
<th>Variables</th>
<th>Resistance to Change</th>
<th>Routine Seeking</th>
<th>Emotional Reaction</th>
<th>Short-term Focus</th>
<th>Cognitive Rigidity</th>
<th>Perceived Stress</th>
</tr>
</thead>
<tbody>
<tr>
<td>Brief COPE</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Self-distraction</td>
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<td>.13</td>
<td>.17</td>
<td>.24*</td>
<td>.10</td>
<td>.38**</td>
</tr>
<tr>
<td>Active coping</td>
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<td>-.11</td>
<td>-.18</td>
<td>-.09</td>
<td>.20</td>
<td>-.00</td>
</tr>
<tr>
<td>Denial</td>
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<td>-.11</td>
<td>-.04</td>
<td>.02</td>
<td>.05</td>
<td>.49**</td>
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<tr>
<td>Substance Use</td>
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<td>-.19</td>
<td>-.13</td>
<td>-.04</td>
<td>-.01</td>
<td>.47**</td>
</tr>
<tr>
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<td>-.04</td>
<td>-.03</td>
<td>-.08</td>
<td>.09</td>
</tr>
<tr>
<td>Instrumental Support</td>
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<td>.02</td>
<td>.05</td>
<td>.03</td>
<td>-.03</td>
<td>.02</td>
</tr>
<tr>
<td>Behavioural disengagement</td>
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<td>-.09</td>
<td>-.01</td>
<td>-.05</td>
<td>-.09</td>
<td>.53**</td>
</tr>
<tr>
<td>Venting</td>
<td>.31**</td>
<td>.25*</td>
<td>.27*</td>
<td>.22*</td>
<td>.14</td>
<td>.26*</td>
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<tr>
<td>Positive</td>
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<td>-.03</td>
<td>.09</td>
<td>-.01</td>
<td>.07</td>
<td>-.03</td>
</tr>
<tr>
<td>Reframing</td>
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<td>-.13</td>
<td>-.10</td>
<td>-.08</td>
<td>.11</td>
<td>.05</td>
</tr>
<tr>
<td>Planning</td>
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<td>.11</td>
<td>.10</td>
<td>.12</td>
<td>.06</td>
<td>.21</td>
</tr>
<tr>
<td>Humour</td>
<td>.13</td>
<td>.06</td>
<td>.10</td>
<td>.02</td>
<td>.23*</td>
<td>.05</td>
</tr>
<tr>
<td>Acceptance</td>
<td>.37**</td>
<td>.30**</td>
<td>.31**</td>
<td>.35**</td>
<td>.14</td>
<td>.06</td>
</tr>
<tr>
<td>Religion</td>
<td>.14</td>
<td>.11</td>
<td>.22</td>
<td>.08</td>
<td>-.01</td>
<td>.46**</td>
</tr>
</tbody>
</table>

*Correlation is significant at .05 level (2-tailed), ** Correlation is significant at .01 level (2-tailed)
3.3.3 Hypothesis 2- Need Satisfaction at Work and Coping

The second hypothesis explored the relationship between need satisfaction at work and coping. A multiple regression analysis was used to assess whether need satisfaction at work (autonomy, relatedness and competence) predicted any or all of the 6 significant coping strategies which were self-distraction, substance use, denial, behavioural disengagement, venting and self-blame.

The results are depicted in tables 5 and 6. Multiple regression analysis found that need satisfaction at work predicted self-distraction coping, and accounted for 15% variance ($R^2 = .15, F(3, 77) = 5.70, p = .001$). Autonomy ($\beta = -.51, p = .001, 95\% CI = -1.64$ to $-.44$), and relatedness ($\beta = .30, p = .018, 95\% CI = .10$ to $.98$) were found to predict self-distraction coping. In addition need satisfaction at work was found to significantly predict substance use coping. The three predictors (autonomy, relatedness and competence) explained 8% of the variance ($R^2 = .08, F(3, 78) = 3.28, p = .025$). Autonomy was also found to be the only predictor of substance use ($\beta = -.35, p = .029, 95\% CI = -1.08$ to $-.06$). As per the full results in tables 5 and 6 relatedness and competence were found to not predict substance use.
### Table 5: Anova Multiple Regression Values of Dependent Variables in Hypothesis 2

<table>
<thead>
<tr>
<th>Dependent Variable</th>
<th>F</th>
<th>dF</th>
<th>p</th>
<th>R²</th>
</tr>
</thead>
<tbody>
<tr>
<td>Self-distraction</td>
<td>5.70</td>
<td>3.77</td>
<td>.001</td>
<td>.15</td>
</tr>
<tr>
<td>Substance use</td>
<td>3.28</td>
<td>3.78</td>
<td>.025</td>
<td>.08</td>
</tr>
<tr>
<td>Denial</td>
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<td>3.80</td>
<td>.108</td>
<td>.04</td>
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<td>Behavioural disengagement</td>
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<td>3.78</td>
<td>.060</td>
<td>.06</td>
</tr>
<tr>
<td>Venting</td>
<td>2.37</td>
<td>3.77</td>
<td>.077</td>
<td>.05</td>
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<tr>
<td>Self-blame</td>
<td>2.61</td>
<td>3.77</td>
<td>.057</td>
<td>.06</td>
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</tbody>
</table>

### Table 6: Multiple Regression Values of Independent Variables in Hypothesis 2

<table>
<thead>
<tr>
<th>Dependent Variable</th>
<th>Independent Variables</th>
<th>Beta</th>
<th>Sig.</th>
<th>Lower 95% CI</th>
<th>Upper 95% CI</th>
</tr>
</thead>
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<td>Autonomy</td>
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<td>-.44</td>
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<tr>
<td></td>
<td>Relatedness</td>
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<td>.018</td>
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<td></td>
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<td>Competence</td>
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<td>.08</td>
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<td>.089</td>
<td>-.99</td>
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<td>Competence</td>
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<td>Self-blame</td>
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<td>-.81</td>
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<tr>
<td></td>
<td>Relatedness</td>
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<td>-.28</td>
<td>.58</td>
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<tr>
<td></td>
<td>Competence</td>
<td>-.25</td>
<td>.103</td>
<td>-.99</td>
<td>.09</td>
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</tbody>
</table>
3.3.4 Hypothesis 3- Coping and Resistance to Change

The third hypothesis investigated the relationship between coping and resistance to change. Multiple regression analysis found that coping significantly predicted resistance to change and explained 19% of the variance ($R^2 = .19, F(4, 72) = 5.49, p = .001$). In total two coping styles significantly predicted resistance to change. Both religion ($\beta = .36, p = .001, 95\% \text{ CI} = .06 \text{ to .24}$), and venting ($\beta = .24, p = .034, 95\% \text{ CI} = .01 \text{ to .22}$) significantly predicted resistance to change. Religion was found to be a stronger predictor of resistance to change than venting. Self-distraction ($\beta = .18, p = .104, 95\% \text{ CI} = -.02 \text{ to .15}$), and acceptance coping ($\beta = -.10, p = .388, 95\% \text{ CI} = -.14 \text{ to .06}$) were not found to significantly predict resistance to change.

3.3.5 Hypothesis 4- Coping and Perceived Stress

The fourth hypothesis investigated the relationship between coping and perceived stress. Multiple regression analysis found that coping significantly predicted perceived stress and explained 38% of the variance ($R^2 = .38, F(6, 73) = 9.10, p < .001$). Self-blame ($\beta = .28, p = .020, 95\% \text{ CI} = .22 \text{ to 2.49}$) was found to be the only significant predictor of perceived stress. Self-distraction ($\beta = .16, p = .105, 95\% \text{ CI} = -.15 \text{ to 1.59}$), denial ($\beta = .12, p = .360, 95\% \text{ CI} = -.88 \text{ to 2.39}$), substance use ($\beta = .17, p = .152, 95\% \text{ CI} = -.33 \text{ to 2.06}$), behavioural disengagement ($\beta = .22, p = .076, 95\% \text{ CI} = -.13 \text{ to 2.60}$), and venting ($\beta = -.04, p = .695, 95\% \text{ CI} = -.139 \text{ to .93}$) were all found to not significantly predict perceived levels of stress.

3.3.6 Hypothesis 5- Perceived Stress and Resistance to Change

The aim of the fifth hypothesis was to investigate the relationship between perceived stress and resistance to change. Using simple regression analysis, it was found that perceived
stress significantly predicted resistance to change \( (F(1, 75) = 7.28, p=.009, R^2 = .08) \), (Perceived stress, \( \beta=30, p=.009 \)). The 95% confidence limits was narrow with the population slope showing as being between .01 and .05. The beta value indicates that a moderate positive relationship exists between perceived stress and resistance to change.

3.3.7 Hypothesis 6- Need Satisfaction at Work and Perceived Stress

The sixth hypothesis was to investigate the relationship between need satisfaction at work (autonomy, competence and relatedness) and perceived stress. First a Pearson correlation coefficient found a significant weak negative relationship between autonomy \( (M=4.77, SD=.86) \) and perceived stress \( (M=17.38, SD=7.57) \) \( (r(78) = -.25, p=.023) \). 6.25 % of variance is shared between the two variables. A Pearson correlation coefficient also found a significant weak negative relationship between competence \( (M=5.26, SD=.87) \) and perceived stress \( (M=17.38, SD=7.57) \) \( (r(78) = -.28, p=.012) \). 7.84 % of variance is shared between the two variables. Competence was found to have a slightly more significant negative relationship with perceived stress than autonomy. In contrast, relatedness \( (M=5.00, SD=.95) \) was not found to be significantly related to levels of perceived stress. \( (M=17.38, SD=7.57) \) \( (r(78) = -.07, p=.522) \).

Subsequently a multiple regression analysis was used to assess if need satisfaction at work (autonomy, competence and relatedness) would predict levels of perceived stress. Multiple regression analysis found that the need for autonomy, competence and relatedness did not significantly predict levels of perceived stress. The results indicate that need satisfaction at work only explains 6% of the variance, \( (R^2 =.06, F(3, 76) = 2.65, p=.055) \).
3.3.8 Hypothesis 7 - Job Level, Resistance to Change and Perceived Stress

The purpose of the seventh hypothesis is to examine if the job level the employee holds within the organisation is related to resistance to change and levels of perceived stress. An independent samples t-test found a significant difference between the resistance to change levels of non-managers ($M=3.04$, $SD= .80$) and managers ($M=2.72$, $SD= .55$) ($t(75) = -2.05$, $p=.044$). Most notably non-managers displayed greater resistance to change than managers. On further analysis it was highlighted that one of the resistance to change subscales may be responsible for the significant difference. An independent samples t-tests found a significant difference between non-managers ($M=3.28$ $SD=1.13$) and managers ($M=2.64$, $SD= .74$) for emotional reaction to change, with non-managers showing greater emotional reaction to change than managers ($t(38.30) = -2.66$, $p=.011$). As shown in table X, an independent samples t-tests for the remaining resistance to change subscales of routine seeking, short-term focus and cognitive rigidity did not record a significant difference between non-managers and managers.

However an independent samples t-tests also found a significant difference between perceived stress levels of non-managers ($M=20.79$, $SD= 7.81$) and managers ($M=15.43$, $SD= 6.77$) ($t (78) = -3.22$, $p=.002$). Non-managers were found to display more perceived stress than managers. Table 7 summarises the t-test results for non-managers and managers when comparing resistance to change and perceived stress levels.
Table 7: *An Independent Samples T-test table displaying the differences between Non-Managers and Manager for Resistance to Change and Perceived Stress.*

<table>
<thead>
<tr>
<th>Variables</th>
<th>Groups</th>
<th>Mean</th>
<th>SD</th>
<th>t</th>
<th>df</th>
<th>p</th>
</tr>
</thead>
<tbody>
<tr>
<td>Resistant to change</td>
<td>Non-manager</td>
<td>3.04</td>
<td>.80</td>
<td>-2.05</td>
<td>75</td>
<td>.044</td>
</tr>
<tr>
<td></td>
<td>Manager</td>
<td>2.72</td>
<td>.55</td>
<td>-2.05</td>
<td>75</td>
<td>.044</td>
</tr>
<tr>
<td>Emotional Reaction</td>
<td>Non-manager</td>
<td>3.28</td>
<td>1.13</td>
<td>-2.66</td>
<td>38.30</td>
<td>.011</td>
</tr>
<tr>
<td></td>
<td>Manager</td>
<td>2.64</td>
<td>.74</td>
<td>-2.66</td>
<td>38.30</td>
<td>.011</td>
</tr>
<tr>
<td>Routine Seeking</td>
<td>Non-manager</td>
<td>2.80</td>
<td>1.01</td>
<td>-1.86</td>
<td>76</td>
<td>.066</td>
</tr>
<tr>
<td></td>
<td>Manager</td>
<td>2.44</td>
<td>.69</td>
<td>-1.86</td>
<td>76</td>
<td>.066</td>
</tr>
<tr>
<td>Short-term Focus</td>
<td>Non-manager</td>
<td>2.69</td>
<td>1.22</td>
<td>-1.37</td>
<td>38.39</td>
<td>.180</td>
</tr>
<tr>
<td></td>
<td>Manager</td>
<td>2.33</td>
<td>.80</td>
<td>-1.37</td>
<td>38.39</td>
<td>.180</td>
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<td>Cognitive Rigidity</td>
<td>Non-manager</td>
<td>3.46</td>
<td>.87</td>
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<tr>
<td></td>
<td>Manager</td>
<td>3.57</td>
<td>.78</td>
<td>.53</td>
<td>75</td>
<td>.601</td>
</tr>
<tr>
<td>Perceived Stress</td>
<td>Non-manager</td>
<td>20.79</td>
<td>7.81</td>
<td>-3.22</td>
<td>78</td>
<td>.002</td>
</tr>
<tr>
<td></td>
<td>Manager</td>
<td>15.43</td>
<td>6.77</td>
<td>-3.22</td>
<td>78</td>
<td>.002</td>
</tr>
</tbody>
</table>
3.3 Qualitative Results

Thematic analysis, a qualitative method used for analysing and reporting patterns and themes within data (Howitt & Cramer, 2011, p.329), was carried out by hand in the current research to analyse responses to the three open ended questions. To analyse each of the responses, a coding framework was first devised and the codes were then structured into the common themes which emerged from participant responses (n=77). The themes which emerged highlighted a range of psychological states associated with coping with change and stress at work. The following results provide an overview of the main themes.

3.4.1 Coping with change at work:

In the first open ended question participants were asked how they cope with change at work. In total 3 main themes emerged, which include: coping well with change, adaptive coping strategies used internalising the value of change. The first theme was that a high majority of participants (n=44) felt they “cope well” with change. With participants indicating that they tend to “embrace change”, and “accept it”, and “just get on with it”. The second theme identified were the common coping strategies participants (n=41) use to cope with change, such as: “I work hard to understand it, the impact of the change, and I prepare myself, and I work with my team/colleagues to deal with it as effectively as possible”. Participants appear to use predominantly adaptive or problem-focused coping, such as: seeking information to understand the change and preparing and planning for the change. In addition further adaptive or emotion-focused coping was evident in the format of seeking advice and support from colleagues “I ask for advice from colleagues - until
comfortable”. This highlights the importance of social support and the potential role which relatedness has within an organisational change context.

The third theme to emerge was that coping with change was dependent on how participants (n=13) internalise and view the reasons for the change and the impact of it, such as “I cope well unless it has a direct negative impact”. If the change is viewed negatively then stress is a potential outcome, as a participant noted, “if it is for the better I am open to embracing these changes. If they are for the worse I am likely to get on with it but I will find it tough and often adds to my stress”. Coping was also dependent upon factors such as time “I cope well as long as I have time to deal with it and process it”. Hence if the change makes sense and is something which the participant individually wants this will influences their ability to cope well with the change. However if the change is not wanted and it does not make sense this will impede the participant’s ability to cope and participate in the change.

In a limited number of cases participants (n=4) highlighted that they find change difficult “generally it takes me a while to accept change, I find it hard to adjust sometimes”, and avoid or resist the change “depending on the change, I either make an effort to adapt or avoid adapting”. There was a relative common understanding among participants that “change is just day to day business” and a “part of normal work life, to be expected”.

3.4.2 Coping with stress at work

For the second question participants described the ways in which they cope with stress at work. In total 3 main themes emerged which include the use of: adaptive coping strategies, detaching work from home life, and internalising stress. The first theme to emerge was the usage of adaptive as opposed maladaptive coping mechanisms to deal with stress.
The codes and sub-themes could clearly be grouped into the specific adaptive and maladaptive coping strategies. Adaptive coping strategies were referenced most frequently (n=61), compared with maladaptive coping (n=16). In terms of adaptive coping, participants cited physical exercise as the most commonly used coping mechanism (n=14). Social support was the second most prominent adaptive coping mechanism (n=13). Participants described how they speak with colleagues and friends in order to ask for advice and support during times of stress “I tend to talk it out with my boss/colleagues “and “I talk about it, get someone else's opinion”, and “I take a break, step away from it and get advice from someone who I am close to on how to deal with it”. Escaping from and avoiding the work related stressor was the most common maladaptive coping mechanism used (n=11). This came in various forms from taking time off or taking a break “I try to take a break”, or completely avoiding dealing with the stress “well. I just shut it out”. Maladaptive emotional reactions to stress were also apparent in the form of comfort eating “very aware of it, I do comfort eat” and general annoyance and frustration, as one participant noted, “At times I would be very emotional and upset. I find it hard not to bring my stress home with me”.

The second theme to emerge was that a number of participants (n=12) felt that they coped better when they could detach work from home life, “I don't seem to get stressed - I leave work in work. There was a strong sense that coping was enhanced by detaching work from home and personal life, “I cope reasonably well. I try to leave work in work”. The third theme provided an insight into how participants internalise their feelings of stress, with many participants (n=10) describing how they try to put things into perspective when dealing with stressful events “I try to put things into perspective, i.e. not really as important as other things in life”. Others clearly acknowledge when they are stressed and try to understand the root-cause of the stress in order to prevent stress from reoccurring, “I usually try to spend
some time alone to process the reason for my stress and figure out how to avoid the same trigger again”.

3.4.3 Describing change at work

In the third open ended question, participants were asked to describe change at their current workplaces. Overall 3 main themes were evident, which were: negative perceptions of change, the common occurrence of change and the importance of communication. The first theme to emerge was that participants (n=38) had a predominantly negative perception of change at their workplaces, “in recent years change has been negative in the majority of cases”. A high majority of participants (n=27) viewed change as poorly managed and chaotic, with one participant describing their workplace as having “enormous amounts of chaotic change”. There was a sense of surprise that despite change being a frequent and everyday occurrence, that the management of change is still handled poorly. A participant described change as being “really poor, despite there being lots of changes happening. Poor communication and badly thought out strategies to not make change a positive thing in this case”.

The second theme was that participants (n=26) believed change to be a common everyday occurrence and a constant, “change is a constant in the company”. However with the constant nature of change comes feelings of unease and change fatigue. One participant summarised their experience, “change is constant and not very organised. I feel like I just start getting my head around one change and there is another one happening”. The importance of communication and providing participants with information in relation to the change emerged as the third theme. A number of participants (n=9) cited communication as
being key in terms of implementing change effectively “once all the information is provided about the change I am okay”.

A number of smaller themes also emerged which are noteworthy, in a limited number of cases (n=3) a brief insight was provide in terms of potential reasons for resistance to change which include that change is “not always in line with my way of working” and is “not always wanted or appreciated “and I do not mind change when it is structured and for the best, not just for the company/customer but for me also”. The individual hence individualises the meaning of the change which is important for them. They analyse if it is “for the best” and “not just for the company/customer but for me also”. There was a sense that if change is managed and communicated well, is a change which makes sense to the individual, this will allow acceptance of the change. However with the majority viewing it as a negative experience to date.
4 Discussion

4.1 Research Aims

The main aim of this study was to investigate the relationship between need satisfaction at work, coping, stress and resistance to change. The Self Determination Theory (SDT) provided a useful framework upon which the hypotheses in relation to basic need satisfaction at work were tested. The extent to which individuals are able to satisfy their basic needs in the work environment was expected to be associated with how employees perceive stress, cope with stressful situations, and how they respond to and resist change. Research has repeatedly shown that satisfaction of the basic psychological needs is associated with positive outcomes (Hofer & Busch, 2011, p. 1147). Based on previous literature the study sought to investigate an assumption that if the basic needs at work are not satisfied it will lead to unfavourable outcomes for organisations, such as resistance to change. Support was found for a number of hypotheses as discussed in the following section.

4.2 Hypothesis 1- Need Satisfaction at Work and Resistance to change

The results presented in section 3.3.1 indicate that the first hypothesis was not supported. Satisfaction of the three basic needs of: autonomy, competence and relatedness at work were not found to be significantly related with resistance to change. Needs are discussed in the literature as being the fundamental determinants of human behaviour (Broeck, et. al., 2010, p.981). Based on previous research autonomy was expected to play an important role in terms of influencing resistance to change (Gagné et. al., 2000, p.1844). Similarly relatedness was anticipated to influence resistance to change based on past studies (Vakola and Nikolaou, 2005, p.160). Based on the current findings previous research in this area is not supported. The contribution of this study to the existing literature was that it
sought to investigate the effectiveness basic need satisfaction in influencing resistance to change. However the results indicate that none of the needs can reliably predict resistance to change in the current sample.

The core assumption of the study being tested, that if basic needs at work are not satisfied it will lead to unfavourable outcomes for an organisation such as resistance to change, was also not met. While previous research has established that satisfaction of the three basic needs is associated with favourable outcomes such as acceptance of organisational change for example (Gagné et. al, 2000, p.1849), the same clear relationship does not exist with an unfavourable outcome such as resistance to change.

4.3 Hypothesis 2, 3 and 4: Coping, Need Satisfaction, Resistance to Change and Stress.

In total 6 of the 14 coping strategies measured were observed as having relationships with need satisfaction at work as displayed in table 3. Four of the 14 coping strategies were observed as having relationships with resistance to change, and 6 of the 14 were observed as having a relationship with perceived stress, as displayed in table 4. Previous research indicated that need satisfaction should result in the use of more adaptive and less maladaptive coping strategies (Amiot, Blanchard, & Gaudreau, 2008). The results in the current study contradict these previous findings. Autonomy in the present study was found to be correlated with 6 maladaptive coping strategies only, which were: self-distraction, denial, substance use, behavioural disengagement, venting and self-blame. In addition competence was also found to be associated with 4 maladaptive coping strategies only, including: denial, substance, behavioural disengagement and self-blame. Negative correlations were observed between the maladaptive coping strategies and autonomy and competence needs. This suggests that if an
individual’s need for autonomy and competence is increasingly satisfied, it could result in the use of less maladaptive coping. However the use of more adaptive coping would not be a foreseen outcome, which is in contrast to earlier findings (Amiot, Blanchard, & Gaudreau, 2008).

Subsequently 6 of the 14 coping strategies, which represent adaptive forms of coping, were not found to have a significant relationship with either need satisfaction at work, resistance to change or perceived stress, they include: active coping, using emotional support, using instrumental support, positive reframing, planning and humour. Previous research in this area suggested that self-determined individuals would use more task-oriented coping strategies, such as planning and active coping strategies (Parker, Jimmieson & Amiot, 2013), and that the use of task-oriented coping strategies could produce an increase in need satisfaction (Thompson & Gaudreau, 2008). Such finding were not supported by the current study.

Partial support was therefore found for the second hypothesis which investigated the relationship between need satisfaction and coping. Most notably autonomy and relatedness were found to both predict self-distraction as a coping mechanism, with autonomy showing as a stronger predictor of self-distraction coping than relatedness. Autonomy was the only basic need which was found to predict substance use coping. It was expected based on the literature that relatedness would play a more central role in coping (Deci and Ryan, 2002), however autonomy was found to play a more central role in coping in the current study. An important observation was made in relation to competence and relatedness needs. The need for competence did not influence or significantly predict any coping styles, when measured alongside autonomy and relatedness needs. Relatedness performs weaker when it is measured
as a construct in its own right, however competence behaves stronger when measured on its own. The need for autonomy was found to exert an influence on the interaction of competence and relatedness with the other variables in the study. This observation supports SDT claims that autonomy underlies the processes of self-determination, and also supports that autonomy is the most important need for facilitating internalisation (Gagné & Deci, 2005, p. 339).

Support was found for the third hypothesis which explored the relationship between coping styles and resistance to change. Both religion and venting were found to significantly predict resistance to change. Religion was reported as a stronger predictor of resistance to change than venting. Self-distraction and acceptance did not significantly predict resistance to change. The current findings highlight a notable difference between the coping mechanisms associated with resistance to change, and those associated with need satisfaction or perceived stress. For example, religion is related with resistance to change only and no other variables in the current study.

The findings indicate that as individuals use more religion and venting coping mechanisms, the more resistance to change will be displayed. This has important implications in terms of understanding the management of resistance to change, which could focus on reducing or controlling venting which may help reduce resistance to change. Support was also found for the fourth hypothesis which investigated the relationship between coping and perceived stress. The results showed that self-blame coping predicted perceived stress only. The findings indicate that the more individuals used self-blame coping mechanism, the more stress was experienced. This has important implications in terms of designing organisational change programmes and reducing resistance to change.
4.4 Hypothesis 5 and 6: Perceived Stress, Resistance to Change and Need Satisfaction

Support was found for the fifth hypothesis as perceived stress was shown to predict resistance to change. Findings showed that the more stressed employees are, the more resistance to change they are likely to display. These results indicate that companies should focus on creating a work environment which supports and encourages the reduction of stress levels in order to reduce resistance to change and facilitate successful implementation of organisational change programmes. These findings are in line with previous research which indicates that employees are likely to experience stress due to the unpredictable nature of change (Rafferty & Griffin, 2006, p. 1155). Therefore the association between stress and change has been confirmed in the current study.

The sixth hypothesis explored the relationship between need satisfaction and perceived stress. The results provide partial support for the hypothesis. As reported in section 3.3.7 results were very close to being significant, and if the sample size was increased perhaps basic need satisfaction would be a predictor of perceived stress. Further investigation is therefore warranted on the relationship between need satisfaction and perceived stress.

4.5 Hypothesis 7: Differences between non-managers and managers

The job level which the individual holds within the organisation was shown to be important in terms of resistance to change and perceived stress levels. Results from the non-manager and manager groups’ analysis (section 3.3.8) strongly supported the hypothesis that there would be a significant difference between resistance to change and perceived stress
based on participant job level. Most notably non-managers were found to be more resistant to change and also more stressed than managers. Non-managers also displayed higher emotional reaction to change than managers. Managers typically are responsible for implementing change and often have access to more information about the change, and therefore can have a clearer understand the reasons for change. Understanding the change and the reasons for change, as per the qualitative results discussed next, is important in order for employee to internalise the value of the change. However the difference between manager and non-managers reaction to change and stress warrants further investigation and analysis.

4.6 Qualitative Discussion

Based on the qualitative results participants appeared to use more adaptive and less maladaptive strategies to cope with both change and stress. This finding is in contrast to quantitative results presented in this study where participates primarily used maladaptive coping strategies in relation to need satisfaction, resistance to change and stress. However this is in line with previous research which indicates that need satisfaction can result in the use of more adaptive coping, such as planning and active coping, and less maladaptive coping strategies (Amiot, Blanchard, & Gaudreau, 2008; Parker, Jimmieson & Amiot, 2013). Participants also referenced the importance of social support and hence the role of relatedness in coping with both change and stress. The qualitative results help reinforce the importance of the role of relatedness in coping, which according to prior research is central in shaping how people cope (Deci and Ryan, 2002, p. 297).

Participation in and acceptance of change was show to be an individual subjective experience. When faced with change individuals first appear to internalise the value, benefit or impact of engaging in the task or the change, before participating in the change. Similarly
the SDT (Deci & Ryan, 1985; Ryan & Deci, 2000) focuses on the process of internalising goals and values which leads to self-determined behaviours. Based on the quantitative results presented in section 3.3.1, need satisfaction did not predict resistance to change. This result seems surprising in light of the qualitative feedback which highlights the importance of internalising the values of the change for the individual. Not allowing employee’s time to absorb and internalise the value of the change for them as opposed the company could result in negative effects such as resistance to change. The qualitative results therefore suggest support for previous research which found that basic need satisfaction helps to facilitate internalisation of goals and values (Gagné & Deci, 2005, p. 339). However internalisation of the value of engaging in the change is topic which needs to be explored in further research. In addition an interesting difference was observed between how participants believe they cope with change and how they describe change. Participants tended to view themselves as coping well with change, however this is in contrast with descriptions of change at their company, which were predominately negative and reported as chaotic and poorly managed.

4.7 Limitations and Strengths of the Current Study

This study relied on a mixed methods cross-sectional survey design, therefore no inferences about causality can be made. Need satisfaction, coping, perceived stress and resistance to change scores were obtained through self-reports, therefore increasing the risk of common-method bias. However to reduce this risk a qualitative component was included in the study. Potential reliability and validity issues were evident with the Basic Need Satisfaction at Work scale. Notably both the autonomy needs (α=.69), competence needs (α=.60) subscales had a Cronbach’s alpha coefficient of less than .7 which was not ideal. Collinearity issues were also detected between the scores of autonomy and competence when
using multiple regression analysis. Such issues may have impacted results in relation to measuring the satisfaction of all three needs of: autonomy, competence and relatedness.

The many significant interactions observed between the variables has built on previous research in this area, which is a key strength. Another strength of the study is that the results have generally supported the hypotheses. Important insight has been provided in relation to how basic need satisfaction at work interacts with particular coping strategies and stress in today’s workplace. As presented in figure 1, many complex interactions were tested in this study, and this increases the likelihood of additional extraneous variables requiring to be controlled for. Extraneous variables which may have an important influence on resistance to change is organisational culture and leadership style. Research on resistance to change would benefit from future longitudinal research in the area, which would help explain the many complex interactions at play.

4.8 Future research and application of findings

It is expected that the findings of this study will be important to further research aimed at understanding resistance to change. The observed relationships make a strong case for further research in this area. Future research could explore the influence of social support and role of relatedness in organisational change and resistance to change. In addition further research could investigate how much stress can be attributed to organisational change in the workplace today. Based on the qualitative results there is reasons to consider further investigation of the relationship between the SDT and organisation change, however from a motivation or amotivation perspective as opposed basic needs.
There are clear implications for practitioners designing organisational change programmes. Taking an individual’s perspective and needs into account should help smoother introduction of change. Designing an organisational change programme which takes into accounts all individual needs is not practical for companies, and this is an issue which needs to be addressed in order to help people readily embrace change. For each individual organisational change is personal to them, and this needs to be considered when designing change programmes which impact mass numbers. Understanding the mechanisms by which individual’s internalise the value of engaging in a change also provides a positive direction for new research in this area.

4.9 Conclusion

A number of important findings were evident in this study. First, basic need satisfaction at work was not found to predict resistance to change, this concludes that the effectiveness of need satisfaction in an organisational change context is limited. Interesting findings were recorded in terms of the coping mechanisms associated with basic need satisfaction, stress and resistance to change. Both the quantitative and qualitative results in this study provided mixed results in terms of participant usage of predominately adaptive or maladaptive coping. There is a important difference which needs to be explored between the statistical significance and psychological significance of certain coping strategies for individuals, this warrants further investigation.

To conclude work environments which do not allow satisfaction of the three basic needs face the following potential issues including: the increased use of maladaptive coping, such as self-blame for example, increased stress and as a consequence of increased stress,
increased resistance to change becomes a likelihood. On the contrary, work environments which allow satisfaction of the three basic needs, will assist to decrease maladaptive coping, hence decrease stress and as a result potentially decrease resistance to change, which is the desired outcome sought for companies today.
References


DOI:10.1207/S15327965PLI1104_01


Appendices

Appendix A: Survey Cover Letter

Dear Participant,

Firstly, thank you for considering taking part in my study.

My name is Helen Meaney and I am conducting research on behalf of the Department of Psychology at Dublin Business School exploring the relationship between self-determination at work, coping with stress and beliefs and attitudes towards organisational change. This research is being conducted as part of a Higher Diploma in Psychology and will be submitted for examination. This research is important as it can help organisations implement change effectively which can lead to positive effects for employees.

To participate in the study you must be over 18 years of age and in full-time employment in the private sector. Participation in the study involves completion of the attached anonymous survey. Participation is completely voluntary and therefore you are not obliged to take part.

Participants have the right to withdraw from the study at any time for whatever reason before the questionnaire is submitted. Participation in the study is strictly anonymous and confidential, and therefore responses cannot be attributed to any one participant. For this reason, it will not be possible to withdraw from the study after the questionnaire has been submitted.

Your responses and data will be kept strictly confidential, and the data from the questionnaire will be securely stored on a password protected computer. Findings from this study will be published in a thesis and may be presented at conferences and submitted for publication in peer-reviewed journals. However no participants will be identifiable in any publication or presentation.

While the survey asks some questions that might cause some negative feelings, the different questionnaires have been used widely in previous research. If any of the questions do raise difficult feelings for you, contact information for support services are included on the final page.

Should you require any further information about the research, please contact Helen Meaney at the following email address; xxxxxxxxx@xxx.ie. My supervisor Dr. Lucie Corcoran can be contacted at xxxxxx@xxxx.ie.

It is important that you understand that by completing and submitting the questionnaire you are consenting to participate in the study.

*1. Please confirm that you consent to participate in the study. You must click Yes in order to continue. Yes / No

* 2. Please confirm that you are over 18 years of age, and in full-time employment in the private sector. You must click Yes in order to continue. Yes/ No
Appendix B: Demographics Questionnaire

* 3. Are you male or female?

   ○ Male
   ○ Female

* 4. Please indicate the length of time you are in your current job?

   ○ Less than 1 year
   ○ 1–2 years
   ○ 2–5 years
   ○ 5–7 years
   ○ 7-10 years
   ○ 10 years +

* 5. Which of the following best describes your current job level?

   ○ Owner/Executive/C-Level
   ○ Senior Management
   ○ Middle Management
   ○ Intermediate
   ○ Entry Level

* 6. What is the size of your company?

   ○ 1-4 employees
   ○ 5-9 employees
   ○ 10-19 employees
   ○ 20-99 employees
   ○ 100-499 employees
   ○ 500-999 employees
   ○ 1000-4999 employees
Appendix C: Basic Need Satisfaction at Work Scale

When I am at work

The following questions concern your feelings about your job during the last YEAR (If you have been on this job for less than a YEAR, this concerns the entire time you have been at this job). Please indicate how true each of the following statement is for you given your experiences on this job. Remember that your boss will never know how you responded to the questions.

* 7. Please indicate how true each of the following statement is for you given your experiences on this job.

<table>
<thead>
<tr>
<th></th>
<th>1. Not at all true</th>
<th>2.</th>
<th>3. true</th>
<th>4. Somewhat true</th>
<th>5.</th>
<th>6. Very true</th>
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</thead>
<tbody>
<tr>
<td>1. I feel like I can make a lot of input to deciding how my job gets done.</td>
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<td>2. I really like the people I work with.</td>
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<td>3. I do not feel very competent when I am at work.</td>
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<td>4. People at work tell me I am good at what I do.</td>
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<td>5. I feel pressured at work.</td>
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<td>6. I get along with people at work.</td>
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<td>7. I pretty much keep to myself when I am at work.</td>
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<td>8. I am free to express my ideas and opinions on the job.</td>
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<td>9. I consider the people I work with to be my friends.</td>
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<td>10. I have been able to learn interesting new skills on my job.</td>
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<td>11. When I am at work, I have to do what I am told.</td>
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<td>12. Most days I feel a sense of accomplishment from working.</td>
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<td>13. My feelings are taken into consideration at work.</td>
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<td>14. On my job I do not get much of a chance to show how capable I am.</td>
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<td>15. People at work care about me.</td>
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<td>16. There are not many people at work that I am close to.</td>
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</table>
17. I feel like I can pretty much be myself at work.
18. The people I work with do not seem to like me much.
19. When I am working I often do not feel very capable.
20. There is not much opportunity for me to decide for myself how to go about my work.
21. People at work are pretty friendly towards me.

Appendix D: Brief COPE Scale

**Coping**

These items deal with the ways you've been coping with stress in your life. There are many ways to try to deal with problems. These items ask what you've been doing in general to cope with stressful events. Obviously, different people deal with things in different ways, but think about what you usually do when you are under a lot of stress. Each item says something about a particular way of coping. I want to know to what extent you've been doing what the item says. How much or how frequently. Don't answer on the basis of whether it seems to be working or not—just whether or not you're doing it.

* 8. Use the following response choices. Try to rate each item separately in your mind from the others. Make your answers as true FOR YOU as you can.

<table>
<thead>
<tr>
<th>I haven't been doing</th>
<th>I've been doing this a little bit</th>
<th>I've been doing this a medium amount</th>
<th>I've been doing this a lot</th>
</tr>
</thead>
</table>

1. I've been turning to work or other activities to take my mind off things.
2. I've been concentrating my efforts on doing something about the situation I'm in.
3. I've been saying to myself "this isn't real".
4. I've been using alcohol or other drugs to make myself feel better.
5. I've been getting emotional support from others.
6. I've been giving up trying to deal with it.
7. I've been taking action to try to make the situation better.
8. I've been refusing to believe that it has happened.
9. I've been saying things to let my unpleasant feelings escape.
10. I've been getting help and advice from other people.
11. I've been using alcohol or other drugs to help me get through it.
12. I've been trying to see it in a different light, to make it seem more positive.
13. I’ve been criticizing myself.
14. I’ve been trying to come up with a strategy about what to do.
15. I’ve been getting comfort and understanding from someone.
16. I’ve been giving up the attempt to cope.
17. I’ve been looking for something good in what is happening.
18. I’ve been making jokes about it.
19. I’ve been doing something to think about it less, such as going to movies, watching TV, reading, daydreaming, sleeping, or shopping.
20. I’ve been accepting the reality of the fact that it has happened.
21. I’ve been expressing my negative feelings.
22. I’ve been trying to find comfort in my religion or spiritual beliefs.
23. I’ve been trying to get advice or help from other people about what to do.
24. I’ve been learning to live with it.
25. I’ve been thinking hard about what steps to take.
26. I’ve been blaming myself for things that happened.
27. I’ve been praying or meditating.
28. I’ve been making fun of the situation.

Appendix E: Perceived Stress Scale

**Perceived Stress**

The questions in this scale ask you about your feelings and thoughts during the last month.

9. In each case, you are asked to indicate how often you felt or thought a certain way. For each question please select one of the provided options.

| Never | Almost never | Sometimes | Fairly often | Very often |

1. In the last month, how often have you been upset because of something that happened unexpectedly?
2. In the last month, how often have you felt that you were unable to control the important things in your life?
3. In the last month, how often have you felt nervous and stressed?
4. In the last month, how often have you felt confident about your ability to handle your personal problems?

5. In the last month, how often have you felt that things were going your way?

6. In the last month, how often have you found that you could not cope with all the things you had to do?

7. In the last month, how often have you been able to control irritations in your life?

8. In the last month, how often have you felt that you were on top of things?

9. In the last month, how often have you been angered because of things that happened that were outside of your control?

10. In the last month, how often have you felt difficulties were piling up so high that you could not overcome them?

Appendix F: Resistance to Change Scale

**Beliefs and attitudes about change**

Listed below are several statements regarding one's general beliefs and attitudes about change. Describe yourself as you generally are now, not as you wish to be in the future. Describe yourself as you honestly see yourself, in relation to other people you know of the same sex, and roughly the same age. Your responses will be kept in absolute confidence.

* 10. Please indicate the degree to which you agree or disagree with each statement by selecting the appropriate option.

*  

<table>
<thead>
<tr>
<th>Strongly Disagree</th>
<th>Disagree</th>
<th>Inclined to Disagree</th>
<th>Inclined to Agree</th>
<th>Agree</th>
<th>Strongly Agree</th>
</tr>
</thead>
</table>

1. I generally consider changes to be a negative thing.

2. I'll take a routine day over a day full of unexpected events any time.

3. I like to do the same old things rather than try new and different ones.

4. Whenever my life forms a stable routine, I look for ways to change it.

5. I'd rather be bored than surprised.

6. If I were to be informed that there's going to be a significant change regarding the way things are done at work, I would probably feel stressed.

7. When I am informed of a change of plans, I tense up a bit.

8. When things don't go according to plans, it stresses me out.

9. If my boss changed the performance evaluation criteria, it would probably make me feel
uncomfortable even if I thought I'd do just as well without having to do extra work.

10. Changing plans seems like a real hassle to me.

11. Often, I feel a bit uncomfortable even about changes that may potentially improve my life.

12. When someone pressures me to change something, I tend to resist it even if I think the change may ultimately benefit me.

13. I sometimes find myself avoiding changes that I know will be good for me.


15. I don’t change my mind easily.

16. Once I’ve come to a conclusion, I’m not likely to change my mind.

17. My views are very consistent over time.

Appendix G: Open-ended Questions

* 11. How do you normally cope with change at work?

* 12. How do you normally cope with stress at work?

* 13. How would you describe change at your company?

Appendix H: Support Services

**Final Page of Survey:**

Thank you for taking the time to complete this survey.

If any of the questions have raised difficult feelings for you, or if you are experiencing stress in the workplace, the following support services can be contacted:

- Carecall: [http://www.carecallwellbeing.ie](http://www.carecallwellbeing.ie)
- My Mind: [https://mymind.org/](https://mymind.org/)
- Aware: [http://www.aware.ie/](http://www.aware.ie/)

Should you require any further information about the research, please contact Helen Meaney at the following email address: xxxx@xxxx

My supervisor Dr. Lucie Corcoran can be contacted at xxxx@xxx