

2015

Predicting affective well-being from self-determination needs satisfaction: The moderating role of work positivities and work negativities

Chou Chuen YU

Singapore Management University, ccyu.2013@phdps.smu.edu.sg

Follow this and additional works at: https://ink.library.smu.edu.sg/etd_coll

Part of the [Industrial and Organizational Psychology Commons](#)

Citation

YU, Chou Chuen. Predicting affective well-being from self-determination needs satisfaction: The moderating role of work positivities and work negativities. (2015). 1-86. Dissertations and Theses Collection (Open Access).

Available at: https://ink.library.smu.edu.sg/etd_coll/123

This Master Thesis is brought to you for free and open access by the Dissertations and Theses at Institutional Knowledge at Singapore Management University. It has been accepted for inclusion in Dissertations and Theses Collection (Open Access) by an authorized administrator of Institutional Knowledge at Singapore Management University. For more information, please email libIR@smu.edu.sg.

Predicting Affective Well-Being from Self-Determination Needs Satisfaction:
The Moderating Role of Work Positivities and Work Negativities

Yu Chou Chuen

Singapore Management University

2015

Predicting Affective Well-Being from Self-Determination Needs Satisfaction:
The Moderating Role of Work Positivities and Work Negativities

by
Yu Chou Chuen

Submitted to School of Social Sciences in partial fulfilment of the requirements for the
Degree of Master of Science in Psychology

Thesis Committee:

David Chan (Supervisor)
Professor of Psychology
Singapore Management University

Cheng Chi-Ying
Assistant Professor of Psychology
Singapore Management University

William Tov
Assistant Professor of Psychology
Singapore Management University

Singapore Management University

2015

Copyright (2015) Yu Chou Chuen

Predicting Affective Well-Being from Self-Determination Needs Satisfaction:
The Moderating Role of Work Positivities and Work Negativities

Yu Chou Chuen

ABSTRACT

Self-determination theory (SDT; Deci & Ryan, 1985, 1991) proposes that conditions at work promoting the satisfaction of the three fundamental needs of *competence*, *autonomy* and *relatedness* engender positive well-being for employees. Whilst there is some research on the affective components (i.e., positive and negative affect) of well-being at the workplace involving SDT, the boundary conditions (i.e., moderators) for the relationship between self-determination needs satisfaction (SDNS) and these affective components have not been examined. Using a sample of employees from different industries in the United States, this study hypothesised and tested the moderating effects of three pairs of work environment variables (i.e., supportive-abusive supervisors, supportive-abusive colleagues, positive-negative working conditions) with contrasting valence (termed work positivities vs. work negativities) on the relationship between self-determination needs satisfaction and affective well-being outcomes at work (i.e., positive affect and negative affect). Both composite measures and the relevant subscales were tested. Results supported several hypotheses of moderator effects in which the strength of the relationship between SDNS and affective well-being at work was dependent on the level of work negativities (e.g. negative working conditions and abusive colleagues). Although several moderator effects in which the strength of the relationship between SDNS and positive affect at work were dependent on the level of work positivities, the nature of the interactions were not as hypothesised. Implications of the results and future directions for research were discussed in terms of the understanding self-determination needs satisfaction within the context of other work environment variables.

TABLE OF CONTENTS

ABSTRACT.....	iii
TABLE OF CONTENTS.....	iv
LIST OF TABLES.....	v
LIST OF FIGURES.....	vi
ACKNOWLEDGEMENTS.....	viii
1. CHAPTER 1: INTRODUCTION.....	1
2. CHAPTER 2: METHOD.....	17
3. CHAPTER 3: RESULTS.....	23
4. CHAPTER 4: DISCUSSION.....	31
REFERENCES.....	70
APPENDIX A.....	84

LIST OF TABLES

Table 1.	Internal Consistency Reliabilities, Means, Standard Deviations, and Inter-Correlations of Study Variables (N = 373)	39
Table 2.	Summary of Hierarchical Regression Analyses for H3a (N = 373)	40
Table 3.	Summary of Hierarchical Regression Analyses for H3b (N = 373)	42
Table 4.	Summary of Hierarchical Regression Analyses for H3c (N = 373)	44
Table 5.	Summary of Hierarchical Regression Analyses for H3d (N = 373)	46

LIST OF FIGURES

<i>Figure 1</i>	Conceptual model of proposed research.	48
<i>Figure 2</i>	Nature of hypothesised Self-Determination Needs Satisfaction x Work Positivities interaction effect on Positive Affect (Hypothesis 3a).	49
<i>Figure 3</i>	Nature of hypothesised Self-Determination Needs Satisfaction x Work Negativities interaction effect on Positive Affect (Hypothesis 3b).	50
<i>Figure 4</i>	Nature of hypothesised Self-Determination Needs Satisfaction x Work Positivities interaction effect on Negative Affect (Hypothesis 3c).	51
<i>Figure 5</i>	Nature of hypothesised Self-Determination Needs Satisfaction x Work Negativities interaction effect on Negative Affect (Hypothesis 3d)	52
<i>Figure 6</i>	Nature of hypothesised moderator effects of Work Positivities and Negativities for Positive Affect (Hypothesis 4a).	53
<i>Figure 7</i>	Nature of hypothesised moderator effects of Work Positivities and Negativities for Negative Affect (Hypothesis 4b).	54
<i>Figure 8</i>	Moderator effects of Work Positivities on the relationship between Autonomy Need Satisfaction and Positive Affect.	55
<i>Figure 9</i>	Moderator effects of Supportive Supervisors on the relationship between Autonomy Need Satisfaction and Positive Affect.	56
<i>Figure 10</i>	Moderator effects of Supportive Colleagues on the relationship between Autonomy Need Satisfaction and Positive Affect.	57
<i>Figure 11</i>	Moderator effects of Positive Working Conditions on the relationship between Autonomy Need Satisfaction and Positive Affect.	58
<i>Figure 12</i>	Moderator effects of Negative Working Conditions on the relationship between Self-Determination Needs Satisfaction and Positive Affect.	59
<i>Figure 13</i>	Moderator effects of Abusive Supervisor on the relationship between Autonomy Need Satisfaction and Positive Affect.	60

LIST OF FIGURES

<i>Figure 14</i>	Moderator effects of Negative Working Conditions on the relationship between Autonomy Need Satisfaction and Positive Affect.	61
<i>Figure 15</i>	Moderator effects of Negative Working Conditions on the relationship between Relatedness Need Satisfaction and Positive Affect.	62
<i>Figure 16</i>	Moderator effects of Work Negativities on the relationship between Autonomy Need Satisfaction and Positive Affect.	63
<i>Figure 17</i>	Moderator effects of Work Negativities on the relationship between Relatedness Need Satisfaction and Positive Affect.	64
<i>Figure 18</i>	Moderator effects of Abusive Colleagues on the relationship between Self-Determination Needs Satisfaction and Negative Affect.	65
<i>Figure 19</i>	Moderator effects of Abusive Colleagues on the relationship between Autonomy Need Satisfaction and Negative Affect.	66
<i>Figure 20</i>	Moderator effects of Abusive Supervisor on the relationship between Relatedness Need Satisfaction and Negative Affect.	67
<i>Figure 21</i>	Moderator effects of Abusive Colleagues on the relationship between Relatedness Need Satisfaction and Negative Affect.	68
<i>Figure 22</i>	Moderator effects of Work Negativities on the relationship between Relatedness Need Satisfaction and Negative Affect.	69

ACKNOWLEDGEMENT

I am grateful to my supervisor Professor David Chan for his invaluable guidance and support throughout this research study. I would also like to thank my thesis committee members Assistant Professor Cheng Chi-Ying and Assistant Professor William Tov for their very useful comments on the study.

CHAPTER 1: INTRODUCTION

It is well established that job stress affects employee health and productivity. Stressors such as high work load, long working hours or even high decision authority have been shown to cause sleeping problems, exhaustion, alcohol abuse, and impaired health (e.g., Doi, 2005; Hackman & Oldham, 1980; Halbesleben & Buckley, 2004; Joensuu et al., 2010; Karasek & Theorell, 1990; Niedhammer, Chastang, David, & Kelleher, 2008). Long-term negative consequences of stressors at the workplace for organisations include reduced work involvement and absenteeism from the workplace (Marchand, Demers, & Durand, 2005). Research that contributes toward the field of workplace well-being therefore continues to be of pressing need.

In the last three decades, there has been substantial research on workplace well-being that focused on the workplace variables that support or thwart positive human potentials, most of which are based on the concepts from self-determination theory (Deci & Ryan, 1985, 1991; Ryan, 1993; Ryan & Deci, 2000). Central to self-determination theory (SDT) is the notion that basic needs for competence, autonomy and relatedness are three universal innate psychological needs that if satisfied, act as nutriments for the growth and well-being of humans and if not satisfied, contribute to pathology and psychological distress (Deci & Ryan, 2014; Ryan & Deci, 2000). Whether people are explicitly conscious of needs as goals objects, the average healthy adult “strives for these nutriments and, when possible, gravitates toward situations that provide them” (Ryan & Deci, 2002, p. 7). Indeed, researching on conditions that support or thwart these three needs satisfactions is fruitful on grounds that self-determination needs satisfaction (SDNS) have consistently been established to relate positively to well-being at the workplace (Baard, Deci, & Ryan, 2004; Ilardi, Leone, Kasser,

& Ryan, 1993; Kasser & Ryan, 1996; Van den Broeck, Vansteenkiste, De Witte, & Lens, 2008; Vansteenkiste et al., 2007).

Although it has been established that SDNS is positively associated with employee well-being (for review, see Deci & Ryan, 2014), there is limited research on the potential moderators of this relationship. Given that there can exist work characteristics with the capacity to weaken the relationship between SDNS and affective well-being, research into moderator effects is important for findings can inform organisational practices in promoting affective well-being by tackling areas that can reduce the beneficial effects of needs satisfaction derived from work. Drawing from the positive organisational scholarship that emphasises the valence of constructs (e.g., Bono, Glomb, Shen, Kim, & Koch, 2013; Dutton, Glynn, & Spreitzer, 2006), the present study hypothesised and tested the moderating effects of three pairs of contrasting valence variables (termed work positivities and work negativities) on the relationship between SDNS and positive affect (PA) and negative affect (NA) at the workplace. It is critical to study valence of variables because negativity bias suggests a difference in strength of effects between negatively valence constructs and positively valence constructs. The three pairs of contrasting valence moderating predictor variables include supportive-abusive supervisor (e.g. Duffy, Ganster, & Pagon, 2002; Hobman, Restubog, Bordia, & Tang, 2009), supportive-abusive colleagues (e.g. DuBois et al., 2002; Ng & Sorensen, 2008) and positive-negative working conditions (e.g. Anton, 2009; Bedi & Schat, 2013; Z. Chen, Takeuchi, & Wakabayashi, 2005; DeHart-Davis & Pandey, 2005; Sugarman, 2001; L. Q. Yang, Che, & Spector, 2008). Theoretical justifications for the potential moderating roles of these variables will be provided in detail in the following sections.

The aim of this study was twofold. The first was to test if work positivities and negativities moderate the relationship between SDNS and both PA and NA. Whilst a higher

level of SDNS at the workplace is expected to be associated with better well-being outcomes (i.e., higher PA and lower NA), the magnitude of this association may depend on the level of work positivities or work negativities experienced at the workplace. Specifically, it was predicted that the effects of SDNS on PA will be reduced in low work positivities conditions and also in high work negativities conditions. In addition, the effects of SDNS on NA will be increased in low work positivities conditions and also in high work negativities conditions. A series of hypotheses (1a-3d) were formulated to address this research question and they are represented conceptually in Figure 1.

The second aim of this study was to examine if the corresponding moderator effect is stronger for work negativities than work positivities. Based on the vast research literature on negativity bias, we believe that employees would react more strongly in presence of negative work valence. This would be the case for both outcomes PA and NA. The second research aim was addressed through the next set of hypotheses (4a-4b). In the following sections, we will first provide a review on the relationship between SDNS and well-being followed by discussions on the theoretical justifications behind the selected three pairs of contrasting valence variables.

Self-Determination Needs Satisfaction and Well-Being

The positive relationship between self-determination fulfilment and well-being extends beyond the workplace to include many domains. Examples include education, parenting, health care, and close relationships (Deci & Ryan, 2014). Some studies that included other work outcomes measures also observed the relationship between well-being and high-quality performances in addition to those with well-being (e.g. Deci & Ryan, 2008). SDT postulates that work climates that promote the satisfaction of the three basic needs will yield positive work outcomes (including psychological well-being) primarily because

employee's intrinsic motivation is enhanced in addition to the internalisation of extrinsic motivation (Gagné & Deci, 2005). Intrinsic motivation refers to doing work out of interest and enjoyment whilst internalised extrinsic motivation means doing the activity willingly because of its personal values and importance (Deci & Ryan, 2000). In the SDT conceptualisation, autonomy refers to the experience of one's behaviour as being self-endorsed, that the source of one's behaviour is truly coming from the self (Deci & Ryan, 1985). Competence refers to the experience of self-mastery and effectiveness in one's social environment (Deci, 1975) whilst relatedness refers to feeling of having connection, belonging and support from significant others (Baumeister & Leary, 1995; Carstensen, 1998; Ryan, 1993).

Although there have been studies (e.g. Reis, Sheldon, Gable, Roscoe, & Ryan, 2000; Sheldon & Bettencourt, 2002; Sheldon, Ryan, & Reis, 1996) examining the relationship between general SDNS and affective well-being (i.e., PA and NA), our review indicated that studies involving SDNS and affective well-being in the work domain were limited. Amongst these studies, some of the measures used do however tap into some affective experiences such as anxiety, depression (Baard et al., 2004; Ilardi et al., 1993) and self-esteem (Deci et al., 2001; Ilardi et al., 1993; Kasser & Ryan, 1996; Ryan et al., 1999). One study that included PA and NA measures in its entirety was that by Sheldon and Niemiec (2006). That study however examined aggregated levels of subjective well-being by subtracting the scores on NA from the sum of the scores on PA and life satisfaction, instead of treating PA and NA as distinct constructs to be examined separately (Bradburn & Caplovitz, 1965; Diener & Emmons, 1984; Watson, Clark, & Tellegen, 1988). Using a composite measure of overall well-being is a convenient means of estimating an individual's global sense of well-being; a logic favoured in many subjective well-being research (Reis et al., 2000, p. 424). We argue that treating well-being outcomes from a unipolar bivariate perspective (where PA and NA

are construed as two distinct constructs) can potentially reveal important differences in the moderator effects on self-determination that may be masked when PA and NA are treated as a composite, with stronger outcomes hypothesised for NA in lieu of sensitivity to valence. The limitation we have identified therefore calls for research to further our understanding involving workplace SDNS and affective well-being variables (PA and NA) from a unipolar bivariate perspective. To be clear on the definitions, PA reflects the extent to which an individual “feels enthusiastic, active and alert. High PA is a state of high energy, full concentration and pleasurable engagement whereas low PA is characterised by sadness and lethargy”. Conversely, NA “is a general dimension of subjective distress and pleasurable engagement that subsumes a variety of aversive mood states including anger, contempt, disgust, guilt, fear and nervousness with low NA being a state of calmness and serenity (Watson et al., 1988, p. 1063).”

Work Positivities and Work Negativities

As highlighted in the introduction, the first goal of the research was to show that higher level of SDNS was associated with better well-being outcomes (i.e., higher PA and lower NA), but this could be influenced depending on the level of work positivities or work negativities in question. Work positives and work negativities investigated were selected based on theoretical justification and in the following paragraphs explicated.

Supportive-abusive supervision. The coexistence of supportive behaviour and undermining/abusive behaviour by supervisors have been observed (Duffy et al., 2002; Hobman et al., 2009; Nahum-Shani, Henderson, Lim, & Vinokur, 2014; Rooney & Gottlieb, 2007; Yagil, 2006). For example the same supervisor may on some occasions display aggressive behaviour towards an underperforming staff but also provide advice and assistance in other instances. Over time, such forms of supervisory behaviour will have

effects on the individual's sense of autonomy and competence. Indeed the influential role of supportive-abusive supervision cannot be underplayed. In a recent meta-analytic review by Hershcovis and Barling (2010), abusive behaviours by supervisors have been found to have adverse impacts on the well-being of employees including those of depression and emotional exhaustion. Also, the commentary by Zeni, MacDougall, Chauhan, Brock, and Buckley (2013) has shown that supervisors play an important role in providing guidance, assistance and feedback to their employees and this role has positive effects on a range of positive work outcomes including higher levels of supervision support result in increased job satisfaction (Eastburg, Williamson, Gorsuch, & Ridley, 1994; Rauktis & Koeske, 1994; Wood & Peccei, 1995; Yukl, 2013), retention rates (Chen & Scannapieco, 2010) and organisational citizenship behaviours (Clark, 2001). On this basis, supportive supervision was deemed a work positivity and abusive supervision, a work negativity.

Supportive-abusive colleagues. As noted in the meta-analytic review by Ng and Sorensen (2008, p. 245), there is agreement amongst researchers that instrumental and emotional assistance in the form of "sympathy, caring, comfort, and encouragement" from peers is an important resource at work (DuBois et al., 2002; Hayton, Carnabuci, & Eisenberger, 2012; Johnson et al., 2005; Okun & Lockwood, 2003; Taylor et al., 2004). Colleagues at the workplace have the potential to engage in both helping and harmful/aggressive behaviour. Much like the supervisor who can be both supportive and abusive, colleagues can display abusive behaviour towards a colleague (by being rude or saying hurtful things) but also provide advice and assistance in other instances whereby work tasks involve collaboration and teamwork. The same colleague therefore can behave differently from an expressive and instrumental level. Therefore an individual at the workplace can have different colleagues who are either supportive or abusive. On the basis

of our argument, “positive behaviours of colleagues” was deemed a work positivity and “negative behaviours of colleagues”, a work negativity.

Positive and negative working conditions. Beyond relationships with superiors and colleagues, employees at the workplace are faced with working conditions that can be said to be either enabling or inhibiting to their growth, progress and development. What is crucial here is that both positive and negative working conditions can co-exist. Human resources initiatives can create conducive conditions that promote learning, effectively utilises one’s skills and knowledge (through crafting appropriate job scope) and career advancement opportunities. Yet for the very same organisation with such initiatives, there can exist debilitating work practices such as excessive rules and procedures, conflicting requests from multiple chains of commands and organisational politics amongst different factions in the organisation. For this study, dimensions of positive conditions included those that (a) provides learning opportunities, (b) engages one’s skills and knowledge and (c) provides opportunities for career advancement. Dimensions of negative working conditions included (d) rules and procedures (or red tape) that inhibit work, (e) conflicting requests from various parties and (f) organisational politics. Since unlike behaviours of supervisors and colleagues with either established dimensions or clear cut behavioural manifestations, we will elaborate in turn our reasons for the classification of these dimensions as either work positivities or work negativities.

Learning opportunities. Scholars have argued that learning opportunities at work may be a route through which competencies and adaptive skills are developed to cope with the fast pace of workplace and organisational changes ubiquitous of modern day organisations (Panari, Guglielmi, Simbula, & Depolo, 2010; Sugarman, 2001). Such learning opportunities act as resources to mitigate effects of stress (Bakker, van Veldhoven, & Xanthopoulou, 2010; Holman & Wall, 2002) and increase employees’ motivation (Morrison,

Cordery, Girardi, & Payne, 2005). Learning opportunities therefore was classified as a dimension of positive working conditions.

Skill utilisation. Positive work outcomes are attained when employees' skill and knowledge are effectively utilised (Z. Chen et al., 2005). When there is a mismatch between job requirements and skill sets, low productivity and frustration occur since there is little opportunity for individuals to utilise their skill effectively. Work that utilises an individual's knowledge and skills is therefore important for one's motivation and affective state. Indeed some studies have shown that individuals who feel that their skills have been effectively utilised reported lower psychological distress (De Jonge, Reuvers, Houtman, Bongers, & Kompier, 2000; Mausner-Dorsch & Eaton, 2000; Niedhammer, Goldberg, Leclerc, Bugel, & David, 1998; Stansfeld, Fuhrer, Shipley, & Marmot, 1999; Margot Van Der Doef, Maes, & Diekstra, 2000). Skill utilisation therefore was classified as a dimension of positive working conditions.

Career advancement. Individuals join an organisation with expectations concerning their career development and therefore perception of opportunities for advancement would enhance job satisfaction (L. Q. Yang et al., 2008). Also, there are societal expectations emphasising regular promotions for good performance (Carlson & Rotondo, 2001). As pointed out by Carlson and Rotondo (2001), a mismatch between what organisations can offer in terms of advancement opportunities and what many employees implicitly expect from a career can be a significant source of stress for individuals (DeFrank & Ivancevich, 1998). Indeed, such propositions can indicate why perceptions of career advancement opportunities have been associated with higher job satisfaction (Browne, 2000; Dewe, O'Driscoll, & Cooper, 2012). Growth programs within organisation are therefore important in providing employees with the chance to apply what has been learnt during development

(Pfeffer, 1994). Opportunities for advancement therefore was classified as a dimension of positive working conditions.

Red tape. All organisations have rules and procedures that regulate employees' actions. Common to large organisations and especially the public sector, this can be a negative working condition since red tape causes much frustrations to employees who feel that their action and decision making have been unnecessarily hindered. Perceptions of organisational rules and procedures as red tape have been associated with feelings of alienation and this has adverse impact on employees' motivation (Coursey & Rainey, 1990; DeHart-Davis & Pandey, 2005). Red tape therefore was classified as a dimension of negative working conditions.

Conflicting requests. Role conflict is common at the workplace. Employees are often involved in unnecessary tasks, get caught between conflicting demands from various parties or chains of command and often complete tasks acceptable by one but not another (Ivancevich & Matteson, 1980). Flatter organisational structure (Holbeche, 1994), a common characteristic of contemporary organisations, meant that role conflict is a familiar negative work condition to many employees. As noted by Anton (2009), role conflict has been identified as a key stressor especially in organisations experiencing drastic changes (Anton, 2009; Antoniou, Davidson, & Cooper, 2003; Johnson et al., 2005). Conflicting requests therefore was classified as a dimension of negative working conditions.

Office politics. In a recent meta-analysis on perception of office politics by Bedi and Schat (2013), their review showed that high perception of politics has been associated with a variety of poor outcomes both for the organisation and employees. Negative effects included lower job satisfaction (e.g. Cropanzano, Howes, Grandey, & Toth, 1997), lower job involvement (e.g. Ferris & Kacmar, 1992), stress (e.g. Vigoda-Gadot & Kapun, 2005), and

increased levels of absenteeism (e.g. Vigoda, 2000). Organisational politics therefore was classified as a dimension of negative working conditions.

Relationship between Self-Determination Needs Satisfaction and Affective Well-Being

Including measures of both PA and NA as well-being indicators allowed us to examine the two contrasting valence constructs and potential differences in relationships involving the two constructs. It is important to examine both positive and negative affect at the workplace because it has been well established that affect at work predict various work-relevant outcomes. For example, PA has been found to positively predict outcomes such as creative problem solving, helping behaviour, pro-social and altruistic behaviour (Brief & Weiss, 2002; George, 1991; George & Brief, 1992; Isen, 1999) and NA has been found to positively predict outcomes such as counterproductive behaviors, workplace aggression, and incivility (Bowling & Eschleman, 2010; Fox, Spector, & Miles, 2001; Hershcovis et al., 2007; Penney & Spector, 2005; Porath & Pearson, 2013; J. Yang & Diefendorff, 2009). The main effects of self-determination on experiential affect are stated in hypothesis 1a and 1b.

Previous studies have shown a positive relationship between needs satisfaction and positive valence well-being measures (Deci et al., 2001; Kasser & Ryan 1996; Ryan et al., 1999; Ilardi et al., 1993) and also a negative relationship between needs satisfaction and negative valence well-being measures (Baard et al., 2004; Ryan & Frederick, 1997, Ilardi et al., 1993). As discussed above, we would expect SDNS to predict affective well-being given that needs satisfaction or non-satisfaction should directly translate to valence of affect at work. Hence, it was hypothesised that:

Hypothesis 1a: There is a positive relationship between self-determination needs satisfaction and positive affect.

Hypothesis 1b: There is a negative relationship between self-determination needs satisfaction and negative affect.

Main Effects of Work Positivities and Work Negativities

Having established the manner through which SDNS associate with both positive and negative affect, questions remained on the relationship between affective well-being (PA and NA) and the valence work environment factors (work positivities and work negativities) in addition to how these factors play a moderating role in influencing the relationships between SDNS and affective well-being. In the work context, it has been proposed that positive events (work positivities in our context) lead to a variety of positive emotions and outcomes (Bono et al., 2013). For instance, it was observed that employees found in an environment with good relations (with supervisors and colleagues) and enjoyable work experience higher positive mood (Miner, Glomb, & Hulin, 2005). Spreitzer, Sutcliffe, Dutton, Sonenshein, and Grant (2005, p. 542) proposed that such positive contextual factors (e.g. good relational resources) have the effect of increasing SDNS at the work place. In a study by Bono et al. (2013) using longitudinal field methods, findings indicated that positive work events together with positive reflection intervention (an internal condition) were associated with improved health. In areas outside of work, experiential measures indicated that daily positive events are linked with increased feelings of self-esteem and sense of control (Nezlek & Plesko, 2001; Reis & Gable, 2003). Also, the energising effects of positive events (Zohar, Tzischinski, & Epstein, 2003) and also buffering effects against stress generated by work demands have also been reported (Folkman & Moskowitz, 2000).

Studies on the deleterious effects of negative work events on employees have been well established. A review by Marchand et al. (2005) showed that negative conditions at work leading to long hours, low control and high demands were associated with

psychological distress (e.g. Bültmann, Kant, Van Den Brandt, & Kasl, 2002; De Jonge, Mulder, & Nijhuis, 1999; De Jonge et al., 2000; Payne & Morrison, 1999; Stansfeld et al., 1999; M. Van der Doef & Maes, 1999; Margot Van Der Doef et al., 2000). Research has also shown that negative work events reduces wellbeing through negative mood states induced (Bolger, DeLongis, Kessler, & Schilling, 1989; Evans, Johansson, & Rydstedt, 1999). As summarised by Bono et al. (2013), negative work events should negatively affect overall employee well-being. We viewed that as not only the increase in NA but also the decrease in PA. From established findings on the relationship between valence working conditions and valence work outcomes, main effects of the valence work factors of this study on affective well-being are listed as follows.

Hypothesis 2a: There is a positive relationship between work positivities and positive affect.

Hypothesis 2b: There is a negative relationship between work negativities and positive affect.

Hypothesis 2c: There is a negative relationship between work positivities and negative affect.

Hypothesis 2d: There is a positive relationship between work negativities and negative affect.

Moderating Effects of Work Positivities and Work Negativities

In lieu of the findings of the effects of work positivities in various psychological domains, we should also expect work positivities in combination with SDNS to produce a greater effect on PA than the effects of SDNS needs satisfaction derived from work on PA alone. Put in another way, for a given need satisfactions level, we should observe the PA levels of employees to be higher for those with high work positivities than those with low

work positivities. To give an illustration, for any given level of SDNS level, employees faced with better supervisory practices will have higher level of PA. A relevant question that follows is whether this work positivity has greater effect for the employee high in needs satisfaction or the one low in it? Sensitivity to valence suggests to us that the positive association between need satisfaction and PA will be weaker among those with high work positivities than among those with low work positivities. In other words, a flatter slope is expected for those high in work positivities than those low in work positivities. This is because those with high needs satisfaction are already experience higher PA and so the additional energizing benefits of work positivities are expected to be lesser compared to those low in needs satisfaction. In the former scenario there are two positivities whilst the latter there is only one. This prediction is formally stated as hypothesis 3a below (refer to figure 2).

Hypothesis 3a: There is a SDNS x work positivities interaction effect on PA. Specifically, the positive association between NS and PA is weaker among those with high work positivities than among those with low work positivities.

Similar to effects of work positivities, we should expect work negativities in combination with SDNS to produce a greater effect on PA than the effects of SDNS derived from work on PA alone. Those with less work negativities should fare better in PA than those with high work negativities. For a given need satisfactions level, we should observe the PA levels of employees to be higher for those with low work negativities (e.g. low abusive supervision) than those with high work negativities (e.g. high abusive supervision). Overall, it was expected that the positive association between need satisfaction and PA will be weaker among those with high work negativities than among those with low work negativities. This is because those with high work negativities are reacting more strongly to a high amount of negative valence and so any beneficial effect from self-determination needs satisfaction

(being met) is mitigated. In instances of high work negativities, the positive relationship between SDNS and PA is much lower compared to instance of low work negativities. This prediction is formally stated as hypothesis 3b below (refer to figure 3).

Hypothesis 3b: There is a SDNS x work negativities interaction effect on PA. Specifically, the positive association between NS and PA is weaker among those with high work negativities than among those with low work negativities.

Having elucidated the findings on work positivities and negativities on wellbeing, and drawing connections for PA in particular, it should be apparent that the effects for NA will be the converse. In short, the energizing and buffering effects of work positivities (Folkman & Moskowitz, 2000; Zohar et al., 2003) should lead to the expectation that the negative relationship between SDNS and NA will be mitigated in the presence of work positivities. The negative association between need satisfaction and NA would be stronger among those with low work positivities than among those with high work positivities. This is because those with higher needs satisfaction are already experiencing lower NA and so the additional buffering benefits of work positivities is expected to be lesser than compared with those with low needs satisfaction. This prediction is formally stated as hypothesis 3c below (refer to figure 4).

Hypothesis 3c: There is a SDNS x work positivities interaction effect on NA. Specifically, the negative association between NS and NA is lower among those with high work positivities than among those with low work positivities.

With regard to work negativities and what has already been discussed on their deleterious effects on wellbeing, the moderating roles should be quite clear. For a given need satisfactions level, we should observe the NA levels of employees to be higher for those with high work negativities than those with low work negativities. As those experiencing higher

work negativities should react more strongly to it than those experiencing lower amounts of it, increasing needs satisfaction should therefore make less of a difference. In the negative relationship between need satisfaction and NA, the buffering effect of work negativities is therefore not uniform with less of a difference for those experiencing high work negativities compared to amongst those experiencing low work negativities. In instances of high work negativities, the negative relationship between SDNS and NA is much lower compared to instance of low work negativities. This prediction is formally stated as hypothesis 3d below (refer to figure 5).

Hypothesis 3d: There is a SDNS x work negativities interaction effect on NA. Specifically, the negative association between NS and NA is weaker among those with high work negativities than among those with low work negativities.

Moderator Effect Sizes

The second goal of this proposed research was to understand how work positivities and negativities differ from each other in moderator effects. Doing so is important, the reason being that managerial decisions to allocate similar amount of resources to engender work positivities and reduce work negativities may well produce unexpected differential well-being outcomes. Based on negativity bias theory, we predicted that moderator effect would be stronger for work negativities than work positivities. This would be the case for both affective outcome variables.

Cacioppo, Gardner, and Berntson (1997, p. 11) defined negativity bias as ‘the propensity to react more strongly to negative than positive stimuli’. As proposed by (Cacioppo & Berntson, 1994) with ample evidence to support the case in the review by Ito, Larsen, Smith, and Cacioppo (1998) negativity bias meant that attitudinal and behavioural expressions are strongly influenced by negative stimuli than positive ones. In other words,

when examining the effects of negative (aversive) and positive (appetitive) stimuli on a construct hypothesised to be affected, each unit increase in the negative stimuli will produce a larger effect than each unit increase in the positive stimuli. A steeper ‘negative gradient’, as coined by researchers in this field, was therefore posited to occur (Cacioppo & Berntson, 1994; Cacioppo, Gardner, & Berntson, 1999; Ito et al., 1998; Rozin & Royzman, 2001). In the context of this proposed research, negativity bias theory suggests employees would react more strongly in the presence of negative work valence compared to positive work valence.

Negativity bias suggested that the increasing of work negativities has a greater deleterious effect on PA than the reduction of work positivities. The benefit of having high SDNS at the workplace is therefore limited with increasing work negativities (the flattest slope would therefore be observed for those high in work negativities). We therefore expect to see the greatest difference in PA between high and low work negativities when SDNS was high. This prediction is formally stated as hypothesis 4a below (refer to figure 6).

Hypothesis 4a: Comparing the moderator effects of work positivities and negativities, the magnitude of difference in PA is largest for work negativities.

In understanding how work positivities and negativities differed from each other in moderator effects, negativity bias would again suggest that the biggest difference in NA to occur under varying work negativities conditions and the effects becoming more pronounced with increasing SDNS (the flattest slope would therefore be observed for those high in work negativities). We therefore expected to see the greatest difference in NA between high and low work negativities when SDNS was high. This prediction is formally stated as hypothesis 4b below (refer to figure 7).

Hypothesis 4b: Comparing the moderator effects of work positivities and negativities, the magnitude of difference in NA is largest for work negativities.

CHAPTER 2: METHOD

Employee self-report data on the study variables were collected to test the hypotheses in this study. The self-report method was justified on account of the fact that the constructs investigated were inherently perceptual in nature and it was more valid to ask the individual about his/her perception on the various work and affective experiences than to infer it indirectly through other means (Chan, 2009). As noted in Chan (2009), other forms of measures (i.e., non self-report) may not be superior as valid operationalisations of perceptual constructs. For instance to claim that conducting studies examining the employee's behaviour is more meaningful and with greater validity is problematic for several reasons. Firstly, particular experiences may not translate to observable behaviours at the point of observation or if at all. Secondly even if work experiences were translated into behaviour, the observer may not have the opportunity to observe it and thirdly there is no grounds to know if the observer can accurately infer the meaning of the behaviour in question. To conduct laboratory studies to examine our research hypotheses may be less suited for the task on hand since the concern is with self-report data (i.e., perception of experiences at work) and experimental effects from artificial setting will lack external validity (Brewer, 2000). Whilst we acknowledged that in some instances high external validity may not always be needed so long as there is construct validity (Brewer, 2000), examining perpetual experiences at work meant external validity was highly crucial in this research.

As this study involved participants from a general working population (to be elaborated in the next section), social desirability responding would not be an issue for there were no reason to do so. Managing impression or fake responding could be an issue if the study was conducted in an organisation whereby the fear of being identified could drive

participants to do so. This was not a high stake “testing context” whereby faking is likely to occur for obvious reasons.

We acknowledged that self-report data is not free from common method variance but as shown in Chan (2009), its existence is only a possibility and not a necessity. Since the reliability of the measures for each construct varies, correlations among self-report measures are not always inflated, a common and unfair criticism levelled on self-report measures. Consequently, the impact of common method variance is not so clear cut given the existence of counteracting effects. Convergent and discriminant validity were assessed to check that the data analysed were robust.

Participants and Procedure

An anonymous online survey was distributed by Qualtrics to a general working population panel in the United States. Participants received incentives for successfully completing the online survey. Conforming to ethical standards stipulated by the Institutional Review Board, informed consent were obtained from participants prior to proceeding with the survey. A strict screening criteria was imposed to ensure that only participants who were currently working in the United States with a minimum of 12 months of working experience, currently working as a full-time employee, and at least 18 years old were allowed to participate. In addition, participants must currently have a supervisor (or boss) whom they report directly to at work. Beyond the screening criteria, quality checks were also in place to filter out responses that were not up to mark. The first quality check involves ensuring that participants do not engage in speed responding. Participants who took less than 10 minutes to complete the survey were excluded from the study since pilot test conducted indicated that to complete the survey thoughtfully, the average response time was approximately 15 minutes. The second quality check was to include validation questions (three in total) in

various section of the survey. These questions dictate to respondents to respond accordingly such as “please select ‘agree’ for this question” and those who did not do so were excluded from the study since they were not paying attention. These validation questions also ensured that participants who engaged in random responding were filtered out of the study. The final quality check was to ensure that participants completed the survey only once. Data analysis confirmed this to be the case as no IP addresses were similar (two identical IP address will provide a strong indication that the same person is doing the survey twice).

A total of 373 participants (52% male, 48% female) were surveyed and this adequately met the minimal sample size of at least 30 or 40 participants for each predictor as recommended by Cohen (2013) to ensure that normality assumptions were not violated for hierarchical regression procedures. Participants in this study were sampled from a variety of sectors including construction, manufacturing, public utilities, retail, personnel services, entertainment or recreational services, finance, education, healthcare, public administration and professional services ($M = 39.02$ years of age, $SD = 12.33$; $M = 7.98$ years of organisational tenure; $SD = 7.62$) and majority of them were in intermediate positions (47.70%) followed by middle management (27.10%) and then entry-level (15.30%) positions.

Measures

Online survey participation rate is generally noted to be low (Tourangeau, Rips, & Rasinski, 2000) and the cost for conducting the survey also increases significantly with greater survey length. In lieu of the need to attract participants to take the online survey and overall cost considerations, survey questions must be designed to facilitate easy comprehension and item numbers per construct kept to the minimal whenever possible. These practical constraints imposed on the researcher meant that many lengthy scales used in prior research had to be adapted in this study. With the exception of the measures assessing

PA, NA and supportive supervision, all other measures were adapted or developed for this study. Unless otherwise indicated, respondents indicated on a 5-point Likert scale whether each statement described their experiences at the workplace with anchors ranging from 1 (*strongly disagree*) to 5 (*strongly agree*).

Self-determination needs satisfaction. SDNS was measured using an adapted 9-item basic need satisfaction at work scale developed by Deci and Ryan (2000; 2001). Each of the individual needs satisfaction (i.e., autonomy, competence and relatedness) were measured with a 3-item measure (9 in total). Sample items included “I have a lot of opportunity to set my own goals to achieve my work objectives” and “I get along with people at work”. The list of items is shown in Appendix A.

Positive and Negative Affect. The Positive and Negative Affect Schedule (PANAS) developed by Watson et al. (1988) was used to measure individual affect. The PANAS is a 20-item scale with 10 items measuring positive affect and the other 10 items measuring negative affect. For each item, respondent indicated how he/she felt at work during the past few weeks on a 5-point scale with anchors ranging from 1 (*very slightly or not at all*) to 5 (*extremely*). Sample items for positive affect included *enthusiastic*, *interested* and *excited* whilst sample items for negative affect included *irritable*, *ashamed* and *jittery*. The list of items is shown in Appendix A.

Supportive supervisor. Following Eisenberger, Stinglhamber, Vandenberghe, Sucharski, and Rhoades (2002), supportive supervision was assessed using a 3-item measure adapted from the Survey of Perceived Organisational Support (Eisenberger, Huntington, Hutchison, & Sowa, 1986). Items were adapted by replacing the word *organisation* with the term *supervisor* (Items 10, 27 and 35). Sample items included “My supervisor tries to make

my work as interesting as possible” and “My supervisor is willing to help me perform my work to the best of my ability”. The list of items is shown in Appendix A.

Abusive supervisor. Abusive supervision was measured using an adapted 3-item measure developed by (Tepper, 2000). Sample items included “My supervisor ridicules me” and “My supervisor is rude to me”. The list of items is shown in Appendix A.

Supportive colleagues. The support provided by colleagues at work is similar to the experience of interpersonal organisational citizenship behaviours shown by colleagues (Lee & Allen, 2002). On this basis, a 3-item measure reflecting colleagues support was adapted from the organisational citizenship behaviour-interpersonal scale by Lee and Allen (2002). Sample items included “My colleagues willingly give time to help me on work-related problems” and “My colleagues assist me with my duties”. The list of items is shown in Appendix A.

Abusive colleagues. Abusive behaviours by colleagues can be said to be similar to those portrayed in the interpersonal deviance scale by (Bennett & Robinson, 2000). On this basis, a 3-item measure on abusive colleague was derived. Sample items included “My colleagues say hurtful things to me at work” and “My colleagues publicly embarrassed me at work”. The list of items is shown in Appendix A.

Positive working conditions. In the earlier section, theoretical justifications were given the three dimensions that constitute positive working conditions. As noted earlier, the dimensions classified for this study were learning opportunities, skill-knowledge utilisation and career advancement opportunities. Sample items included “My work allows me to learn new things important for my development” and “My work allows me to utilize my knowledge and skills to a large extent”. The list of items is shown in Appendix A.

Negative working conditions. As noted earlier, theoretical justifications were given for the three dimensions that constitute negative working conditions that is unique to this study. The three dimensions are red tape, conflicting requests and organisational politics. Sample items included “My work has a lot of conflicting requests I have to deal with” and “My work has a lot of organizational politics to navigate through in order for me to get things done”. The list of items is shown in Appendix A.

Individual differences in self-determination needs. SDT scholars have argued that the primary predictor of outcomes depends on the degree through which needs are satisfied on the job rather than the strength of the needs (Deci & Ryan, 2014). This does not mean need strength is unimportant and therefore need not be considered in studies. Rather, the focus on conditions that cause need satisfaction versus need thwarting is more critical in cutting variance in outcomes than is need strength. In this study, an auxiliary analysis was conducted to examine the potential impact of individual differences on the moderating relationships by testing if controlling for individual differences in self-determination needs could change the nature of the interactions. The items mirrored that of SDNS insofar as respondents were asked whether each of the 9 items were important to them or not. Sample items included “It is important to me that I have a lot of opportunity to set my own goals to achieve my work objectives” and “It is important to me that I get along with people at work”. The list of items is shown in Appendix A.

Respondent characteristics. Demographic and background variables including sex, age, nationality, work position, tenure and industrial sector were collected to examine these respondent characteristics as potential covariates to the focal variables in the study.

CHAPTER 3: RESULTS

The first set of analysis conducted involved zero-order bivariate correlations, which tested H_1 and H_2 . Table 1 presents the means, standard deviation, estimates of internal consistency reliability and bivariate correlations among the study variables. Although SDNS has been treated as a unidimensional construct in the literature, there are good reasons to view it as multidimensional. It can be argued that the SDNS dimensions are related but distinct in nature. As will be shown in the subsequent paragraph, the correlations between the dimensions found in this study were in fact not strong, giving support in favour of the multidimensional perspective. Similarly, inter-item correlations indicated that work positivities and work negativities can be viewed as multidimensional in nature. In lieu of the need to consider analysis at the multidimensional level, this study examined both the composite measure and the subscales that form the measure for both the predictor and moderator. For the predictor variable, the composite measure was SDNS and its subscales: Autonomy (Aut), Competence (Com) and Relatedness (Rel). For the positively valence moderator variable, the composite measure was work positivity (WP) and its subscales: supportive supervisor (WPsup), supportive colleagues (WPcol) and positive working conditions (WPwcn) whereas for the negatively valence moderator variable, the composite measure was work negativity (WN) and its subscales: abusive supervisor (WNsup), abusive colleagues (WNcol) and negative working conditions (WNwcn). For our auxiliary analysis involving the composite measure of individual differences in self-determination needs (SDNT), its subscales were also analysed. There were: trait autonomy (AutT), trait competence (ComT) and trait relatedness (RelT). Overall, the measures used in this study showed high internal consistency reliabilities (.83 to .94) with three measures (WP, WN, RelT) having moderate values (.69 to .78).

Mentioned in the previous paragraph, the inter-item correlations within the respective composite measures SDNS, WP and WN are not all consistently strong even after correcting for attenuation (for Aut and Com, $r_{cor} = .79$, $r_{obs} = .62$, $p < .01$; for Aut and Rel, $r_{cor} = .50$, $r_{obs} = .42$, $p < .01$; for Com and Rel, $r_{cor} = .51$, $r_{obs} = .40$, $p < .01$; for WPsup and WPcol, $r_{cor} = .53$, $r_{obs} = .44$, $p < .01$; for WPsup and WPwcn, $r_{cor} = .76$, $r_{obs} = .65$, $p < .01$; for WPcol and WPwcn, $r_{cor} = .56$, $r_{obs} = .47$, $p < .01$; for WNsup and WNcol, $r_{cor} = .62$, $r_{obs} = .56$, $p < .01$; for WNsup and WNwcn, $r_{cor} = .48$, $r_{obs} = .43$, $p < .01$; for WNcol and WNwcn, $r_{cor} = .39$, $r_{obs} = .35$, $p < .01$). This provided the justification to include using the subscales to test the hypotheses of this study.

Examining the bivariate correlations involving SDNS (composite and its components) and affective well-being (PA and NA) in Table 1, the results indicated that there was a positive relationship between SDNS and PA ($r_{cor} = .74$; $r_{obs} = .66$, $p < .01$). There was also a negative relationship between SDNS and NA ($r_{cor} = -.45$; $r_{obs} = -.39$, $p < .01$). This was the case for all the relevant subscales for SDNS and PA (for Aut and PA, $r_{cor} = .59$; $r_{obs} = .52$, $p < .01$; for Com and PA, $r_{cor} = .78$; $r_{obs} = .65$, $p < .01$; for Rel and PA, $r_{cor} = .51$; $r_{obs} = .45$, $p < .01$), and all the relevant subscales for SDNS and NA (for Aut and NA, $r_{cor} = -.37$; $r_{obs} = -.32$, $p < .01$; for Com and NA, $r_{cor} = -.39$; $r_{obs} = -.32$, $p < .01$; for Rel and NA, $r_{cor} = -.35$; $r_{obs} = -.30$, $p < .01$). H_{1a} and H_{1b} were therefore supported.

Separately examining the relationship between WP and WN with PA, there was a positive relationship between WP and PA ($r_{cor} = .72$; $r_{obs} = .61$, $p < .01$). The positive relationship was also noted for all the subscales (for WPsup and PA, $r_{cor} = .53$; $r_{obs} = .48$, $p < .01$; for WPcol and PA, $r_{cor} = .43$; $r_{obs} = .38$, $p < .01$; for WPwcn and PA, $r_{cor} = .73$; $r_{obs} = .64$, $p < .01$). Pertaining to WN, there was a negative relationship between WN and PA ($r_{cor} = -.38$; $r_{obs} = -.31$, $p < .01$). The negative relationship was also noted for all the subscales (for WNsup and PA, $r_{cor} = -.23$; $r_{obs} = -.21$, $p < .01$; for WNcol and PA, $r_{cor} = -.17$; $r_{obs} = -.16$, $p < .01$).

.01; for WNwcn and PA, $r_{cor} = -.36$; $r_{obs} = -.33$, $p < .01$). H_{2a} and H_{2b} were therefore supported.

When NA was examined with the same WP and WN measures, the relationship was converse as expected and there was a negative relationship between WP and NA ($r_{cor} = -.42$; $r_{obs} = -.35$, $p < .01$). The negative relationship was also noted for all the subscales (for WPsup and NA, $r_{cor} = -.32$; $r_{obs} = -.29$, $p < .01$; for WPcol and NA, $r_{cor} = -.31$; $r_{obs} = -.27$, $p < .01$; for WPwcn and NA, $r_{cor} = -.36$; $r_{obs} = -.31$, $p < .01$). Pertaining to WN, there was a positive relationship between WN and NA ($r_{cor} = .65$; $r_{obs} = .51$, $p < .01$). The positive relationship was also noted for all the subscales (for WNsupt and NA, $r_{cor} = .45$; $r_{obs} = .41$, $p < .01$; for WNcol and NA, $r_{cor} = .49$; $r_{obs} = .45$, $p < .01$; for WNwcn and NA, $r_{cor} = .42$; $r_{obs} = .38$, $p < .01$). H_{2c} and H_{2d} were therefore supported.

Several other patterns of results in the bivariate relationships were noteworthy. Importantly, even after the observed correlations were corrected for attenuation due to unreliability of measurement, the inter-construct relationship between SDNS and SDNT is moderate ($r_{cor} = .65$; $r_{obs} = .54$, $p < .01$). The correlations amongst the matching subscales were also weak to moderate (for Aut and AutT, $r_{cor} = .39$, $r_{obs} = .32$, $p < .01$; for Com and ComT, $r_{cor} = .53$, $r_{obs} = .40$, $p < .01$; for Rel and RelT, $r_{cor} = .74$, $r_{obs} = .61$, $p < .01$). This indicated that individual differences in self-determination needs was distinctive from perceptions of self-determination needs satisfaction at the workplace. In other words, those who reported high (or low) in SDNS were distinctive from those who reported high (or low) in SDNT. Examining the bivariate relationships between age, tenure and position, a conclusion could be drawn that there was a logical coherence between the various variables. Those with higher tenure should be older ($r_{obs} = .58$, $p < .01$) and those with higher position should have higher tenure ($r_{obs} = .20$, $p < .01$). These findings together with those for H₁ and H₂ indicated that there was convergent validity. Also, it was expected that there would be

significant relationships between position and various SDNS measures (i.e., those who are higher in position should experience greater autonomy needs satisfaction) but not the case for tenure since it was not a necessity that having worked longer in the firm meant one would have greater autonomy because one could be a mid-level staff who is under many layers of supervision (for tenure and Aut, $r_{obs} = .01, p > .05$; for position and Aut, $r_{obs} = .29, p < .01$). This finding indicated that there was discriminant validity in the dataset.

Hierarchical regression analyses were conducted to test the hypothesised moderator effects of work environments (WP and WN) on the relationship between SDNS and PA or NA (H_{3a} to H_{3d}). Since the subscales of each predictor and moderator were also investigated, there were a total of 16 interactions analysed for each of the four hypotheses. To recap, the subscales of SDNS were Aut, Com, and Rel. The subscales of WP were WPsup, WPcol and WPwcn. The subscales of WN were WNsup, WNcol and WNwcn. For ease of presentation, the findings were summarized in four tables. In each table, the results of the 16 interactions associated with the moderator hypotheses were presented.

Table 2 summarized the results of the tests for all the hypothesised WP x SDNS interactions for PA (H_{3a}). Of the 16 interactions tested, 4 interactions were found to be significant. However the plot of the interaction and simple slopes analysis indicated that the observed nature for these interactions was not as hypothesised. Therefore, H_{3a} was not supported. The significant interactions specifically involved the predictor Aut and the moderator WP ($\Delta R^2 = .01, p < .01$). The interactions of Aut with the individual subscales (i.e., WPsup, WPcol and WPwcn) were also significant ($\Delta R^2 = .02$ for Aut x WPsup, $p < .01$; $\Delta R^2 = .01$ for Aut x WPcol, $p < .05$; $\Delta R^2 = .02$ for Aut x WPwcn, $p < .01$). Simple slopes analysis (Refer to figure 8-11) showed a consistent pattern whereby the positive association between Aut and PA was stronger among those with high work positivities than among those with low work positivities (for Aut x WP, $b = .32$ for high WP, $p < .01$ and $b = .15$ for low

WP, $p < .01$; for Aut x WPsup, $b = .55$ for high WPsup, $p < .01$ and $b = .28$ for low WPsup, $p < .01$; for Aut x WPCol, $b = .51$ for high WPCol, $p < .01$ and $b = .36$ for low WPCol, $p < .01$; for Aut x WPwcn, $b = .30$ for high WPwcn, $p < .01$ and $b = .08$ for low WPwcn, $p = .12$).

This was contrary to H_{3a} which hypothesised that the positive association between NS and PA will be weaker among those with high work positivities than among those with low work positivities.

Table 3 summarized the results for the tests of the hypothesised WN x SDNS interactions for PA (H_{3b}). Of the 16 interactions, 7 interactions were found to be significant. The significant interactions involved SDNS x WN ($\Delta R^2 = .01$, $p < .05$), SDNS x WNwcn ($\Delta R^2 = .01$, $p < .05$), Aut x WN ($\Delta R^2 = .01$, $p < .01$), Rel x WN ($\Delta R^2 = .01$, $p < .05$), Aut x WNsup ($\Delta R^2 = .02$, $p < .01$), Aut x WNwcn ($\Delta R^2 = .01$, $p < .05$) and Rel x WNwcn ($\Delta R^2 = .02$, $p < .01$). The interaction terms therefore accounted for a small but significant increase in proportion of variance accounted for, with incremental proportion variance ranging from 1% to 2% depending on the moderator in question. Simple slopes analysis revealed that 4 of the interactions (Aut x WN, Rel x WNwcn, Rel x WN and Aut x WNwcn) were as hypothesised and significant (Aut x WN: $b = .38$ for high WN, $p < .01$ and $b = .59$ for low WN, $p < .01$; Rel x WNwcn: $b = .29$ for high WNwcn, $p < .01$ and $b = .61$ for low WNwcn, $p < .01$; Rel x WN: $b = .34$ for high WN, $p < .01$ and $b = .54$ for low WN, $p < .01$; Aut x WNwcn: $b = .38$ for high WNwcn, $p < .01$ and $b = .55$ for low WNwcn, $p < .01$). The other 3 interactions (SDNS x WN, SDNS x WNwcn, Aut x WNsup) were also significant in the hypothesised direction (SDNS x WN: $b = .81$ for high WN, $p < .01$ and $b = 1.01$ for low WN, $p < .01$; SDNS x WNwcn: $b = .73$ for high WNwcn, $p < .01$ and $b = .97$ for low WNwcn, $p < .01$; Aut x WNsup: $b = .59$ for high WNsup, $p < .01$ and $b = .68$ for low WNsup, $p < .01$) although they showed cross-over patterns. Examining the effect sizes of the difference in PA where the cross-over occurred, the difference for SDNS x WNwcn (Cohen's $d = .09$) and the

difference for Aut x WNwcn (Cohen's $d = .13$) is small. As a result, an argument could therefore be made that these two interactions were on the whole in line with H_{3b}. However, the effect sizes for the difference in PA at both ends of the slope were small for SDNS x WN (Cohen's $d = .16$ and Cohen's $d = .16$). To be conservative, we treated this as not supporting the hypothesis. Overall, the simple slopes analyses therefore showed that 6 of the 16 interactions were supported (refer to figures 12-17 for these 6 interactions). Therefore, hypothesis H_{3b} was partially supported. In some instances, work negativities (either the composite measure or subscales) moderated the relationship between SDNS (either the composite measure or subscales) and PA.

The third set of analyses looked at WP x SDNS interactions for PA (i.e., H_{3c}). Findings were summarised in Table 4. None of the 16 interactions were found to be significant. Therefore hypothesis H_{3c} was not supported. WP (either the composite measure or subscale) did not moderate the relationship between SDNS (either composite measure or subscale) and PA.

Finally, the fourth set of analyses investigated WN x SDNS interactions for NA (H_{3d}). Findings were summarised in Table 5. Of the 16 interactions, 5 interactions were found to be significant. The significant interactions involved SDNS x WNcol ($\Delta R^2 = .01, p < .05$), Rel x WN ($\Delta R^2 = .01, p < .05$), Aut x WNcol ($\Delta R^2 = .01, p < .05$), Rel x WNsup ($\Delta R^2 = .02, p < .01$) and Rel x WNrel ($\Delta R^2 = .01, p < .05$). The interaction terms therefore accounted for a small but significant increase in proportion of variance accounted for, with incremental proportion variance ranging from 1 to 2 % depending on the moderator in question.

Simple slopes analysis (refer to figures 18-22) revealed that all of the interactions were as hypothesised and significant (SDNS x WNcol: $b = -.21$ for high WNcol, $p < .01$ and $b = -.25$ for low WNcol, $p < .01$; Rel x WN: $b = -.03$ for high WN, $p = .49$ and $b = -.18$ for

low WNcol, $p < .01$; Aut x WNcol: $b = -.11$ for high WNcol, $p < .05$, and $b = -.24$ for low WNcol, $p < .01$; Rel x WNsup: $b = .04$ for high WNsup, $p = .62$ and $b = -.21$ for low WNsup, $p < .01$; Rel x WNcol: $b = -.09$ for high WNcol, $p = .08$ and $b = -.22$ for low WNcol, $p < .01$). It should be pointed out that the interaction Rel x WNsup showed that NA increases with increasing Rel for those high in WNsup but this effect was found not to be significant ($p = .62$) and therefore does not put the hypothesised relationship into doubt (refer to figure 20). Another observation is that the interaction Rel x WNcol showed that NA decreases with increasing Rel for those high in WNcol and this is in line with the hypothesised effect (refer to figure 21) although this effect was not found to be significant ($p = .08$). Overall, hypothesis H_{3d} was partially supported. In some instances, work negativities (either the composite measure or subscales) moderated the relationship between SDNS (either the composite measure or subscales) and NA.

In this study, H_{4a} and H_{4b}, which are hypotheses comparing the magnitude of interactions effects hypothesized in H_{3a} and H_{3b} and in H_{3c} and H_{3d}, respectively, are meaningful only if the hypothesized interactions were first found to be significant. In other words, H_{4a} can be tested only if H_{3a} and H_{3b} were both supported, and similarly H_{4b} can be tested only if H_{3c} and H_{3d} were both supported. Given that these corresponding interactions were not found to be significant across both sets of hypotheses, it was not meaningful to proceed to test H_{4a} and H_{4b}.

Finally, as an auxiliary analysis, we examined the potential impact of individual differences by testing if controlling for SDNT could greatly reduce or remove the significant interactions obtained. If this occurred, it would indicate that individual differences may matter as much if not more than actual workplace experiences that influence SDNS. In this auxiliary analysis, we re-ran all the hierarchical regressions by entering SDNT in step 1 of the model to control for the individual difference in trait influences (i.e., the main effects

variables were entered in step 2 and the interaction term was entered in step 3). After controlling for SDNT, results showed that 8 of the 11 significant interactions as hypothesised remained (Aut x Wnsup, Rel x WNwcn, Aut x WN, Rel x WN, SDNS x WNcol, Rel x WNsups, Rel x WNcol, Rel x WN). As AutT was not significant, the 9th interaction Aut x WNcol was not considered. The change in *R* squared in the auxiliary analysis were not higher and in fact mirrored those when SDNT were not controlled for with the incremental proportion variance ranging from 1% to 2% depending on the moderator in question ($p < .05$). Hence with only 2 of 10 interactions removed after controlling for SDNT, SDNT did not greatly reduce the significant interactions.

CHAPTER 4: DISCUSSION

In this study, the pattern of results from the zero-order bivariate correlations provided support for self-determination theory's proposition that self-determination needs satisfaction predicts well-being. Specifically, this study showed that employees whose workplace is able to satisfy self-determination needs tend to experience higher positive affect (i.e., high PA) and lower negative affect (i.e., low NA) at work. The present findings add to the extant research on self-determination theory through examining self-determination needs satisfaction and affective well-being in the work domain. The results from the bivariate correlations in this study also showed that positivities and negativities in the work environment are strongly associated with positive and negative affective well-being, respectively. This pattern of results is consistent with the common assumption or accounts that the valence (i.e., positive versus negative) of the contextual factors at work tends to predict the corresponding valence (i.e., positive versus negative) of well-being (e.g., Bono et al., 2013).

This study further contributes to the literature by examining moderators of the self-determination and affective well-being bivariate relationships. These moderators are common work environment factors that can be subjected to managerial interventions and because valence is examined, this study went beyond merely identifying what these work factors are by showing how these work factors can influence self-determination needs satisfaction and affective wellbeing when these work factors are positively or negatively valence. The work positivities examined in this study were supportive supervisor, supportive colleagues and positive working conditions. The corresponding work negativities were abusive supervisor, abusive colleagues and negative working conditions.

Overall, this study found that in some instances, work negativities moderated the relationship between self-determination needs satisfaction and both positive affect and negative affect. Examining both composite measures and subscales, the moderating roles of work positivities were however not supported. Pertaining to the moderating effects of work negativities on the relationship between self-determination needs satisfaction and positive affect, the following significant interactions were found: (a) Self-determination needs satisfaction x Negative working conditions, (b) Autonomy x Abusive supervision, (c) Autonomy x Negative working conditions, (d) Relatedness x Negative working conditions, (e) Autonomy x Work Negativities and (f) Relatedness x Work Negativities. Importantly, the strength of the positive relationship between self-determination needs satisfaction and positive affective well-being at work was dependent on the level of work negativities. The positive association between self-determination needs satisfaction and positive affect were found to be weaker among those with high work negativities than among those with low work negativities. Viewed in another way, in instances of high work negativities, the positive relationship between self-determination needs satisfaction and positive affect is much lower compared to instance of low work negativities. Hence this finding provides an indication that in some contexts, the beneficial effects of have self-determination needs satisfied at work on affective well-being (i.e., role of SDNS in promoting PA) is attenuated in work environments characterised by high work negativities. When self-determination needs satisfaction is treated at the composite level, the context is negative working conditions. When self-determination needs satisfaction is treated at the subscales level, the more salient contexts include negative working conditions and work negativities in general.

With regards to the moderating effects of work negativities on the relationship between self-determination needs satisfaction and negative affect, the following significant interactions were found: (a) Self-determination needs satisfaction x Abusive colleagues, (b)

Autonomy x Abusive colleagues, (c) Relatedness x Abusive supervisors, (d) Relatedness x Abusive colleagues, and (e) Relatedness x Work negativities. Importantly, the strength of the negative relationship between self-determination needs satisfaction and negative affective well-being at work was dependent on the level of work negativities. The negative association between SDNS and NA were found to be weaker among those with high work negativities than among those with low work negativities. Viewed in another way, in instances of high work negativities, the negative relationship between self-determination needs satisfaction and negative affect is much lower compared to instance of low work negativities. Hence this finding provides another indication that in some contexts, the beneficial effects of have self-determination needs satisfied at work on affective well-being (i.e., role of SDNS in reducing NA) is attenuated in work environments characterised by high work negativities. When self-determination needs satisfaction is treated at the composite level, the context is abusive colleagues. When self-determination needs satisfaction is treated at the subscales level, the more salient contexts include abusive colleagues and work negativities in general.

In this study, justifications were made to test the hypotheses at both the composite and subscales level. After correcting for attenuation, the dimensions underlying self-determination needs satisfactions and work environment factors were not all strong and majority of the dimensions were only moderately correlated (before correction, none of the observed dimensions were strong). With regard to interaction effects, findings showed that when self-determination needs satisfaction and work environment factors were analysed at the subscales level, many significant interactions were detected. If the data analysis approach had ignored multi-dimensionality issues, many of the interactions found would have been missed out. Consequently, this study suggests it is important for future research to treat self-determination needs satisfaction and work environment factors as multi-dimensional rather than strictly uni-dimensional constructs.

Whilst self-determination theory scholars have argued that the primary predictor of outcomes depends on the degree through which needs are satisfied on the job rather than the strength of the needs (Deci & Ryan, 2014), there has not been empirical support for this argument as far as the author is aware of. The auxiliary analysis conducted may be the first to provide the indication needed to support this argument. This study revealed that the majority of the significant interaction effects held even after controlling for individual differences in self-determination needs satisfaction. In support of claims by proponents of SDT, actual workplace experiences of self-determination needs satisfaction therefore mattered more than individual differences in self-determination needs.

Overall, this study therefore demonstrated that despite the purported beneficial role of self-determination needs satisfaction on affective well-being at the workplace, there are boundary conditions of this effect and this study identified important work environment factors as some of these boundary conditions. As discussed, two work factors that particular stood out were negative working conditions and abusive colleagues.

Some findings from this study were unexpected and possible explanations will be briefly discussed. Firstly, work positivities did not play a moderating role on the relationship between self-determination needs satisfaction and affective experiences. Perhaps there is more consensus on what constitute work negativities compared to work positivities. For instance, abusive behaviours of supervisors are clear-cut and categorically unpleasant to the receiver. Conversely, supportive behaviours of supervisors may not be perceived as something always positive or desirable. For instance, supportive supervision may mean little to someone with intentions of leaving the organisation or to someone who is disengaged from working in general. To give another separate example, there is no ambiguity with regards to abusive behaviours from colleagues but the same cannot be said with regards to supportive behaviours. Some employees may be very task oriented and view supportive colleagues as

interfering with one's work preferences. Another possible explanation is that because the sample of this study was heterogeneous in nature with participants coming from a variety of job sectors, what constitute work positivities can well be different. For instance it is possible that a supervisor trying to make one's job as interesting as possible is not viewed as critical for a fast-paced sales job compared to another's whose job task is monotonous and repetitive.

The second unexpected finding was that none of the work environment factors moderated the relationship between competence need satisfaction and affective well-being. A plausible explanation for this observation is that the relationship between competence need satisfaction and affective well-being experiences is something dependent on the work task at hand and/or on one's sense of self-efficacy. Work environment factors are external factors which may play an insignificant role in affecting the strength of the bivariate relationship.

Finally the findings from H_{3a} were also unexpected. The positive association between autonomy need satisfaction and positive affect were found to be stronger among those with high work positivities than among those with low work positivities (finding applicable for all subscales). This was contrary to the prediction that the positive association between autonomy need satisfaction and positive affect will be weaker among those with high work positivities than among those with low work positivities. A possible explanation for these findings is that these work positivities are *hygiene* factors at the workplace and in their absence (i.e., low work positivities), the positive relationships between autonomy need satisfaction and PA are severely weakened and this explains the flatter slope for low work positivities. Future replication studies may help to clarify these peculiarities found in this study.

Researching on conditions that support or thwart SDNS at the workplace has been advocated by SDT scholars and this research using a heterogeneous work sample in the

United States, contributed to expanding knowledge in this field by examining work environments with the potential to support or thwart the effects of SDNS on the affective well-being indicators PA and NA. Two key managerial implications can be highlighted from the study. First, negative working conditions consisting of red tape, conflicting requests and organisational politics can thwart the beneficial effects of self-determination needs satisfaction on positive affect. Even when employees derived self-determination needs satisfaction from work, well-being cannot be assumed to occur without considering the extent of negative working conditions at the workplace. Managers in an attempt to create workplace conditions promoting self-determination needs satisfaction must not ignore addressing the workplace negativities of red tape, conflicting work requests and organisational politics between individuals and work units. Team managers should also be on the lookout for potential abusive behaviours amongst colleagues or teammates since this study found that work environments with high abusive colleagues reduced the capacity of the role of self-determination needs fulfilment in buffering experiences of negative workplace affect. Finally, an important takeaway for management is that addressing workplace negativities is important for the well-being of employees beyond attempts at only promoting positive ones.

Limitations and Future Research Directions

Several limitations to this study and future research directions are noteworthy. In this study, participants were asked to make an assessment and report their positive and negative affective experiences over the past 12 months at work. Nevertheless, it is possible that their judgements were affected by more recent affective encounters at their workplace. Future research could compare the effects of recent affective experiences with the effects of averaged or other overall measures of affective experiences in the period of experiences under study.

At least some aspects of well-being can be assessed using non-self report measures such as reports of workplace expressions and behaviours as observed by colleagues, supervisors or significant others. Findings from these other-report measures may supplement self-reports to provide a more holistic assessment of effects on the well-being construct.

In this study, abusive behaviours by supervisors and colleagues were construed in terms of negative expressions in interpersonal interaction situations such as being rude. Future research can examine more severe abusive behaviours such as physical harassment or more subtle abusive behaviours such as manipulative behaviours and unfairly assigning blame or taking credit. Future research can also examine the effects of other negative working conditions not included in this study such as unsafe work practices, uncondusive physical environment (e.g., poor lighting, poor ventilations) and inefficient working tools (e.g., hardware and software issues not suited for the task).

This study included measures of trait individual differences in self-determination needs to examine their potent impact on the interaction effects of self-determination needs satisfaction and working conditions. Although the trait individual difference measures in this study did not show substantive effects, future research should examine the potential effects of other individual difference variables such as thinking styles, vocational interests and trait affectivity. For instance those high in trait negative affectivity may experience weaker positive effects from supportive colleagues or supervisors.

The benefit of using a heterogeneous employee sample in this study is that the findings are unlikely to be occupation-specific or industry-specific and therefore more likely to be generalizable across different occupations and industries. However, the limitation of sample size by occupation and industry in this study precluded the assessment of contextual effects due to specific occupational or industry groups. Future research can examine these

potential contextual effects by replicating the study across different occupational and industry samples. For example, the negative effect of abusive supervisors may be weaker in occupational samples where there are strong norms of obedience to authority.

The use of self-report measures is often criticised for issues related to construct validity, common method variance and social desirability responding. However, many of the problems associated with the use of self-report data are often exaggerated and the use of self-report measures is in fact preferable to non self-report measures under certain situations (Chan, 2009). The use of self-report for this study is justified given the nature of the perceptual and experiential constructs examined. Specifically, the subjective perceptions of and reactions to work positivities and work negativities should matter more to the well-being of individuals than the objective quality of these work environment variables. Nevertheless, strong practical recommendations for organisational or employee interventions should not be made from the findings in this study given that the veracity of work positivities and work negativities were not independently and objectively established. If the interest is in the effects of objective environment variables at the workplace, objective measures are more suited and the findings from this study are less applicable. Hence, from a practical perspective, this study has limitations although it provided potentially useful findings on subjective perceptions that can be further examined and related to objective work conditions in future research. From a theoretical perspective, this study provided some incremental contribution to the literature on self-determination theory as a first step to examine the boundary conditions of the positive effects postulated by the theory.

SELF-DETERMINATION NEEDS SATISFACTION AND WELL-BEING

Table 1. Internal Consistency Reliabilities, Means, Standard Deviations, and Inter-Correlations of Study Variables (N = 373)

	M	SD	PA	NA	SDNS	Aut	Com	Rel	SDNT	AutT	ComT	RelT	WP	WP sup	WP col	WP wcn	WN	WN sup	WN col	WN wcn	Age	Tenure	Position	Sex	
PA	3.63	.85	{.94}																						
NA	1.66	.69	-.23**	{.91}																					
SDNS	4.00	.65	.66**	-.39**	{.84}																				
- Aut	3.86	.90	.74	-.45	.52**	-.32**	.86***^	{.84}																	
- Com	3.98	.79	.59	-.37	.65**	-.32**	.82***^	.62**	{.74}																
- Rel	4.14	.73	.78	-.39	.45**	-.30**	.74***^	.42**	.40**	{.82}															
SDNT	4.08	.52	.51	-.35	.44**	-.14**	.54**	.39**	.45**	.49**	{.84}														
- AutT	4.11	.62	.49	-.16	.30**	-.04	.35**	.32**	.30**	.22**	.78***^	{.82}													
- ComT	4.31	.58	.34	-.05	.36**	-.08	.38**	.28**	.40**	.25**	.79***^	.60**	{.78}												
- RelT	3.81	.82	.41	-.19**	.42	-.10	.47	.34	.53	.31	.78***^	.32**	.36**	{.83}											
WP	3.76	.75	.41	-.22	.61**	-.35**	.81**	.69**	.64**	.64**	.51**	.31**	.33**	.50**	{.77}										
- WPsup	3.69	.95	.72	-.42	.48**	-.29**	.69**	.62**	.50**	.53**	.42**	.24**	.28**	.42**	.86***^	{.86}									
- WPcol	3.88	.79	.53	-.32	.38**	-.27**	.54**	.35**	.36**	.60**	.44**	.23**	.23**	.51**	.74***^	.44**	{.83}								
- WPwcn	3.71	.97	.43	-.31	.64**	-.31**	.77**	.69**	.70**	.46**	.40**	.29**	.30**	.35**	.87***^	.65**	.47**	{.83}							
WN	1.94	.80	.73	-.36	-.31**	.51**	-.52**	-.47**	-.35**	-.42**	-.16**	-.03	-.07	-.24**	-.51**	-.50**	-.34**	-.41**	{.69}						
- WNsups	1.72	1.01	-.38	.65	-.21**	.41**	-.46**	-.46**	-.29**	-.34**	-.16**	-.04	-.09	-.21**	-.46**	-.55**	-.23**	-.34**	.82***^	{.91}					
- WNcols	1.50	.80	-.23	.45	-.16**	.45**	-.34**	-.26**	-.18**	-.36**	-.15**	-.07	-.04	-.21**	-.33**	-.26**	-.37**	-.21**	.74***^	.56**	{.90}				
- WNwcn	2.61	1.22	-.17	.49	-.33**	.38**	-.43**	-.37**	-.34**	-.31**	-.09**	.03	-.05	-.17**	-.42**	-.37**	-.25**	-.40**	.80***^	.43**	.35**	{.90}			
Age	39.02	12.33	-.36	.42	-.08	-.16**	-.02	-.05	.02	-.02	-.03	-.06	-.03	.01	-.09	-.11*	.02	-.12*	.03	-.01	-.03	.08	-	-	
Tenure	7.98	7.62	-.43**	.42	-.03	-.13*	.05	.01	.06	.06	-.01	-.06	-.04	.05	-.04	.01	-.05	-.05	-.01	-.04	-.03	.58**	-	-	
Position	2.34	0.91	-.33**	.38**	.22**	-.08	.29**	.29**	.21**	.20**	.18**	.19**	.09	.14**	.22**	.18**	.20**	.18**	-.05	-.03	-.08	.13*	.20**	-	
Sex	-	-	-.43**	.42	.02	.01	-.01	-.03	-.01	.03	.03	.03	.02	.02	-.06	-.03	.04	-.06	-.02	-.04	-.05	-.05	-.23**	-.20**	-.06

Note. Values in { } represent internal consistency reliabilities (Cronbach's alphas) obtained in the study. Values in () represent corrected correlations.

** p < .01, * p < .05

^ indicates that corrected correlations not included because it correlates highly with its composite measure.

SELF-DETERMINATION NEEDS SATISFACTION AND WELL-BEING

Table 2

Summary of Hierarchical Regression Analyses for H_{3a} (N = 373)

		Outcome variable = PA						
		Predictor	β	R	R ²	df	ΔR^2	Δdf
SDNS, WP	Step1:	SDNS	.63	.67	.45	2		
		WP	.26					
	Step 2:	SDNS x WP	.08	.68	.46	3	.01	1
SDNS, WPsup	Step1:	SDNS	.82	.66	.44	2		
		WPsup	.04					
	Step 2:	SDNS x WPsup	.06	.66	.44	3	0	1
SDNS, WPcol	Step1:	SDNS	.84	.66	.44	2		
		WPcol	.04					
	Step 2:	SDNS x WPcol	.09	.67	.44	3	.01	1
SDNS, WPwcn	Step1:	SDNS	.54	.69	.48	2		
		WPwcn	.29					
	Step 2:	SDNS x WPwcn	.08	.70	.49	3	.01	1
Aut WPsup	Step1:	Aut	.34**	.56	.31	2		
		WPsup	.23**					
	Step 2:	Aut x WPsup	.13**	.58	.33	3	.02**	1
Aut, WPcol	Step1:	Aut	.42**	.56	.31	2		
		WPcol	.24**					
	Step 2:	Aut x WPcol	.09*	.57	.32	3	.01*	1
Aut, WPwcn	Step1:	Aut	.14**	.65	.42	2		
		WPwcn	.47**					
	Step 2:	Aut x WPwcn	.11**	.66	.44	3	.02**	1
Com, WPsup	Step1:	Com	.64**	.67	.45	2		
		WPsup	.19**					
	Step 2:	Com x WPsup	.01	.67	.45	3	0	1
Com, WPcol	Step1:	Com	.69**	.67	.44	2		
		WPcol	.18**					
	Step 2:	Com x WPcol	.03	.67	.49	3	0	1

SELF-DETERMINATION NEEDS SATISFACTION AND WELL-BEING

		Predictor	β	R	R^2	df	ΔR^2	Δdf
Com, WPwcn	Step1:	Com	.46**	.70	.49	2		
		WPwcn	.32**					
Rel, WPsup	Step 2:	Com x WPwcn	.03**	.70	.49	3	0	1
		WPsup	.30					
Rel, WPcol	Step1:	Rel	.29**	.53	.28	2		
	Step 2:	Rel x WPsup	.01	.53	.28	3	0	1
Rel, WPwcn	Step1:	Rel	.37**	.47	.22	2		
	Step 2:	WPcol	.19**					
Rel, WPwcn		Rel x WPsup	.08	.47	.22	3	0	1
	Step1:	Rel	.21**	.66	.44	2		
Aut, WP		WPwcn	.49**					
	Step 2:	Rel x WPsup	.05	.67	.44	3	.01	1
Com, WP	Step1:	Aut	.18**	.63	.39	2		
	Step 2:	WP	.55**					
Rel, WP		Aut x WP	.11**	.64	.41	3	.01**	1
	Step1:	Com	.51**	.70	.49	2		
Com, WP		WP	.38**					
	Step 2:	Com x WP	-.01	.70	.49	3	0	1
Rel, WP	Step1:	Rel	.11	.62	.38	2		
	Step 2:	WP	.63**					
		Rel x WP	.06	.62	.38	3	0	1

* $p < .05$

** $p < .01$

SELF-DETERMINATION NEEDS SATISFACTION AND WELL-BEING

Table 3

Summary of Hierarchical Regression Analyses for H_{3b} (N = 373)

		Outcome variable = PA						
		Predictor	β	R	R ²	df	ΔR^2	Δdf
SDNS, WN	Step1:	SDNS	.89**	.66	.44	2		
	Step 2:	WN SDNS x WN	.05 -.13*	.67	.45	3	.01*	1
SDNS, WNSup	Step1:	SDNS	.92**	.67	.45	2		
	Step 2:	WNSup SDNS x WNSup	.09* -.05	.67	.45	3	0	1
SDNS, WNcol	Step1:	SDNS	.89**	.66	.44	2		
	Step 2:	WNcol SDNS x WNcol	.08 -.06	.66	.44	3	0	1
SDNS, WNwcn	Step1:	SDNS	.83**	.66	.44	2		
	Step 2:	WNwcn SDNS x WNwcn	-.04 -.10*	.67	.45	3	.01*	1
Aut WNSup	Step1:	Aut	.50**	.52	.27	2		
	Step 2:	WNSup Aut x WNSup	.03 -.01**	.53	.29	3	.02**	1
Aut, WNcol	Step1:	Aut	.49**	.52	.27	2		
	Step 2:	WNcol Aut x WNcol	-.02 -.05	.52	.27	3	0	1
Aut, WNwcn	Step1:	Aut	.44**	.54	.29	2		
	Step 2:	WNwcn Aut x WNwcn	-.11** -.07**	.55	.30	3	.01*	1
Com, WNSup	Step1:	Com	.75	.65	.42	2		
	Step 2:	WNSup Com x WNSup	-.02 -.05	.65	.42	3	0	1
Com, WNcol	Step1:	Com	.75**	.65	.42	2		
	Step 2:	WNcol Com x WNcol	-.04 -.02	.65	.42	3	0	1

SELF-DETERMINATION NEEDS SATISFACTION AND WELL-BEING

		Predictor	β	R	R^2	df	ΔR^2	Δdf
Com, WNwcn	Step1:	Com	.71**	.66	.43	2		
		WNwcn	-.09**					
	Step 2:	Com x WNwcn	-.07	.66	.44	3	.01	1
Rel, WNSup	Step1:	Rel	.46**	.45	.20	2		
		WNSup	-.06					
	Step 2:	Rel x WNSup	-.04	.45	.21	3	.01	1
Rel, WNcol	Step1:	Rel	.48**	.45	.20	2		
		WNcol	.01					
	Step 2:	Rel x WNSup	.01	.45	.20	3	0	1
Rel, WNwcn	Step1:	Rel	.41**	.49	.24	2		
		WNwcn	-.15**					
	Step 2:	Rel x WNSup	-.13**	.51	.26	3	.02**	1
Aut, WN	Step1:	Aut	.45**	.53	.28	2		
		WN	-.01					
	Step 2:	Aut x WN	-.13**	.54	.29	3	.01**	1
Com, WN	Step1:	Com	.72**	.65	.43	2		
		WN	-.10*					
	Step 2:	Com x WN	-.10	.66	.43	3	0	1
Rel, WN	Step1:	Rel	.42**	.47	.22	2		
		WN	-.16**					
	Step 2:	Rel x WN	-.12*	.48	.23	3	.01*	1

* $p < .05$

** $p < .01$

SELF-DETERMINATION NEEDS SATISFACTION AND WELL-BEING

Table 4

Summary of Hierarchical Regression Analyses for H_{3C} (N = 373)

		Outcome variable = NA						
		Predictor	β	R	R^2	df	ΔR^2	Δdf
SDNS, WP	Step1:	SDNS	-.32	.40	.16	2		
	Step 2:	WP SDNS x WP	-.10 .04	.40	.16	3	0	1
SDNS, WPsup	Step1:	SDNS	-.38	.39	.15	2		
	Step 2:	WPsup SDNS x WPsup	-.03** .03	.39	.15	3	0	1
SDNS, WPcol	Step1:	SDNS	-.40**	.40	.16	2		
	Step 2:	WPcol SDNS x WPcol	-.08 .01	.40	.16	3	0	1
SDNS, WPwcn	Step1:	SDNS	-.38**	.39	.15	2		
	Step 2:	WPwcn SDNS x WPwcn	-.02 .04	.39	.15	3	0	1
Aut WPsup	Step1:	Aut	-.18**	.34	.11	2		
	Step 2:	WPsup Aut c WPsup	-.10* .02	.34	.11	3	0	1
Aut, WPcol	Step1:	Aut	-.20**	.37	.10	2		
	Step 2:	WPcol Aut x WPcol	-.16** .01	.37	.10	3	0	1
Aut, WPwcn	Step1:	Aut	-.16**	.35	.12	2		
	Step 2:	WPwcn Aut x WPwcn	-.12* .03	.35	.12	3	0	1
Com, WPsup	Step1:	Com	-.23**	.35	.13	2		
	Step 2:	WPsup Com x WPsup	-.12** .03	.35	.13	3	0	1
Com, WPcol	Step1:	Com	-.24**	.36	.13	2		
	Step 2:	WPcol Com x WPcol	-.16** .01	.36	.13	3	0	1

SELF-DETERMINATION NEEDS SATISFACTION AND WELL-BEING

		Predictor	β	R	R^2	df	ΔR^2	Δdf
Com, WPwcn	Step1:	Com	-.19**	.34	.12	2		
		WPwcn	-.12*					
	Step 2:	Com x WPwcn	.02	.35	.12	3	0	1
Rel, WPsup	Step1:	Rel	-.18**	.34	.11	2		
		WPsup	-.13**					
	Step 2:	Rel x WPsup	-.02	.34	.11	3	0	1
Rel, WPcol	Step1:	Rel	-.19**	.32	.10	2		
		WPcol	-.13*					
	Step 2:	Rel x WPsup	.01	.32	.10	3	0	1
Rel, WPwcn	Step1:	Rel	-.17**	.36	.12	2		
		WPwcn	-.16**					
	Step 2:	Rel x WPsup	.01	.36	.12	3	0	1
Aut, WP	Step1:	Aut	-.12*	.37	.14	2		
		WP	-.23**					
	Step 2:	Aut x WP	.04	.37	.14	3	0	1
Com, WP	Step1:	Com	-.15**	.37	.14	2		
		WP	-.23**					
	Step 2:	Com x WP	.05	.38	.14	3	0	1
Rel, WP	Step1:	Rel	-.11*	.37	.13	2		
		WP	-.25**					
	Step 2:	Rel x WP	-.01	.37	.13	3	0	1

* $p < .05$

** $p < .01$

SELF-DETERMINATION NEEDS SATISFACTION AND WELL-BEING

Table 5

Summary of Hierarchical Regression Analyses for H_{3d} (N = 373)

		Outcome variable = NA						
		Predictor	β	R	R ²	df	ΔR^2	Δdf
SDNS, WN	Step1:	SDNS	-.18**	.53	.28	2		
		WN	.36**					
	Step 2:	SDNS x WN	.04	.53	.28	3	0	1
SDNS, WNsup	Step1:	SDNS	-.27**	.47	.22	2		
		WNsup	.20**					
	Step 2:	SDNS x WNsup	.07	.48	.23	3	.01	1
SDNS, WNcol	Step1:	SDNS	-.28**	.52	.27	2		
		WNcol	.31**					
	Step 2:	SDNS x WNcol	.11*	.52	.28	3	.01*	1
SDNS, WNwcn	Step1:	SDNS	-.29**	.46	.20	2		
		WNwcn	.15**					
	Step 2:	SDNS x WNwcn	-.06	.46	.20	3	0	1
Aut WNsup	Step1:	Aut	-.13**	.44	.19	2		
		WNsup	.23**					
	Step 2:	Aut x WNsup	.03	.44	.19	3	0	1
Aut, WNcol	Step1:	Aut	-.17**	.50	.25	2		
		WNcol	.34**					
	Step 2:	Aut x WNcol	.08*	.51	.26	3	.01*	1
Aut, WNwcn	Step1:	Aut	-.16**	.43	.18	2		
		WNwcn	.17**					
	Step 2:	Aut x WNwcn	-.06	.43	.19	3	.01	1
Com, WNsup	Step1:	Com	-.21**	.46	.21	2		
		WNsup	.24**					
	Step 2:	Com x WNsup	.01	.46	.21	3	0	1
Com, WNcol	Step1:	Com	-.23**	.51	.26	2		
		WNcol	.35**					
	Step 2:	Com x WNcol	.05	.51	.26	3	0	1

SELF-DETERMINATION NEEDS SATISFACTION AND WELL-BEING

		Predictor	β	R	R ²	df	ΔR^2	Δdf
Com, WNwcn	Step1:	Com	-.21**	.43	.19	2		
		WNwcn	.17**					
	Step 2:	Com x WNwcn	-.03	.43	.19	3	0	1
Rel, WNSup	Step1:	Rel	-.16**	.44	.20	2		
		WNSup	.24**					
	Step 2:	Rel x WNSup	.10**	.47	.22	3	.02**	1
Rel, WNcol	Step1:	Rel	-.14**	.47	.22	2		
		WNcol	.34**					
	Step 2:	Rel x WNSup	.08*	.48	.23	3	.01*	1
Rel, WNwcn	Step1:	Rel	-.18**	.43	.18	2		
		WNwcn	.18**					
	Step 2:	Rel x WNSup	.01	.43	.18	3	0	1
Aut, WN	Step1:	Aut	-.08*	.52	.27	2		
		WN	.40**					
	Step 2:	Aut x WN	.01	.52	.27	3	0	1
Com, WN	Step1:	Com	-.15**	.53	.29	2		
		WN	.39**					
	Step 2:	Com x WN	-.02	.53	.29	3	0	1
Rel, WN	Step1:	Rel	-.09*	.52	.27	2		
		WP	.40**					
	Step 2:	Rel x WN	.09*	.53	.28	3	.01*	1

* $p < .05$

** $p < .01$

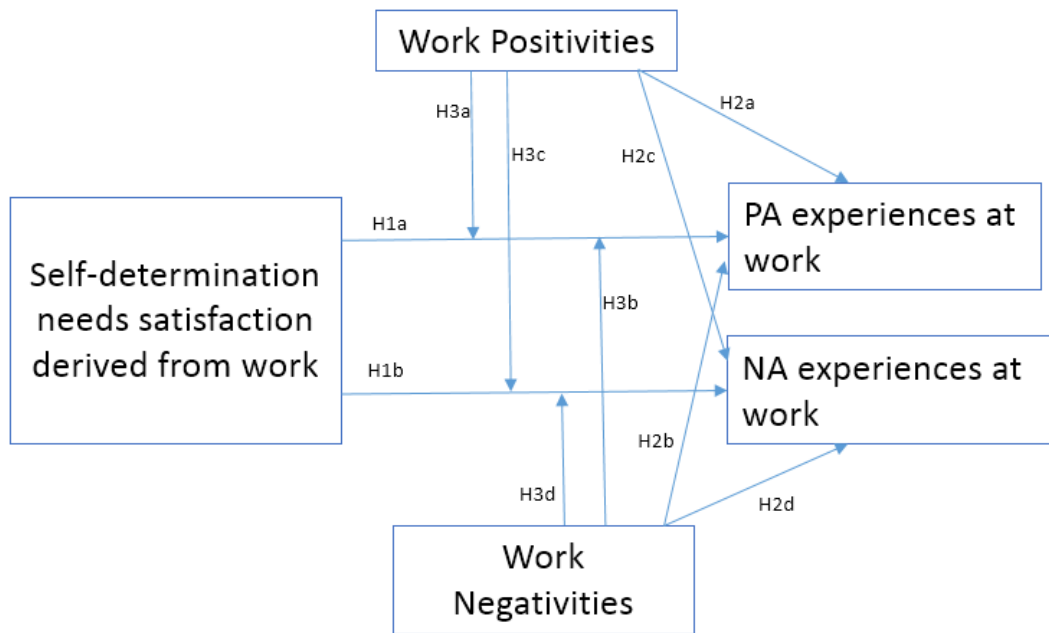


Figure 1. Conceptual model of proposed research.

SELF-DETERMINATION NEEDS SATISFACTION AND WELL-BEING



Figure 2. Nature of hypothesised Self-Determination Needs Satisfaction x Work Positivities interaction effect on Positive Affect (Hypothesis 3a).

SELF-DETERMINATION NEEDS SATISFACTION AND WELL-BEING



Figure 3. Nature of hypothesised Self-Determination Needs Satisfaction x Work Negativities interaction effect on Positive Affect (Hypothesis 3b).

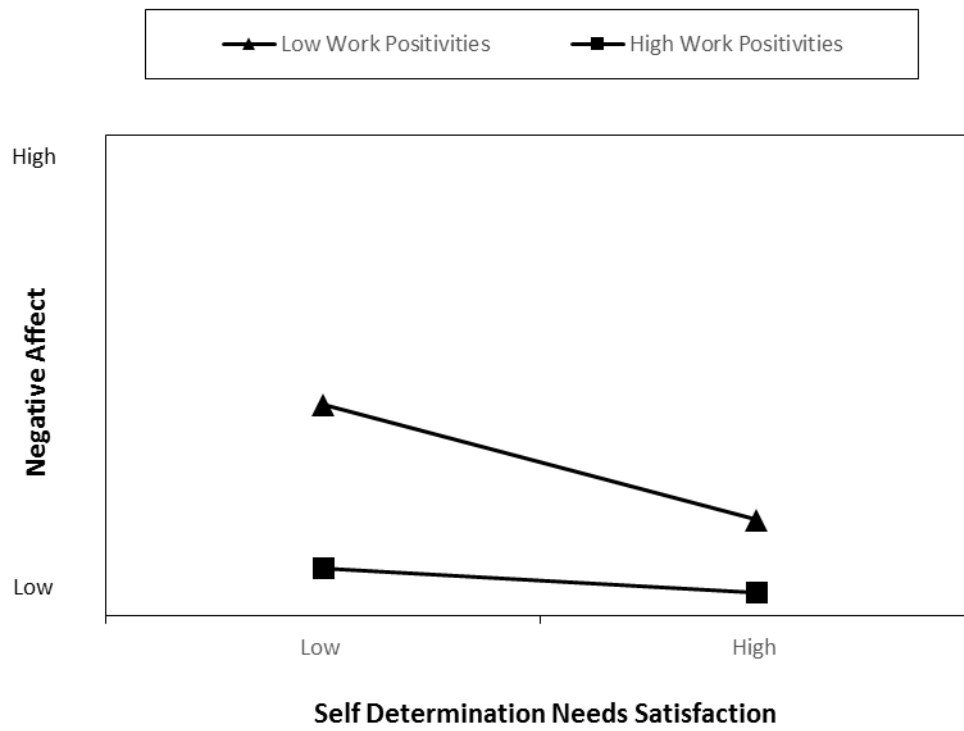


Figure 4. Nature of hypothesised Self-Determination Needs Satisfaction x Work Positivities interaction effect on Negative Affect (Hypothesis 3c).

SELF-DETERMINATION NEEDS SATISFACTION AND WELL-BEING



Figure 5. Nature of hypothesised Self-Determination Needs Satisfaction x Work Negativities interaction effect on Negative Affect (Hypothesis 3d).

SELF-DETERMINATION NEEDS SATISFACTION AND WELL-BEING

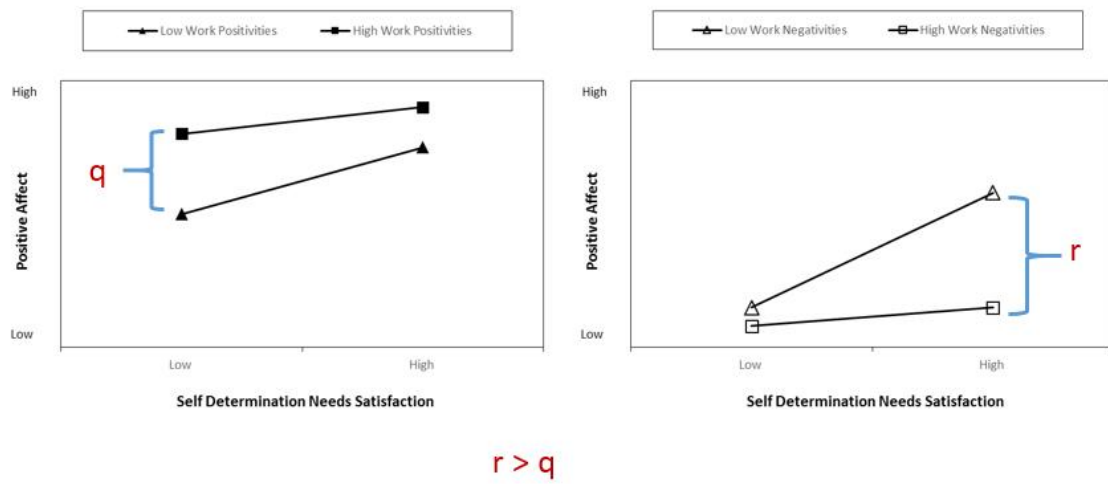


Figure 6. Nature of hypothesised moderator effects of Work Positivities and Negativities for Positive Affect (Hypothesis 4a).

SELF-DETERMINATION NEEDS SATISFACTION AND WELL-BEING

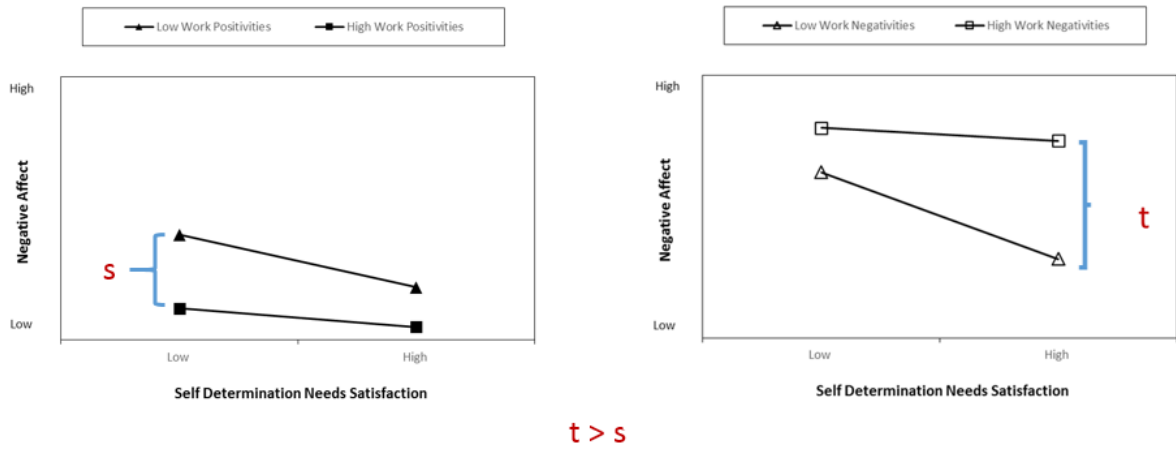


Figure 7. Nature of hypothesised moderator effects of Work Positivities and Negativities for Negative Affect (Hypothesis 4b).

SELF-DETERMINATION NEEDS SATISFACTION AND WELL-BEING

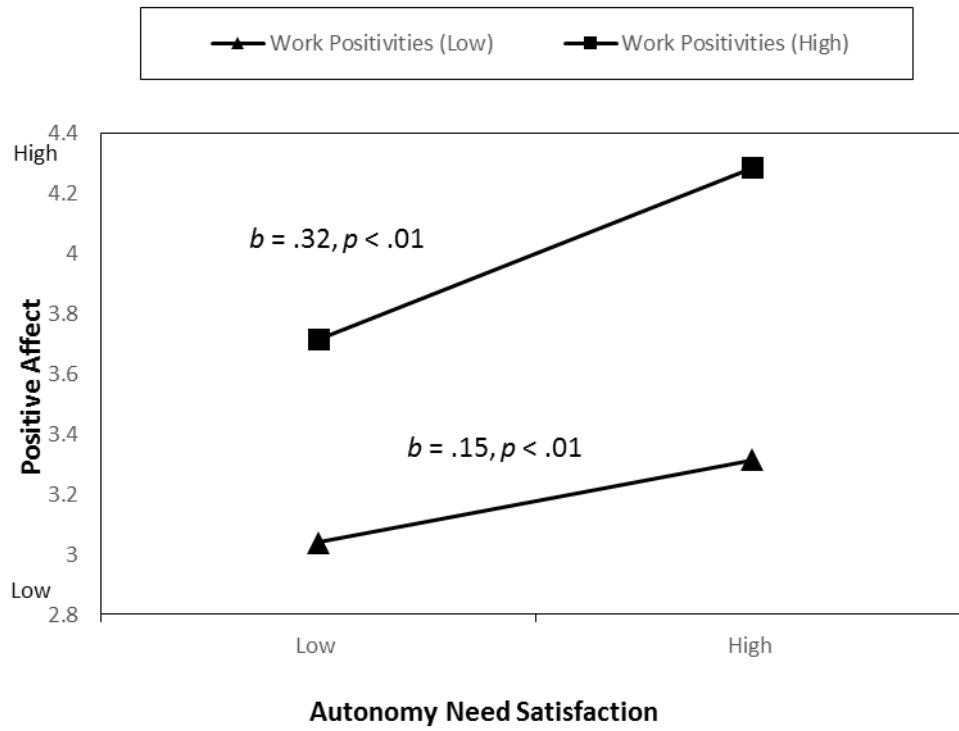


Figure 8. Moderator effects of Work Positivities on the relationship between Autonomy Need Satisfaction and Positive Affect.

SELF-DETERMINATION NEEDS SATISFACTION AND WELL-BEING

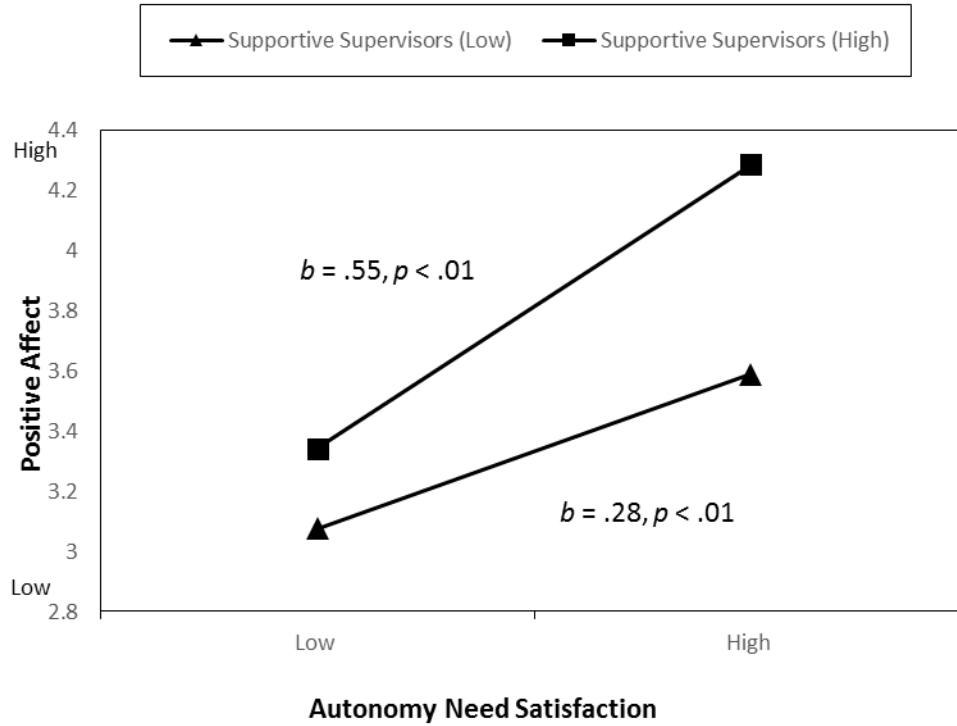


Figure 9. Moderator effects of Supportive Supervisors on the relationship between Autonomy Need Satisfaction and Positive Affect.

SELF-DETERMINATION NEEDS SATISFACTION AND WELL-BEING

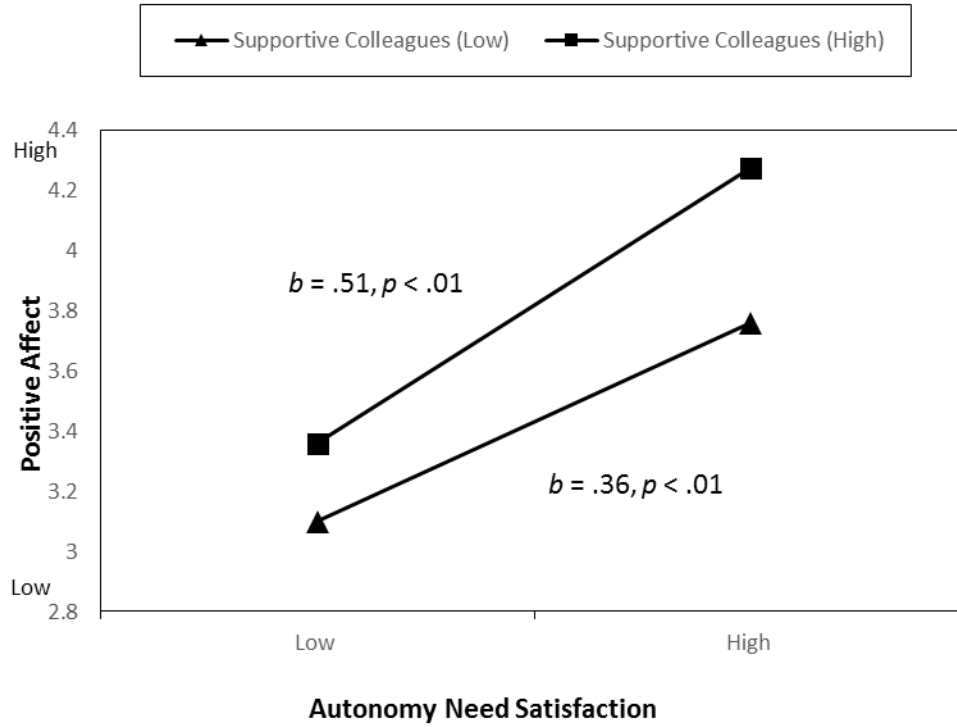


Figure 10. Moderator effects of Supportive Colleagues on the relationship between Autonomy Need Satisfaction and Positive Affect.

SELF-DETERMINATION NEEDS SATISFACTION AND WELL-BEING

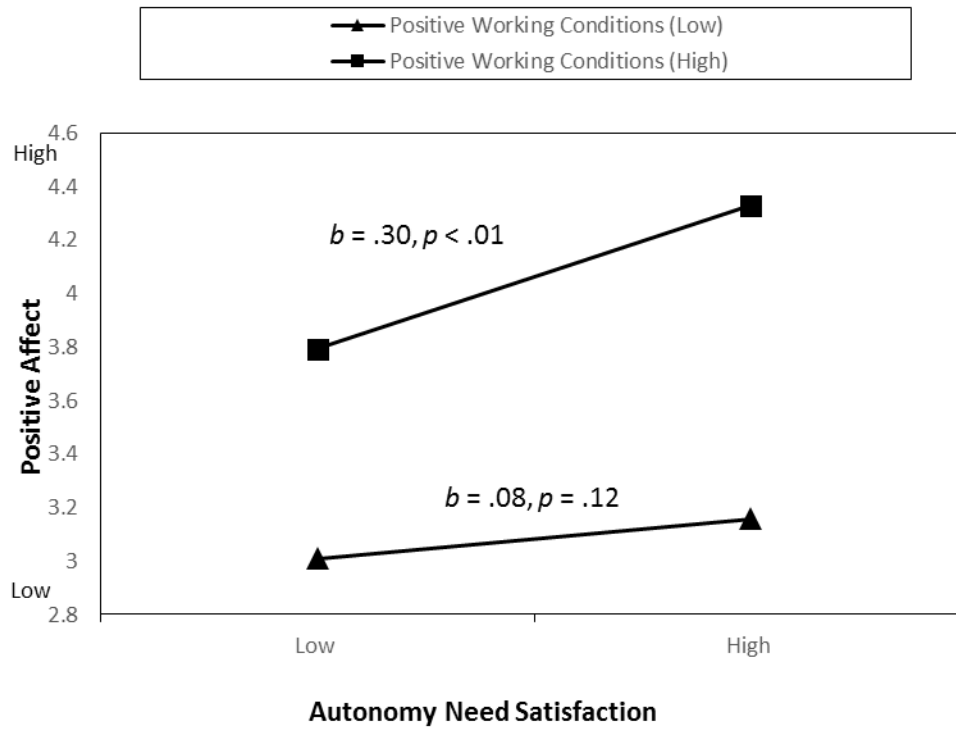


Figure 11. Moderator effects of Positive Working Conditions on the relationship between Autonomy Need Satisfaction and Positive Affect.

SELF-DETERMINATION NEEDS SATISFACTION AND WELL-BEING



Figure 12. Moderator effects of Negative Working Conditions on the relationship between Self-Determination Needs Satisfaction and Positive Affect.

SELF-DETERMINATION NEEDS SATISFACTION AND WELL-BEING

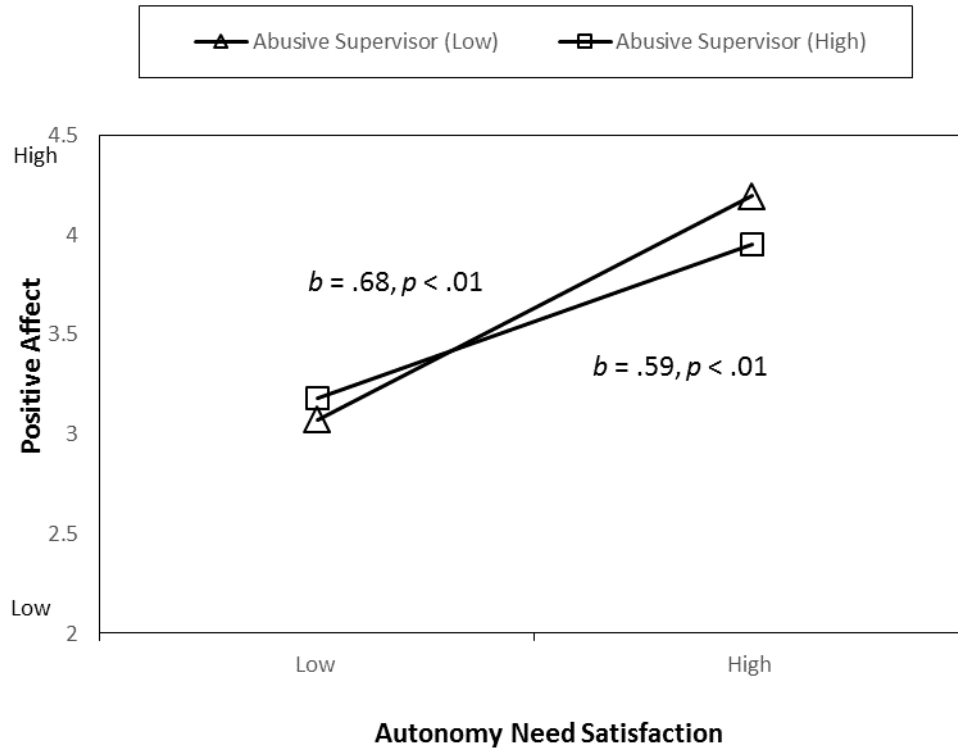


Figure 13. Moderator effects of Abusive Supervisor on the relationship between Autonomy Need Satisfaction and Positive Affect.

SELF-DETERMINATION NEEDS SATISFACTION AND WELL-BEING

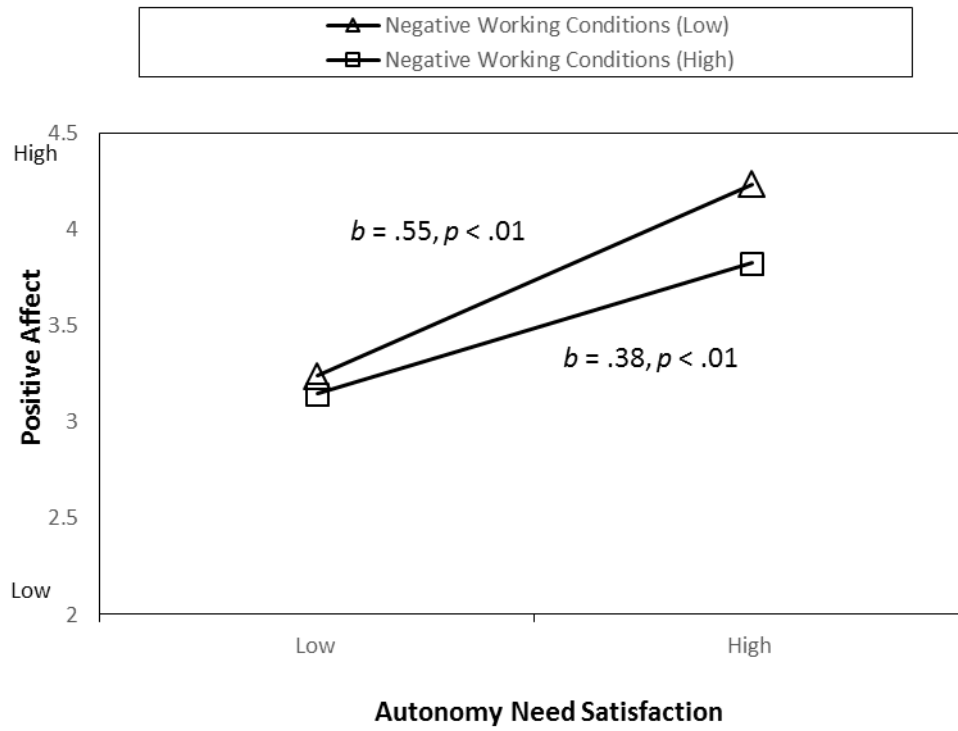


Figure 14. Moderator effects of Negative Working Conditions on the relationship between Autonomy Need Satisfaction and Positive Affect.

SELF-DETERMINATION NEEDS SATISFACTION AND WELL-BEING



Figure 15. Moderator effects of Negative Working Conditions on the relationship between Relatedness Need Satisfaction and Positive Affect.

SELF-DETERMINATION NEEDS SATISFACTION AND WELL-BEING



Figure 16. Moderator effects of Work Negativities on the relationship between Autonomy Need Satisfaction and Positive Affect.

SELF-DETERMINATION NEEDS SATISFACTION AND WELL-BEING

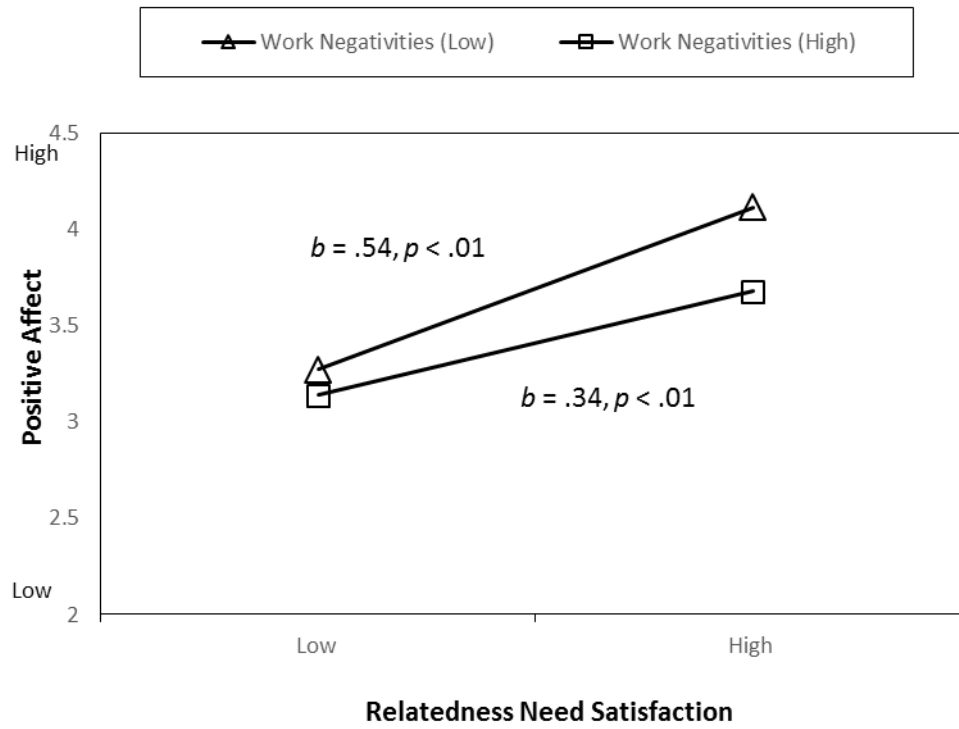


Figure 17. Moderator effects of Work Negativities on the relationship between Relatedness Need Satisfaction and Positive Affect.

SELF-DETERMINATION NEEDS SATISFACTION AND WELL-BEING

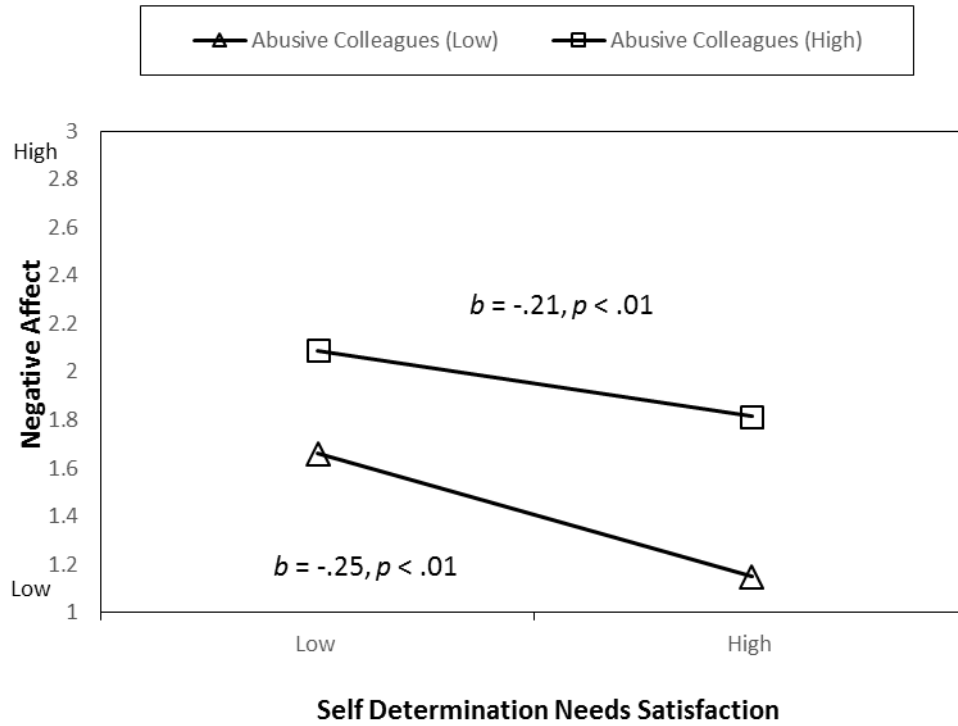


Figure 18. Moderator effects of Abusive Colleagues on the relationship between Self-Determination Needs Satisfaction and Negative Affect.

SELF-DETERMINATION NEEDS SATISFACTION AND WELL-BEING

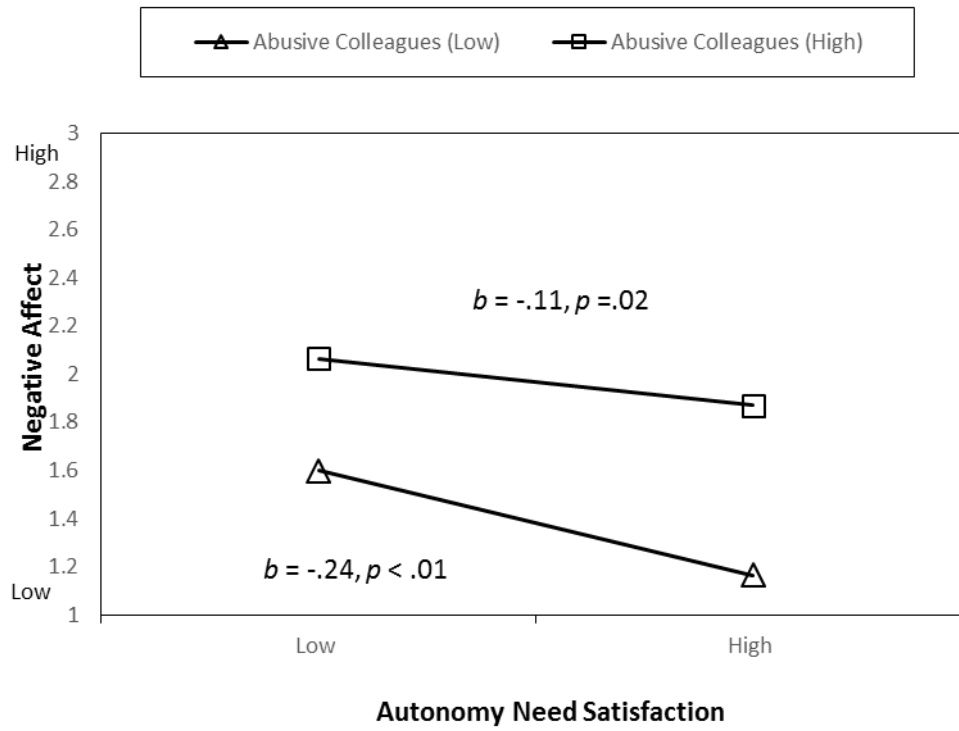


Figure 19. Moderator effects of Abusive Colleagues on the relationship between Autonomy Need Satisfaction and Negative Affect.

SELF-DETERMINATION NEEDS SATISFACTION AND WELL-BEING

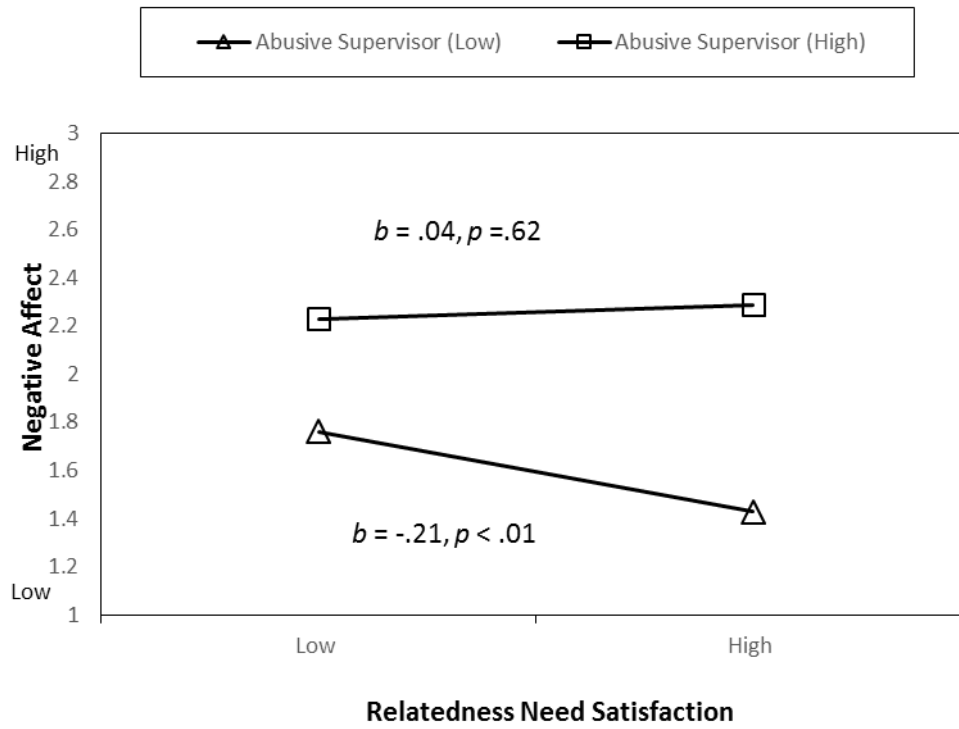


Figure 20. Moderator effects of Abusive Supervisor on the relationship between Relatedness Need Satisfaction and Negative Affect.

SELF-DETERMINATION NEEDS SATISFACTION AND WELL-BEING

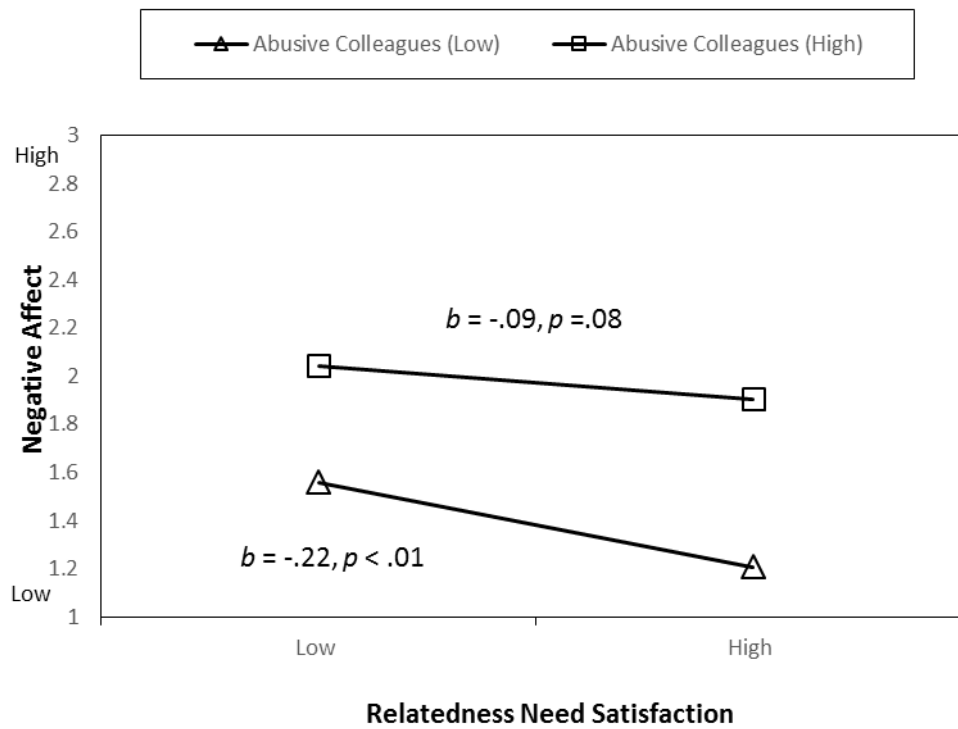


Figure 21. Moderator effects of Abusive Colleagues on the relationship between Relatedness Need Satisfaction and Negative Affect.

SELF-DETERMINATION NEEDS SATISFACTION AND WELL-BEING



Figure 22. Moderator effects of Work Negativities on the relationship between Relatedness Need Satisfaction and Negative Affect.

REFERENCES

- Anton, C. (2009). The impact of role stress on workers' behaviour through job satisfaction and organizational commitment. *International Journal of Psychology, 44*(3), 187-194.
- Antoniou, A.-S. G., Davidson, M. J., & Cooper, C. L. (2003). Occupational stress, job satisfaction and health state in male and female junior hospital doctors in Greece. *Journal of Managerial Psychology, 18*(6), 592-621.
- Baard, P. P., Deci, E. L., & Ryan, R. M. (2004). Intrinsic Need Satisfaction: A Motivational Basis of Performance and Well-Being in Two Work Settings. *Journal of Applied Social Psychology, 34*(10), 2045-2068.
- Bakker, A. B., van Veldhoven, M., & Xanthopoulou, D. (2010). Beyond the demand-control model: Thriving on high job demands and resources. *Journal of Personnel Psychology, 9*(1), 3-16.
- Baumeister, R. F., & Leary, M. R. (1995). The need to belong: desire for interpersonal attachments as a fundamental human motivation. *Psychological Bulletin, 117*(3), 497-529.
- Bedi, A., & Schat, A. C. H. (2013). Perceptions of organizational politics: A meta-analysis of its attitudinal, health, and behavioural consequences. *Canadian Psychology/Psychologie Canadienne, 54*(4), 246-259.
- Bennett, R. J., & Robinson, S. L. (2000). Development of a measure of workplace deviance. *Journal of Applied Psychology, 85*(3), 349-360.
- Bolger, N., DeLongis, A., Kessler, R. C., & Schilling, E. A. (1989). Effects of daily stress on negative mood. *Journal of Personality and Social Psychology, 57*(5), 808-818.
- Bono, J. E., Glomb, T. M., Shen, W., Kim, E., & Koch, A. J. (2013). Building positive resources: Effects of positive events and positive reflection on work stress and health. *Academy of Management Journal, 56*(6), 1601-1627.

- Bowling, N. A., & Eschleman, K. J. (2010). Employee personality as a moderator of the relationships between work stressors and counterproductive work behavior. *Journal of Occupational Health Psychology, 15*(1), 91-103.
- Bradburn, N. M., & Caplovitz, D. (1965). Reports on happiness: A pilot study of behaviour to mental health. Chicago, USA: Aldine Publishing Company.
- Brewer, M. B. (2000). Research design and issues of validity. In H. T. Reis & C. M. Judd (Eds.), *Handbook of research methods in social and personality psychology* (pp. 3-16). Cambridge, UK: Cambridge University Press.
- Brief, A. P., & Weiss, H. M. (2002). Organizational behavior: Affect in the workplace. *Annual Review of Psychology, 53*(1), 279-307.
- Browne, J. H. (2000). Benchmarking HRM practices in healthy work organizations. *American Business Review, 18*(2), 54-61.
- Bültmann, U., Kant, I. J., Van Den Brandt, P. A., & Kasl, S. V. (2002). Psychosocial work characteristics as risk factors for the onset of fatigue and psychological distress: prospective results from the Maastricht Cohort Study. *Psychological Medicine, 32*(2), 333-345.
- Cacioppo, J. T., & Berntson, G. G. (1994). Relationship between attitudes and evaluative space: A critical review, with emphasis on the separability of positive and negative substrates. *Psychological Bulletin, 115*(3), 401-423.
- Cacioppo, J. T., Gardner, W. L., & Berntson, G. G. (1997). Beyond bipolar conceptualizations and measures: The case of attitudes and evaluative space. *Personality and Social Psychology Review, 1*(1), 3-25.
- Cacioppo, J. T., Gardner, W. L., & Berntson, G. G. (1999). The affect system has parallel and integrative processing components: Form follows function. *Journal of Personality and Social Psychology, 76*(5), 839-855.

- Carlson, D. S., & Rotondo, D. M. (2001). Differences in promotion stress across career stage and orientation. *Human Resource Management, 40*(2), 99-110.
- Carstensen, L. (1998). A lifespan approach to social motivation. In J. H. C. Dweck (Ed.), *Motivation and self-regulation across the life span* (pp. 341-364). Cambridge, UK: Cambridge University Press.
- Chan, D. (2009). So Why Ask Me? Are Self-Report Data Really that Bad? In C. E. Lance & R. J. Vandenberg (Eds.), *Statistical and methodological myths and urban legends doctrine, verity and fable in the organizational and social sciences* (pp. 309-336). New York, NY: Routledge.
- Chen, S. Y., & Scannapieco, M. (2010). The influence of job satisfaction on child welfare worker's desire to stay: An examination of the interaction effect of self-efficacy and supportive supervision. *Children and Youth Services Review, 32*(4), 482-486.
- Chen, Z., Takeuchi, N., & Wakabayashi, M. (2005). Managerial skill utilization: Work environment, gender, and training incentive. *The International Journal of Human Resource Management, 16*(5), 786-808.
- Clark, S. C. (2001). Work cultures and work/family balance. *Journal of Vocational Behavior, 58*(3), 348-365.
- Cohen, B. (2013). *Explaining psychological statistics* (4th ed.). Hoboken, NJ: Wiley.
- Coursey, D., & Rainey, H. G. (1990). Perceptions of personnel system constraints in public, private, and hybrid organizations. *Review of Public Personnel Administration, 10*(2), 54-71.
- Cropanzano, R., Howes, J. C., Grandey, A. A., & Toth, P. (1997). The relationship of organizational politics and support to work behaviors, attitudes, and stress. *Journal of Organizational Behavior, 18*(2), 159-180.

- De Jonge, J., Mulder, M. J., & Nijhuis, F. J. (1999). The incorporation of different demand concepts in the job demand-control model: Effects on health care professionals. *Social Science & Medicine*, 48(9), 1149-1160.
- De Jonge, J., Reuvers, M. M., Houtman, I. L., Bongers, P. M., & Kompier, M. A. (2000). Linear and nonlinear relations between psychosocial job characteristics, subjective outcomes, and sickness absence: Baseline results from SMASH. *Journal of Occupational Health Psychology*, 5(2), 256-268.
- Deci, E. L. (1975). *Intrinsic motivation*. New York, NY: Plenum Press.
- Deci, E. L., & Ryan, R. M. (1985). The general causality orientations scale: Self-determination in personality. *Journal of Research in Personality*, 19(2), 109-134.
- Deci, E. L., & Ryan, R. M. (1991). A motivational approach to self: Integration in personality. In R. Dienstbier (Ed.), *Nebraska symposium on motivation: Vol. 38. Perspectives on motivation* (pp. 237-288). Lincoln, NE: University of Nebraska Press.
- Deci, E. L., & Ryan, R. M. (2000). The "what" and "why" of goal pursuits: Human needs and the self-determination of behavior. *Psychological Inquiry*, 11(4), 227-268.
- Deci, E. L., & Ryan, R. M. (2008). Self-determination theory: A macrotheory of human motivation, development, and health. *Canadian Psychology/Psychologie Canadienne*, 49(3), 182-185.
- Deci, E. L., & Ryan, R. M. (2014). The importance of universal psychological needs for understanding motivation in the workplace. In M. Gagne (Ed.), *The Oxford handbook of work engagement, motivation, and self-determination theory* (pp. 13-32). New York, NY: Oxford University Press.
- Deci, E. L., Ryan, R. M., Gagné, M., Leone, D. R., Usunov, J., & Kornazheva, B. P. (2001). Need satisfaction, motivation, and well-being in the work organizations of a former

- eastern bloc country: A cross-cultural study of self-determination. *Personality and Social Psychology Bulletin*, 27(8), 930-942.
- DeFrank, R. S., & Ivancevich, J. M. (1998). Stress on the job: An executive update. *The Academy of Management Executive*, 12(3), 55-66.
- DeHart-Davis, L., & Pandey, S. K. (2005). Red Tape and Public Employees: Does Perceived Rule Dysfunction Alienate Managers? *Journal of Public Administration Research and Theory: J-PART*, 15(1), 133-148.
- Dewe, P., O'Driscoll, M., & Cooper, C. (2012). Theories of psychological stress at work. In R. J. Gatchel & I. Z. Schultz (Eds.), *Handbook of Occupational Health and Wellness* (pp. 23-38). New York, NY: Springer Science + Business Media.
- Diener, E., & Emmons, R. (1984). The independence of positive and negative affect. *Journal of Personality and Social Psychology*, 47(5), 1105-1117.
- Doi, Y. (2005). An epidemiologic review on occupational sleep research among Japanese workers. *Industrial Health*, 43(1), 33-58.
- DuBois, D. L., Burk-Braxton, C., Swenson, L. P., Tevendale, H. D., Lockerd, E. M., & Moran, B. L. (2002). Getting by with a little help from self and others: Self-esteem and social support as resources during early adolescence. *Developmental Psychology*, 38(5), 822-839.
- Duffy, M. K., Ganster, D. C., & Pagon, M. (2002). Social undermining in the workplace. *Academy of Management Journal*, 45(2), 331-351.
- Dutton, J. E., Glynn, M. A., & Spreitzer, G. (2006). Positive organizational scholarship. In J. G. G. Callanan (Ed.), *Encyclopedia of career development* (pp. 641- 644). Thousand Oaks, CA: Sage.

- Eastburg, M. C., Williamson, M., Gorsuch, R., & Ridley, C. (1994). Social support, personality, and burnout in nurses. *Journal of Applied Social Psychology, 24*(14), 1233-1250.
- Eisenberger, R., Huntington, R., Hutchison, S., & Sowa, D. (1986). Perceived organizational support. *Journal of Applied Psychology, 71*(3), 500-507.
- Eisenberger, R., Stinglhamber, F., Vandenberghe, C., Sucharski, I. L., & Rhoades, L. (2002). Perceived supervisor support: Contributions to perceived organizational support and employee retention. *Journal of Applied Psychology, 87*(3), 565-573.
- Evans, G. W., Johansson, G., & Rydstedt, L. (1999). Hassles on the job: A study of a job intervention with urban bus drivers. *Journal of Organizational Behavior, 20*(2), 199-208.
- Ferris, G. R., & Kacmar, K. M. (1992). Perceptions of organizational politics. *Journal of Management, 18*(1), 93-116.
- Folkman, S., & Moskowitz, J. T. (2000). Positive affect and the other side of coping. *American Psychologist, 55*(6), 647-654.
- Fox, S., Spector, P. E., & Miles, D. (2001). Counterproductive work behavior (CWB) in response to job stressors and organizational justice: Some mediator and moderator tests for autonomy and emotions. *Journal of Vocational Behavior, 59*(3), 291-309.
- Fredrickson, B. L. (1998). What good are positive emotions? *Review of General Psychology, 2*(3), 300-319.
- Gagné, M., & Deci, E. L. (2005). Self-determination theory and work motivation. *Journal of Organizational Behavior, 26*(4), 331-362.
- George, J. M. (1991). State or trait: Effects of positive mood on prosocial behaviors at work. *Journal of Applied Psychology, 76*(2), 299-307.

- George, J. M., & Brief, A. P. (1992). Feeling good-doing good: A conceptual analysis of the mood at work-organizational spontaneity relationship. *Psychological Bulletin*, *112*(2), 310-329.
- Hackman, J. R., & Oldham, G. R. (1980). *Work redesign*. Reading, MA: Addison-Wesley.
- Halbesleben, J. R., & Buckley, M. R. (2004). Burnout in organizational life. *Journal of Management*, *30*(6), 859-879.
- Hayton, J. C., Carnabuci, G., & Eisenberger, R. (2012). With a little help from my colleagues: A social embeddedness approach to perceived organizational support. *Journal of Organizational Behavior*, *33*(2), 235-249.
- Hershcovis, M. S., & Barling, J. (2010). Towards a multi-foci approach to workplace aggression: A meta-analytic review of outcomes from different perpetrators. *Journal of Organizational Behavior*, *31*(1), 24-44.
- Hershcovis, M. S., Turner, N., Barling, J., Arnold, K. A., Dupré, K. E., Inness, M., . . . Sivanathan, N. (2007). Predicting workplace aggression: A meta-analysis. *Journal of Applied Psychology*, *92*(1), 228-238.
- Hobman, E. V., Restubog, S. L. D., Bordia, P., & Tang, R. L. (2009). Abusive supervision in advising relationships: Investigating the role of social support. *Applied Psychology*, *58*(2), 233-256.
- Holbeche, L. (1994). *Career Development in Flatter Structures*. Horsham, UK: Roffey Park Management Institute.
- Holman, D. J., & Wall, T. D. (2002). Work characteristics, learning-related outcomes, and strain: A test of competing direct effects, mediated, and moderated models. *Journal of Occupational Health Psychology*, *7*(4), 283-301.
- Ilardi, B. C., Leone, D., Kasser, T., & Ryan, R. M. (1993). Employee and supervisor ratings of motivation: Main effects and discrepancies associated with job satisfaction and

- adjustment in a factory setting. *Journal of Applied Social Psychology*, 23(21), 1789-1805.
- Isen, A. M. (1999). Positive affect. In T. Dalgleish & M. J. Power (Eds.), *Handbook of cognition and emotion* (pp. 521-539). New York, NY: John Wiley & Sons.
- Ito, T. A., Larsen, J. T., Smith, N. K., & Cacioppo, J. T. (1998). Negative information weighs more heavily on the brain: The negativity bias in evaluative categorizations. *Journal of Personality and Social Psychology*, 75(4), 887-900.
- Ivancevich, J. M., & Matteson, M. T. (1980). *Stress at Work*. Glenview, IL: Scott Foresman.
- Joensuu, M., Väänänen, A., Koskinen, A., Kivimäki, M., Virtanen, M., & Vahtera, J. (2010). Psychosocial work environment and hospital admissions due to mental disorders: A 15-year prospective study of industrial employees. *Journal of Affective Disorders*, 124(1), 118-125.
- Johnson, S., Cooper, C., Cartwright, S., Donald, I., Taylor, P., & Millet, C. (2005). The experience of work-related stress across occupations. *Journal of Managerial Psychology*, 20(2), 178-187.
- Karasek, R., & Theorell, T. (1990). *Healthy work, stress, productivity, and the reconstruction of working life*. New York, NY: Basic Books.
- Kasser, T., & Ryan, R. M. (1996). Further examining the American dream: Differential correlates of intrinsic and extrinsic goals. *Personality and Social Psychology Bulletin*(22), 280-287.
- Lee, K., & Allen, N. J. (2002). Organizational citizenship behavior and workplace deviance: The role of affect and cognitions. *Journal of Applied Psychology*, 87(1), 131-142.
- Marchand, A., Demers, A., & Durand, P. (2005). Does work really cause distress? The contribution of occupational structure and work organization to the experience of psychological distress. *Social Science & Medicine*, 61(1), 1-14.

- Mausner-Dorsch, H., & Eaton, W. W. (2000). Psychosocial work environment and depression: Epidemiologic assessment of the demand-control model. *American Journal of Public Health, 90*(11), 1765-1770.
- Miner, A., Glomb, T., & Hulin, C. (2005). Experience sampling mood and its correlates at work. *Journal of Occupational and Organizational Psychology, 78*(2), 171-193.
- Morrison, D., Cordery, J., Girardi, A., & Payne, R. (2005). Job design, opportunities for skill utilization, and intrinsic job satisfaction. *European Journal of Work and Organizational Psychology, 14*(1), 59-79.
- Nahum-Shani, I., Henderson, M. M., Lim, S., & Vinokur, A. D. (2014). Supervisor support: Does supervisor support buffer or exacerbate the adverse effects of supervisor undermining? *Journal of Applied Psychology, 99*(3), 484-503.
- Nezlek, J. B., & Plesko, R. M. (2001). Day-to-day relationships among self-concept clarity, self-esteem, daily events, and mood. *Personality and Social Psychology Bulletin, 27*(2), 201-211.
- Ng, T. W. H., & Sorensen, K. L. (2008). Toward a Further Understanding of the Relationships Between Perceptions of Support and Work Attitudes: A Meta-Analysis. *Group & Organization Management, 33*(3), 243-268.
- Niedhammer, I., Chastang, J.-F., David, S., & Kelleher, C. (2008). The contribution of occupational factors to social inequalities in health: findings from the national French SUMER survey. *Social Science & Medicine, 67*(11), 1870-1881.
- Niedhammer, I., Goldberg, M., Leclerc, A., Bugel, I., & David, S. (1998). Psychosocial factors at work and subsequent depressive symptoms in the Gazel cohort. *Scandinavian Journal of Work, Environment & Health, 24*(3), 197-205.

- Okun, M. A., & Lockwood, C. M. (2003). Does level of assessment moderate the relation between social support and social negativity?: A meta-analysis. *Basic and Applied Social Psychology, 25*(1), 15-35.
- Panari, C., Guglielmi, D., Simbula, S., & Depolo, M. (2010). Can an opportunity to learn at work reduce stress? *Journal of Workplace Learning, 22*(3), 166-179.
- Payne, R. L., & Morrison, D. (1999). The importance of knowing the affective meaning of job demands revisited. *Work & Stress, 13*(3), 280-288.
- Penney, L. M., & Spector, P. E. (2005). Job stress, incivility, and counterproductive work behavior (CWB): The moderating role of negative affectivity. *Journal of Organizational Behavior, 26*(7), 777-796.
- Pfeffer, J. (1994). *Competitive advantage through people: Unleashing the power of the workforce*. Boston, MA: Harvard Business School Press.
- Porath, C., & Pearson, C. (2013). The price of incivility. *Harvard Business Review, 91*(1-2), 115-121.
- Rauktis, M. E., & Koeske, G. F. (1994). Maintaining social worker morale: When supportive supervision is not enough. *Administration in Social Work, 18*(1), 39-60.
- Reis, H. T., & Gable, S. L. (2003). Toward a positive psychology of relationships. In C. L. Keyes & J. Haidt (Eds.), *Flourishing: The positive person and the good life* (pp. 129-159). American Psychological Association: Washington: DC.
- Reis, H. T., Sheldon, K. M., Gable, S. L., Roscoe, J., & Ryan, R. M. (2000). Daily well-being: The role of autonomy, competence, and relatedness. *Personality and Social Psychology Bulletin, 26*(4), 419-435.
- Rooney, J. A., & Gottlieb, B. H. (2007). Development and initial validation of a measure of supportive and unsupportive managerial behaviors. *Journal of Vocational Behavior, 71*(2), 186-203.

- Rozin, P., & Royzman, E. B. (2001). Negativity bias, negativity dominance, and contagion. *Personality and Social Psychology Review*, 5(4), 296-320.
- Ryan, R. M. (1993). Agency and organization: Intrinsic motivation, autonomy, and the self in psychological development. In J. Jacobs (Ed.), *Nebraska symposium on motivation: Development perspectives on motivation* (pp. 1-56). Lincoln, NE: University of Nebraska Press.
- Ryan, R. M., Chirkov, V. I., Little, T. D., Sheldon, K. M., Timoshina, E., & Deci, E. L. (1999). The American dream in Russia: Extrinsic aspirations and well-being in two cultures. *Personality and Social Psychology Bulletin*, 25(12), 1509-1524.
- Ryan, R. M., & Deci, E. L. (2000). Self-determination theory and the facilitation of intrinsic motivation, social development, and well-being. *American Psychologist*, 55(1), 68-78.
- Ryan, R. M., & Deci, E. L. (2002). Overview of self-determination theory: An organismic dialectical perspective In E. L. Deci & R. M. Ryan (Eds.), *Handbook of Self-Determination Research* (pp. 3-33). Rochester, NY: University Rochester Press.
- Sheldon, K. M., & Bettencourt, B. A. (2002). Psychological need-satisfaction and subjective well-being within social groups. *British Journal of Social Psychology*, 41(1), 25-38.
- Sheldon, K. M., & Niemiec, C. P. (2006). It's not just the amount that counts: balanced need satisfaction also affects well-being. *Journal of Personality and Social Psychology*, 91(2), 331-341.
- Sheldon, K. M., Ryan, R., & Reis, H. T. (1996). What Makes for a Good Day? Competence and Autonomy in the Day and in the Person. *Personality and Social Psychology Bulletin*, 22(12), 1270-1279.
- Spreitzer, G., Sutcliffe, K., Dutton, J., Sonenshein, S., & Grant, A. M. (2005). A socially embedded model of thriving at work. *Organization Science*, 16(5), 537-549.

- Stansfeld, S. A., Fuhrer, R., Shipley, M. J., & Marmot, M. G. (1999). Work characteristics predict psychiatric disorder: Prospective results from the Whitehall II Study. *Occupational and Environmental Medicine*, *56*(5), 302-307.
- Sugarman, B. (2001). A learning-based approach to organizational change: Some results and guidelines. *Organizational Dynamics*, *30*(1), 62-76.
- Taylor, S. E., Sherman, D. K., Kim, H. S., Jarcho, J., Takagi, K., & Dunagan, M. S. (2004). Culture and social support: who seeks it and why? *Journal of Personality and Social Psychology*, *87*(3), 354-362.
- Tepper, B. J. (2000). Consequences of abusive supervision. *Academy of Management Journal*, *43*(2), 178-190.
- Tourangeau, R., Rips, L. J., & Rasinski, K. (2000). *The Psychology of Survey Response*. Cambridge, UK: Cambridge University Press.
- Van den Broeck, A., Vansteenkiste, M., De Witte, H., & Lens, W. (2008). Explaining the relationships between job characteristics, burnout, and engagement: The role of basic psychological need satisfaction. *Work & Stress*, *22*(3), 277-294.
- Van der Doef, M., & Maes, S. (1999). The job demand-control(-support) model and psychological well-being: A review of 20 years of empirical research. *Work and Stress*, *13*(2), 87-114.
- Van Der Doef, M., Maes, S., & Diekstra, R. (2000). An examination of the job demand-control-support model with various occupational strain indicators. *Anxiety, Stress & Coping*, *13*(2), 165-185.
- Vansteenkiste, M., Neyrinck, B., Niemiec, C. P., Soenens, B., Witte, H., & Broeck, A. (2007). On the relations among work value orientations, psychological need satisfaction and job outcomes: A self-determination theory approach. *Journal of Occupational and Organizational Psychology*, *80*(2), 251-277.

- Vigoda-Gadot, E., & Kapun, D. (2005). Perceptions of politics and perceived performance in public and private organisations: A test of one model across two sectors. *Policy & Politics, 33*(2), 251-276.
- Vigoda, E. (2000). Organizational politics, job attitudes, and work outcomes: Exploration and implications for the public sector. *Journal of Vocational Behavior, 57*(3), 326-347.
- Watson, D., Clark, L. A., & Tellegen, A. (1988). Development and validation of brief measures of positive and negative affect: The PANAS scales. *Journal of Personality and Social Psychology, 54*(6), 1063-1070.
- Wood, S., & Peccei, R. (1995). Does total quality management make a difference to employee attitudes. *Employee Relations, 17*(3), 52-62.
- Yagil, D. (2006). The relationship of abusive and supportive workplace supervision to employee burnout and upward influence tactics. *Journal of Emotional Abuse, 6*(1), 49-65.
- Yang, J., & Diefendorff, J. M. (2009). The relations of daily counterproductive workplace behavior with emotions, situational antecedents, and personality moderators: A diary study in Hong Kong. *Personnel Psychology, 62*(2), 259-295.
- Yang, L. Q., Che, H., & Spector, P. E. (2008). Job stress and well-being: An examination from the view of person-environment fit. *Journal of Occupational and Organizational Psychology, 81*(3), 567-587.
- Yukl, G. (2013). *Leadership in organizations* (8th ed.). Upper Saddle River, NJ: Prentice-Hall.
- Zeni, T. A., MacDougall, A. E., Chauhan, R. S., Brock, M. E., & Buckley, M. R. (2013). In search of those boundary conditions that might influence the effectiveness of supportive supervision. *Journal of Occupational and Organizational Psychology, 86*(3), 317-323.

Zohar, D., Tzischinski, O., & Epstein, R. (2003). Effects of energy availability on immediate and delayed emotional reactions to work events. *Journal of Applied Psychology*, 88(6), 1082-1093.

APPENDIX A

The Positive and Negative Affect Schedule

PA items	NA items
1. Interested	1. Distressed
2. Excited	2. Upset
3. Strong	3. Guilty
4. Enthusiastic	4. Scared
5. Proud	5. Hostile
6. Alert	6. Irritable
7. Inspired	7. Ashamed
8. Determined	8. Nervous
9. Attentive	9. Jittery
10. Active	10. Afraid

Source: From Watson, D., Clark, L. A., & Tellegen, A. (1988). Development and validation of brief measures of positive and negative affect: The PANAS scales. *Journal of Personality and Social Psychology*, 54(6), 1063-1070.

Self-Determination Needs Satisfaction

Autonomy at work

1. I have a lot of opportunity to set my own goals to achieve my work objectives.
2. I have a lot of opportunity to provide inputs to decide how my work gets done.
3. I am free to express my ideas and opinions at work.

Competence at work

1. I feel very competent when I am at work.
2. Most days I feel a sense of accomplishment from working.
3. At work I have a lot of opportunity to show how capable I am.

Relationships at work

1. I get along with people at work.
2. I consider the people I work with to be my friends.
3. People at work care about me.

Source: Adapted from Deci, E. L., & Ryan, R. M. (2000). The "what" and "why" of goal pursuits: Human needs and the self-determination of behavior. *Psychological Inquiry*, 11(4), 227-268.

Supportive Supervisor

1. My supervisor tries to make my work as interesting as possible.
2. My supervisor is willing to help me perform my work to the best of my ability.
3. My supervisor takes pride in my accomplishments at work.

Source: Eisenberger, R., Huntington, R., Hutchison, S., & Sowa, D. (1986). Perceived organizational support. *Journal of Applied Psychology, 71*(3), 500-507.

Abusive Supervisor

1. My supervisor puts me down in front of others.
2. My supervisor expresses anger at me when he/she is mad for another reason.
3. My supervisor is rude to me.

Source: Adapted from Tepper, B. J. (2000). Consequences of abusive supervision. *Academy of Management Journal, 43*(2), 178-190.

Supportive Colleagues

1. My colleagues willingly give time to help me on work-related problems.
2. My colleagues show genuine concern and courtesy toward me, even under the most trying work or personal situations.
3. My colleagues assist me with my duties.

Source: Adapted from Lee, K., & Allen, N. J. (2002). Organizational citizenship behavior and workplace deviance: The role of affect and cognitions. *Journal of Applied Psychology, 87*(1), 131-142.

Abusive Colleagues

1. My colleagues say hurtful things to me at work.
2. My colleagues act rudely toward me at work.
3. My colleagues publicly embarrass me at work.

Source: Adapted from Bennett, R. J., & Robinson, S. L. (2000). Development of a measure of workplace deviance. *Journal of Applied Psychology, 85*(3), 349-360.

Positive Working Conditions

1. My work allows me to learn new things important for my development.
2. My work allows me to utilize my knowledge and skills to a large extent.
3. My opportunities for advancement are good.

Negative Working Conditions

1. My work has a lot of red tape to go through in order for me to get things done.
2. My work has a lot of conflicting requests I have to deal with.
3. My work has a lot of organizational politics to navigate through in order for me to get things done.

Individual Differences in Self-Determination Needs

Need for Autonomy

1. It is important to me that I have a lot of opportunity to set my own goals to achieve my work objectives.
2. It is important to me that I have a lot of opportunity to provide inputs to decide how my work gets done.
3. It is important to me that I am free to express my ideas and opinions at work.

Need for Competence

1. It is important to me that I feel very competent when I am at work.
2. It is important to me that most days I feel a sense of accomplishment from working.
3. It is important to me that at work I have a lot of opportunity to show how capable I am.

Need for Relationships

1. It is important to me that I get along with people at work.
2. It is important to me that I consider the people I work with to be my friends.
3. It is important to me that People at work care about me.

Source: Adapted from Deci, E. L., & Ryan, R. M. (2000). The " what" and " why" of goal pursuits: Human needs and the self-determination of behaviour. *Psychological Inquiry*, 11(4), 227-268.