

## THE MODERATING EFFECT OF SELF-EFFICACY ON THE RELATIONSHIPS BETWEEN TRANSFORMATIONAL LEADERSHIP AND SUBORDINATES HEALTH

GEBEYEHU BEGASHAW ABATE<sup>1</sup>, DANIEL TSEHAY SEWASEW<sup>2</sup>, BIRHANU MEKONNEN WOLDEMESKEL<sup>3</sup>

<sup>1,3</sup> Lecturer, <sup>2</sup> Assistant Professor, Department of Psychology, College of Social Science and the Humanities, University of Gondar, Post Box 196, Gondar, Ethiopia. Email: gebeyehu\_2006@yahoo.com

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### ABSTRACT

The aim of this study was to examine the moderating effect of self-efficacy on the relationships between transformational leadership and employees' health and wellbeing. A cross-sectional survey design was employed. Questionnaires were distributed for 528 employees working in different social service organizations in Spain. Participants had worked on average 62 months (5.1) years in their current position (e.g. as administrative personnel, assistant personnel and technician assistant including psychologists and social workers). The average age was 37 years and more than three quarters of the participants were females (82 percent). As expected transformational leadership has a direct negative relationship with employees' health (psychological distress and psychosomatic complaint). There is however, no enough evidence to show that self-efficacy moderates the relationship between transformational leadership and health. The study has practical implications particularly for the leadership development and organizational intervention programs.

**Keywords:** Transformational Leadership, Psychological Distress, Psychosomatic Complaint, Self-Efficacy.

### INTRODUCTION

In the last several decades, the concept of transformational leadership has received a great deal of theoretical and practical attention (Avolio, 1999; Tafvelin, Armelius, & Westerberg, 2011; Hetland, Sandal, & Johnson, 2007). Several studies have shown that transformational leadership (TL) is positively related to job satisfaction, commitment, creativity and performance (e.g. Jung, 2000; MacKenzie, Podaskoff, & Rich, 2001; Tafvelin, Armelius & Westerberg, 2011; and Hetland et al., 2007; Waldman, Ramirez, House, Puranam, 2001). Thus, the organizational effectiveness of transformational leadership is widely acknowledged (Franke & Felfe, 2011).

There is, however, comparatively little research on transformational leadership and employees' health (Franke & Felfe, 2011). Nevertheless, increasing attention has been given to investigate the effect of TL on employees' health. Indeed, some empirical research has shown, TL is associated with lower levels of psychological strain (Franke & Felfe, 2011), increased affective wellbeing (Arnold et al., 2007; Nielsen, Yarker, Brenner, Randall & Borg, 2008; Nielsen & Munir, 2009), increased job satisfaction (Bushra, Usman, & Naveed, 2011), improve sleep quality (Nielsen & Munir 2009) and reduced burnout (Hetland et al., 2007).

Transformational leaders were suggested to influence employee well-being in a variety of ways. First, it could be by reframing stressful situations into developmental opportunities necessary for personal growth (intellectual stimulation), employees may feel reassured and motivated to deal with the situation (Bass, 1998; and Tafvelin et al., 2011). Second, it may be through listening attentively to the personal needs of the followers (individual consideration) employees may feel understood and encouraged (Bass & Riggio, 2006). Furthermore, its influence could be through fostering perceptions of confidence, trust and appreciation (Franke & Felfe, 2011).

Efficacy beliefs have been related to a number of important individual, group and organizational outcomes (Walumbawa, Lawler, Avolio, Wang, & Shi, 2005). Some studies have reported that employees' health and well being is affected by the level of their self efficacy. For example, Jex and Bliese (1999) reported that self and collective efficacy moderated the relation between stressor (could be leadership) and strain (components of health). Respondents with

strong self-efficacy reacted less negatively in terms of psychological and physical strain than did those reporting low levels of efficacy. Although not directly related to health, Walumbawa et al., (2005) have also reported self-efficacy moderated the relationship between transformational leadership and followers work related outcomes (e.g. organizational commitment and job satisfaction).

A number of studies (Nielsen, Yarker, Randall, & Munir, 2009; O'Leary, 1992; Offerman, & Hellmann, 1996; Nielsen & Munir, 2009; Jex, Bliese, Buzzell, & Primeau, 2001) have confirmed the independent effects of leadership and efficacy on important individual outcomes such as stress and psycho-somatic wellbeing. However, studies that examined the interactive effect of transformational leadership and self-efficacy on employees' health and well being are hardly available. The purpose of this study was therefore, to examine the interactive effects of transformational leadership and self-efficacy on employees' health and wellbeing.

### Transformational Leadership

Transformational leadership refers to the leader moving the follower beyond immediate self-interests through idealized influence (charisma), inspiration, intellectual stimulation, or individualized consideration. It elevates the follower's level of maturity and ideals as well as concerns for achievement, self-actualization, and the well-being of others, the organization, and society (Bass, 1999).

*Idealized influence* and *inspirational leadership* are displayed when the leader envisions a desirable future, articulates how it can be reached, sets high standards of performance, and shows determination and confidence. Followers want to identify with such leadership. *Intellectual stimulation* is displayed when the leader helps followers to become more innovative and creative. *Individualized consideration* is displayed when leaders pay attention to the developmental needs of followers and support and coach the development of their followers (Bass, 1998).

### Health and Wellbeing

The concept of health and wellbeing is differently used by different researchers and variously includes concepts of physical and psychological health (Arnold et al., 2007). Most literatures have

focused on the relationships of leadership and the absence of ill-health or job satisfaction (soft aspects of wellbeing). However, there is at present increased interest in the positive aspects of wellbeing (derived from positive psychology) that goes beyond the absence of ill health and usually defined as the affective state of individuals (Nielsen & Munir, 2009; and Tafvelinet al., 2011).

Well being is also thought to be more of multi dimensional models including cognitive, professional, social, affective and psychosomatic dimensions (Tafvelin et al., 20011) but most empirical researches have focused on the affective part of wellbeing. This may be due to the availability of abundant measures of affective well being and the difficultness of measuring other dimensions such as psychosomatic wellbeing.

Thus In this study, health and wellbeing were addressed through psychological wellbeing (to be measured in psychological distress scales derived from GHQ) and psychosomatic wellbeing. Although psychosomatic compliant is a softer measure and a subjective report of self-report questionnaire, we think that it may represent the physical aspects of health. Hence, health and wellbeing is considered to be represented by psychological (affective) and psychosomatic wellbeing, which only few previous studies have studied both areas at the same time.

### Transformational Leadership and Health

Growing research bodies have shown that transformational leadership has a direct link to employees' health and wellbeing (e.g., Nielsen & Munir, 2009; Franke & Felf, 2011; Tafin, Armelius & Westerberg, 2011; and Liu, Siu & Shi, 2010). For example, transformational leadership is found to be positively associated with follower's perception of their work characteristics (Nielsen et al., 2008), which subsequently influences their general wellbeing.

Transformational leaders are able to induce a positive emotion to the followers through their charismatic and intellectual stimulation Arnold et al., (2007). They argued that positive moods and emotions would be forms of positive affective wellbeing, which is a mechanism that transformational leaders could establish and maintain the psychological wellbeing of workers.

Besides, transformational leaders, show concern and provide personal attention (individualized consideration) for their employees through listening and being compassionate and such a close relationship between leader and follower may increase employees sense of well being (Nielsen & Munir, 2009).

Sosik and Godshalk (2000) also found that transformational leadership behavior was positively related to mentoring functions received and in turn negatively related to job related stress. Based on the above review the following hypothesis was constructed:

**Hypothesis 1:** There is a direct negative relationship between transformational leadership and employees' psychological distress and psychosomatic complaints.

### Self-efficacy

Self-efficacy refers to one's belief about the ability and capacity to accomplish a task or environmental demands (Bandura, 1997) and the efficacy beliefs influence how people think, feel, motivate themselves and act.

Although leadership is not directly involved, some authors have found that self-efficacy also has a moderating effect on the relationship between stressors and strains (e.g. Jex & Gudanowski, 1992; Schaubroeck & Merritt, 1997). They reported that high self-efficacy beliefs buffer the impact of stressors on strains and individuals with high self-efficacy are likely to do something about stressors, whereas those with low self-efficacy have a greater tendency to worry about them. Individuals can meet situational demands quite successfully (Bandura, 1997) if they have the belief about their capacity and ability. It seems logical then to think that individuals with high self-efficacy are more likely to believe that they can meet job demands despite the presence of stressors (Jex et al., 2001).

Some other related studies have also shown that employees' health and well being is affected by the level of their self efficacy. For example, Jex and Bliese (1999) reported that self and collective efficacy moderated the relation between stressor and strain. Specifically, low levels of self-efficacy were associated with high levels of psychological strain and high levels of physical strain (Jex & Gudanowski, 1992) as well as with low levels of job satisfaction.

Moreover, high self efficacy has also shown to modulate the physiological stress response that is associated to health outcomes such as cardiovascular diseases (O'Leary, 1992) and general self-efficacy moderated the relationship between stressors (e.g. leadership) and mental well being (Siu, lu & spector, 2006).

Levels of self-efficacy may also influence individuals' preferences for different types of jobs and work environments (Jex & Bliese, 1999). Compared to those with low self-efficacy, individuals with high levels of self-efficacy would likely be more comfortable in "high scope" jobs where they can exercise personal judgment and function relatively independently (which are the behaviors of transformational leadership).

Researchers suggest self-efficacy would mediate the relationship between transformational leadership and affective wellbeing (Nielsen & Munir, 2009), and job satisfaction and psychological well being (Nielsen et al., 2009; Shi & Siu, 2010). Such and other studies investigated the mediating role of self efficacy on the relationships between transformational leadership and employees health, while leaving the interactive effects of these two important constructs (Walumbwa, et al., 2005).

Thus, this study has examined the role of self-efficacy in moderating the relationship between transformational leadership and employee's health and wellbeing. The following hypothesis was forwarded:

**Hypothesis2:** The relationship between transformational leadership and followers health (psychological distress and psychosomatic complaints) are moderated by followers self efficacy.

## METHODS

### Design and Procedure

The study employed a cross-sectional survey design. Questionnaires were distributed for 528 employees working in different social service organizations in Spain. Participants had worked on average 62 months (5.1) years in their current position (e.g. as administrative personnel, assistant personnel and technician assistant including psychologists and social workers). The average age was 37 years and more than three quarters of the participants were females (82 percent).

### Measures

**Transformational Leadership:** This concept was measured using the Spanish adapted version of the Multifactor Leadership Questionnaire (MLQ 5x; Bass and Avolio, 1995). Respondents were asked to rate how often their supervisor engages in behaviors specific to each dimension on a 5-point scale ranging from 0 (*not at all*) to 4 (*often, if not always*).

**Self-efficacy:** Five items Spanish version of self- efficacy was employed (Grau, Martinez, Agut & Salanova, 2001). An example of an item is "I can usually handle whatever comes my way in my work". Responses categories are: 1= strongly disagree, 2= moderately disagree, and 3= strongly agree.

**Health and Wellbeing:** The concept of Health and well-being was approached through Psychological distress and psychosomatic complaints. Psychological distresses are measured with 12 items derived from General Health questionnaire (GHQ) (Goldberg, 1992). An example of an item is "I have been felt constantly under stress". Response categories are: 1= not at all, 2= same as usual, 3 = more than usual, 4= much more than usual. Similarly, *psychosomatic complaints* were measured with a reduced nine items questionnaire (based on Cooper, Sloan, Williams, 1988). An example of an item is "frequency of the occurrence of Headaches and pains in your head

for the last three months. Response categories are: 1= never, 2= very infrequently, 3= infrequently, 4 = sometimes, 5= frequently, 6= very frequently. All the measurement scales had acceptable psychometric (reliability and validity) values.

**Control variables:** As health and wellbeing has been found to fluctuate with age and gender, (Arnold et al., 2007; Keyes, Shmotkin, & Ryff, 2002), it was necessary to control these variables. As people aged, they should develop skills (Gilbreath & Benson, 2004) that will help them to cope with their job and supervisor, they may also develop more realistic expectations about what to expect from a job and a supervisor. However, there was limited evidence that shows the control variables have an effect on the relations between transformational leadership and health and well being in this study.

**RESULTS**

**Intercorreltaions among Variables**

Binary correlations along with descriptive statistics were performed to examine relationships among variables of interest. Preliminary analyses were performed to ensure no violation of the assumptions of normality, linearity and homoscedasticity.

As shown in table 1, transformational leadership was significantly correlated with employees' health and well being (psychological stress and psycho somatic complaints),  $r = -.25$ , for psychological

distress, and  $r = -.19$ , for psychosomatic complaint,  $p < .01$  &  $.05$ , respectively. Thus, as participants rated their supervisor as more transformational, psychological distress and psychosomatic complaint decreases.

**Table 1: Means, Standard Deviations, Correlations of Study Variables and Alpha Coefficients NT1, 528 & NT2, 280)**

Scale	M (T1)	Sd(T1)	1	2	3	4
TL	2.6	.80	(.96)			
Slf.eff	3.2	.51	.14**	(.82)		
Psy.st	1.9	.46	-.25**	-.24	(.87)	
Psyc.som	2.1	.88	-.19*	-.15**	.55**	(.86)

*Note: TL (Transformational Leadership), Slf.eff (Self-Efficacy), Psy.st (Psychological Stress) and*

*Psyc.som (Psychosomatic Compliant). \*Significant at the 0.05; \*\*Significant at the 0.01.*

**Transformational Leadership and Employees Health and Wellbeing**

Using a hierarchical regression, the direct relationship (hypothesis one) was tested between TL and health and wellbeing. Preliminary analyses were conducted to ensure no violation of the assumptions of normality, linearity, multicollinearity (using tolerance and variable inflicting factor) and homoscedasticity.

**Table2: Regression Analysis of the Relations between Transformational Leadership and Health and Well-Being (N=528)**

Steps	Variables	T1(Psyc.str)			T1(Psyc.somat)		
		B	SEB	$\beta$	B	SEB	$\beta$
Step1	Job p.	-.04	.02	-.08	-.06	.04	-.06
	Age	.01	.03	-.01	.02	.06	.02
	Sex	.07	.05	.06	.20	.11	-.06
	R <sup>2</sup>			.005	.006		.012
Step 2	Job p.	.03	.02	-.07	-.05	.05	-.05
	Age	.01	.03	-.01	.03	.06	.02
	Sex	.07	.05	.06	.21	.09	.09
	TL	-.08	.03	-.13**	-.07	.05	-.15*
	$\Delta R^2$			.021	.004		.065

*Dependent variables; Psychological Stress and Psychosomatic Complain*

*Note: Job.p (Job Position), TL (Transformational Leadership) and P <.01\*\*, P < .05\**

As shown in table 2, TL predicts employees' health and well being. For example, TL predicts psychological distress ( $\beta = -.13$ ,  $P < .001$ ). Moreover, the result also revealed that there is a statistically significant relationship between TL and psychosomatic complain ( $\beta = -.15$ ,  $P < .001$ ). This shows that employees positive rate of their leaders lead to the decrease of experiencing psychological stress and somatic complain. Nevertheless, the variability accounted in this model as a result of transformational leadership is quite low (adjusted  $R^2 = .021$ ). Age, job position and sex were controlled in the analysis but none of them were found significant.

**Self- efficacy as a Moderator**

It was also hypothesized that the relationship between transformational leadership and employees' health and well-being is moderated by their level of self efficacy. A multiple regression model was tested to investigate whether the association between TL and employees health depends on the level of employee's self-efficacy.

**Table 3: Self-Efficacy as a Moderator in the Relationship between TL and Health (N=528)**

Variables	Psychological Distress				Psychosomatic Compliant			
	$\beta$	SEB	R <sup>2</sup>	sig	$\beta$	SEB	R <sup>2</sup>	sig
TL	-.17	.02		.001	-.07	.05		.001
Self-efficacy	-.19	.04		.001	-.31	.07		.001
TL*Self-efficacy	-.03	.02	.065	.110	-.07	.03	.038	.068
$\Delta R^2$			.063				.037	

*Dependent variable; Psychological Distress and Psychosomatic Complain; TL (Transformational Leadership)*

The result showed that there is lack of interaction effect. It is none significant in both aspects of health, psychological distress and psychosomatic complain (e.g.  $\beta = -.03$ ,  $p < .11$ , for psychological distress). Only main effects are observed to be significant.

**DISCUSSION**

This study aims to understand the moderating role of self-efficacy in the relationship between transformational leadership and employees' health and wellbeing. Psychological distress and

psychosomatic complaints were the outcome measures conceptualized as employees' health and well-being. The study allows reaching to two main conclusions. (1) There is support for the direct relationship between transformational leadership and health and wellbeing. (2) Self-efficacy does not moderate the relationship between transformational leadership and employee's health and wellbeing.

This study adds support to previous cross-sectional studies showing associations between transformational leadership/supervisors behavior and employees' health and well being (e.g. Arnold et al., 2007; Corrigan, Diwan, Campion & Rashid, 2002; Sosik & Godshalk, 2000; Gilbreath & Benson, 2004; Nielsen & Munir, 2009). The results of this study are also in line with results of (Liu, Siu, & Shi, 2010; Stordeur, D'hoore, & Vandenberghe, 2001), who found that leaders behavior made a significant contribution to the prediction of employees burnout. Thus, once again our results have confirmed the significant relationship between TL and employee well-being in the Spanish context.

The findings that transformational leadership has influences on followers' health related outcomes have practical implications for leadership development programmers as well as for intervention related programs to employees' health and wellbeing. It suggests that organizations can benefit greatly by providing transformational leadership training to their supervisors and managers to enhance followers' health (Kelloway & Barling, 2000, Arnold et al., 2007).

This study fails to provide enough evidence that self-efficacy moderates the relationship between transformational leadership and employees' health and wellbeing. Previous studies have also found inconsistent results. For example, Jex and Bleiese (1999) reported that self-efficacy moderates the relations between stressors (where leadership could be a component) and strain. Waluwmbwa et al., (2005) also reported that self-efficacy moderates employees' job satisfaction (component of psychological wellbeing).

On the other hand, Jex and Gudanowski (1992) failed to find moderator effects for self-efficacy on the relations between stressors and strain. This may be due to some factors: It might be due to low statistical power, small sample size and or simply the moderator did not have an impact on the stressor- strain relationship (Waluwmbwa et al., 2005). Siu et al., (2007) also reported a mixed result of the moderating role of self-efficacy in stressors and well being. Self-efficacy moderated the relationship between stressors and mental well-being, yet did not moderate the relationship between stressors and physical well-being.

Frazier, Tix & Barron (2004) also reported that detecting a true moderator effects is related to several difficulties. Such as, the low power of regression analysis to detect true interaction effect, non-experimental designs always have lower power to detect interaction effect, and the reliability of measures. This might be the reason that our study is not able to identify a significant interaction effect.

In fact, there might simply be no interaction effect between transformational leadership and self-efficacy that could have influenced employees' health and wellbeing. However, further research is needed to replicate and confirm this non-existent interaction. The results obtained from the present study however, provided support that self-efficacy was positively related to employees health and wellbeing and transformational leadership.

#### Limitations conclusions

The data was collected through a self-report questionnaire; this may lead to common problems with common method bias. The study also used cross-sectional research design, which might be difficult to reach a definite conclusion. Another limitation of this study could be the use of self-reported measurements for psychological distress and psychosomatic complaints. Although the instruments for each variable were reliable, objective measures such as recording sick leaves, blood pressure measures and saliva cortisol levels might be the best alternative.

In conclusion, the result has important implications for organizations aiming to improve employees' health and well-being

by giving trainings for supervisors to exert certain behaviors up on their followers particularly for a short period. We hope that the results of the current study will stimulate further investigation into the effect that transformational leadership would have on employee's wellbeing on the long run. Further longitudinal study is suggested.

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