Leadership Styles as Predictors of Employee General Health and Organizational Citizenship Behavior

SADIA NAZ

Department of Applied Psychology,
Lahore College for Women University, Lahore.
Email: sn9.bs2011@gmail.com

TEHZIBA KOUSIR

(Corresponding Author)
Lecturer, Department of Applied Psychology,
Lahore College for Women University, Lahore.
Email: tehzibakausar@gmail.com

AMINA OBAID KHAWAJA

Assistant Professor, Department of Applied Psychology,
Lahore College for Women University, Lahore.
Email: amina.o.khawaja@gmail.com

Abstract

The study investigates the role of Perceived Leadership Styles as predictors of Employee General Health and Organizational Citizenship Behavior among Software Engineers. This study also aims to explore how Perceived Social Support mediates the relationship between Leadership Styles and General Health of employees. The study is based on cross sectional survey design. The sample for the research consisted of 160 (men=80, women=80) Software Engineers, and data was collected from different software houses in Lahore by using purposive sampling technique. Leadership Styles were measured by using Transformational and Transactional Leadership Inventory (Podsakoff, MacKenzie, Moorman, & Fetter, 1990). To measure General Health of engineers, SF-36 (Ware & Sherbourne, 1992) was used. Organizational Citizenship Behaviour was measured by using Organizational Citizenship Behavior Checklist (Fox & Spector, 2012) and Multidimensional Scale of Perceived Social Support (Zimet, Dahlem, Zimet, & Farley, 1988) was used to measure the role of Social Support. A significant positive relationship appeared between Leadership Styles (Transformational, r=.24 and Transactional, r=.24) and Employee General Health, however, Citizenship Behavior did not show a significant correlation with either Leadership Styles (Transformational and Transactional) and Employee General Health. Social Support acted as a partial mediator in the relationship between Leadership Styles (Transactional and Transformational) and Employee General Health. Among socio-demographic variables, the number of dependents significantly predicted Organizational Citizenship Behavior. Furthermore, a gender based difference in General Health of the participants was observed where a significant gender difference was found in self- reported Pain, Energy and Fatigue levels of software engineers.

Key Words: Perceived Leadership Styles, General Health, Organizational Citizenship Behavior, Perceived Social Support.

Introduction

Software Engineering is a broad and emerging field of today's world. Software Engineers show different types of behaviors in their organizations. Software Engineering is a specific branch of engineering that focuses on all the features of software construction from the initial phases of system requirement to the retaining of system after its usage (Sommerville, 2011). The followers' perception of their leader's leadership styles influences their behavior in organization and their health which in turn affects the success and performance of their organization. The organizational environment, relationship with leaders and coworkers, and perceived social support from family, friends and coworkers also affect employees' behavior and health. The relationship between people and environment can also be described by the Person Environment Fit Model. Person Environment Fit (PE) can be defined as the extent of fit, match and similarity between person and some aspects of work environment (Edwards, Caplan, & Harrison, 1998). According to the past researches there are different types of fit such as a fit between skills of the person and requirements of the work environment. This model explains that if the environment is compatible with the needs of a person, positive outcomes occur. On the other hand, if the mismatch occurs between person's needs and work environment it will cause stress (Dawis, 1992; Edwards, 1996). Positive outcomes such as psychological well-being, citizenship behavior, job performance and satisfaction and commitment with organization are linked with Person Environment Fit (Zimmerman & Johnson, 2005).

According to Robbins (2001) leadership is a talent that persuades people, groups or organizations to attain a common goal. Dubrin (2001) stated that leadership is a skill to motivate the members of an organization by giving them self-confidence to accomplish the goals of their organization. Leadership style is a pattern of reliable behavior that is utilized by the leaders and perceived by people with whom they are working (Mishra, Grunewald, & Kulkarni, 2014). The behavioral acts that leaders demonstrate to lead their own organizations in order to persuade the employees to accomplish their organizational goals are known as leadership styles (Durbin, 1997).

In organizations the relationship of followers with their leaders can fall in two different types namely Transformational Leadership and Transactional Leadership Style (MacKenzie, Podsakoff, & Rich, 2001). Burns (1978) described these leadership styles for the first time and these were further explained and expanded by Bass and Avolio (1991). Transformational leadership style is a specific style in which a leader makes an effort to encourage followers in order to enhance their self -development so that they try to attain organizational goals (Bass & Avolio, 1990).

Podsakoff, Mackenzie and Bommer (1996) recommended six dimensions to define behavior of Transformational Leadership: to promote intellectual stimulation, to identify and articulate a vision, to foster the acceptance of group goals, to provide individualized support, to provide appropriate model and to set high performance expectations. To promote intellectual stimulation means that leaders motivate their employees to think innovatively and to challenge their existing state of affairs, intellectually play a part and take risks. To identify and articulate a vision means that leaders recognize opportunities for individual or organization, and develop a coherent and motivating vision of the future for their employees. To foster the acceptance of group goals refers to encouraging collaboration among followers and employees and encouraging them to work collectively toward shared goals. To provide individualized support means that leaders respect their employees and are concerned about their personal needs, feelings and well-being. To provide appropriate model means that a leader sets examples for followers that are relevant to their values. To set high performance expectations means that leaders exhibits their hope and anticipation for quality, excellence and employees' high performance (Harms & Crede, 2010). The present research aims to explore the effect of these six dimensions of Transformational Leadership

described by the model of Podsakoff, Mackenzie and Bommer (1996), on health and organizational citizenship behavior of software engineers.

Bass (1990) explains that transactional leadership style may be described by a number of components which may not be essentially equally exclusive. The first component or dimension is contingent rewards or the identification of success by rewarding the attempts and better performance. The second dimension is an active management by exception which involves an active monitoring and bringing the issues to the management. . Leaders observe the absence of compliance by using well developed standards and rules and take the corrective actions when needed. Transactional leadership style may also concentrate on passive management by exception in which the leaders are intended to interfere only when the desired objectives are not accomplished. The last component of transactional leadership style is laissez-faire in which the leaders stay away from decision making and employees who are engaged in the procedure take up all responsibilities Management by intervention and conditional rewards are the characteristics of transactional leadership style (Chang, 2002).

Earlier leadership researchers (Bass, 1985; Podsakoff, 1990) have highlighted contingent reward, which includes leaders explaining their expectations related to the task and roles and provide conditional rewards on the completion of expected tasks. This contingent reward is the primary and most important behavior to characterize transactional leadership style because it exhibits the concept of exchange which is essential for the behavior of transactional leader. The exchanges or transactions involved in contingent reward may contain tangible (e.g. increase in pay) or intangible (e.g. gratitude) goods (Podsakoff, 1990). The current study aims to explore the effect of contingent reward dimension of transactional leadership style on general health and organizational citizenship behavior of software engineers. Now what is general health and why should we discuss it with reference to leadership styles?

According to World Health Organization (WHO), Health is a condition of complete mental, physical, and social well-being and not only the lack of illness or disease (Nordqvist, 2015). Consistent with the definition of health given by WHO, Health Related Quality of Life concentrates on the complete state of quality of life of healthy or ill human beings as reflected by eight dimensions which are as follows: (a) limited physical activities due to health problems, (b) limited role activities due to physical symptoms, (c) pain in body, (d) limited social activities due to emotional or physical problems, (e) limited role activities due to emotional problems, (f) overall mental health, (g) vitality, and (h) an individual or group's perceptions about general health which is measured in the form of feelings related to satisfaction or dissatisfaction (Ware & Sherbourne, 1992).

Employees who are working in IT industry are more likely to experience a variety of health related problems because of constant physical and mental strain of work. Diseases are provoked, sustained or worsened by stress. The general health problems caused by stress are Habit Disorders such as alcohol abuse, Sleep disorders (Insomnia, Hypersomnia), Dermatological problems, Anxiety, Migraine, Hypertension, Muscle Tension, Diabetes (Type I, Type II) and Asthma etc (Padma, Anand, Gurukul, Javid, Prasad & Arun, 2015).

Work related anxieties such as severe anger, unrealistic expectations from employees, leaning towards achievement, not having job safety, lack of ability to admit failure have increased a mass of psychological problems among software professionals. Clinical psychologists stated that employees in information technology (IT) field experience a lot of Depression, Anxiety and loneliness due to their work environment and frequently exhibit feelings of failure, low self-esteem, and lack of satisfaction. This manifests in of marital, sexual and social problems. So, It is a good idea to treat the psychological problems of people

working in IT profession and to also concentrate on the management process and social environment of a company (Nayak, 2014).

The act or behavior that is helpful for organizations and their employees is called Citizenship Behavior (OCB) (Spector & Fox, 2002). OCB is an act or performance of an employee that maintains the psychological and social environment in which the employees perform their tasks (Fox, Spector, Goh, Bruursema, & Kessler, 2011). According to Williams and Anderson (1991) there are two categories of organizational citizenship behavior; (1) Citizenship behavior directed towards individuals (OCBI) which refers the behaviors that provide instant advantage to particular individuals in an organization and indirectly contributes to the success of organization, (2) Citizenship behavior directed towards organization (OCBO) which refers to behaviors that generally provide benefit to the organization. These behaviors contain providing an earlier notice about absence from work or to informally follow the rules to maintain organization. The study objectives include:

➢ To find out the relationship between Perceived Leadership Styles, Employee General Health and Organizational Citizenship Behavior among Software Engineers.
➢ To analyze the role of Perceived Leadership Styles (Transformational, Transactional) as predictors of Employee General Health and Organizational Citizenship Behavior.
➢ To find out how Perceived Social Support mediates the relationship between Perceived Leadership Styles and Employee General Health.
➢ To assess the role of socio-demographic variables in predicting Employee General Health and Organizational Citizenship Behavior.
➢ To compare experiences of Leadership Styles, General Health and Organizational Citizenship Behaviors in terms of Gender, Designation and Organization.

Literature Review

Turner and Muller (2005) stated that leadership style is a significant factor of success for the performance of a project team. There is no need for argument that leadership plays a significant role in software companies, however, there's almost no research study which indicates that leadership behaviors influence general health and organizational citizenship behavior in the context of software companies in Pakistan. It is this research gap that this study tries to fill.

Many researches have been conducted on leadership styles of software engineers. Minh-Ha and Nguyen (2014) studied the significant positive effect of Transformational Leadership and Transactional Leadership on job performance among software engineers. Nath (2013) found that software supervisors' Transformational Leadership ability and high emotional intelligence (EI) positively affect their teams, individual subordinates and organizations. Parzinger, Nath and Lemons (2011) found a significant positive correlation between managers' Transformational Leadership Style with the quality of software developed by the employees. Study findings suggested that a combination of Transactional, Transformational and technical Leadership results in great success of projects (Thite, 2000). Another study suggested that Transformational Leadership Style of project managers and support from top management can be equally useful for attaining the success of project in developed and developing countries (Iqbal, Long, Fei, & Bukhari, 2015). Ahmmed (2014) found that project managers' Transformational Leadership Style (TLS) had significant effect on project performance. Riaz and Haider (2010) concluded that job success was more likely to depend on Transformational and Transactional Leadership than career satisfaction. Angeline and Sudha (2005) highlighted the importance of Leadership Styles in IT organizations which can enhance

employees' satisfaction with factors (organization's reputation, health and work life balance) affecting their turnover decisions.

Many researches explained the health problems of software engineers such as depression, professional stress and harmful alcohol use (Darshan, Raman, Rao, Ram & Annigeri, 2013), eye strain, general fatigue, headache and body ache (Das, 2012), allergic diseases, hypertension and gastro-duodenal ulcer, depressive symptoms, adjustment and affective disorders, dysthymic disorder and psychological factors that affect their physical condition (Shoji, Oda, Satoh, Kubota & Imai, 2000), pain in back, neck, wrists, elbows and forearms, dry, itchy, sore or red eyes as well as stiffness or swelling in wrist and hand (Kumari & Pandey, 2010), insomnia, poor quality of life in mental, general and physical health (Zadeh & Begum, 2010).

In literature, researches have been conducted to explore the relationship between employee General Health and Leadership Styles. One study found that relationship between Leadership Style and employees' well-being was mediated by the followers' perceptions of clarity of their role, developmental opportunities and meaningfulness (Nielsen, Randall, Yarker, & Brenner, 2008). Transformational Leaders help to ensure employee's Psychological Wellbeing and job satisfaction and self and team efficacy mediated this relationship (Nielsen, Yarker, Randell & Munir, 2009). Rowold and Schlotz (2009) suggested that Transformational Leadership (individualized consideration) had negative relationship with dissatisfaction with work while Transactional Leadership (management by exception passive) had positive relationship with social conflicts, excessive work demands, high level of dissatisfaction with work and performance pressure that are indicators of stress.

Another study explored that active management by exception (one dimension of Transactional Leadership), stress related to physical and social work environment and uncertainty about their role had significant association with high level of emotional exhaustion which in return related to mental health of employees while contingent reward (one dimension of Transactional Leadership), and Transformational Leadership had no effect on emotional exhaustion (Stordeur, Dhoore & Vandenberghe, 2001). Kelloway, Turner, Baling and Loughlin (2012) indicated that perceived Transformational Leadership had positive relationship with employees' Psychological Wellbeing and this was mediated by trust in leader but active management by exception (a component of Transactional Leadership) and laissez-faire leadership had negative effect on employees' Psychological Wellbeing and reduced trust in leader. Leadership style or management in collaboration with organization may be an aspect that has influence on employees' health (Bernin, 2002). Similarly the present study aims to find out the role of transformational and transactional leadership styles in predicting general health of software engineers.

Transformational leaders encourage employees by directing them to give priority to the major collective success over their personal interests. Researches indicatethat transformational leadership has been constantly related with high levels of employees' OCB (Boerner, Eisenbeiss, Griesser, 2007; Schlechter & Engelbrecht, 2006; Wang, Law, Hackett, Wang, Chen, 2005). A study by Nielsen and Daniels (2016) highlighted that transformational leaders motivate their employees to show altruistic behavior (a dimension of OCB) and affect their long term illness and absence from work. The findings indicated that transformational leadership, procedural justice and complexity had a positive impact on OCB of employees (Lee, Kim & Hyung, 2013). Fatima, Irfan, Salahudin and Khan (2014) carried out a study on employees from telecom sector of Pakistan and results showed that there was a positive effect of perceived transformational leadership on OCB and emotional intelligence acted as a moderator in this relationship. Chen and Lee (2008) studied that supervisors' transformational leadership style was significantly positively related with Software Engineers' OCB.

It is stated that transactional leadership is more realistic and practical in nature because it focuses on achieving particular objectives and goals. An efficient transactional leader is able to identify and reward employees' achievements in issues such as efficiency of preparation before time (Jung, 2001). Rubin, Bommer and Bachrach (2010) pointed out that there is an important association between conditioned reinforcement/ transactional leadership and OCB. Khan and Rashid (2012) found that transformational and transactional leadership, organizational culture and organizational justice had a positive association with OCB. Ahmad, Asgari, Silong and Samah (2008) showed that there was a direct and positive association among transformational (TSL) and transactional leadership (TSLS), OCB and organizational justice. It was found that leader member exchange (LMX), trust and perceived organizational support (POS) mediated the relationship among TLS, TSLS, OCB and organizational justice. In another study Asgari, Silong, Ahmad and Samah (2008) found that TLS predicts OCB. The results of another research indicated that TLS and TSLS were positive predictor of employees' OCB. It was found that TLS was a stronger predictor of OCB than TSLS (Rodrigues & Ferreira, 2015). The results suggested that there was significant relationship between the quality of leader-employee relationship, employees' altruistic OCB and commitment (Truckenbrodt, 2000). The present study aims to explore the role of transformational and transactional leadership styles in predicting OCB of software engineers.

Previously, different researches have been done to find out the relationship between General Health and Citizenship Behavior. One study indicated that there was a significant positive effect of altruism, civic virtue and sportsmanship (dimensions of OCB) on subjective well-being while conscientiousness (dimension of OCB) had a negative impact on subjective well-being of employees (Yurcu, Colakglu & Atay, 2015). According to a study by Baranik and Eby (2016) OCB was related with positive affect and positive affect had positive relationship with satisfaction with General Health and Life Satisfaction. It was seen that high level of OCB was related with good Wellbeing (low level of job stress, work-family conflict, negative affect, burnout, emotional exhaustion and depersonalization) of employee (Meer, 2010). Jain (2014) stated that OCB was a strong predictor of General Health and promoted employees' General Health positively. Qadeer and Jaffery (2014) conducted a study on software engineers and showed a significant association of psychological capital (a person's positive psychological condition of development) with both OCB (towards organization and colleagues) and organizational climate. It was found that the psychological capital acted as a mediator in the relationship between organizational climate and OCB. It was concluded that OCB increased when supportive organizational climate was changed into the employees' psychological capital.

Many researches have been conducted to explore the relationship of Social Support with Leadership Styles, OCB and employees' Health. Holstad, Korek, Rigotti and Mohr (2014) suggested that the Transformational leaders decreased the followers' emotional strain by providing them Social Support. The study concluded that Social Support acted as a mediator and protective factor for the mental health of ambitious employees. Collins (2014) demonstrated a negative relationship between TLS and perceived stress. Similarly a negative association was found between perceived social support (PSS) and perceived stress which indicated that PSS improved the Psychological Wellbeing of employees.

It was found that offensive humor from coworkers was related with poor OCB and perceived support by Transactional Leaders influenced the OCB (Tremblay & Gibson, 2015). A research concluded that Transformational Leaders as compared to Transactional Leaders are more likely to motivate the perception of Social Support that can reduce the stress appraisal at work place which helps to improve the mental and physical health of employees (Lyons & Schneider, 2009). Sin (2012) found that high social support and low stress lead to higher OCB. It was suggested that employees' symptoms of stress could be

influenced by different types of Leadership behaviors and this effect could be reduced by sufficient amount of Social Support.

The results indicated that when leaders provided power and authority to their employees, they showed high level of citizenship behavior. When the organizations treated their employees equally and provided them justice, the employees showed positive behaviors, increased job performance and OCB and reduced withdrawal behavior or absentees. Perceived organizational support played a mediating role between them (Hassan & Hassan, 2015). There is an indication that Transformational and Reward Leadership promotes motivating Work Climate which then reduces psychosomatic problems of employees. It was concluded that Transformational and Reward (Transactional) Leadership was related with Health, and Social Support mediated this relationship (Mellor, Arnold, & Gelade, 2008).

Theatrical Framework for the Study

Social Cognitive theory by Bandura provides a strong theoretical framework for the study. According to Social Cognitive theory, with the help of social relations people know how to behave with leaders, followers and coworkers at workplace (Bandura, 2006). At workplace, employees communicate with their leaders, observe them and consider them as a model. Through this interaction they get motivation to shape their behavior and modify their actions according to the leadership style of their manager (Davies & Luthans, 1981; Wood & Bandura, 1989).

The study can also be described by Bio-psycho-social Model given by George Engel (1977). According to Bio-psycho-social model the interaction of biological, social and psychological needs of a person can affect the health and illness of a person. The present study measures General Health (as biological factor), Organizational Citizenship Behavior (as psychological factor) and Perceived Social Support (as social factor).

According to Zimet, Dahlem, Zimet and Farley (1988), Perceived Social Support is a person's perception about the buffering effect of resources between stressful incidents and symptoms. Perceived Social Support has three dimensions such as friends, family and significant others. Family and friends are those sources of support which can be clearly defined while a significant other can be a peer, leader, coworker and any other person not clearly defined, but a person with whom one meets daily. Johnson (1986) declared that social support is an essential need at the place of work to protect against stress. The impact of support depends on the perception of receiver (House, 1981). Social support can maintain or improve health and is often explained to be linked with health in three different manners.

A. Main effect
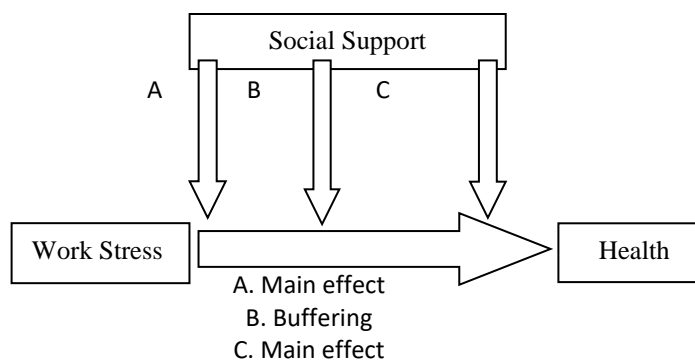B. Buffering
C. Main effect
Figure 1: Social Support (House, 1981)

Social support acts as a mediator in the relationships between different variables. The relationship between leadership styles and employee general health can be indirect and affected by perceived social support. Mediator variables identify how or why a specific effect or association occurs. Mediators explain the psychological processes that take place to construct the associations which are always dynamic qualities of individuals (e.g., emotions, beliefs, behaviors). Generally, a certain variable can be supposed to function as a mediator to the degree to which it performs action for the association between the predictor and the outcome. Mediators describe how external physical factors introduce inner psychological consequence. While moderator variables identify when significant effects will occur, mediators address how or why those effects take place (Baron & Kenny, 1986).

The present study aims to explore the mediating role of perceived social support in the relationship between perceived leadership styles and general health of software engineers. There is no such study in the literature which specifically focuses on this phenomenon which is why the current study tries to fill this gap in literature.

Research Hypotheses

It was hypothesized that:

- There is a significant relationship between Perceived Leadership Styles, Employee General Health and Organizational Citizenship Behavior (OCB) among Software Engineers.
- There is a significant relationship between Perceived Social Support and Employee General Health.
- There is a significant correlation between Perceived Social Support and OCB.
- Perceived Leadership Styles are significant predictors of Employee General Health and OCB.
- Perceived Social Support mediates the relationship between Perceived Leadership Styles and Employee General Health.
- The socio-demographics significantly predict Employee General Health and OCB.
- Male Employees' General Health and OCB are better as compared to female employees.

Method

Cross sectional research design was used for the study. To measure the Leadership Styles in the current study, Podsakoff, MacKenzie, Moorman, and Fetter's (1990) Transformational Leadership Inventory (TLI) and Contingency Reward measure of Transactional Leadership was used. 22 items of the TLI were used to measure six components of Transformational Leadership (demonstrating a proper role model, providing a clear vision, expects high performance, provides support and stimulation and encourages the achievement of goals) and 5 items about Contingent Reward measured Transactional Leadership Style. This Inventory has 7 point likert scale ranging from Strongly Disagree (1) to Strongly Agree (7) in order to measure all the constructs. In TLI the item number 16 and 19 were reverse coded while in the measure of Transactional Leadership Style the item number 5 was reverse coded. It was reported that TLI has .95 reliability and .82 to .87 internal consistency reliability for each dimension. The measure of Transactional Leadership Style, Contingent Reward has .93 reliability (Podsakoff, Mackenzie & Bommer, 1996).

RAND 36-Item Short Form Health Survey (SF-36) by Ware and Sherbourne (1992) was used to measure General Health. The SF-36 is constructed to measure a person's perception about General Health and it is a common and standard measure of Health Related Quality of Life (Ware & Sherbourne, 1992). SF-36 is a multi-item scale which measures eight domains of Health: (1) limited physical activities due to health problems, (2) limited normal role activities due to physical health related problems, (3) energy and fatigue

(vitality), (4) pain in body, (5) limited social activities due to physical or emotional problems, (6) limited role activities due to emotional problems, (7) general mental health (psychological wellbeing and psychological distress), (8) perceptions about general health (McHorney, Ware & Sherbourne, 1994). Most of the researches reported that the reliability of SF-36 was higher than 0.80 (McHorney, Ware & Sherbourne, 1994). It was estimated that the reliability of physical and mental health sections are more than 0.90 (Ware, Snow, Kosinski & Gandek, 1993).

In order to measure Organizational Citizenship Behavior, OCB-C by Fox and Spector (2009) was used. This 20 items OCB checklist measures the two dimensions of OCB: OCB towards coworkers and OCB towards organization. This checklist uses a 5 point likert scale that ranges from 1 (Never) to 5 (Everyday). According to Fox and Spector (2009) a concurrent validity of .83 and an alpha coefficient of .91 were reported for OCB-C. Perceived social support was measured by Multidimensional Scale of Perceived Social Support (MSPSS) (Zimet, Dahlem, Zimet, & Farley, 1988). The MSPSS measures the perception of a person about social support that he or she gets from friends, family and significant others. The MSPSS is a 12 items self-report scale. It has a 7 point likert scale that ranges from 1 (very strongly disagree) to 7 (very strongly agree). It has three subscales: (1) family, (2) friends and (3) significant others; each subscale contain four items. The values of test retest reliability were: Family subscale =.85, Friends subscale =.75 and Significant Others subscale =.72, and for the whole MSPSS =.85. The Cronbach's alpha reliability coefficient for the total MSPSS was .92 (Zimet, Powell, Farlley, Werkman, & Berkoff, 1990).

Sample and Procedure

Non-probability purposive sampling technique was used for data collection. The sample comprised of 160 software engineers (men=80, women=80)) with age range of 22-45 years from software houses in Lahore. Demographic information (Age, number of children, marital status, number of dependents, family income, job rank etc) was taken from sample. Official permission was taken from the organizational administrative authorities for data collection. Before administration of the questionnaire, the participants were briefed about the nature and purpose of the study. Rapport was established by assuring them of the confidentiality of their personal information to elicit their true responses. They were ensured that their information would be used for research purpose only. A consent form was also obtained from each participant individually. Questionnaires were distributed among participants and were collected back after the given time. The filled questionnaires were reviewed for data analysis and entry. The participants' responses were entered into the software for scoring and analysis. SPSS version 21 was used to analyze the data. A number of statistical techniques were used to evaluate hypotheses including Descriptive Statistics, Pearson Product Moment Correlation, Linear Regression, Path Analysis (Mediation), Independent Sample t-test and one way Analysis of Variance (ANOVA).

Results

Table 1: Demographic Characteristics of Software Engineers (N=160)

Variables	M	SD
Age in Years	26.18	4.19
	f	*%*
Age		
22-29	136	85.0
30-37	19	11.9
38-45	5	3.1
Gender		
Male	80	50

	f	%
Female	80	50
Marital Status		
Married	49	30.6
Unmarried	110	68.8
Separated	1	0.6
Number of Children		
No Children	132	82.5
1-2 Children	22	13.8
3 or more Children	6	3.8
Education		
Bachelors	27	16.9
Masters	121	75.6
M.phil	12	7.5
Ranking of Organization		
High Rank	64	40.0
Average Rank	96	60.0
Position or Rank of the Participant		
Assistant Software Engineer	18	11.3
Software Engineer	92	57.5
Senior Software Engineer	38	23.8
Team Lead	12	7.5
Employment Status		
Part-time	1	0.6
Full-time	159	99.4
Months Employed with Current Organization		
1-6 months	30	18.8
7-12 months	44	27.5
13-18 months	11	6.9
more than 18 months	75	46.9
Years of Experience in Job		
1-5 years	135	84.4
6-10 years	20	12.5
11-15 years	4	2.5
16 or more years	1	0.6
Family System		
Joint	74	46.3
Nuclear	86	53.8
Family Background		
Rural	37	23.1
Urban	123	76.9
Number of Dependents		
No Dependents	66	41.3
3 or more Dependents	94	58.8
Financial Satisfaction		
Yes	126	78.8
No	34	21.3
Job Satisfaction		
Yes	143	89.4
No	17	10.6

Note: f= Frequency, %= Percentage

The above table shows the demographic distribution of the participants.

Table 2: Descriptive Statistics and Alpha Reliability Coefficients of Leadership Styles, General Health, Organizational Citizenship Behavior and Social Support (N=160)

Variables	K	A	M	SD	Mini-Max
Transformational Leadership	22	.86	109.39	16.83	48-153
Articulation a Vision	5	.80	24.61	5.32	7-35
Providing an Appropriate Model	3	.87	15.7	3.71	3-21
Fostering the Acceptance of Group Goals	4	.85	21.63	4.47	5-28
High Performance Expectations	3	.61	15.24	3.28	5-21
Individualized Support	4	.28	18.22	3.84	6-28
Intellectual Stimulation	3	.74	13.97	3.51	4-21
Transactional Leadership	5	.69	24.41	5.87	6-35
Organizational Citizenship Behavior	20	.89	61.21	14.16	25-95
Social Support	12	.89	5.33	1.04	2.08-7
Significant Others Support	4	.89	5.10	1.50	1-7
Family Support	4	.81	5.58	1.16	2-7
Friends Support	4	.82	5.31	1.15	1.25-7
SF-36	36	.67			
Physical Functioning	10	.88	61.25	27.80	0-100
Role Limitations due to Physical Health	4	.67	61.09	34.65	0-100
Role Limitations due to Emotional Problems	3	.66	58.33	38.30	0-100
Energy / Fatigue	4	.11	57.75	15.16	15-95
Emotional Wellbeing	5	.24	66.60	17.35	16-100
Social Functioning	2	-.10	59.68	22.16	0-100
Pain	2	.75	65.75	23.84	0-100
General Health	5	-.17	63.09	18.29	15-100

Note: K= Number of Items, M= Mean, SD= Standard Deviation, α= Cronbach's Alpha

Table 2 indicates the mean, standard deviation and alpha reliability coefficient of Transformational Leadership, Transactional Leadership, Organizational Citizenship Behavior, Social Support (Significant others, Family, Friends) and SF-36 measuring General Health (Physical Functioning, Role Limitations due to Physical Health, Role Limitations due to Emotional Problems, Energy / Fatigue, Emotional Wellbeing, Social Functioning, Pain and General Health). The results showed good reliability coefficients for all variables.

The results of Pearson Product Moment Correlation indicated that Transformational Leadership Style (TFLS) is significantly positively related with Transactional Leadership Style (TSLS). TFLS significantly positively correlates with General Health, and its domains such as, Physical Health, Mental Health, RLPH, EF, EW and GH. But no significant relationship is found between TFLS and other domains of General Health such as PF, RLEP, SCF and Pain. It is found that Transactional Leadership Style (TSLS) has a significant positive relationship with General Health, Physical Health, Mental Health, and some of its domains such as, EF, EW, SCF, Pain and GH. But TSLS is not significantly associated with PF, RLPH, and RLEP. No significant relationship is found among OCB, General Health, TFLS and TSLS. But a significant negative relationship of OCB is found with SCF domain of General Health. There is a significant positive relationship between Social Support and OCB. Social Support has a significant positive relationship with Mental Health, but there is no significant relationship among Social Support, General Health and Physical Health.

Table 3: Correlation among Perceived Leadership Styles, Employee General Health, Organizational
Citizenship Behavior and Perceived Social Support (N=160)

Sr. No.	Variables	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21
1	Total TFLI	-	.84**	.79**	.77**	.57**	.63**	.45**	.52**	.09		.24**	.22**	.20**	.05	.21**	.09	.18*	.35**	.14	.09	.23**
2	AV		-	.61**	.59**	.41**	.44**	.21**	.34**	.09					.04	.21**	.12	.06	.25**	.14	.10	.17*
3	PAM			-	.60**	.31**	.42**	.27**	.43**	.09					-.01	.13	.02	.21**	.27**	.08	.04	.20**
4	FAGG				-	.38**	.36**	.16*	.46**	.03					.14	.08	.14	.18*	.38**	.19*	.10	.21**
5	HPE					-	.20**	.15*	.25**	.04					-.00	.05	.03	.06	.19*	-.01	-.02	.07
6	IDS						-	.17*	.46**	.04					.07	.30**	.08	.06	.19*	.07	.12	.10
7	IS							-	.19*	.06					-.04	.05	-.04	.17*	.13	.04	.02	.17*
8	Total TSLI								-	.11		.24**	.21**	.21**	.09	.14	.13	.16*	.27**	.15*	.16*	.19*
9	OCBC									-	.19*	-.10	-.08	-.10	-.11	-.05	-.07	.04	.03	-.18*	-.14	.06
10	Social Support										-	.15	.09	.18*								
11	General Health											-	.91**	.85**								
12	Physical Health												-	.56**								
13	Mental Health													-								
14	PF														-	.36**	.23**	.09	.15*	.28**	.20*	.20**
15	RLPH															-	.36**	.25**	.25**	.43**	.40**	.25**
16	RLEP																-	.22**	.41**	.48**	.28**	.23**
17	EF																	-	.48**	.37**	.34**	.37**
18	EW																		-	.54**	.29**	.40**
19	SCF																			-	.46**	.29**
20	Pain																				-	.39**
21	GH																					-

Note. **p< 0.01, *p< 0.05, TFLI= Transformational Leadership Inventory, AV= Articulating a Vision, PAM= Providing an Appropriate Model, FAGG= Fostering the Acceptance of Group Goals, HPE=High Performance Expectations, IDS= Individualized Support, IS= Intellectual Stimulation, TSLI= Transactional Leadership Inventory, OCBC= Organizational Citizenship Behavior Checklist, PF= Physical Functioning, RLPH= Role Limitations due to Physical Health, RLEP= Role Limitations due to Emotional Problems, EF= Energy and Fatigue, EW= Emotional Wellbeing, SCF= Social Functioning, GH= General Health.

Table 4: Multiple Linear Regression Analysis Predicting Employee General Health and OCB (N=160)

Variables	Employee General Health			OCB		
	B	$β$	95% CI	B	B	95% CI
Total TFLI	1.23	.16	[-.11, 2.58]	.03	.04	[-.11, .19]
Total TSLI	3.41	.15	[-.45, 7.28]	.22	.09	[-.22, .66]
R	.28			.12		
R^2	.07			.01		
F	6.66**			1.16		
ΔR^2	.07			.01		
ΔF	6.66			1.16		
	Physical Health			Mental Health		
Total TFLI	.74	.15	[-.10, 1.60]	.48	.12	[-.19, 1.16]
Total TSLI	1.85	.13	[-.59, 4.30]	1.56	.14	[-.38, 3.51]
R	.25			.23		
R^2	.06			.05		

F	5.50**			4.74**		
ΔR^2	.06			.05		
ΔF	5.50			4.74		
	Physical Functioning (PF)			Role Limitations due to Physical Health (RLPH)		
Total TFLI	.02	.01	[-.28, .32]	.38	.18*	[.00, .75]
Total TSLI	.39	.08	[-.48, 1.26]	.29	.04	[-.77, 1.36]
R	.09			.21		
R^2	.00			.04		
F	.64			3.82*		
ΔR^2	.00			.04		
ΔF	.64			3.82		
	Role Limitations due to Emotional Problems (RLEP)			Energy and Fatigue (EF)		
Total TFLI	.08	.03	[-.32, .50]	.11	.13	[-.04, .28]
Total TSLI	.74	.11	[-.45, 1.94]	.24	.09	[-.22, .71]
R	.13			.19		
R^2	.01			.04		
F	1.53			3.23*		
ΔR^2	.01			.04		
ΔF	1.53			3.23		
	Emotional Wellbeing (EW)			Social Functioning (SCF)		
Variables	B	β	95% CI	B	B	95% CI
Total TFLI	.29	.28***	[-.11, .47]	.10	.07	[-.13, .34]
Total TSLI	.38	.12	[-.12, .89]	.44	.11	[-.24, 1.13]
R	.36			.17		
R^2	.13			.03		
F	12.29***			2.40		
ΔR^2	.13			.03		
ΔF	12.29			2.40		
	Pain			General Health (GH)		
Total TFLI	.02	.01	[-.23, .28]	.20	.18*	[.00, .39]
Total TSLI	.62	.15	[-.11, 1.36]	.29	.09	[-.26, .85]
R	.16			.24		
R^2	.02			.06		
F	2.15			5.18		
ΔR^2	.02			.06		
ΔF	2.15			5.18		

Note. *$p<0.05$.,**$p<0.01$, ***$p<0.001$. CI= Confidence Interval, $\Delta R^2 = R^2$ change. R^2= Coefficient of determination., β= Standardized Coefficient. B=Un-standardized Coefficient. TFLI= Transformational Leadership Inventory, TSLI= Transactional Leadership Inventory.

A Multiple Linear Regression Analysis was performed to predict OCB and General Health with all of its dimensions from Transformational and Transactional Leadership Styles. It was found that Transformational Leadership Style (TFLS) significantly predicts Role Limitations due to Physical Health (RLPH), β = .18, $t(157)$ = 2.02, $p < .05$. A significant amount of variance in RLPH scores is also explained by

TFLS, R^2 = .04, $F(2,157)$ = 3.82, $p < .05$. TFLS is also found a significant predictor of Emotional Wellbeing (EW), $β$ = .28, $t(157)$ = 3.23, $p < .001$, by creating a significant proportion of variance in EW, R^2 = .13, $F(2,157)$ = 12.29, $p < .001$. Similarly, General Health (GH) is also significantly predicted by TFLS, $β$ = .18, $t(157)$ = 2.04, $p < .05$, with an insignificant difference, R^2 = .06, $F(2,157)$ = 5.18, $p > .05$. TFLS does not predict other dimensions of Health and overall Employee General Health (Physical & Mental Health) and OCB. Transactional Leadership Style does not predict OCB and General Health.

Table 5: Mediation Analysis for Social Support, Leadership Styles and General Health

Variables	General Health		
	B	B	95% CI
Step 1:			
Transformational Leadership Style	1.86	.24**	[.70, 3.01]
R	.24		
R^2	.06		
F	10.15**		
$ΔR^2$	.06		
$ΔF$	10.15		
Step 2:			
Transformational Leadership Style	1.67	.22**	[.40, 2.93]
Perceived Social Support	10.32	.06	[-12.77, 28.01]
R	.24**		
R	.25		
R^2	.06		
F	5.33		
$ΔR^2$	.06		
$ΔF$	5.33		
Step 3:			
Transactional Leadership Style	5.28	.24**	[1.97, 8.59]
R	.24		
R^2	.05		
F	9.94**		
$ΔR^2$	.05		
$ΔF$	9.94		
Step 4:			
Transactional Leadership Style	4.71	.21**	
Perceived Social Support	8.65	.07	
R	.24**		
R	.25		
R^2	.06		
F	5.32		
$ΔR^2$	.06		
$ΔF$	5.32		

Note. *p<0.05., **p<0.01. CI= Confidence Interval, $ΔR^2$=R^2 change. R^2= Coefficient of determination., β = Standardized Coefficient. B=Un-standardized Coefficient.

Regression analysis was used to investigate the mediating role of Perceived Social Support in the relationship between Leadership Styles (Transformational & Transactional) and Employee General Health. The results indicated that Transformational Leadership Style (TFLS) is a significant predictor of General

Health, β = .24, p < .01, with an R2 = .06. While in the second step, in the presence of mediator (Social Support) the β value of TFLS is reduced, β = .22, p < .01. It means that the mediator influences the effect of TFLS on General Health, which shows that Social Support is a partial mediator in the relationship between TFLS and General Health (Figure 2). Similarly, Transactional Leadership Style (TSLS) is shown as a strong predictor of General Health, β = .24, p < .01, with an R2 = .05while in the next step, due to the presence of Social Support as a mediator the β value of TSLS is decreased, β = .21, p < .01. It means that Social Support partially mediates the relationship between TSLS and General Health (Figure 3).
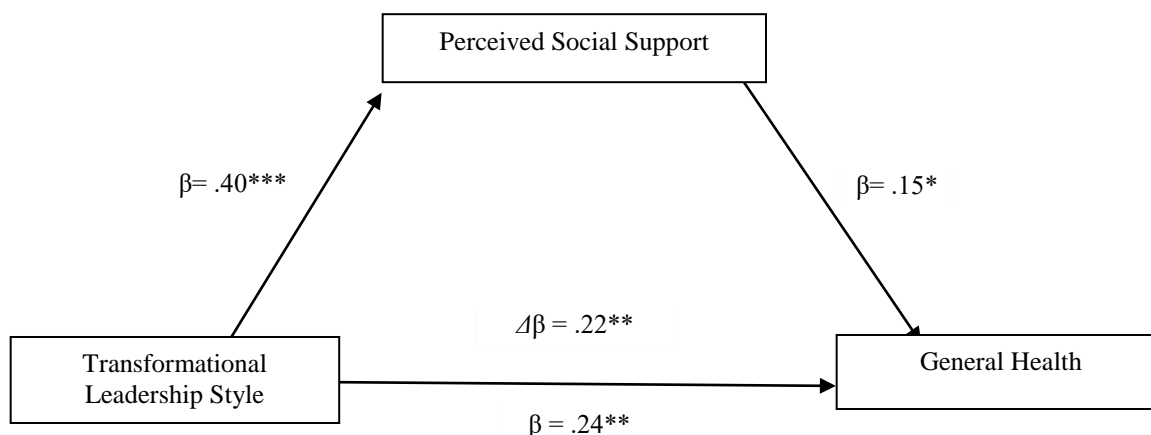
Figure 2: Social Support is a partial mediator in the relationship between TFLS and General Health.
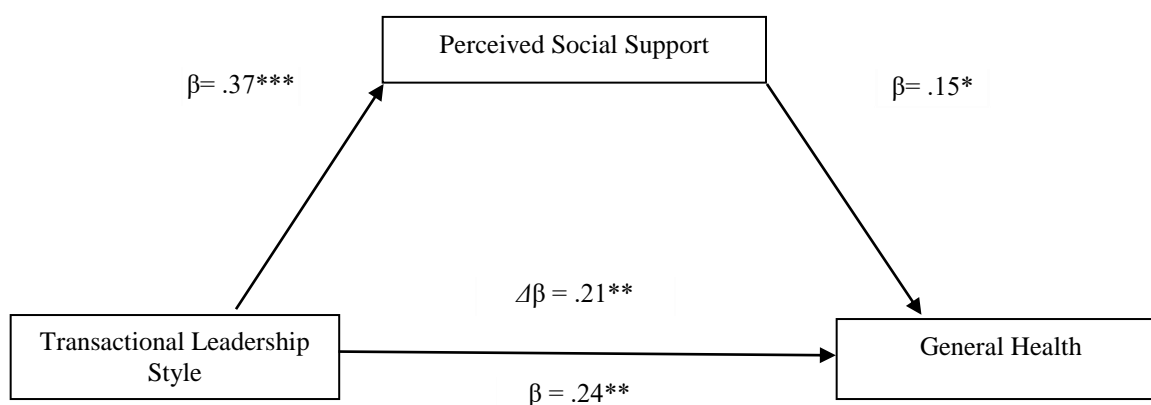

Figure 3: Social Support is a partial mediator in the relationship between TSLS and General Health.

A Multiple Linear Regression Analysis was conducted to predict OCB and General Health from demographic variables. The results indicated that gender is a significant negative predictor of General Health,

Table 6: Multiple Linear Regression Analysis Predicting Employee General Health and OCB (N=160)

Variables	Employee General Health			OCB		
	B	B	95% CI	B	β	95% CI
Gender	-57.33	-.22*	[-110.68, -3.98]	-.90	-.03	[-6.83, 5.02]
Family System	6.58	.02	[-34.72, 47.89]	-1.01	-.03	[-5.60, 3.57]
Family Background	39.03	.12	[-8.91, 86.99]	-4.43	-.13	[-9.76, .89]
Number of Dependents	-26.52	-.10	[-71.17, 18.13]	-4.90	-.17*	[-9.86, .05]
Financial Satisfaction	-7.10	-.02	[-61.62, 47.41]	-1.61	-.04	[-7.66, 4.44]
Job Satisfaction	-51.24	-.12	[-122.62, 20.13]	-6.90	-.15	[-14.84, 1.02]
Rank of Organization	-42.31	-.16	[-94.01, 9.38]	-.54	-.01	[-6.29, 5.19]
R	.25			.24		
R^2	.06			.06		
F	1.44			1.41		
ΔR^2	.06			.06		
ΔF	1.44			1.41		

Note. *p<0.05. CI= Confidence Interval, ΔR^2=R^2 change. R^2= Coefficient of determination. β = Standardized Coefficient. B=Un-standardized Coefficient.

$β$ = -.22, $t(152)$ = -2.12, $p < .05$,, R^2 = .06, $F(7,152)$ = 1.44, $p > .05$. Similarly, number of dependents is a significant negative predictor of OCB, $β$ = -.17, $t(152)$ = -1.95, $p < .05$, with an insignificant proportion of variance in OCB levels, R^2 = .06, $F(7,152)$ = 1.41, $p > .05$. All other demographic variables do not predict OCB and General Health of Software Engineers.

Table 7: Mean Differences between Male and Female Employees on General Health and OCB (N=160)

	Gender Male (n=80)		Female (n=80)				CI (95%)		
	M	SD	M	SD	t(158)	p	UL	LL	Cohen's d
OCBC	60.76	13.10	61.67	15.21	-.40	.68	3.52	-5.34	0.06
PF	60.12	27.61	62.37	28.12	-.51	.61	6.45	-10.95	0.08
RLPH	60.00	34.58	62.18	34.90	-.39	.69	8.66	-13.03	0.06
RLEP	60.00	38.39	56.66	38.39	.54	.58	15.32	-8.65	0.08
EF	60.06	15.68	55.43	14.36	1.94	.05	9.32	-.07	0.30
EW	66.55	18.97	66.65	15.69	-.03	.97	5.33	-5.53	0.00
SCF	59.84	23.92	59.53	20.40	.08	.92	7.25	-6.63	0.01
Pain	69.46	24.81	62.03	22.37	1.99	.04	14.81	.05	0.31
GH	65.12	17.39	61.06	19.05	1.40	.16	9.75	-1.63	0.22
Physical Health	314.78	79.30	303.09	81.02	.92	.35	36.72	-13.34	0.14
Mental Health	186.39	67.27	182.84	60.11	.35	.72	23.46	-16.37	0.05
General Health	501.17	130.28	485.94	125.02	.75	.45	55.10	-24.64	0.11

Note. CI= Confidence Interval; LL: Lower Limit, UL: Upper Limit, M = Mean; SD = Standard Deviation.

The results of Independent sample t-test showed that there is a significant difference in both genders on the self- reported Energy and Fatigue Level (domain of General Health), $t(158)$ =1.94, $p < .05$, with males receiving higher scores than females. Similarly, both genders have significantly different mean scores on self-reported Pain, $t(158)$ =1.99, $p < .05$, with males receiving higher scores than females. On the other

hand, there are no significant differences in OCB and other domains of General Health among male and female employees.

Table 8: Mean Differences between Employees of High and Average Rank Organizations on General Health and OCB (N=160)

| | Rank of Organization | | | | | | CI (95%) | | |
| | High Rank (n=64) | | Average Rank (n=96) | | | | | | |
	M	SD	M	SD	t(158)	p	UL	LL	Cohen's d
OCBC	61.28	14.62	61.17	13.92	.04	.96	4.63	-4.42	0.00
PF	62.96	27.98	60.10	27.77	.63	.52	11.74	-6.01	0.10
RLPH	65.62	32.88	58.07	35.63	1.35	.17	18.56	-3.46	0.22
RLEP	58.33	38.94	58.33	38.08	.00	1.00	12.24	-12.24	0.0
EF	56.71	13.92	58.43	15.98	-.70	.48	3.12	-6.56	0.11
EW	67.06	17.99	66.29	17.00	.27	.78	6.31	-4.77	0.04
SCF	60.93	22.65	58.85	21.90	.58	.56	9.16	-4.99	0.09
Pain	65.93	23.12	65.62	24.43	.08	.93	7.93	-7.31	0.01
GH	62.81	17.36	63.28	18.98	-.15	.87	5.38	-6.31	0.02
Physical Health	314.06	77.88	305.52	81.81	.65	.51	34.12	-17.04	0.10
Mental Health	186.33	66.22	183.47	62.15	.27	.78	23.19	-17.48	0.04
General Health	500.39	127.03	489.00	128.29	.55	.58	52.12	-29.33	0.08

Note. CI= Confidence Interval; LL: Lower Limit, UL: Upper Limit, M = Mean; SD = Standard Deviation.

The results of Independent sample t-test indicated that there is no significant difference in OCB levels and General Health among Software Engineers on the basis of the ranking (high rank, average rank) of organization.

Table 9: One-way Analysis of Variance for the difference in employee's position or rank on their OCB and General Health

Sources	SS	Df	MS	F	p
OCBC					
Between Groups	580.68	3	193.56	.96	.41
Within Groups	31302.66	156	200.52		
Total	31883.34	159			
PF					
Between Groups	298.75	3	99.52	.12	.94
Within Groups	122651.43	156	786.22		
Total	122950.00	159			
RLPH					
Between Groups	14893.51	3	4964.50	4.39	.00
Within Groups	176040.07	156	1128.46		
Total	190933.59	159			
RLEP					
Between Groups	9625.25	3	3208.41	2.23	.08
Within Groups	223708	156	1434.02		
Total	233333.33	159			
EF					
Between Groups	667.22	3	222.40	.96	.41

Within Groups	35922.77	156	230.27		
Total	36590.00	159			
EW					
Between Groups	1239.28	3	413.09	1.38	.25
Within Groups	46671.11	156	299.17		
Total	47910.40	159			
SCF					
Between Groups	1640.68	3	546.89	1.11	.34
Within Groups	76468	156	490.18		
Total	78109.37	159			
Pain					
Between Groups	1000.82	3	333.60	.58	.62
Within Groups	89396.67	156	573.05		
Total	90397.50	159			
GH					
Between Groups	3720.17	3	1240.05	3.90	.01
Within Groups	49523.41	156	317.45		
Total	53243.59	159			
Physical Health					
Between Groups	35334.70	3	11778.23	1.86	.13
Within Groups	985522.17	156	6317.45		
Total	1020856.87	159			
Mental Health					
Between Groups	28696.05	3	9565.35	2.42	.06
Within Groups	614897.05	156	3941.64		
Total	643593.10	159			
General Health					
Between Groups	118370.19	3	39456.73	2.49	.06
Within Groups	2466862.53	156	15813.22		
Total	2585232.73	159			

Note. **$p < 0.01$, *$p < 0.05$, SS= Sum of Squares, df=Degree of Freedom, MS= Mean Square, PF= Physical Functioning, RLPH= Role Limitations due to Physical Health, RLEP= Role Limitations due to Emotional Problems, EF= Energy and Fatigue, EW= Emotional Wellbeing, SCF= Social Functioning, GH= General Health.

The results of one way Analysis of Variance showed that employees differ significantly in their Role Limitations due to Physical Health across position or rank (RLPH), $F(3,156) = 4.39$, p=.00, as well as on their General Health (GH), $F(3,156) = 3.90$, p=.01. Post Hoc analysis Tukey HSD for significance indicated that Senior Software Engineers (M =76.97, SD = 27.49) experience more Role Limitations due to Physical Health (RLPH) than Software Engineers (M = 56.79, SD = 34.98), and Team Lead (M = 43.75, SD = 35.55), and this difference is significant at 0.5 level of significance. Similarly, the Senior Software Engineers have better General Health (GH), (M= 69.21, SD = 18.58) as compared to Assistant Software Engineers (M= 52.50, SD = 18.72), and this difference is also significant at 0.5 level of significance. All other comparisons are not statistically significant.

Discussion

The study under discussion hypothesized that there would be a significant relationship between Perceived Leadership Styles, Employee General Health and Organizational Citizenship Behavior (OCB) among Software Engineers. This was supported by statistical analysis : Transformational Leadership Style (TFLS) was found to have a a significant positive relationship with General Health and its domains such as, Physical Health, Mental Health, Physical role functioning (RLPH), Energy and Fatigue (Vitality), Emotional Wellbeing (EW), and General Health (GH). The positive relationship between TFLS and General Health was borne outby previous research. For insatnce ait was shown that TFLS is related to employees' well-being (Nielsen, Randall, Yarker & Brenner, 2008). Another study found that employees' health and wellbeing were enhanced by TFLS (Lloyd, King, & Chenoweth, 2002).

The positive association existing between TFLS and Physical Health in the current study is supported by research data indicating that TFLS enhances Physical Health and Wellbeing of employees (Zwingmann, Wegge, Wolf, Rudolf, Schmidt, & Richter, 2014). The positive association between RLPH (Physical role functioning) and EF (Vitality) indicates that employees under TFLS feel more energetic and their physical functioning improves due to underlying motivation provided by TFLS. These findings are consistent with the earlier findings of a study conducted by Cavazotte, Moreno and Bernardo (2013) which indicated that perceived TFLS was associated with high task performance and helping behaviors of employees. The reason behind this is that the TFLS motivates employees to achieve group goals and provides them a clear vision for the future.

A positive interaction is found between TFLS, Emotional Wellbeing (EW) and Mental Health in the study and it is similar to earlier research findings (Kelloway, Turner, Baling, & Loughlin, 2012; Skakon, Nielsen, Borg, & Guzman, 2010). All these findings suggested that TFLS had a significant positive relationship with affective/emotional wellbeing, psychological wellbeing or Mental Health of employees.

The research further indicates that Transactional Leadership Style (TSLS) has a significant positive relationship with General Health and its domains (Physical Health, Mental Health, EF, EW, SCF, Pain and GH). The findings are consistent with the earlier researches which indicate that TSLS has a positive association with employees' psychological wellbeing i.e. Emotional and Mental Health (Kelloway, Turner, Baling, & Loughlin, 2012). Mellor, Arnold and Gelade (2008) discovered that TSLS enhanced the Health of employees by reducing their physical, mental and emotional concerns.

The present study also highlights that there is no significant interaction between General Health and OCB. This finding lacks a support from literature as many researches showed that Citizenship Behavior and General Health were positively related (Baranik & Eby, 2016; Jain, 2014; Meer, 2010; Yurcu, Colakglu, & Atay, 2015). OCB has a significant negative association with Social Functioning (SCF) a domain of General Health and in the present study SCF means the activities and interactions with friends, groups, family or neighbors. This result is inconsistent with findings of a research done by Bolino, Bloodgood and Turnley (2001) which indicated that OCB was positively linked with the creation of a network of strongly attached personal relationships (Social Capital). The reason behind these inconsistent findings may be the culture, climate and environment of the Pakistani software companies which may not support the employees' Citizenship Behavior in organization so that they are not allowed to interfere, help and interact with other coworkers in spite of their social functioning outside the organization.

OCB has no relationship with TFLS and TSLS. These findings are not supported by the earlier researches because previously it was found that TFLS and TSLS had a positive relationship with OCB (Ahmad, Asgari,

Silong, & Samah, 2008; Chen & Lee, 2008; Khan& Rashid, 2012). A Transformational leader motivates the employees to achieve group goals that enhances their Citizenship Behavior but the study findings are not supporting this phenomenon probably because the field like Software Engineering (SE) has its own policies, culture, and climate in which the leaders may not allow their subordinates to interfere, interact and help other coworkers. While on the other hand, a Transactional leader reinforces the employees when the expected goals are achieved, so in SE field the leaders may not focus on the Citizenship Behavior of the employees and only be concerned with the quality and success of their projects.

It was also hypothesized that there is a significant relationship between Perceived Social Support and Employee General Health (Physical & Mental). It was found that Social Support is significantly positively correlated with Mental Health. This is consistent with past researches which highlighted that social support showed a positive relationship with Mental Health, which meant that the Mental Health of employees was improved by getting high level of Social Support (Daalen, Willemsen, Sanders, & Veldhoven, 2009; Sinokki, 2011; Snow, Swan, Raghawan, Connel, & Kleins, 2003; Stenfors, Hanson, Oxenstierna, Theorell, & Nillson, 2013).

Relationship between Social Support and General Health (Physical) is not justified by the current study which is quite surprising because previous researches mostly stated that Social Support had a significant positive relationship with General Health and Physical Health (Oxenstierna, Ferrie, Hyde, Westerlund, & Theorell, 2005; Oxenstierna, Hanson, Widmark, Finnholm, Stenfors, Elofsson, & Theorell, 2011). The reason behind this surprising evidence may be the professional circumstances as fields like Software Engineering (SE) do not keep physical health into consideration and all that is demanded, is mental work and creativity because the SE focuses on the construction, maintenance and success of software projects which requires intellectual, mental and innovative work.

A significant association was assumed between Perceived Social Support and OCB in the current study. It was found that Social Support has a significant positive relationship with OCB. This finding is similar with most ofthe studies in literature which show that Social Support enhances OCB of employees (Anjum & Naqvi, 2012; Chen & Chiu, 2008; Miao, 2011; Wang, 2014).

Another hypothesis stated that Perceived Leadership Styles significantly predicted Employee General Health and OCB as TFLS is a significant predictor of RLPH, Emotional Wellbeing (EW) and GH (General Health). Many previous researches (Kelloway, Turner, Baling, & Loughlin, 2012; Nielsen, Randall, Yarker, & Brenner, 2008; Skakon, Nielson, Borg, & Guzman, 2010) provide a strong evidence for the current research findings that TFLS positively predicted Psychological/Emotional Well-being, but it is inconsistent with a research conducted by Stordeur, Dhoore and Vandenbeghe (2001), which indicated that TFLS did not predict EW. It is clearly evident that most of the researches support the current study findings that TFLS has an effect on EW and GH.

Another finding in the present study reveals that both TFLS and TSLS do not predict OCB and overall Employee General Health. These findings are inconsistent with earlier researches which found that TFLS and TSLS strongly predicted OCB and General Health (Ahmad, Asgari, Silong, & Samah, 2008; Fatima, Irfan, Salahudin, & Khan, 2014; Khan& Rashid, 2012; Lee, Kim, & Hyung, 2013; Madhu & Krishnan, 2005; Mellor, Arnold, & Gelade, 2008; Rodrigues & Ferreira, 2015). It may be due to the fact that the SE field requires mental health, intellectual and creative abilities for the development and success of software products and the SE culture may not support employees' interaction and correspondence which leads to the OCB.

Perceived Social Support (PSS) mediated the correlation between Employee General Health and Perceived Leadership Styles (PLS) in current research ;the mediation effect was however partial. The role of PSS as a mediator is reported many times by different researches. However, considering PSS as a mediator between PLS and General Health seems to be a new angle,which is supported by some evidence from previous researches (Holstad, Korek, Rigotti, & Mohr, 2014; Mellor, Arnold, & Gelade, 2008) which showed that TFLS and TSLS was related with employees' Health, and Social Support mediated this relationship.

It was assumed that socio-demographic variables are significant predictors of Employee General Health and OCB. The findings show that gender is the only significant predictor of General Health (Physical and Mental Health). This finding is supported by different researches. It was found that gender has an effect on the level of depression faced by Software Engineers as it was reported that female Software Engineers were more likely to suffer from depression (Darshan, Raman, Rao, Ram, & Annigeri, 2013). It can be concluded from this finding that gender is an important determinant of Mental Health of Software Engineers. Another research indicated that Software Engineers were more prone to suffer from insomnia and it was related with poor quality of life (Physical and Mental Health). Gender has a significant effect on insomnia but it has no effect on the relationship between insomnia and quality of life or General Health (Zadeh & Begum, 2010). It can be concluded from all these findings that gender is an important predictor of Software Engineers' General Health (Physical, Mental) or it may affect any physical or mental health problem.

Another finding of the study shows that OCB is significantly negatively predicted by number of dependents. The number of dependents refers to the number of people financially dependent on the person: if an employee has satisfactory financial resources, salary or income then he or she can easily meet the needs of people financially supported by the employee and it can affect OCB level. It means that the higher the number of dependents, the lower the level of OCB or vice versa. There is no research which specifically focused on the relationship between number of dependents and OCB. But researches have been conducted on income and marital status (married employees have children and have to support their families having more dependents) and OCB. It was found that marital status and annual income has a significant effect on OCB levels (Ueda & Ohzono, 2013).

The study hypothesized that male employees would score better on OCB and General Health as compared to female employees. No significant difference is however reported between male and female scores on OCB; these findings are supported by a research (Murugesan, Raja, & Kannan, 2013), while another research challenges these findings, which showed that there was a significant gender difference in OCB levels of employees i.e. female employees showed higher levels of OCB (Mehnaz, Mehdi, Jafar, & Abbolghasem, 2013).

It is found that male employees feel more energetic (EF i.e. Vitality domain of General Health) than female employees. Males have a biologically strong body structure and can easily do tasks which require more energy therefore they show more vitality as compared to females. The females have to do their family and household responsibilities and this can make them less active and energetic at workplace. Here, more vitality or energy means less fatigue. There is no such study in literature which specifically focuses on the energy and fatigue level in software engineers. But a study was conducted on sleep disturbance, fatigue and sickness absences, which studied the gender difference in effect of fatigue level on sickness absence among male and female employees, indicating that fatigue had a significant effect on sickness absence in men as compared to women. It was concluded that male experienced more fatigue (i.e. less energy) which

made them vulnerable to long-term sickness absence (Bultmann, Nielsen, Madsen, Burr, & Rugulies, 2012).These findings are contrary to the present research findings.

The study showed that male employees reported more pain which is quite an interesting finding because mostly it is observed that females report more pain while males make less complaints of pain. The reason of this unique finding may be the culture, long working hours and nature of job in Software Engineering field. But this finding lacks a support from literature as a study showed that female workers (computer users) reported more severe pain for longer duration and poor work performance and productivity as compared to males (Madeleine, Vangsgaard, Andersen, YouGe, & Arendt-Nielsen, 2013).

When employees are compared on the basis of organizational ranks (high rank, average rank), no significant difference is as such reported in the current research. These findings are contrary to a research which showed that Software Engineers of multinational companies (high rank) showed higher level of OCB as compared to Indian companies (average rank) (Murugesan, Raja, & Kannan, 2013). This is due to the fact that multinational or high rank companies may have such policies and organizational climate that support the Citizenship Behavior but in the current study, organizational climate was not studied. Therefore, more researches are needed to explore this phenomenon by taking into consideration the organizational climate and exact ranking of organization.

The findings of present research show that there is a significant effect of employees' position or rank on their Physical Health (Physical role functioning), as well as on their General Health (GH). It indicates that Senior Software Engineers show more physical role functioning (RLPH) than Software Engineers and Team Lead. Similarly, the Senior Software Engineers have better General Health (GH) as compared to Assistant Software Engineers. This phenomenon can be explained by taking into account the fact that each rank of job has different job demands, responsibilities and roles which can affect General Health and physical functioning. A Senior Software Engineer has experience and is well settled in job which leads towards job and career satisfaction that make General Health better. While a Team Lead is more senior and has more job responsibilities, leads a project team and is responsible for team performance and project success; all these things can cause stress which affects the GH of a Team Lead. Similarly, an Assistant Software Engineer is new in practical field, concerned about his or her career, not having good salary and experience and feels job insecurity as well; all these factors create stress and affect the GH of Assistant Software Engineer. It is quite a unique study of its nature because it is done in software industry and used different types of position or rank of employees according to the organization. No research is found which compared General Health of employees by using these job ranks in Software Engineering field. The effect of job rank on health of employees can be described by a study conducted by Safaria, Othman and Wahab (2012) which indicated that rank of employees (academic staff) has an impact on perceived job stress that can affect employees' GH.

Initially the sample size was decided to be 200, but due to the security reasons in a country like Pakistan, the sample size was reduced to 160, because most of the companies did not allow for data collection. The Software Engineers did not know about the importance of research because they mostly work on different types of projects and they are not aware of the application of Health and Organizational Psychology in the field of Software Engineering. They feel that Behavioral and Psychological research is not relevant to their field and nature of job and it is a factor that affects their true responses on OCB as well as their willingness to participate in research. Therefore, there is a need to create awareness among Software Professionals that the human dimension is also important in Software production because their behaviors, physical and mental health and leadership styles affect their performance, success and quality of their software products.

The study is unique in its nature because it explores the specific phenomenon i.e. Leadership Styles, General Health and OCB, taking Social Support as mediator in the mentioned variables (TFLS, TSLS and General Health) to fill a gap in literature and open the door for future researches in software engineering.

Conclusion

The study is concluded with the findings that Leadership Styles should be considered important determinants of employee Health and OCB. The results clearly reported that only TFLS predicts General Health,;OCB however could not prove to be predicted by TFLS and TSLS. It further demonstrates that there is a significant gender difference in Physical Health (EF, Pain), but no gender difference was found in OCB levels of employees. Socio-demographics do not significantly predict any of the mentioned variables except gender and number of dependents. Social Support partially affects the strength of relationship between Leadership Styles (TFLS, TSLS) and General Health of Software Engineers, which means that to acquire better organizational outcomes, General Health, Social Support and OCB should be promoted by the authorities in Software Engineering field.

Limitations

- The sample size is small and therefore hinders generalization of results on larger population.
- Most of the participants belonged to average ranked organizations. Therefore a clear comparison could not be established due to the unavailability of t equal representation of the participants from average and high ranked organizations.
- The organizational climate is not studied in the present research while it is an important factor that influences employees' health and OCB.
- Only self-reported OCB and General Health of employees as well as Perceived Leadership Styles were assessed which may not be able to provide a clear picture of the phenomenon and may be affected by the participants' bias.

Suggestions

- There is a need to create awareness among HR Managers of Software companies about the importance of research on Leadership Styles and their effects on their employees' General Health and Citizenship Behavior in order to get successful outcomes.
- Further researches are needed to explore this phenomenon of Leadership Styles and General Health by recruiting sample from different Software organizations with an equal representation of the participants from organizations of different ranking.
- The organizational climate should be studied along with Leadership Styles because organizational climate has a great impact on OCB and General Health.
- The OCB and General Health reported by other coworkers and leaders along with the perceived ratings of the targeted participants as well as the Leaders' own perception about their Leadership Styles along with their subordinates' perception should also be assessed for broad implications.

Significance of Research

Leadership Styles and employee's perception about leader's behavior can affect Employee's General Health as well as their behavior in organization. This study provides valuable evidence of how Leadership Styles predict Employee General Health and Organizational Citizenship Behavior. This study helps to

determine the mediating role of Perceived Social Support in the relationship between Perceived Leadership Styles and Employee General Health. This research provides valuable literature for further researches and sheds light on factors that are important for successful organizational outcomes. It can further assist policy makers, managers, entrepreneurs, executives and company bosses to play a better role as leaders and take into consideration employees' bio-psycho-social needs for effective outcomes.

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