College of business and Economics

School of Graduate Studies

Department of Management- Specialization in MBA Management

Self-efficacy as a Mediator on the Relationship between Work Stressors and Counterproductive Work Behavior

By:

Mnshir Geto Teferra

June, 2020

Addis Ababa, Ethiopia

Self-efficacy as a Mediator on the Relationship between Work Stressors and Counterproductive Work Behavior

By: Mnshir Geto

Advisor: Lakew Alemu(PhD)

A Research Project Submitted in Partial Fulfillment of the Requirement for the Degree

of Master of Business Administration- Specialization in Management

Addis Ababa University

College of Business and Economics

Department of Management

Graduate Program

June, 2020

Addis Ababa, Ethiopia

Statement of Declaration

I, the under signed, declare that, this research paper is my original work, has never been presented in this or any other university, and that all resources and materials used herein have been duly acknowledged.

Name: Mnshir Geto Teferra

Signature:_____

Place: College of Business and Economics, Addis Ababa University, Ethiopia.

Date of submission: _____

Statement of Certification

This is to certify that **Mnshir Geto Teferra** has carried out his research work on the topic entitled **"The Mediating role of Self-efficacy on the Relationship between Work Stressors and Counterproductive Work Behavior."** The work is original in nature and is suitable for submission for the award of Masters Degree in Business Administration.

_____

Advisor: Lakew Alemu (PhD)

Date: _____

The Mediating role of Self-efficacy on the Relationship between Work Stressors and Counterproductive Work Behavior

By: Mnshir Geto Teferra

Approved by Board of Examiners

_____	_____
Name	**Signature**
_____	_____
Name	**Signature**

Acknowledgement

First of all, thanks to my Almighty God for his faith in my whole life. My wife, Fantaye Nigus, thank you for your patience and assistance in the whole process. God bless you. I dedicated this paper for you. I would like to thank my kids; you gave me strength and hope every day.

I am highly indebted to thank my advisor Lakew Alemu (PhD) for his unreserved effort, attention and patience to correct my report and advising me for the better improvement of this thesis.

To my best friends, Emawayih Tona and Molla Beyene, I have no words to express my heart full thanks but let God bless you.

Finally yet importantly, I would like to acknowledge CBE; HR transaction department, Akaki branch staffs and participants of the study for being willing to help me and participate in the study respectively and provide valuable information. Moreover, those individuals who have been contributing a lot for the entire work, either directly or indirectly deserve to be acknowledged.

THANK YOU ALL!!

Table of Contents

Contents **Pages**

List of Tables

List of Figures

Acronyms

AVE: Average Variance Extracted

AET: Affective Event Theory

CBE: Commercial Bank of Ethiopia

CFA: Confirmatory Factor Analysis

CFI: Comparative Fit Index

CI: Confidence Interval

CR: Composite Reliability

CWB: Counterproductive Work Behavior

CWB-C: Counterproductive Work Behavior Checklist

CWB-I: Counterproductive Work Behavior toward Interpersonal

CWB-O: Counterproductive Work Behavior toward Organization

Edl: Educational Level

Exp; Experience

Gen: Gender

Ho: Null hypothesis

H1: Alternative hypothesis

IC: Interpersonal Conflict

ICAWS: Interpersonal Conflict at Work Scale

KMO: Kaiser-Meyer-Olkin measure of sampling adequacy.

NT: Normality Theory

OC: Organizational Constraints

OCS: Organizational Constraints Scale

OJ: Organizational Justice

OSES: Occupational Self-Efficacy Scale

PCA: Principal Component Analysis

P-P: Probability plot

QWI: Quantitative Workload Inventory

RMSEA: Root Mean Squared Error of Approximation

SE: Self-Efficacy

SEM: Structural Equation Modeling

SRMR: Standard Root Mean Square Residual

SPSS: Statistical Packages for Social Science

TLI or NNFI: Tucker Lewis Index or Non-Normed Fit Index

WHO: World Health Organization

WL: Workload

Abstracts

Counterproductive work behavior negatively affects organization and its employees. This study aims to investigate the mediating role of self-efficacy on the relationship between work stressors and CWB. The valid respondents were 304(n=304) which were selected based on simple random, stratified, and judgmental sampling techniques taking structured questionnaire as data collection tool. To analyze the data; descriptive statistics, correlation analysis, mediation with multiple regression and SEM with path analyses were applied. Causal- approach (Baron and Kenny's approach), normality theory method and bootstrap re-sampling techniques were used to test the significance the mediation (indirect) effect. The result shows that work stressors were very important (especially organizational constraints and justice) predictors of CWB. But self-efficacy was affected only by organizational justice and workload with negative insignificant relation with CWB. The result also suggests there is no mediation. To control counterproductive work behavior, organizations (particularly CBE) need to be aware and minimize work stressors to safeguard itself and its employees.

Keywords: Mediation, structural equation modeling (SEM), Self-efficacy, Counterproductive work behavior, work stressors

CHAPTER ONE
INTRODUCTION

1.1 Back ground of the study

In now days where competition is stiff, employee behavior has become a key concern of almost all organizations across the world (Parvez and Anjum, 2013).It deals with what employees say and do at their workplaces (Robbins and Coutler, 2002; Sims, 2002; Hiriyappa, 2008). These behaviors can be grouped into those that benefit the organization and those that harm it. The first is good for organizational success; whereas, the latter is a barrier to the organizations-which is termed as Counterproductive Work Behavior (CWB) (Spector and Fox, 2002).

Counterproductive Work Behavior (CWB) means an intentional behavior experienced by employees that harms or intends to harm organizations and/or its affiliates (Bennett, and Robinson, 1995; Sprung, 2011). Among many behaviors of such types; aggression, interpersonal conflict, sabotage, theft, wasting time and/or materials, spreading rumors, refusing to cooperate, and physical assault are a few (Baronand Neuman, 1996; Penney and Spector, 2002; Gruys and Sackett, 2003).

CWB's have a vast negative effect on organizations. For example it may leads to organizational hold-back in; productivity, profitability, teamwork, and a fall in customer satisfaction as a result. Thus, the different behaviors under the construct of CWB leave many potential challenges for organizations. The dark side of CWB has been presented by different researches on varying time, disclosing that these behaviors harm the organizations and its people. For instance, 75% of employees steal from their organization at least once, (McGurn, 1988), 33% to 95%, on average, of employers are exposed to employee theft and fraud (Bennett and Robinson, 2000; Mount, Ilies, and Johnson, 2006), and on the hand it has been predicted that 68% of managers have experienced verbal forms of aggression (e.g. insults, profanity) due to performance evaluation disagreement (Neumanand Baron, 1998). Furthermore, not only organizational members affected but also, economic agents may be the victim of CWB through higher prices on goods and services (Rotundo and Spector, 2010). Hence, CWB can have adverse effects on every person associated with an organization.

Furthermore, existence of CWB in an organization leads to increased employee turnover and cost, and high level of job dissatisfaction, low job engagement and stress (Manzoor, Khattak, and Hassa, 2015). In addition, it costs both materially and mentally (Bennett,and Robinson, 2000;Sprung, 2011;Whelpley, and McDaniel, 2016;His, 2017; and Brender-Ilan and Sheaffer, 2018). For instance in US it costs up to $200 billion which is between 1% and 2% of average business of sales and accounts 20% of failed business annually (Penney and Spector,2002; Coffin,2003; and Gualandri,2012).

The mental/psychological impacts of CWB revealed by Trott, and MacLean (1994), in their study of abusive behavior in the workplace (a form of CWB), found that all participants had experienced at least one incident of nonsexual, nonphysical abusive behavior. Respondents also indicated that supervisors were the most common perpetrator, followed by coworkers and subordinates. Moreover, they reported feeling more disturbed by abuse from supervisors than from coworkers (Keashly and Neuman, 2002). Relatedly, 32% of participants in Bjorkqvist et al.(1994) study of harassment at work reported that they had observed others being mistreated. Respondents also indicated that individuals in superior positions harassed others in lower positions more often than those in lower positions harassed others in superior positions.

Although CWB encompasses many challenges to organizations around the globe, there is no sufficient evidence to prove how much it costs to Ethiopia. In addition to this, to the level of my best, few researches have been made to examine the CWB in Ethiopia. Furthermore, no study has been made to examine the mediator role of self –efficacy in the relationship between work stressors and CWB using SEM in Ethiopia. Thus, it's logical to consider CWB- as the result of the existence of CWB challenge and implications of the above mentioned studies and it is vital to know factors influencing the employees' probability of engaging in CWB using self-efficacy as the mediator in the relationship between work stressors and counterproductive work behavior in Ethiopia, specifically in banking sector.

1.2 Statement of the problem

The relationship between Work stressors and occurrence of deviance behavior have been examined (Fox, Spector, and Miles, 2001; Penney and Spector, 2005) and are established as a principal antecedent of CWB. In addition, Mount et al.,(2006); and Salgado, (2002) examined

personality and its association to the likelihood of employee's engagement in CWB. According to these studies, personality may shape the manner in which employees interpret and respond to work stressors and hence the two variables are related.

Spector (2011) pointed out the relationship between CWB and personality. According to this author, "Personality" includes the "big five personality dimension" and personalities out of this realm such as self-efficacy, self-esteem, narcissism and locus of control. For example Sheaffer (2018), has viewed self-efficacy as a potential mediator in the relationship between destructive leadership and CWB. But, Zagross and Jamileh (2016) revealed that destructive leadership a leads to work stress. Since, destructive leadership and CWB positively related self-efficacy mediate the relationship between work stressors and CWB.

Thus, it is essential to examine thoroughly the mediating effects of work stressors and personality on CWB. However, to the level of my best, no research has been made to examine the mediating role of self –efficacy between work stressors and CWB. Moreover, to highest level of my knowledge, no study has been conduct to explain the mediating role of work self-efficacy in the relationship between work stressors and CWB in Ethiopia. Hence, the present study aims to examine a personality trait –self-efficacy- in conjunction to CWB. Particularly, this study investigates the mediating role of self-efficacy, plus the direct and the indirect (mediating) effects of self-efficacy on the relationship between work stressors and CWB. This study is significant in that it provides additional input concerning how personality, specifically self-efficacy, may influence the relationship between work stressors and CWB using structural equation modeling.

1.3 Objective of the study

The general objective of this study is to examine the mediating role of self-efficacy on the relationship between work stressor and counterproductive work behavior.

Specific objectives

1. To investigate the effect of work stressors (organizational constraints, interpersonal conflict, Workload and organizational justice) on CWB.
2. To scrutinize the effect of work stressors(organizational constraints, interpersonal conflict, Workload and organizational justice)on the employees' level of self-efficacy

3. To examine the effect of self-efficacy on CWB
4. To examine the mediating effect of self-efficacy on the relationship between work stressors (organizational constraints, interpersonal conflict, Workload and organizational justice) and employees' level of counterproductive work behavior.

1.4 Research questions

The following questions were addressed under this study:

1. What is the effect of work stressors (organizational constraints, interpersonal conflict, Workload and organizational justice) on CWB?
2. What is the effect of work stressors (organizational constraints, interpersonal conflict, Workload and organizational justice) on the employees' level of self-efficacy?
3. Does self-efficacy affect CWB?
4. Does self-efficacy mediate the relationship between work stressors (organizational constraints, interpersonal conflict, Workload and organizational justice) and employees' level of counterproductive work behavior?

1.5 Significant of the study

Global interdependence has paves the way for the existence and emerging of international companies. These global business entities competes each other; on the basis of technology, market shares, profitability etc to attract, satisfy and retain customers. However, the survival and the existence of these international and local organizations can not only determined by how good they are to their customers but also by the level and capacity of human capital they are endowed with(Robbins and Coulter,2012). Human capital, as an asset, literary implies the stock of skills, knowledge, habit, education, experience, social and personality attributes that an organization's employees have (Alnachef and Alhajjar, 2017). Each employees as an individual has their own personal traits and behaviors which in turn affects an organization in both positive and negative ways.

Behaviors like CWB, most arguably, are unwelcome and unhealthy; generate both mental and psychological cost to the organization (Bennett, and Robinson, 2000; Sprung, 2011; and, Whelpley and McDaniel, 2015). Especially, in developing countries like Ethiopia-where behavioral institution are lagging behind plus some bad cultures on work ,the probability of

employees engagement in CWB is expected to be high. So, it is vital to study the antecedent of CWB (e.g. work stressors) and what role does personality traits-like self-efficacy, can play in examining the relation between work stressors and CWB. Therefore, this study is significant in that it pointed the way how organizations can reduce CWBs in their domain. In addition, the study supplies extra contribution concerning how personality traits, specifically self-efficacy, may influence the relationship between work stressors and CWB.

1.6 Scope of study

The sampled population is employees of commercial bank of Ethiopia due to the number of staff it has, which is far much more than the whole private banks in Ethiopia. And also in the capital city, Addis Ababa more than 400 branches with at least 10, 000 employees are found.

Although the CWB and its antecedent interacts with different personality traits in varying sectors, our focus is limited to self-efficacy and work stressors construct and banking sector in Ethiopia, especially on commercial bank of Ethiopia employees.

Thus, generalizing the result for other personality traits, predictors of CWB and sectors of the economy is not recommended.

1.7 Organization of the paper

The rest of the paper organizes as follows: the next chapter i.e. chapter two dealt with the review of literature followed by methodological frame work. Chapter four presents the data analysis , estimations results and discussions. Chapter five concludes.

CHAPTER TWO

REVIEW OF RELATED LITRATURE

This chapter deals with both theoretical and empirical literature with critical evaluation in the context of our subject.

2.1 Introduction

Forms of CWB

CWB takes varies forms. The first attempt to categorize CWB was made by Spector in 1978, who suggested that aggression in the workplace can be directed at either people or the organization itself. Organizational CWB represents acts directed at the organization as a whole (e.g., theft), whereas personal CWB is directed at individuals within the organization (e.g Abuse) (Goh, 2006). Later on Sackett (2002) grouped CWB in to two types behavioral aspects; namely-property and production deviance. The first situation represent the misuse of organization's asset such as theft and property destruction, whereas, the later refers to violation of organizational norms (how work should be accomplished) such as wasting time and/or alcohol abuse.

Although this kind of classification was important as an initial stage, it was not an inclusive grouping for all forms of CWB-meaning, not all deviant behaviors match undoubtedly in to these two categories. A more refined version of categorization of CWB was introduced by adding interpersonal aspects of CWB (Robinson and Bennett, 1995). The authors established the two distinct form of CWB, that is behaviors directed toward organization (CWB-O) and its member-recognizing that CWB is has an interpersonal orientation (CWB-I). This form of classification is theoretically examined and empirically investigated. The same authors (in 2000) provide evidence to support their model of CWB. They found the correlation of 0.46 between CWB-O and CWB-I using confirmatory factor analysis by applying two separate scales under the main construct of CWB. This implies that the dimension shows different aspects within CWB.

Other study was conducted by Gruys and Sackett in 2003 shows that the correlation between CWB-O and CWB-I was estimated and yields $r^1 = 0.43$ applying the same procedure as Robinson

[1] 'r' implies the correlation coefficient

and Bennett (2000). Despite that the two dimensions seems to be related their correlation is minimum. Due to the fact that many dimensions of CWB vary with antecedents and other characteristics, it's not plausible to take one form of CWB rather it's better to consider multiple type of CWB.

One of the most popular conceptualizations of CWB is provided by Spector et al. (2006). These authors agree that the behaviors subsumed by CWB are too diverse to be represented by a single construct because the CWB items were differentially associated with antecedents; for example, some items related more strongly to anger and stress, while others associated more strongly with boredom. Accordingly, Spector and colleagues developed a scale separating CWB into two dimensions: CWB-I and CWB-O. In addition, the authors further divide CWB into five sub-dimensions: abuse (harmful behaviors directed towards other people), production deviance (purposely doing work incorrectly or slowly), sabotage (physical destruction/vandalism of employer property), theft (stealing property from people or organization), and withdrawal (working fewer hours than required). The CWB-I dimension contains mostly items within the abuse sub-dimension, while CWB-O contains items from the other four subscales (Spector at al.2006, p.455). Thus, it is important to understand that CWB can be broken down into different dimensions and that these categories may have differing antecedents.

However , despite these weak correlation, the correlation between them have been found to be significantly large (Spector et al,2006; Bayram,2009; Bowling and Eschleman,2010; Sprung,2011; Spector and Zhou,2014; and His,2017 found a correlation coefficient of 0.84,0.89,0.78,0.95,0.84 and 0.76 respectively with $p<0.001$). Hence, although the correlation magnitude varies from study to study, all signifies the existence of two forms of CWB. Regardless of how one conceptualizes CWB, there have been a variety of variables found to be associated with the likelihood of engaging in CWB.

Antecedents of CWB

Many antecedents of CWB have been discovered by various studies. Among many some potential antecedents of CWB include personality, work , contextual and organizational factors (Lau, Au, Hs and Ho, 2003; and His, 2017). According to this study personal factors include characteristics shared among employees engaging in CWB at work on the other hand organizational factor holds shared of summary of perception that people attached to particular

work setting(e.g. supervisory monitoring, group influence organizational ant-theft policy etc). The third type of antecedent of CWB, that is, the work factor includes factors related to job nature such as job complexity, high-risk occupation and task independence (autonomy). Finally, the situational factor deals with a diverse mix of variables relevant to individual's decision to engage or refrain from committing dishonest acts such variables includes employment rate, economic, weather and opportunity to steal.

The other forms of antecedents include motivation and control variables (Marcus and Schuler, 2004). Among these antecedents, various individual differences have been found to be associated with CWB, including demographic variables (Lau et al., 2003), job attitudes (Dalal, 2005; Hershcovis et al., 2007), job stress (Piar and Pawan, 2014), emotions (Miles, Borman, Spector, and Fox, 2002; Spector and Fox, 2002), and personality (Salgado, 2002; Mount et al., 2006). In addition, environmental factors such as leadership style (Hepworth and Towler, 2004), abusive supervision (Tepper, 2007), workplace incivility (Penney and Spector, 2005), organizational justice (Dalal, 2005; Greenberg, 1990), coworker influence (Robinson and O'Leary-Kelly, 1998), and work stressors[2] (Chen and Spector, 1992) have also been shown to be related to the occurrence of CWB. Thus, there are multiple predictors of CWB.

Of the antecedents shown above, associated with CWB, work stressors and personality have attracted the attention of much previous research, demonstrating both direct and moderating effects on CWB. But personality as mediator has also been studied. Thus, this study get a new look at to add some empirical evidence on this contradictions with a focus on trait self-efficacy as mediator. Accordingly, work stressors, self-efficacy and CWB are the focus of the present study. In order to provide a background for the current study, work stressor and personality research relevant to the CWB literature are reviewed, followed by a review of the mediating effects of self-efficacy on work stressors and CWB.

[2] Work stressors, in this study, include Interpersonal conflicts, organizational constraints, workload and organizational justice.

2.2 Work Stressors and CWB

[3]The World Health Organization (WHO) definition of work-related stress is the response of when presented with work demands and pressures that are not matched to their knowledge and abilities and which challenge their ability to cope. Stress occurs in a wide range of work circumstances but is often made worse when employees feel they have little support from supervisors and colleagues, as well as little control over work processes. This situation may lead to employees to CWB.

The situation within which an employee works holds many variables that may have a paramount impact on the probability of employee's engagement in CWB. Among the antecedents of CWB, work stressors are the most common forms. According to Spector and Jex (1998), work stressors mean the challenging aspects of a job, including employee workload, interpersonal conflict, organizational justice and organizational constraints. Sonnentag and Frese (2003), in their work of "Stress in the organization" reported that between 26 and 40 percent of all surveyed workers experience their work as very stressful. Given the prevalence of stressors in general, it is important to examine work stressors in relation to CWB. Previous research has identified numerous potential negative outcomes associated with stress for both people and organizations, one of which is CWB. Various forms of work stressors have been shown to be positively related to CWB (Rotundo and Spector, 2010), including interpersonal and organizational stressors, which are discussed in turn.

The theoretical explanation of how work stressors leads to CWB related the Affective Event Theory (AET) (Weiss & Cropanzano, 1996) and stressor-emotion theory of CWB (Spector, 2006). Both theories stated that emotion may serve as the mechanism by which stressors may lead to CWB that is stressors trigger negative emotion and negative emotion may lead to CWB.

2.2.1 Interpersonal stressors and CWB

Interpersonal stressors involve stressful social situations with one or more people in the workplace. One stressor that has been shown to be related to CWB is interpersonal conflict at work.

[3] https://www.who.int/occupational_health/topics/stressatwp/en/

The term interpersonal conflict used to express the form of relationship which is negatively charged interaction with others (Jex, 2002). Interpersonal conflict at work place may range in severity from minor disagreements between coworkers to physical fights (Spector &Jex, 1998). The conflict can be covert (e.g., spreading rumors about a coworker) or overt (e.g., yelling at a coworker) in nature. In addition, conflict can be broken into active (e.g., arguing with a coworker) or passive (e.g., deliberately not returning a coworker's phone calls) forms (Jex, 2002).

Price and Spratlen (1995) showed that the most common forms of conflict experienced at work place are environmental mistreatment. In their study of mistreatment, 23 % of respondent reported that they have been victims of mistreatment during one and half year period. To mention few examples; being treated in a rude, hostile, or demeaning manner; being talked down to in front of others; or being ignored. The majority of respondents also reported experiencing verbal mistreatment such as being yelled or sworn at; receiving demeaning comments; being threatened with injury; or being verbally assaulted. Moreover, instigators of mistreatment were supervisors more often than coworkers. Furthermore, Keenan and Newton (1985) asked engineers the event that made them felt stress and 75% of all event reported including interaction with coworkers, supervisors and subordinates caused stress. In this study, interpersonal conflict was found to be the most cited sources of stress. These negative interpersonal encounters involved behaviors that can be classified as verbal aggression or covert hostility.

Narayanan, Menon, and Spector (1999b, cited in Goh, 2006, p.13) also asked individuals in different occupational groups (academic, clerical, and sales) about stressful incidents at work. Interpersonal conflict was the most frequently reported source of stress for the academic and sales groups. In contrast, it was the third most cited source of stress for the clerical group. Again, Narayanan, Menon, and Spector (1999a) in their cross cultural stressors and strains study(for two countries) with comparable job, interpersonal conflict was the third most cited source of stress for American respondents, in contrast to India, which was the fourth most cited source of stress.

An cross-cultural study, by Liu (2003, cited in Goh,2006),on stressors and strains using a sample of Chinese and American university professors and administrative support staff showed that

Chinese professors reported significantly higher levels of interpersonal conflict than American ones. Similarly, they experienced higher levels of conflict with supervisors than American professors. Chinese professors also reported higher levels of conflict with coworkers; however, the difference was not statistically significant. Liu categorized the conflict in to direct and indirect. Direct conflict involves direct confrontation between people, whereas indirect conflict involves indirect actions such as doing nasty things to someone behind their back. Chinese respondents experienced significantly more indirect conflict than American ones. In contrast, American participants experienced significantly more direct conflict than Chinese ones.

Whatever form of conflict, it has a certain reaction. Interpersonal conflict reaction includes: negative emotions (Fox et al., 2001) and other feelings such as anger (Chen and Spector, 1991), anxiety, frustration (Spector, 1987), and being upset (e.g., discouraged, frightened, furious, and gloomy) (Spector et al., 2006). There are also other strains like psychological and physical strains related to conflict. To list a few (psychological); perceptions of stress (Chen and Spector, 1991), depression (Heinisch and Jex, 1997), work anxiety (Jex and Spector, 1996), job dissatisfaction (Spector, 1987), and intent to quit (Spector, Dwyer, and Jex, 1988; and physical strains such as physical symptoms (Spector, 1987) and doctor visits (Chen and Spector, 1991). All these reaction to interpersonal conflicts lead to CWB.

Interpersonal conflict and CWB

Interpersonal conflict can be distinguished from CWB-I in that; CWB-I is intended to harm the target whereas interpersonal conflict does not necessarily have harmful intentions. For example, two coworkers may have differing opinions on how to perform a certain job task, leading to conflict as to which person's method is better. In this situation, the two coworkers are not necessarily intending to harm each other, but rather having a simple disagreement. However, interpersonal conflict and disagreements may escalate and potentially lead to forms of CWB. As such, previous research has discovered a link between interpersonal conflict and CWB-I (Sprung, 2011).

Fox et al. (2001) found that interpersonal conflict significantly predicted both CWB-I and CWB-O. This study also examined the mediating role of negative emotions in the relationship between conflict and CWB. It was found that interpersonal conflict was significantly related to negative

emotions, and that negative emotions were positively related to both forms of CWB.The results suggested negative emotions as a means by which interpersonal conflict may lead to CWB. Accordingly, people who experience interpersonal conflict may subsequently experience more negative emotions, such as anger or anxiety. These negative emotions, in turn, may contribute to increases in CWB. For example, conflict with another person may lead an employee to experience the negative emotion of anger, and the employee may release this anger through engaging in destructive acts against the organization or the perpetrator of the conflict. Thus, CWB may serve as an action by which employees release the tension created by negative emotions. These results suggest that emotions play a significant role in the process by which stressors lead to CWB.

Hershcovis and colleagues (2007) conducted a meta-analysis and found results similar to Fox and colleagues (2001); interpersonal conflict among employees was positively correlated with both forms of CWB. Moreover, they found that the correlation between conflict and CWB-I was significantly larger than the correlation between conflict and CWB-O. Thus, employees experiencing interpersonal conflict may be more likely to engage in interpersonal forms of CWB.

Interpersonal conflict has been associated with an overall measure of CWB (r = .19) (Miles et al., 2002) in addition to organizational (r = .32) and personal (r = .40) forms (Fox et al.2001). Conflict has also been related to other dimensions of CWB such as abuse (r = .54), production deviance (r = .28), sabotage (r = .26), theft (r = .19), and withdrawal (r = .14; Spector et al., 2006). Spector et al. (2006) noted that interpersonal conflict had stronger relations with personal forms of CWB (i.e., abuse and person CWB) than with organizational forms of CWB (i.e., production deviance, sabotage, theft, and withdrawal). Interestingly, conflict was more strongly related to theft from fellow employees (r = .26) than theft from the organization (r = .17).

The results of the previous studies demonstrate the relationship between interpersonal conflicts with the CWB has important implication. That is, different stressors may lead to CWBs. Though the previous studies focused on interpersonal conflict, the results that interpersonal conflict demonstrated a significantly higher correlation with CWB-I suggests that stressors dealing with the organization, such as organizational constraints, may be more likely to lead to CWB-O. As a

result, different stressors may have differential associations with employees' tendencies to engage in CWB-I versus CWB-O.

2.2.2 Organizational Stressors and CWB

In addition to interpersonal stressors, aspects of the environment stemming from the organization as a whole can also impact employee stress levels and reactions to these stressors. The most common aspect stemming from the organization that can be perceived as stressors are organizational constraints and organizational justice.

Organizational constraints are "situations or things that prevent employees from translating ability and effort into high levels of job performance" (Spector and Jex, 1998, p.357). It is a situation or aspect of the work environment that interfere with employee job performance, such as poor equipment, incomplete information, or interruption by others (Spector and Jex, 1998).

As with interpersonal conflict, reaction to organizational constraints includes: negative emotions (Fox et al., 2001) and other feelings such as anger (Chen and Spector, 1991), anxiety, frustration (Spector, 1987), and being upset (e.g., discouraged, frightened, furious, and gloomy) (Spector et al., 2006).

According to Liu (2003, cited in Goh, 2006), organizational constraints can be classified in to two groups namely; interpersonal and job context. Interpersonal organizational constraints deals with issues related to one's supervisor; other employees; inadequate help from others; and interruptions from other people whereas job context constraints consist of issues related to conflicting job demands; lack of necessary information about what or how to do tasks; inadequate training; incorrect instructions; poor equipment or supplies; lack of equipment or supplies; and organizational rules and procedures. However, this study treat it as one-dimensional constructs as in most of past studies (e.g., Peters and O'Connor, 1980; cited in Liu et al., 2010).

Organizational Constraints and CWB

Previous research has demonstrated that organizational constraints are significantly related to both CWB-I and CWB-O (e.g. Fox et al., 2001; Penney and Spector, 2005). Moreover, it has been found that organizational constraints tend to be more strongly related to CWB-O, suggesting that organizational constraints may lead to more CWB directed at the organization

than at other people (Fox et al., 2001; Hershcovis et al., 2007). This is consistent with the idea that interpersonal conflict is more strongly associated with CWB-I. Because the source of the stress is stemming from the organization are more likely to retaliate against the organization rather than against other people.

Organizational constraints also associated with the overall measure of CWB (r = .36) in addition to organizational (r = .37) and personal (r =.26) forms (Fox and Spector, 1999). Constraints have also been related to other dimensions of CWB (Spector et al., 2006), specifically abuse (r = .32), production deviance (r = .23), sabotage (r = .19), theft (r = .15), and withdrawal (r = .18). In addition, Khosravi(2016) found that overall measure of organizational constraints positively associated with total CWB ($r=0.41$, $p<0.01$) but the correlation went up to $r=0.87$ to both CWB-I and CWB-O dimensions at $p<0.01$.

Reaction to organizational constraints, especially negative emotions, was also found to have a mediating effect on the relationship between organizational constraints and CWB (Fox et al., 2001). Organizational constraints tend to be positively associated with negative emotions, which in turn are associated with increased CWB. Organizational constraints may lead to negative emotional reactions (i.e. anger), and these negative emotions can contribute to counterproductive behavioral reactions. In other words, CWB may serve as a means by which negative emotions can be released.

[4]Organizational Justice

Organizational justice refers to an employee's perception of fair treatment on the job and it can take three forms: distributive, procedural justice and [5]interactional justice. Whereas the distinction between procedural and distributive justice was supported, there is less agreement about the distinction between interactional justice and procedural justice (Cohen-Charash and

[4] Note that the every statement made for organizational justice inversely holds for organizational injustice in this study.

[5]Interactional justice refers to the interpersonal side of organizational practices, focusing on management's interpersonal treatment of and communication with employees (Cohen-Charash and Spector, 2001).

Spector, 2001). Thus, interactional justice is ignored and focus on procedural and distributive justice in this study.

Distributive Justice

Distributive justice deals with the perceived fairness of outcomes; it has the potential to have strong implications in the organizational context, of which distribution of outcomes is an integral part (Cohen-Charash and Spector, 2001). Realizing the potential implications of distributive justice, and especially equity theory, on the organizational context, researchers examined the perceived fairness of organizational outcomes (e.g., pay selection, and promotion decisions) (Colquitt, 2001).

Due to its focus on outcomes, distributive justice is predicted to be related mainly to cognitive, affective, and behavioral reactions to particular outcomes. Thus, when a particular outcome is perceived to be unfair, it should affect the person's emotions (e.g., experience anger, happiness, pride, or guilt), cognitions (e.g., cognitively distort inputs and outcomes of himself/herself or of the others), and ultimately their behavior (e.g., performance or withdrawal) Cohen-Charash and Spector, 2001).

Procedural Justice

Procedural justice, refers to the fairness of the process by which outcomes are determined (Cohen-Charash and Spector, 2001), is considered to exist when procedures embody certain types of normatively accepted principles. . It is maintained by making decisions in a consistent, accurate, and unbiased manner (Colquitt and Greenberg, 2003, cited in Goh, 2006).

Leventhal (1980 , cited in Cohen-Charash and Spector, 2001) identified six rules which the procedure would follow to be considered as fair: (i) the consistency rule, stating that allocation procedures should be consistent across persons and over time; (ii) the bias-suppression rule, stating that personal self-interests of decision-makers should be prevented from operating during the allocation process; (iii) the accuracy rule, referring to the goodness of the information used in the allocation process; (iv) the correctability rule, dealing with the existence of opportunities to change an unfair decisions; (v) the representativeness rule, stating that the needs, values, and outlooks of all the parties affected by the allocation process should be represented in the process;

and (vi) the ethicality rule, according to which the allocation process must be compatible with fundamental moral and ethical values of the perceiver.

Prediction about procedural and distributive justice to which they are related to was different. Because ,organizational procedures represent the way the organization allocates resource, procedural justice is predicted to be related to cognitive, affective, and behavioral reactions toward the organization, such as organizational commitment (Martin and Bennett, 1996). Thus, when a process leading to a certain outcome is perceived to be unfair, the person's reactions are predicted to be directed at the whole organization, rather than at his/her tasks or the specific outcome in question. This differs from predictions made for distributive justice, which emphasize outcome-focused, rather than organization-focused reactions (Sweeney and McFarlin, 1993, cited in Cohen-Charash and Spector, 2001, p.281).

Organizational justice and CWB

Fox et al. (2001) point out that employee perception of injustice can be conceptualized as a form of perceived job stress that can lead to CWB. For example, an employee who received an inadequate explanation for the pay cut experienced greater perceptions of pay inequity and had higher theft rates than those who received a more thorough explanation for the pay cut. Thus, employee perceptions of organizational (in) justice are important and can play a role in the likelihood of engaging in CWB. Accordingly, if employees feel like they are treated unfairly, they may engage in more CWB against the organization in order to make things equal between themselves and their organization. Thus, restoration of equity serves as a mechanism by which organizational justice can lead to CWB. Furthermore distributive justice can play to avoid retaliation of work by employees (Skarlicki and Folger, 1997).

Multiple meta-analyses have also found a significant negative relationship between organizational justice and CWB (Dalal 2005; Skarlickiand Folger, 1997;Cohen-Charash and Spector, 2001). Accordingly, employee perceptions of justice involving treatment, outcomes, and procedures to determine those outcomes can have a significant impact on employees' likelihood of engaging in CWB. Cohen-Charash and Spector (2001) reported that organizational injustice had a positive relationship with CWB (with a range of r = 0.25 to 0.36). Furthermore, Al-A'wasa(2018) showed that CWB had a significant negative relationship with organizational

justice, i.e. at 5% significance level with r=0.42 and 0.303 to distributive and procedural justice respectively.

2.2.3 Workload

In addition to organizational constraints and organizational (in) justice, workload represents another work stressor that may contribute to CWB. Workload is the variable that represents the amount of work expected to be performed by someone within a period of time (Sepctor and Jex, 1998). It can be quantitative or qualitative in nature. Quantitative workload occurs when an individual has too much to do during a time period, whereas qualitative workload occurs when job tasks are too difficult for the employee (Goh, 2006).

Workload and CWB

Chen and Spector (1992) found that employee workload can lead to an increased likelihood of engaging in CWB. This might be as the result of the feelings of frustration (i.e. work-frustration-aggression model; Fox and Spector, 1999). For example, the greater workload employees have, the more likely they are to feel overwhelmed as a result of their situation. Employees' workload can lead to negative emotional reactions such as anger, frustration, or even neglect from their organization. These negative emotional reactions may increase their likelihood of engaging CWB. Workload has been correlated with an overall measure of CWB (r =.21; Miles et al., 2002) and the (r = .13) dimension of CWB (Chen and Spector, 1992). Furthermore, Piar and Pawan(2014) found a positive correlation between workload; and sabotage , theft, withdrawal and property deviance with r= 0.255, 0.131 0.227 and 0 .114 respectively. These forms of CWB are more likely related to CWB-O that is workload more likely the source of organizational CWB than its members (CWB-I) (abuse r=-0.025 with non-significance effect).

2.3 Summary of Work stressors

From all the above evidences, it can be seen that various roads would be taking us to CWB. For instance, interpersonal conflict may lead to more CWB-I while organizational constraints and workload may lead to greater levels of CWB-O. Though work stressors can be separated into interpersonal and organizational domains depending on their nature, the mechanisms by which both types of stressors lead to CWB seem similar. Regardless of the type of work stressor, previous research has demonstrated that, especially, personality traits(through negative emotion) seem to play a vital role in the relationship between various work stressors and both forms of

CWB (e.g. Fox et al., 2001; Fox and Spector, 1999). Therefore, negative emotions serve as important mechanisms by which work stressors may lead to CWB.

2.4 Personality and CWB

The above literatures have support the link between work stressors and CWB, plus the mechanisms by which stressors lead to CWB. But individual differences in personality might influence one's tendency to engage in CWB. Because personality traits reflect peoples' characteristics and tendencies to act in certain ways (Tellegen, 1991; cited in Sprung.2011), it seems possible that certain aspects of personality may play a role in a person's likelihood of engaging in CWB (Sping, 2011). In fact, personality has been repeatedly shown to be associated with CWB (e.g Salgado et al., 2013; Mount et al, 2006; Spector, 2011). Many different aspects of personality, including facets within the Five-Factor Model of personality as well as individual personality traits, have been suggested as having direct, interactive (moderator) and indirect effects on the occurrence of CWB. Thus, certain personality traits may exacerbate or improve the relationship between work stressors and CWB.

2.4.1 Five-Factor Model and CWB

McCrae and Costa (1987), introduced the concept of "The Five-Factor Model of personality/ the Big five" to explain the relationship between personality and CWB, of course it had been getting more attention till now.

[6]Several studies have found evidence suggesting that dimensions of the Big Five are related to CWB (e.g. Salgado, 2002), and that certain dimensions of the Big Five may be differentially related to CWB-I and CWB-O (e.g. Mount et al., 2006). Berry et al. (2007) theorize that agreeableness is more interpersonally oriented whereas conscientiousness is less so; therefore it makes logical sense that agreeableness would be more strongly associated with CWB-I while conscientiousness would be more strongly associated with CWB-O. Overall, the largest correlations among the Big Five dimensions have been found for conscientiousness, agreeableness, and neuroticism. Unlike agreeableness and conscientiousness, neuroticism does not seem to differ in predicting CWB-I and CWB-O; the less emotionally stable people are, the

[6] See for example, Salgado,2002; Salgado et al.2013;Mount et al,2006; Spector,2011

more likely they seem to engage in both forms of CWB (Rotundo and Spector, 2010). Thus, the Big Five personality framework seems to be useful in predicting both forms of CWB.

"The Big Five" as Moderator

The Big Five dimension has been served as both the moderator and the predictors of CWB. For example, Bowling and Eschleman (2010) examined conscientiousness, agreeableness, and negative affectivity as potential moderators in the work stressor-CWB relationship. It was found that workers who were low in conscientiousness or high in negative affectivity had stronger positive relationships between work stressors and CWB than workers who were high in conscientiousness or low in negative affectivity; agreeableness did not significantly moderate the relationship. Conscientiousness and agreeableness associated with CWB-I and CWB-O negatively with r=.33 and 0.38 at $p<0.01$; and r= 0.35 and 0.37 for negative affectivity respectively.

However, Flaherty and Moss (2007) discovered in a previous study that both agreeableness and neuroticism served as moderators in the relationship between organizational justice and CWB. As other researchers have pointed out, organizational injustice can also be perceived and classified as a type of work stressor. Therefore, these studies that work stressors and personality seem to have a moderating effects on CWB.

"The Big Five" as Mediator

Again the Big five personality dimensions have also been served as a mediator. Chu, et al., (2013), showed that the big five personality traits mediate the relationship between flow experience and job performance. The findings of this study reflect that extraversion and conscientiousness traits partially mediate the relationship between flow experience and job performance while the mediating role of other three personality traits (agreeableness, neuroticism and openness are non-significant).

Tan (2016), has also investigated the mediating role of openness on the relationship between product creativity and purchase intension and found that product creativity increase purchase intention indirectly through openness to experience- partial mediation

To add, Espinosa and Kadik-Maglajlic (2018) studied the mediating role of consciousness on the relationship between emotional intelligence and health behaviors and argued that there was significant partial mediation.

Given the above few studies one can say that personality traits could be served as mediators on the relationship between different psychological constructs. Nonetheless, previous studies are not sufficient and even they couldn't address whether personality traits could be a mediator on the relationship between work stressors and CWB. Thus, this study tries to fill this gap.

Do "The Big Five" capture all the Personalities?

Though the five-factor model provides a parsimonious model of personality, there are still aspects of personality that are not captured within the big five. Thus, individual traits outside of the five-factor model may also influence CWB. The trait of interest in the current study is work self-efficacy, and lies outside the realm of the big five, as no facets within the big five capture the element of self-efficacy perceptions. Thus, it is expected that employee perceptions of efficacy are likely to interact with work stressors in predicting CWB. Authors have stated the need for increased research into the influence of self-efficacy on CWB (e.g Spector and Fox, 2002; Fox and Spector, 2006). Accordingly, self-efficacy is the personality trait relevant to the current study.

2.5 Self-efficacy

Self-efficacy refers to an individual's beliefs about his or her ability to successfully accomplish a specific task at work place (Bandura, 1977). Bandura contends that beliefs about personal efficacy affect individuals' personal choices, including the quality of their performance, their resilience, and their level of motivation.

According to Albert Bandura, people have an inborn drive of wanting to control the events that influence their lives and to have the competencies and capabilities to perform successfully (Bandura, 1989; Bandura 1997). Thus, self-efficacy does not regard possessing specific skills or abilities, but rather the individual's subjective perception of what one can do with the skills and abilities possessed (Maddux,1995). Understanding what one can do with his skills and abilities increases positive attitude and reduce the chance of getting engage in CWB.

Self-efficacy beliefs should be captured in the context or situation that the behavior under investigation takes place in, such as the workplace (Maddux, 1995). Self-efficacy scales have

been developed but have been shown to be less capable to capture behavioral change than more contextually specific self-efficacy scales (Torpman and Sandgren, 2018).

2.5.1 Differentiating self-efficacy from related concepts

There are concepts which related to self-efficacy. Hence it must be distinguish between self-efficacy from other most related concepts such as self-concept and self -esteem. In general, one's overall perceptions, beliefs, judgments, and feelings are referred to as sense of self.

Self-concept is the cognitive or thinking aspect of self (related to one's self-image) and generally refers to the totality of a complex, organized, and dynamic system of learned beliefs, attitudes, and opinions that each person holds to be true about his or her personal existence (Hattie, 1992; Purkey, 1988). Self-concept holds of two parts: a self-knowledge part also called self-descriptions (thoughts of the self -e.g. "I have blue eye"), and a self-esteem part which is an affective evaluation of, or feeling regarding, the self (e.g. how I feel about having blue eye, whether I consider it good or bad).

Some authors use the three terms interchangeably as though they represent the same phenomenon. In fact, there are clear differences: Self-efficacy is a judgment of the confidence that one has in one's capabilities, whereas self-concept is a description of one's own perceived self (self-description), accompanied by an evaluative judgment of one's self-worth (self-esteem) (Bandura, 1997; Leary and Baumeister 2000; Pajares and Schunk, 2001).

In a work environment the difference between self-efficacy and self-concept (of which self-esteem is one part) can be identified by the question they try to rise. For example a self-concept item such as "laptop makes me feel scarce" differs distinctly from a self-efficacy question that may begin with "How confident are you that you successfully can install a new program on your computer?" The answers to the self-concept question reveal your positive or negative views on yourself and the subject. But the answers to the self-efficacy questions reveal the degree of confidence you possess in your capability to accomplish the task or succeed at the activity in question (Betz and Klein, 1996; Brockner, 1988; Chen, Gully, and Eden, 2001; Gardner and Pierce, 1998).

Moreover, there is no fixed relationship between beliefs about one's capabilities (self-efficacy) and whether one likes or dislikes oneself (self-esteem). Individuals may judge themselves hopelessly inefficacious in a given activity domain without suffering any loss of self-esteem whatsoever, because they do not invest their self-worth in that activity (Bandura, 1997).

Thus, failure in a domain deemed not important would not lead to lowered self-esteem, whereas failure in domains attributed as very central to the person would harm her or his self-esteem. Hence, if your goal is to be a professor in Addis Ababa University, doing poorly in the banking sector as an officer (work domain) may severely damage both your self-esteem and your self-efficacy. Being a bad tennis player on the other hand, an activity you pursue just for fun (leisure domain), probably won't affect your self-esteem much, although your self-efficacy may be lowered. It is true, however, that people tend to develop their capabilities in activities that give them a sense of self-worth. That is self-efficacy will give them a sense of self-esteem.

2.5.2 Work Stressors and Self-efficacy

Work stressors (such as interpersonal conflict, organizational constraints, organizational injustice and workload) assumed to have negative relationship with self-efficacy, though the direction of causation must be verified empirically. An employee with high level of self-efficacy avoids conflict and copes with stress at work place. Similarly, organizational constraints (e.g. poor equipment) and organization injustice (e.g. unfair reward) could reduce an employee's level of efficacy and push to CWB. For example, (Spector, 2004) believes that individuals with low efficacy in performing duties not believe in their ability and incentive to vigorous efforts will be. Research findings indicate that a significant negative relationship between organizational injustice and efficacy (Zadhh and Adhami, 2015).

A more recent study by Molero et al.(2018) disclosed mediating role of self-efficacy and self-esteem on the effect of work load, measured as the number of users attended to in the workday, on burnout in nursing professionals. The result was significant negative mediation effect of self-efficacy on workload and burnout. This is the result of employee's ability to handle stress successfully.

Thus, drawing this kind of relationship i.e. the negative relationship between work stressors and self-efficacy is very important to our study- mediating role of self-efficacy on the relationship

between work stressors and CWB. In other words, work stressors affect CWB vis-à-vis self-efficacy even though the direction of causation which is the objective of this study.

2.5.3 Self-efficacy and CWB

In the social learning theory, self-efficacy implies an aspect of perseverance beyond obstacle and misfortune (Bandura, 1977). Further, employees with high self-efficacy are more flexible and adaptable, more likely to persevere longer through difficulties at work or home, and more likely to be confident (Fida et. al, 2015). Self-efficacy is positively related to an internal locus of control (Phillips and Gully, 1997), self-impact (Wang, Gan, Wu, and Wang, 2015), self-regulation and self-control (Fida et. al, 2015).

Consequently, researchers found that employees with high level self-efficacy level are less likely to participate in CWBs. For instance, Fida et.al. (2015) found that self-efficacy acted as a protective factor that reduced CWBs due to stress in the workplace. Employees who feel more capable in their job and abilities respond better to stress in the workplace and are less likely to allow that stress to result in CWBs or other negative behaviors. An employee's perceptions of self-efficacy influence their response to stressors.

High levels of self-efficacy result in positive stress management. As a result, employees are less likely to act impulsively or hostile in reaction to work related stressors. Alternatively, lower self-efficacy and external locus of control result in a higher likelihood for CWBs. (Fida et. al., 2015, Martink et. al., 2002). Additionally, low levels of self-efficacy increase the likelihood of both CWB-O and CWB-I (Fida et. al., 2015). Accordingly, it is predicted that those with higher levels of self-efficacy commit fewer CWBs.

Research consistently shows that an individual's level of self-efficacy seems to influence whether they engage in ethical misconduct (Wang et. al., 2015; Rafik, 2009; Fida et.al. 2015). For instance, self-efficacy is negatively related to perceptions of cheating (Lawson, 2004; Murdock and Anderman, 2006). Students with higher academic self-efficacy viewed cheating as unethical, while students with lower self-efficacy were less likely to view cheating as unethical. Unsurprisingly, cheating in school is a significant predictor of cheating in the workplace (Elias,

2009; Lawson, 2004). Obviously, the same students who view cheating as permissible while in school may also view cheating in the workplace as permissible.

Similarly, employees with higher self-efficacy claim more responsibility and have a higher locus of control (Wang et. al., 2015; Fida et. al., 2015). These self-efficacy-related beliefs effect the employee's perceptions. Employees with high levels of self-efficacy are more likely to react positively and speak up in ethical dilemmas, and are less likely to participate in CWBs (Wang et. al., 2015). This connection is crucial to understanding the antecedents of CWBs because self-efficacy is an individual difference variable that influences how a behavior is perceived, whether unethical or permissible. In other words, perceived self-efficacy will influence how an individual copes with work-related stress (Bandura, 1997). When presented with tasks or goals that are too ambitious, individuals with lower levels of self-efficacy will experience a more intense physiological stress reaction than those who have higher levels of self-efficacy.

To sum up, self-efficacy, or one's belief in his or her own capabilities, is another individual difference variable that has been empirically linked to CWB. In general, research shows that those with higher self-efficacy are less likely to engage in CWBs than those who do not have strong beliefs in their personal abilities (Spector, 2011). Accordingly, this study seeks to demonstrate how self-efficacy influences the relationship between work stressors and CWB.

2.5.4 Self-efficacy as Mediator

Despite its relationship with many constructs (such as stress, CWB and personality), self-efficacy has also been examined as a [7]mediator variable within the context of different occupation and various construct. A longitudinal field study by Speier and Frese (1997) explored general self-efficacy as both moderator and mediator(intervening) variable on the relationship between control and complexity at work and personal initiative. The study result stated that relation between control and complexity and concurrent initiative is partly mediated by general self-efficacy.

[7]See for e.g.;Speier and Frese (1997); Nauta (2004); Abd-Elmotaleb and Saha (2013); MOhd et al and Souza LAS et al.(2014); Parsa's sons(Bita et al)(2016); Zahir Osman (2017) and ;Molero et al. and Sheaffer (2018).

Furthermore, Nauta (2004) bared that self-efficacy mediates the relationship between big five personality dimensions and career self-interest. Likewise Abd-Elmotaleb and Saha (2013) elucidate the role of academic Self-efficacy as a mediator variable between perceived academic climate and academic performance and got the outcome of mediated the relationship between perceived academic climate and academic performance in the theoretical schools sample (full mediation), male and female samples (partial mediation).

Mohd et al and Souza Las et al. (2014) conducted two parallel studies taking the mediating role of self-efficacy as their core issue. the first research indicate that self-efficacy acted as full mediating role in the relationship between personal values and entrepreneurial orientation and the second study exposed that the mediation analyses provide satisfactory evidence for the role of perceived self-efficacy as a mediator of the relationship between the subjective well-being variables and the overall health of military trainee.

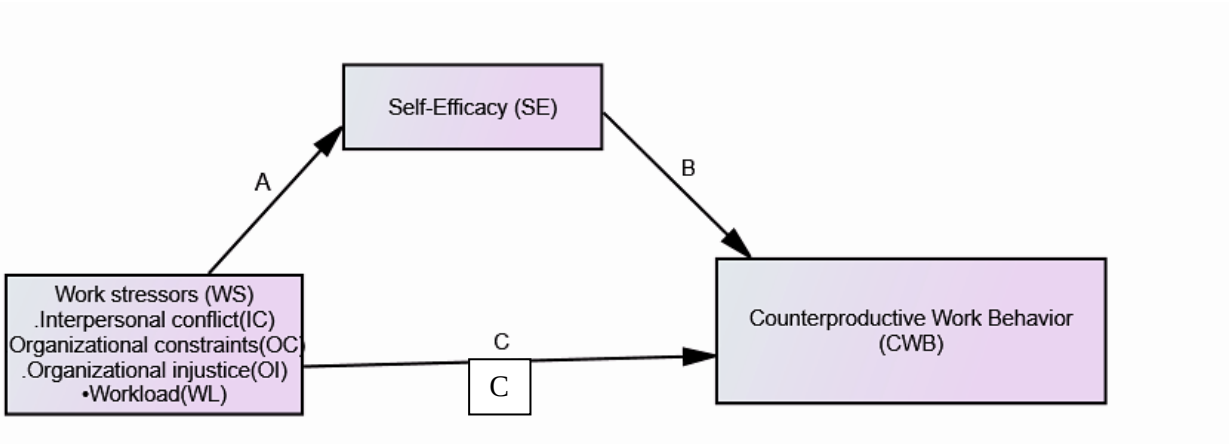
Moreover, the study result of Parsa's sons (2016) show that self-efficacy was related to mentoring and career advancement ($p<0.05$). The effect of mentoring on career advancement was significant ($p<0.05$). Self-efficacy partially mediated the relationship between mentoring and career advancement ($p<0.05$). Further, ZahirOsman (2017) perform a study on the mediating effect of self-efficacy on leadership style and job performance and the result was only partial mediation.

Again in 2018 two studies had also been conducted by Molero et al. and Sheaffer. According to Molero et al., in their study of self-efficacy as a mediator of effect of work load on burnout, show that show that professionals with high levels of self-efficacy also scored higher on global self-esteem. Burnout correlated negatively with both variables (self-efficacy and self-esteem). Self-efficacy and self-esteem function as buffers of the negative effects of workload on burnout. Similarly, as per Sheaffer survey, self-efficacy mediated the relationship between destructive leadership and CWB

To windup, self-efficacy as a mediator variable discussed in the above studies has not provided consistence and valid inference, they would rather inflict different conclusion in different occupation. In addition to this, even though those studies are avail (but not enough), no study has

been conducted by taking self-efficacy as a mediating variable on the relation between work stressors and CWB. Thus, this study tries to fill this gap.

Figure 2. 1 Conceptual framework of the study- proposed mediation analysis



Sources: SPSS, Amos 25

In the above diagram work stressors are independent variable and CWB is the dependent variable while self-efficacy is the mediating variable.

The above model tries to discover and explain the bases of an observed relationship between a dependent variable (CWB) and independent variables (work stressors) through the mediator (SE). Nonetheless, the mediation hypothesis is not related to the direct causal relationship between dependent and independent variables, rather it assumes that the independent variable as the main cause of the mediator variable, which, consequently, results in the dependent variable. Thus, it can be logical to say that the mediator variable seeks to explain the nature of the relationship between the dependent variable and the independent variable

Direct effect = C the effect of work stressors on CWB

Indirect effect= AB the indirect effect of work stressors on CWB through self-efficacy

Total effect C'= C+ AB is the sum of direct effect and indirect effect

2.6 Hypothesis Formulation

Based on the above literature review and theoretical framework, the hypotheses for the study are established as follows. The hypotheses are:

Hypothesis1: there is a significant positive relationship between work stressors and CWB

a. There is a significant positive relationship between organizational constraints and CWB

b. There is a significant positive relationship between interpersonal conflict[8] and CWB
c. There is a significant positive relationship between workload and CW
d. There is a significant negative relationship between organizational justice and CWB

Hypothesis 2: there is a significant negative relationship between work stressors and SE

a. There is a significant negative relationship between organizational constraints and SE
b. There is a significant positive relationship between interpersonal conflict and SE
c. There is a significant positive relationship between workload and SE
d. There is a significant positive relationship between organizational justice and SE

Hypothesis 3: There is a significant negative relationship between self-efficacy and CWB

Hypothesis 4: self-efficacy mediates the relationship between work stressors and CWB

a. Self-efficacy mediates the relationship between organizational constraints and CWB
b. Self-efficacy mediates the relationship between interpersonal conflict and CWB
c. Self-efficacy mediates the relationship between workload and CWB
d. Self-efficacy mediates the relationship between organizational justice and CWB

[8] This variable was dropped later for seek- of admissible solution in SEM

CHAPTER THREE
RESEARCH METHODOLOGY

3.1 Research Design

An appropriate study design was one that allows valid inferences to be made from the findings and these inferences have direct bearing on the research question that the study attempts to answer (Chan, 2008).This research apply a cross sectional quantitative research methodology using correlation, multiple-regression and structural equation model (SEM).

The process of model specification was conducted using PCA (principal component analysis), EFA (Exploratory factor analysis) and the data were check whether it fits to the theoretical model using CFA (confirmatory factor analysis).

This study utilized SPSSv25 (with its special feature Amos25) as the statistical tools for our analysis. Using CFA direct, indirect and total effects are computed. The study utilized a structured questionnaire in order to examine the perception of employees of the bank regarding work stressors, self-efficacy and CWB. Chan,(2008) argued that the most common method of data collection in social science business research is the self-report questionnaire method where items are grouped into scales measuring a variety of constructs in various domains, such as abilities, personality, values, attitudes, and workplace perceptions.

3.2 Study population and sampling Techniques

This research targeted the employees of commercial bank of Ethiopia, but the study population includes employees, who were in grade three and grade four branches located in Addis Ababa and clerical staffs. This study refer to Addis Ababa, because it constitute the four major districts which cover the lion share of bank's employees, customer, volume of transaction and deposit. This research applied judgmental, stratified and simple random sampling. Using a stratified sampling, a total of 3588 clerical staff from 60 branches of four districts of the bank in Addis Ababa (Namely; East, North, and South and West districts) were grouped in four strata. Each stratum has equal number of branches. Each branch from each stratum was selected based on judgmental sampling, and each participant from each branch was drawn randomly.

As per commercial bank's branch grading, Grade one and two branches are small branches in terms of transaction in type and volume with small number of staff. Grade Three and Four

branches are big in size in terms of volume and type of transactions. These branches serve all types of customers, have experienced employees and exposed to work stress comparatively. As a result, the researcher would felt confidence on the reliability of information gathered from the target group since there is no difference on the working condition throughout the bank

Table 3 .1 sampled population

The following table indicates how the sample size determined based proportional allocation for each stratum.

Districts	**Population size per stratum(Nh)**	**Sample size per stratum (nh=(Nh/N)*n**
East	835	(835/33513)*3588=89
North	951	(951)/33513)*3588=102
South	1011	(1011)/33513)*3588=108
West	791	(791/33513)*3588=85
Total(n)	**Total**	**Total sample size**
	3588	**384**[9]

Where :N_h is population size per stratum

N is Total population =total number of employees as of March 31, 2019 =33,513

n_h is sample size per stratum

n is total population in all strata(Pandey and Verma,2008 ; stattrek,2019)

3.3. Sources of the data and data collection method

The basic source of data for this research was and obtained through a close ended and scaled/standardized questionnaire-primary data, however the number of total population was obtained from South-Addis Ababa district human resource department. Each clerical staffs was

[9] Alternatively, sample size can be calculated using the formula(Godden,2004) $n = \frac{pq(Z)^2}{u^2}$ where, n is the sample size, p is sample proportion (=50% proportion is the maximum variability in the population , yield a more conservative sample size,
Z–Z value at specified confidence interval (95%), level of precision is 0.05 and q=1-p and u – error term. Thus, **$n=(0.5*0.5*1.96^2)/0.05^2=384$**

randomly selected from its own branch. They filled the questionnaire voluntarily. Through these questionnaires, the researcher measured the level of employee's perception towards work stressors, self-efficacy and CWB. The type of questionnaire deployed in this research was personally administered structured questionnaire.

The main advantage of this instrument is that, it will enable us to collect all the completed responses within a short period of time. Any doubts that the respondents might have on any question could be clarified on the spot. The researcher is also afforded the opportunity to introduce the research topic and motivate the respondents to offer their frank answers. Administering questionnaires to large numbers of individuals at the same time is less expensive and consumes less time (Asres, 2016). Questionnaires are distributed at their place, filled individually and collected on the same date.

3.4 Measures

3.4.1 Organizational Constraints

This study adopted the modified organizational constraints scale (OCS) of Liu et al. (2010). The revised OCS in cross-cultural study of Liu et al (2010) contains 4 items measuring interpersonal constraints (α=0.71 and 0.80 for USA and China respectively) and 5 items measuring job context constraints (α=0.78 and 0.83 for the respective countries).

Each item describes job relevant constraint. Participants were asked to indicate how often they find it difficult or impossible to do their job because of each constraint. Response options range from 1 (less than once per month or never) to 5 (several times per day), with high scores representing high levels of constraints. Example of the items include:" inadequate training" and "other employees."

3.4.2 Interpersonal Conflict

Spector and Jex's (1998) 4-item Interpersonal Conflict at Work Scale (ICAWS) was used to measure interpersonal conflict. This summed rating scale assesses how well respondents get along with others at work (e.g., how often respondents get into arguments with coworkers). Response options range from 1 (less than once per month or never) to 5 (several times per day),

with high scores representing greater levels of conflict. Spector and Jex (1998) reported a coefficient α of .74 for this scale.

3.4.3 Workload

Workload was measured using the Quantitative Workload Inventory (QWI) (α = .82; Spector and Jex, 1998). This scale consists of five items assessing the amount of work the participant must perform. Each item represents a statement about the participant's amount of work, and participants were asked to indicate how often each occurs; responses to each item range from 1 (less than once per month or never) to 5 (several times per day). An example of an item is, "How often does your job leave you with little time to get things done?" High scores represent a high level of workload.

3.4.4 Organizational Justice.

Perceptions of organizational justice have been measured by combining the distributive and procedural justice scales reported in Moorman (1991; cited in Fox et al., 2001 with α=0.94 for both forms). This study only pick three items for distributive justice and 4 items for procedural justice (Skarlicki et al ,2008; Yesil and Dereli, 2013 and Chen at al 2015 and Horan, 2016 with α=.95, 0.80, and 0.82 respectively). Responses were on a 5 point scale, ranging from 1 (very unfairly) to 5 (very fairly); a high score represents a high level of distributive justice. Responses on this scale range from 1 (strongly disagree) to 5 (strongly agree) with high scores representing high levels of procedural justice with Lower scores represent perceived injustice.

3.4.5 Self-efficacy

The occupation-specific self-efficacy can be measured using Occupational Self-Efficacy Scale (OSES) which consists of 6-item psychometric scale that is designed to assess optimistic self-beliefs to cope with a variety of difficult demands in work (Rogttietal.2008 and Freitaset al.2014). Freitaset al.2014 modifies the six point Likert scale to five points Likert scale for Brazilian cases. Here this study directly adopt OSES, which is composed of six items that are answered on a Likert scale of five points, ranging from 1 (strongly disagree) to 5 (strongly agree). An example of an item includes *"*I feel prepared for most of the demands in my job*."*

With respect to the validity and reliability of the scale, Freitas et al. (2014), conducted cross country study for five countries: Germany , Sweden, Belgium, Britain and Spain and found α of 0.87,0.86,0.85,0.90 and 0.85 respectively.

3.4.6 Counterproductive work behavior

This study uses a shortened 10-item checklist (CWB-C-10) for this study the validity and reliability of measure was examined by Spector and his teammate. This measure can be broken in to two aspects. The first indicates behaviors targeting toward the organization (CWB-O), which is a-5 item scale Spector (2010).Example of an item include: "told people outside the job what a lousy place you work for."

The second is behaviors targeting other people within the organization (CWB-I) which is also a 5 items scale Spector at al. (2010). An example of an item includes: "made fun of someone's personal life." Each item, in both CWB-O and CWB-I, consists of five response choices ranging from 1 (*never*) to 5 (*every day*).

3.4.7 Control variables

Age, sex, education and experience were controlled for in all analyses because it found that they have insignificant association and relationship to self-efficacy and counterproductive work behaviors in both multiple regression equation and structural equation modeling analysis. This idea was backed by Rotundo and Spector, (2010; cited in sprung, 2011) which have suggested that elder people, females, more educated employees and employees with more experience tend to engage in less CWB. As such, controlling for these factors ensure that they are not a driving factor of the relationships between work stressors, self-efficacy, and CWB.

3.5 Method of analysis

In this research the predictor variables are work stressors (interpersonal conflict, organizational constraints, organizational justice and workload), mediator variable is self-efficacy and dependent variable is counterproductive work behavior. To test the hypothesis, this study use structural equation modeling (SEM) analysis.

3.5.1 Structural Equation modeling with latent variables.

An analysis which uses intermediate variable called the "mediator" to explain how and why the independent variable influences the dependent variable (Gunzler et al. 2013). Structural Equation Modeling, or SEM, is a very general statistical modeling technique, which is widely used in the behavioral sciences. It combined factor analysis and regression or complex path analysis.

The interest in SEM is often on theoretical constructs, which are represented by the latent factors. The relationships between the theoretical constructs are represented by regression or path coefficients between the factors. The structural equation model implies a structure for the covariance's between the observed variables. Structural equation models are widely used in psychology and the social science (Hox and Bechger, 1998 and,Gunzler at al.2013).

3.5.2 Mediation Regression Equations: Baron and Kenny's (1986) approach

The Baron and Kenny's approach sets three conditions in mediation analysis :i) a strong relation between the dependent and independent variables, ii) a significant relationship between the hypothesized mediator and the independent indicator, iii) a significant mediator variable is required to be related to the dependent variable. However, both mediating and independent variables are predicting the dependent variable. The following shows the regression equation of the above conditions.

$\mathbf{Y} = \boldsymbol{a_1} + \boldsymbol{\beta_1 X} + \boldsymbol{\mathcal{E}_1} \ldots\ldots\ldots\ldots\ldots\ldots\ldots\ldots\ldots\ldots\ldots\ldots\ldots\ldots\ldots\ldots\ldots\ldots\ldots\ldots \boldsymbol{m_1}$

$\mathbf{Y} = \boldsymbol{a_2} + \boldsymbol{\beta_2 X} + \boldsymbol{\beta_M M} + \boldsymbol{\mathcal{E}_2} \ldots\ldots\ldots\ldots\ldots\ldots\ldots\ldots\ldots\ldots\ldots\ldots\ldots\ldots\ldots\ldots\ldots\ldots\ldots\ldots \boldsymbol{m_2}$

$\mathbf{Y} = \boldsymbol{a_3} + \boldsymbol{\beta_3 X} + \boldsymbol{\mathcal{E}_3} \ldots\ldots\ldots\ldots\ldots\ldots\ldots\ldots\ldots\ldots \boldsymbol{m_3}$

The required three regression equations were computed from the data collected and take the form:

$\mathbf{CWB} = \boldsymbol{a_1} + \boldsymbol{\beta_1 OC} + \boldsymbol{\beta_2}\mathbf{IC} + \boldsymbol{\beta_3}\mathbf{WL} + \boldsymbol{\beta_4}\mathbf{OJ} + \boldsymbol{\mathcal{E}_1} \ldots\ldots\ldots\ldots\ldots\ldots\ldots\ldots\ldots\ldots\ldots\ldots\ldots\ldots \boldsymbol{m_1}$ for (i)

$\mathbf{CWB} = \boldsymbol{a_2} + \Theta_1 \boldsymbol{OC} + \Theta_2 \mathbf{IC} + \Theta_3 \mathbf{WL} + \Theta_4 \mathbf{OJ} + \Theta_M \mathbf{SE} + \boldsymbol{\mathcal{E}_2} \ldots\ldots\ldots\ldots\ldots\ldots\ldots\ldots\ldots\ldots \boldsymbol{m_2}$ for (iii)

$\mathbf{SE} = \boldsymbol{a_3} + 2_1 \boldsymbol{OC} + 2_2 \mathbf{IC} + 2_3 \mathbf{WL} + 2_4 \mathbf{OJ} + \boldsymbol{\mathcal{E}_3} \ldots\ldots\ldots\ldots\ldots\ldots\ldots\ldots\ldots\ldots\ldots\ldots\ldots\ldots \boldsymbol{m_3}$ for (ii)

Where: **CWB** is counterproductive work Behavior which is dependent variable in equation $\boldsymbol{m_1}$ and$\boldsymbol{m_1}$, **OC** is organizational constraints, **IC** is interpersonal conflict, **WL** is work load, **OJ** is organizational justice and **SE** is self-efficacy. And $\boldsymbol{a_1}, \boldsymbol{a_2}and\boldsymbol{a_3}$ **;** are constants corresponding to the three equations. Further, $\boldsymbol{\beta_1} \ldots \boldsymbol{\beta_4}, \Theta_1 \ldots \Theta_4$ $and 2_1 \ldots 2_4$are coefficient to equations $\boldsymbol{m_1}, \boldsymbol{m_2}and\boldsymbol{m_3}$respectively.$\boldsymbol{\mathcal{E}_1}$, $\boldsymbol{\mathcal{E}_2}$ and, $\boldsymbol{\mathcal{E}_3}$are residual terms**.**

Equation $\boldsymbol{m_1}$shows the total effect**;** $\boldsymbol{m_2}$explain the interaction effect and finally $\boldsymbol{m_3}$elucidate the relationship between the mediator and predictors.

3.5.3 Mediation Regression Equations: SEM

SEM contains two models Jöreskog (1973; cited in Rahman, Shah and Rasil, 2015) i.e. the measurement model and structural model.

Measurement Model:

In SEM this model defines the association between the variables of interest (connecting observed to latent variables). A measurement model (must hold first to test the structural hypothesis) is tested to validate the measurement instruments. Thus, it specifies the pattern by which each measure loads on a particular factor (Byrne, 1998; cited in Rahman, Shah and Rasil, 2015).

Mathematically, it can be defined as (Kumar, 2015)

$$\mathbf{y} = \hat{}\mathbf{y} + \boldsymbol{\delta} \ldots\ldots\ldots\ldots\ldots\ldots\ldots\ldots\ldots\ldots\ldots\ldots\ldots\ldots\ldots\ldots\ldots\ldots\ldots\ldots\ldots\ldots\ldots\ldots\ldots\ldots (\mathbf{1})$$

$$\mathbf{x} = \hat{}\mathbf{x} + \boldsymbol{\mathcal{E}} \ldots\ldots\ldots\ldots\ldots\ldots\ldots\ldots\ldots\ldots\ldots\ldots\ldots\ldots\ldots\ldots\ldots\ldots\ldots\ldots\ldots\ldots\ldots\ldots\ldots\ldots (\mathbf{2})$$

The ^y, ^x are the regression coefficients of observable variables and the $\boldsymbol{\delta}$,$\boldsymbol{\mathcal{E}}$ are residual errors

Structural Model:

Structural model links the constructs (latent) to each other. It is based on “a simultaneous regression of the endogenous variables in the hypothesized structural model on the predicted antecedents” (Cheng, 2001, p. 654 cited in Rahman, Shah and Rasil, 2015). Mathematically, it can be formulated as (Kumar, 2015)

$$\eta = \mathbf{B}\eta + \mathbf{L}\mathrm{ŋ} + \varepsilon \ldots\ldots\ldots\ldots\ldots\ldots\ldots\ldots\ldots\ldots\ldots\ldots\ldots\ldots\ldots\ldots\ldots\ldots\ldots\ldots\ldots\ldots\ldots\ldots\ldots\ldots\ldots\ldots\ldots\ldots (\mathbf{3})$$

Here ƞ represent endogenous variables, ŋ is a vector of exogenous variables, ε is the error or disturbance term vector, and B and L are the regression coefficients of endogenous and exogenous variables.

3.5.4 Validity and Reliability

PCA, EFA, Parallel Analysis (PA) and CFA

Item in this study the measure of variables were adopted from validated sources backed by many replicated literatures as indicated in section 3.3. Data cleaning for some non-response,

incomplete and invalid questionnaire were performed. Due to these problem some 80 responses were disregarded

The rule of thumb for sample size in SEM is 200 (Matsunaga, 2010). The online priori sample size calculator yields a minimum of 161 cases with effect size[10]- 0.3, power-0.8[11], number of observed variables -32, number of latent variables -6, and at 0.05 margin of error. In our case the sample size is 296(out of 384 only 304 are responded correctly and with the exclusion of 8 outliers).

Applying PCA reduces the item in to components using factor loadings-the applied rotation method is "Promax"[12]. In this study all factors with less than 0.50 loadings were dropped. These factors are used to build a convergent and discriminant validity later.

Using EFA the correlation matrix has a determinant of 1.699E-10 which is different from zero and hence ensures positive definiteness. In addition, the overall model Kaiser-Meyer-Olkin (KMO) Measure of Sampling Adequacy is 0.81 which is commendable and for the individual items it ranges from 0.52 to 0.92 which passes the minimum threshold level of 0.50, implying that-the sample is adequate- factor analysis yields a valid and reliable analysis (Hair et al., 2006; Bagozzi and Yi, 1988 and Freita et al,2014).

[10] Effect size is the difference between two population means divided by their standard deviation that is $Cohen's\ d = \frac{M_1 - M_2}{SD_{pooled}}, SD_{pooled} = \sqrt{\frac{(n_1-1)s_1^2 + (n_2-1)s_2^2}{n_1+n_2-2}}$,where $n_1, n_1\ and\ s_1^2, s_2^2$ are number of sample size and standard deviation for the two population.

[11] The desired level of statistical power is the probability of committing type II error (fail to reject Ho while it's false or fail to reject Ho while H1 is true).

[12] The default rotation method in SPSS is 'Varimax' which assumes no correlation among components (orthogonality). However this restriction pose three problems: i) in social science nearly all construct relate at other factors some extent, ii) even uncorrelated pattern should emerge naturally and iii) although orthogonal solutions are considered, replicability in large sample size would be affected(Hetzel,1996; Pett et al.,2003 cited in Matsunaga, 2010,p 100).

Table 3. 2 KMO and Bartlett's Test[13]

Kaiser-Meyer-Olkin Measure of Sampling Adequacy.		.807
Bartlett's Test of Sphericity	Approx. Chi-Square	6382.598
	Df	496
	Sig.	.000

Source :SPSS output, 2020

The Bartlett's Test of Sphericity indicates, taking a 95% level of confidence, α=0.05, the p-value of 0.000 less than 0.05, the factor analysis is valid. Further the number of factors to be retained has also been determined using EFA by putting "Promax" and "principal axis" on. Then, applying "parallel analysis"[14](comparing the random data Eigenvalues percentile to the EFA Eigenvalues) , there are seven factors to be retained.

After completing the first two steps(PCA and EFA), Confirmatory Factor Analysis (CFA) is used which is the part of SEM deals with the assessment of fir between observed data and theoretically grounded model that specifies the tentative causal relation between latent factors and their observed indicator (are usually qualitative judgments/responses in a survey/questionnaire. The strength of each indicator with its respective latent construct is expressed as a factor loading) (Rahman, Shah and Rasli, 2015).

Factor analysis assumes that the covariances between a set of observed variables can be explained by a smaller number of underlying latent factors. In confirmatory factor analysis, it is preceded as if there is hypothesis about the number of latent factors and the relations between the latent factors and the observed variables. When CFA is imposed on the data in SEM it can be obtain parameter of the model (i.e. factor loadings, variances and covariances of the factor, and residual error variances of the observed variables) and model fit (model goodness of fit) (Hox and Bechger, 1998).

[13] The test of the null hypothesis that the correlation matrix is an identity matrix

[14] Parallel analysis is considered to be the most accurate methed to determine the number of factors in factor analysis as:i) egien value criteria overstate the latent factors, ii) the test is , in addition to over-extracting factors, based on researcher's subjective decision, iii)Bartlett's X^2 test is highly susceptible to large sample size (Matsunaga, 2010).

In CFA some of the factor loadings are constrained or fixed to be zero and for each factor, it must be fixed to one (uni-dimensionality) to make latent factor an interpretable scale. If it doesn't fixed to one factor loading for (or to another number not equal to zero), the scale of the latent factor is undetermined.

The building blocks of CFA are convergent validity (CV)[15] and discriminant validity (DV). Convergent validity established by computing average variance extracted (AVE>0.50) and composite reliability (CR>0.70). Further Cronbach's alpha (α>0.70) was also checked for reliability (Hair et al., 2010). On the other hand the most widely used criteria to asses discriminant validity is comparing the square of correlation between each latent constructs and the average variance extracted of the respective constructs and/or comparing the square root of the average variance extracted with the correlation of the latent constructs. In both cases the AVE's consistently greater than the correlation of the constructs which ensure strong discriminant validity (supporting Fornell and Larcker ,1981; M R Ab Hamid et al 2017; Haileeyesus, 2018).

3.5.5 Construction of path model for estimation

In the path model "double-headed arrow or single headed arrows", and squares represent the structural relationship and direction among variables. The squares represent the observed variables while oval indicates the unobserved (latent) variables in SEM. The single-headed arrows show the causalities or the structural relationships between the dependent (mediating) and independent variables, and double-headed arrows show the correlations that exist between the independent variables (Hox and Bechger, 1998).

Using these mechanisms the dependent, independent and mediating variables are represented in the path model, the variables that do not have any obvious causes, i.e., there is no arrow signs directed to them, are considered as exogenous variables. There are also variables that are indicated by single-headed arrows directed to them, which represent a regression (causal) relationship with an exogenous variable (Garson, 2007).

[15] Convergent validity measure the correlation between construct in agreement while Discriminant validity measures the actual difference between constructs (M R Ab Hamid et al 2017).

Table 3. 3 Reliability and Validity Test

Constructs	Items	Factor Loadings	Cronbach's α	AVE[a]	CR[b]	$\sqrt{AVE}$
Organizational Constriants(OC)	IOC2	0.86	0.94	0.74	0.95	0.86
	IOC3	0.9				
	IOC4	0.91				
	JOC1	0.87				
	JOC3	0.84				
	JOC4	0.77				
	JOC5	0.85				
Interpersonal Conflict (IC)	IC1	0.95	0.76	0.9	0.97	0.95
	IC2	0.95				
	IC3	0.94				
	IC4	0.95				
Workload (WL)	WL1	0.78	0.85	0.61	0.85	0.78
	WL2	0.79				
	WL3	0.73				
	WL4	0.78				
	WL5	0.82				
Organization Justice (OJ)	DJ1	0.66	0.83	0.61	0.88	0.78
	DJ2	0.76				
	DJ3	0.89				
	PJ1	0.67				
	PJ4	0.88				
Self-Efficacy (SE)	SE1	0.62	0.76	0.52	0.84	0.72
	SE2	0.55				
	SE3	0.82				
	SE5	0.79				
	SE6	0.79				
Counterproductive Work Behavior(CWB)	CWB_I1	0.87	0.88	0.62	0.91	0.94
	CWB_I3	0.8				
	CWB_I4	0.66				
	CWB_O2	0.8				
	CWB_O3	0.68				
	CWB_O5	0.86				

a. $AVE = \frac{\Sigma \lambda^2}{n}$ b. $CR = \frac{(\Sigma \lambda)^2}{(\Sigma \lambda)^2 + \Sigma \varepsilon}$

Source: Own Survey, SPSSv25, 2020

3.5.6 Model Fit Indices

To test whether the model fit the real data this study applies both absolute and incremental fit indices based on Jenatabadi's (2015) presentation.

To do so, Confirmatory factor analysis (CFA) has been performed on individual constructs with SPSS Analysis of Moment Structure (AMOS) v25, which includes all multiple item scales and covariates.

Relevant model fit Confirmatory Fit Index (CFI>0.9), Tucker–Lewis Index (TLI>0.9), Root Mean Squared Error of Approximation (RMSEA<0.05) , Standardized Root Mean Squared Residual(RMR) and others have been checked to make sure the measurement model fits the data reasonably well(*see appendix V B*)[16].

Table 3.4 the summary of the measurement models fit indices

Model Fit Indices	Measurement Models					
	CWB	OC	IC	WL	OJ	SE
$\chi 2$/df	1.613	1.683	0.995	2.706	0.708	0.077
RMR	0.019	0.023	0.016	0.028	0.011	0.002
GFI	0.991	0.983	0.998	0.986	0.997	1.000
AGI	0.963	0.957	0.984	0.949	0.986	0.998
NFI	0.992	0.990	0.999	0.981	0.997	1.000
RFI	0.978	0.984	0.994	0.953	0.981	0.999
IFI	0.997	0.996	1.000	0.988	1.001	1.003
TLI	0.991	0.992	1.000	0.970	1.003	1.016
CFI	0.997	0.996	1.000	0.988	1.000	1.000
RMSEA	0.045	0.047	0.000	0.075	0.000	0.000

Source: own survey result, AMOSv23, 2020

3.6 Ethical Considerations

The appropriateness of the researcher's behavior in relation to the rights of the participants or subjects of the research in research is regarded as ethics (Saunders, Lewis, and Thornhill, 2009, p. 160). The researcher, therefore, required to be governed by the ethical research principles. Hence respondents, employees of Commercial Bank of Ethiopia, have been transparently informed about the objective of the research. The researcher has made sure that, data collection permission letter from the department, covering letter contains information about the investigation, the objectives of the data collection, the voluntary participation of the respondents, assurance regarding confidentiality and anonymity, the intention to reveal the findings up on

[16] Interested reader are advised to see the works of Jenatabai(2015) to get further mathematical insights.

completion of the study and the contact details of the researcher. Furthermore, the researcher, to his best level, was abided by the rules and regulations of the University and has conducted the study on the basis of objective judgment.

CHAPTER FOUR
DATA ANALYSIS, RESULT AND DISCUSSION

In this chapter, data collected from the employees of Commercial Bank of Ethiopia are summarized and analyzed to realize the ultimate goal of the study.

4.1 Survey Response Rate

A total of 384 questionnaires were administered and the respondents (employees) were contacted at their working place. However, only 349 were collected out of which some 45 were rejected due to non-response, incomplete and invalid responses. Thus, 304 questionnaires were found to be acceptable and ready for analysis but unfortunately 8 observations were found to be an outlier which generally mean 296 observation was used in analysis (79.2% response rate and 77.1 % were exactly used in the study).

4.2 Respondent's Profile

The demographic characteristics of respondents are shown in table 4.1 below.

Gender

As observed from table gender composition of males were 42.6 % while the rest 57.4 were females which indirectly implies slightly gender balance in the study.

Age

All participants in this study were older than 20 and less or equal to 45 years old. Out of 304 valid respondents the most respondent's age group was between 25 and 30 which was 48.6 percent. The second age group with higher response was between 30 and 35 which were 23. 6 % followed by the age group between 35 and 40 which accounts 14.5% of respondents. The two last age groups, between 20 and 25, and 40 and 45, were least responded which covered 10.0% and 3 % respectively. From this, one can understand that Commercial Bank of Ethiopia has more young employees.

Experience

The composition of number of year an employee work for in an organization was mostly dominated by the range between 1 and 5 which accounts about 44.9% that is the more younger employees has the organization the lesser work experience is expected. Experience groups

between 5 and 10 years took the second place which was 30.1% followed by experience greater or equal to 15 years with 19.6%. The last group, between 10 and 15 years accounts 5.4 % of the total respondents.

Educational Level

By chance there were no respondents who had a diploma qualification in this study. Degree holder employees in sample cover the lion share, 178 in number, which stands 60.1% followed by those who had masters with 38.2 %. Those who have more than master's degree were only 1.7%. From this, observe that the bank has a younger generation with good educational certification.

Table 4. 1 Summary of demographic characteristics of respondents

Items		Frequency	Percent
Gen=Gender	Male	126	42.6
	Female	170	57.4
	Total	296	100
Age	20-25	30	10.1
	25-30	144	48.6
	30-35	70	23.6
	35-40	43	14.5
	40-45	9	3
	≥45	-	-
	Total	296	100
Exp= Experience	1-5	133	45.39
	5-10	89	29.93
	10-15	16	5.26
	≥15	58	19.41
	Total	296	100
Edu=Educational Level	Diploma	0	-
	Degree	179	60.1
	Masters	113	38.2
	More than masters	5	1.7
	Total	296	100

Source: Own survey SPSS V25 output, 2020

4.3 Descriptive Statistics of Variables

The mean (M) and standard deviation (SD) could be regarded as one of the simple statistical analysis (Marczyk, Dematteo and Festinger, 2005, pp.94).The mean indicates to what extent the

sample respondents on average agrees or disagree (how often they had experience of certain situations) with the different statements and a standard deviation is a measure of variability indicating the average amount that scores vary from the mean. The lower the mean the more the respondents disagree with the statement and the reverse holds true.

In this section, the respondent's response toward each constructs, namely: counterproductive work behavior, organizational constraints, interpersonal conflicts, workload, organizational justice and self-efficacy are discussed using descriptive statistics briefly (refer appendix II, for the details). . The mean and standard deviation of the overall measure of each constructs were 23.11, 11.13, 19.03, 14.40, 21.30 and 8.64; 7.71, 4.43,4.42, 3.77, 4.23 and 2.63 respectively for OC, OJ, CWB, IC, WL and SE. Relatively lower level of standard deviations shows the homogenous response of the participants.

Appendix II presents the mean and standard deviation of each construct's items. Based on the data in appendix II the mean of workload is higher than all other variables (M=4.27) implying that employees of commercial bank of Ethiopia feels they are 'busy'. For instance, 58.4% of the respondents feel that they are doing more work than they can do well several times per day. Further, these employees perceived that interpersonal conflict at work matter a lot next to their busyness (M=3.63). For example 43.9 % of the participant often feels that people are rude to them at work.

On the other hand the third most important work stressors organizational constraints with M=3.31also get attention such that about 37.2 of the respondents feel that they are unable to do their work due to lack of teamwork once or twice per day- implying that a reduction in teamwork. On average, 52.7 % the respondents (M=3.16) have involved in CWB activities (wasting banks materials or supplies) nearly once or twice per week implying, higher score, a signal for organizational risk.

Furthermore, they feel that there is unfairness in their organization (M=2.22). The 62.5 % of respondent's perception toward their reward to the amount of effort they exerted was very low. Similarly their perception toward their belief to cope successfully a given situation which is lower than from all other constructs (M=1.71) indicating that low self-efficacy may contribute to the higher CWB behaviors.

4.4 Correlation Analysis

The degree of association between variables and the direction in which the variable associate-positively or negatively ((Saunders, Lewis, and Thornhill, 2009, p. 490, and Marczyk, Dematteo and Festinger, 2005)-is termed as correlation. Its value ranges from -1 to 1 with value less than 0.2 weak, values more than 0.9 indicating very strong association between variables and value between 0.20 and 0.70 can be considers as modest associations between variables.

Table 4.2 demonstrates the correlation coefficient(r) for the association between dependent and independents variables. It is important to note that emphasis is given to association between dependent variables and other covariates. All the control variables –Gender, Age, and experience except educational level are associated to CWB with very low correlation coefficient and are insignificant. This implies that control variables are not strong predictors of CWB[17].

[17]The overall measure or total score of CWB is recommended rather than the separate dimension (CWB-I and CWB-O) while using the shorter version (Spector, Bauer and Fox, 2010). In addition due to a very high correlation between(r-0.980) ICO and JOC this study also uses the total score of OC in our analysis. Likewise the correlation between PJ and DJ is 0.934 which is again very strong and hence prefer to use the overall measure of OJ in our investigation.

Table 4. 2 Pearson Correlations [d]

Correlations

	Gen.	Age	Exp.	Edu.	CWB	CWB_O	CWB_I	OC	IOC	JOC	IC	WL	OJ	PJ	DJ	SE
Gen.	1	.178**	.166**	-0.034	0.032	0.026	0.034	0.051	0.043	0.056	-0.024	-0.050	-0.073	-0.022	-0.104	0.020
Age	.178**	1	.655**	0.030	0.012	0.007	0.015	-0.028	-0.044	-0.015	0.027	-0.013	-0.008	-0.030	0.009	0.113
Exp.	.166**	.655**	1	0.087	0.002	0.006	-0.002	0.066	0.057	0.071	0.027	-0.057	0.071	0.061	0.072	.137*
Edu.	-0.034	0.030	0.087	1	-.136*	-.127*	-.134*	-0.049	-0.048	-0.048	-0.044	-.157**	0.066	0.063	0.063	0.113
CWB	0.032	0.012	0.002	-.136*	1	**.906**	**.933**	**.160**	**.173**	**.141**	**.002**	**.064**	**.050**	**.045**	**.046**	**.029**
CWB_O	0.026	0.007	0.006	-.127*	.952**	1	**.707**	**.132**	**.147**	**.113**	**.002**	**.051**	**.035**	**.031**	**.032**	**.018**
CWB_I	0.034	0.015	-0.002	-.134*	.966**	.841**	1	**.162**	**.171**	**.146**	**.002**	**.065**	**.057**	**.051**	**.053**	**.035**
OC	0.051	-0.028	0.066	-0.049	.400**	.363**	.402**	1	**.960**	**.972**	**.001**	**.010**	**.000**	**.000**	**.001**	**.003**
IOC	0.043	-0.044	0.057	-0.048	.416**	.383**	.413**	.980**	1	**.872**	**.003**	**.012**	**.001**	**.000**	**.001**	**.004**
JOC	0.056	-0.015	0.071	-0.048	.375**	.336**	.380**	.986**	.934**	1	**.000**	**.008**	**.000**	**.000**	**.000**	**.002**
IC	-0.024	0.027	0.027	-0.044	0.045	0.045	0.042	-0.032	-0.052	-0.015	1	**.010**	**.004**	**.002**	**.005**	**.016**
WL	-0.050	-0.013	-0.057	-.157**	.252**	.226**	.255**	0.100	0.111	0.088	0.100	1	**.007**	**.006**	**.007**	**.044**
OJ	-0.073	-0.008	0.071	0.066	-.224**	-.187**	-.239**	-0.020	-0.025	-0.015	-0.065	0.085	1	**.872**	**.931**	**.036**
PJ	-0.022	-0.030	0.061	0.063	-.211**	-.176**	-.225**	-0.008	-0.009	-0.007	-0.048	0.076	.934**	1	**.651**	**.044**
DJ	-0.104	0.009	0.072	0.063	-.215**	-.178**	-.230**	-0.026	-0.034	-0.019	-0.072	0.085	.965**	.807**	1	**.025**
SE	0.020	0.113	.137*	0.113	-.170**	-.134*	-.188**	-0.051	-0.065	-0.039	-.127*	-.209**	.190**	.210**	.159**	1

**. Correlation is significant at the 0.01 level (2-tailed).

*. Correlation is significant at the 0.05 level (2-tailed).

d. the bold figures to the right of the diagonal elements are the square of correlations of the respective constructs.

From table 4.2 above, it is observed that the correlation between the dependent variable (CWB) and all others variables of interest. Correlation between CWB and Educational level was weak negative but significant. This provide one important implication, that is people with higher educational qualification are less likely to engage in CWB activities than those who have lower educational background (Morf, Feierabend and Staffelbach; 2017).

Concerning the correlation between the dependent and predictors, CWB was positively and significantly associated with OC (r=.400,p<0.01), WL(r-.252, p<0.01) and negative but significant correlation to OJ(r= 0.224, p<0.01) and(r=.17,P<.01) to mediator variable (SE). However, interpersonal conflict (IC) was not significantly associated with CWB.

Unfortunately the pair wise correlation between self-efficacy and work stressors was significant and in proposed direction. Self-efficacy is significantly correlated with all work stressors except organizational constraints. Its association to workload was r=-.209 with p-value<0.01 followed by organizational justice with r=-.190 and interpersonal conflicts at r=-.127.

Thus, the correlation analysis provides the information that the direction of the association between the dependent, independent and mediator variables was with the expected direction.

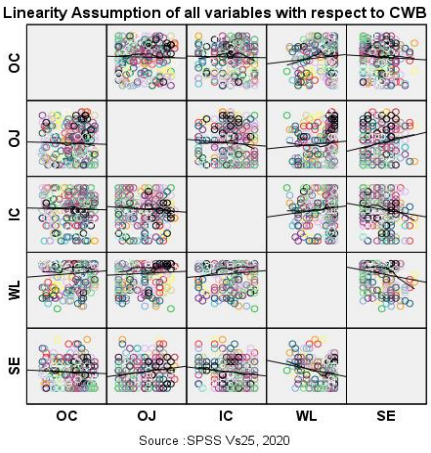
4.5. Diagnostic of Assumptions in SEM

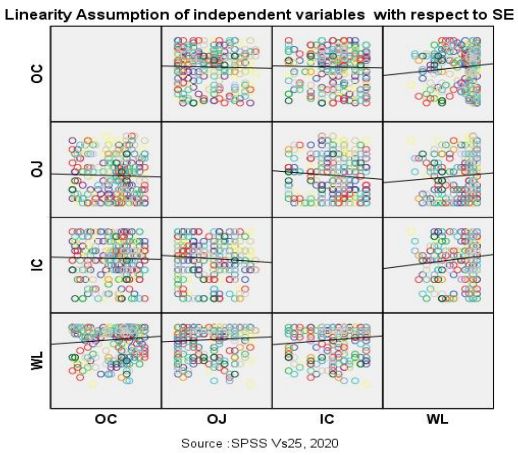
Before conducting a regression analysis and SEM in general, a set of assumption must be satisfied to the original data set. These assumptions are the mandatory precondition in explaining the relationship between the dependent, independent and mediator variables. The most important assumptions are explained as below.

Linearity

By this assumption endogenous variables (counterproductive work behavior and self-efficacy) are need to be a linear function of the exogenous variables (organizational constraints, interpersonal conflicts, workload and organizational justice). This condition was applied in two regressions; regress exogenous variables on both CWB and SE. To test the linearity association of variables the scatter plot diagram with fitted line presented in figure 4.1.The figure below, Fig 4.1 indicates, in both cases, that all relationships are fit reasonably and meets linearity assumption.

Figure 4. 1 linearity test using scatter plot matrices





Normality

Univariate Normality

Multiple-regression assumes error terms are normally distributed (Gujarati, 2003). To check the normality of error term the visual examination of the normal probability plot (P-P) of residuals were compared. This plots enable as to compare standardized residual with normal distribution, that is the normal distribution makes a straight diagonal line and the plotted residuals are compared in reference to it. Furthermore, the histogram was used as extra confirmation of the distribution. If the distribution is normal, the residual line will closely follow the diagonal (Ghozali, 2001). The figure 4.7 appendix IV displays both the histogram and P-P plots of standardized residuals for the three proposed regressions.

Multivariate Normality

The multivariate outliers were checked using the Mehalanobis[18] distance. Using the Mahalanobis distance calculator (with p=0.001and number of observed variables to be estimated=32), the critical value is 62.48722 meaning that the values greater than this were considered as outliers in the data (omitted 8 observation as outliers). The normal distribution of the data was also checked using Skewness (ranges from -1 to 1-normally distributed data) and Kurtosis (-2 to 2- shows normal distribution of the data) and it's found to within the acceptable range.

Multicollinearity

To check whether there is a multicollinearity problem or not, variance inflation factors was applies as statistical measure. It measures the severity of multicollinearity in multiple regression analysis and should not be higher than 10. The VIF displayed with tolerance statistics which measures the variability of a given independent variable not explained by other independents variables in the model (Gujarati, 2003). If the value tolerance is very small (less than 0.10), it indicates that multiple correlation between independent variables is high, and hence problem of mullticollinearity exist and it is found no value less than 0.10 for tolerance and a value greater than 10 for VIF. The following two tables confirm there is no problem of multicollinearity in the two models-for aggregated data. The VIF for multivariate data was presented in appendix III

[18] It measures the distance between two points in multivariate space- the distance between the point and centroid(overall mean) for multivariate data(Zero,2015)

Table 4. 3 Collinearity test for all models

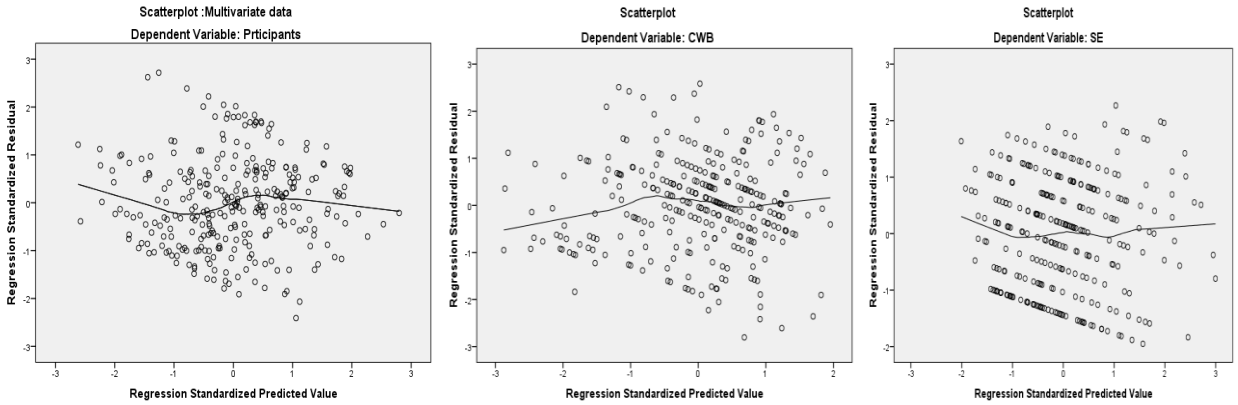
Models	Constructs	Collinearity Statistics	
		Tolerance	VIF
Model 1 Dependent variable CWB	OC	0.987	1.013
	IC	0.983	1.018
	WL	0.970	1.031
	OJ	0.986	1.014
Model 2 Dependent variable CWB	OC	0.986	1.014
	IC	0.973	1.027
	WL	0.925	1.081
	OJ	0.944	1.059
	SE	0.904	1.107
Model 3 Dependent variable SE	OC	0.987	1.013
	IC	0.983	1.018
	WL	0.970	1.031
	OJ	0.986	1.014

Source: Own survey result, SPSSvs25, 2020

Homoscedasticity (Equal Variance)

This assumption demands the even distribution of residual terms or homogeneity of error terms throughout the data. In other words error terms are normally distributed cross observation and have constant variance. Homoscedasticity can be checked by the visual examination of the plot of standardized residual to standardized predicted value. If this assumption is violated ordinary least square method is no more valid and hence SEM too (Gujarati, 2003). The following graph has demonstrated the homoscedasticity of the study.

Figure 4. 2 Scatter plot standardized residuals



Source: Own survey result, SPSSvs25, 2020

Autocorrelation

Although the problem autocorrelation is common in time series data, the test is applied for sake fulfilling linear multiple regression assumptions. The assumption of no autocorrelation states that error term are uncorrelated each other, i.e. they are independent of each other. To determine the autocorrelation between observations, Durbin-Watson's "d" test was used. The null hypothesis of Durbin-Watson's "d" test is no autocorrelation. The Durbin-Watson's "d" statistics ranges from 0 to 4; a value near to 2 indicate no serial correlation and a value close to 4 implies negative autocorrelation while a magnitude approach to 0 shows positive serial correlation(Field,2005 and Gujarati,2003). As the rule thumb values of "d" between 1.5 and 2.5 implies there is no serial correlation in the data. Thus, as indicated in the below table the data has no problem of autocorrelation in all scenarios.

Table 4. 4 Level of autocorrelation

Model Summary					
Model	R	R Square	Adjusted R Square	Std. Error of the Estimate	Durbin-Watson
Multivariate[a]	.490	.240	.148	77.232	1.995
Model 1(m_1)[b]	.511	.262	.251	3.803	1.865
Model 2(m_2)[c]	.515	.265	.252	3.801	1.860
Model 3(m_3)[d]	.310	.096	.084	2.471	2.084

Source: Own survey result, SPSSvs25, 2020

a. not necessary as it was obtained from fake regression taking number of participants as dependent variable and all other observed variables as independent variables.
b. CWB dependent variable while OC ,IC , WL and OJ independent variables
c. CWB dependent variable while OC ,IC , WL , OJ and SE independent variables
d.SE dependent variable while OC ,IC , WL and OJ independent variables

From table 4.4 it is possible to compare the R-square level of the models. R-square also called Coefficient of determination measures the proportion of the variation in a dependent variable that can be statistically explained by independent variables. It takes any value between 0 and 1. The R-square level of model 2 took the highest value with 26.50% followed by model 1 with 26.20% and model 3 took the third place with 9.60% which means the of variation in Counterproductive behavior 26.50%, 26.20 %and 9.60% was explained by the predictor in model 1, mode1 1 and model 3 respectively while the remaining percentage from each model might be predicted by other independent variables which were not included in each respective model and erroneous variables.

4.7 Baron and Kenny's approach Mediation analysis

Once the assumptions of multiple regression analysis are met, the results of regression analysis are presented and test whether the original hypotheses were rejected or not. The most common casual approach of Baron and Kenny's (1986) were applied to test the hypotheses. To do so three distinct regression equations (mediation regressions) are analyzed as indicated in chapter three of section 3.5.2. Further in this study demonstration of the normality theory method of mediation analysis also discussed.

In this case the effects of each independent variable (OC, IC, WL, and OJ) on CWB and SE have been examined. Before proceeding to the analysis part it is important to checked the overall goodness of fit of each separate model. The following consolidated ANOVA table (table 4.5) tells us the overall goodness of fit of the models. The significance result 0.000 less than p<0.05(the F statistics calculated from the data was greater the F critical value from stat table) for all models imply the regression result proved a good degree of prediction of the models- speaking in other words the joint significance of the coefficient of the predictors was proved.

Table 4. 5.overall significance of the models with aggregate data

ANOVA[a]						
Models		Sum of Squares	Df	Mean Square	F	Sig.
Model1	Regression	1490.88	4	372.721	25.768	.000[b]
m_1	Residual	4209.21	291	14.465		
	Total	5700.09	295			
Model 2	Regression	1509.89	5	301.978	20.900	.000
m_2	Residual	4190.20	290	14.449		
	Total	5700.09	295			
Model 3	Regression	189.43	4	47.357	7.754	.000
m_3	Residual	1777.22	291	6.107		
	Total	1966.65	295			

a. Dependent Variable: CWB in model 1 and model 2 but SE in model 3

b. Predictors: (Constant), OJ, OC, IC, WL in model 1 and 3 but in model 2 SE was also predictor

Source :Own survey result , 2020

The Baron and Kenny's (1986) casual approach require three step by step multiple regressions. The first noted (step 1) by $m_1$which is the direct effect –states that the predictors (OC, IC, WL and OJ) significantly related to CWB, the next regression labeled by m_3 (second step) –states that the predictors significantly explains the mediator (SE) variable and the last regression m_2 (third step) suggests the predictors plus mediator simultaneously should significantly related to the dependent variables.

Table 4. 6 the summary of multiple regression equations

Coefficients[a]

Constructs	Unstandardized Coefficients						Standardized Coefficients			t			Sig.		
	B			Std.Err			Beta(β)								
	m_1	m_2	m_3	m_1	m_2	m_3	m_1	m_2	m_3	m_1	m_2	m_3	m_1	m_2	m_3
_consta	11.281	12.442	11.226	1.583	1.879	1.029				7.125	6.623	10.911	.000	.000	.000
OC	.212	.211	-.010	.029	.029	.019	.373	.371	-.029	7.355	7.321	-.517	.000	.000	.605
IC	.022	.015	-.065	.060	.060	.039	.018	.013	-.094	.363	.250	-1.671	.717	.803	.096
WL	.243	.230	-.131	.053	.055	.035	.233	.220	-.214	4.552	4.199	-3.774	.000	.000	.000
OJ	-.234	-.222	.118	.050	.051	.033	-.236	-.223	.212	-4.643	-4.310	3.592	.000	.000	.000
SE		-.103			.090			-.061			-1.147			.252	

a. for dependent and independent variables notation see the footnote of table 4.4

Source: Own survey result, 2020

The standardized coefficients (β value) on each regression equation shows the relative contribution of each work stressors variables in explaining the employees level of self-efficacy and their tendency of participating in counterproductive work behaviors. In the first two models organizational constraints was the most important predictor (β =.373, and .371 for $\boldsymbol{m_1}$*and* $\boldsymbol{m_2}$ respectively**)** followed by organizational justice (β =-.236, and -.223 for $\boldsymbol{m_1}$*and* $\boldsymbol{m_2}$ respectively**).** The third important variable was workload with β =.233 and.220 for $\boldsymbol{m_1}$ *and* $\boldsymbol{m_2}$ respectively. On other hand, workload stood first in its importance in model 3 (β=-.214) followed by organizational justice (β=.212) and placing interpersonal conflict at the third (β =.-.094) and organizational constraints at last (β=-.029)

Thus, is noted that the relative importance of predictors were not the same across models. The most important variable in $\boldsymbol{m_1}$*and* $\boldsymbol{m_2}$ was organizational constraints while in $\boldsymbol{m_3}$it's was the least influential. Likewise workload had the highest contribution in explaining CWB in $\boldsymbol{m_3}$ while it was third in $\boldsymbol{m_1}$*and* $\boldsymbol{m_2}$**.** Hence**,** CWB was most affected by OC while SE was better explained by workload.

Based on the above regression result table the following mediation regression equations are drawn.

$$\boldsymbol{CWB = 11.281 + .212OC + .022IC + .243WL - .234OJ} \ldots\ldots\ldots\ldots\ldots\ldots\ldots\ldots\ldots\ldots \boldsymbol{m_1}$$

$$\boldsymbol{CWB = 11.442 + .211OC + .15IC + .230WL - .222OJ - .1031SE} \ldots\ldots\ldots\ldots\ldots \boldsymbol{m_2}$$

$$SE = 11.226 - .010OC - .065IC - .131WL + .118OJ \ldots\ldots\ldots\ldots\ldots\ldots\ldots\ldots\ldots\ldots\ldots\ldots\ldots\ldots m_3$$

As per the result indicated in the above mediation regression equation the research hypotheses were tested accordgly. The details presents in the following subsections:

4.7.1 Model 1(Total Effect) and Hypothesis Testing

Hypothesis 1, in general, proposed that work stressors will positively and significantly influence counterproductive work behavior. Hypothesis 1(a) stated that there is a significant positive relationship between OC and CWB. The result disclosed that organizational constraints (OC) was positively and significantly influence CWB (B=0.212, t=7.355, p<0.05) supporting the null hypothesis of H1 (a). The more frequent the employee experienced with OC the higher their engagement in the CWB.

Furthermore, hypothesis 1(b) suggested a positive significant relationship between interpersonal conflicts and counterproductive work behaviors. As far as this data was concerned there was no such relationship between these variables. The result demonstrated a positive –weak-insignificant relationship between these variables (B=.022, t= .363, p>.05). This implies that the null hypothesis of hypothesis 1(b) was rejected. On the other hand, hypothesis1(c) predicted a positive and significant relationship between workload (WL) and CWB. With B=.243, t=4.652, p<0.05, the result supports this hypothesis. Since workload results in fatigue, busyness and stress, the more the employees gets loaded for a long period of time the higher the probability of the employees to engage in CWB.

Hypothesis1 (d) also predicted a negative significant effect of organizational justice on CWB (B=-.234, t= -4.136, p<0.05). Employee's perception of fairness in organization, treated fairly in an organization leads to lower level of engagement in CWB.

4.7.2 Model 2 and Hypothesis Testing

This model explains the effects of SE on CWB and other predictor's on CWB, i.e. what will happen on the direct model due to the inclusion of SE as additional predictors. The model attempts to test hypothesis 1 and hypothesis 3 of the study.

Like the total effect, from equation m_2 and table 4.it can be shown that CWB is significantly explained by OC, WL and OJ. However, the impact of new variable, SE, on CWB is negative but not significant (B=-.103, t=-.1.15, p>0.05). Explanations of all other variables (with respect to B, β, t and significance level) is similar to model 1(m_1) with the exception of a very slightly change in the magnitude of un-standardized coefficients, beta's and t-values (lower in m_2 than m_1)-results in no change on the decision.

In general, with the help of model 2 multiple regression results hypothesis 1(a, c and d) were not rejected but hypothesis 3 even at 10% significant level meaning that, our data do not support, self-efficacy(though the direction was as predicted) was not significantly predict counterproductive work behavior. However, the correlation approach as shown in table 4.2 showed that counterproductive behaviors were significantly associated with self-efficacy in opposite direction. This supports the idea that correlation doesn't meant causation. Again, interpersonal conflict had insignificant effect on CWB (B=.015, t=.250,p>.05)

4.7.3 Model 3 and Hypothesis Testing

The result of multiple regressions illustrated in table 4.6 shows the contribution each independent variable in explaining the dependent variable. From the output equation and is possible to formulate the regression equation of model 3. Thus, hypothesis 2 of this study which states that there is a significant negative relationship between work stressors and SE is tested against the data.

Equation m_3 and table 4.6 B portrayed a positive insignificant effect of organizational constraints (OC)(B=-.010, t=-.517,p>.05) and interpersonal conflicts on self-efficacy (B=-.065, t=1.671, p>.0.05), results in failing to reject the null hypothesis 2(a). The power of OC in explaining the SE is not supported by the data. Despite its insignificancy, the OC positively related to SE. this might be the more constrained the employee at work place the more they face

the strange and challenges in performing their task. This might push them to think about the solution, and then through process they develop a habit of working in a challenging- constrained environment through which they build the ability to cope with difficult situation more successfully- meaning that their belief in their ability to do certain task became higher. Thus, higher self-efficacy might arise as the result.

However, the effect of workload (WL) and organizational justice (OJ) on SE was in line with the proposed hypothesis. Accordingly, there was a negative significant relationship between workload and self-efficacy (B=-.131, t= -3.774, $p<0.05$). This support the idea that higher workload leads to frustration which in turn results in aggression and hence to CWB. Thus, the null hypothesis of hypothesis 2(c) was rejected –meaning the result support hypothesis2(c).

Furthermore, the positive significant effect of organizational justice on CWB was also demonstrated by this result-which supported hypothesis 2(d) of the study (B=.118, t=3.592, $p<.05$).The reason behind might be the more the employees feel they are treated fairly in an organization the higher motivation there will be. This motivation could enhance their knowledge of doing job for better result. In due process they acquire the way how to solve the problems and hence the higher level of self –efficacy could be developed.

4.7.4 Hypothesis 4

The last hypothesis predicted that self-efficacy will mediate the relationship between work stressors and counterproductive behaviors. However, according to Baron and Kenny (1986), a variable is said to be mediator if the three conditions meets. The first one is if the independent variables significantly predict the dependent variable-to this condition our model 1 regression equation provides the answer. All covariates (OC, WL and OJ) significantly determined the CWB-thus, the first condition meets. This method also needs the covariates to be the significant explanatory of mediator variable (SE) - at this stage only WL and OJ were but OC was not. Finally, the procedure demands from equation 2 (model 2) SE to be a significant predictor of CWB –which not in our case as explained above.

Thus, depending on this result the null hypothesis of hypothesis 4 (with its sub hypotheses; a, c, and d) was failed to reject. In short self-efficacy was not the mediator between on the relationship between work stressors (OC, IC, WL, and OJ) and CWB.

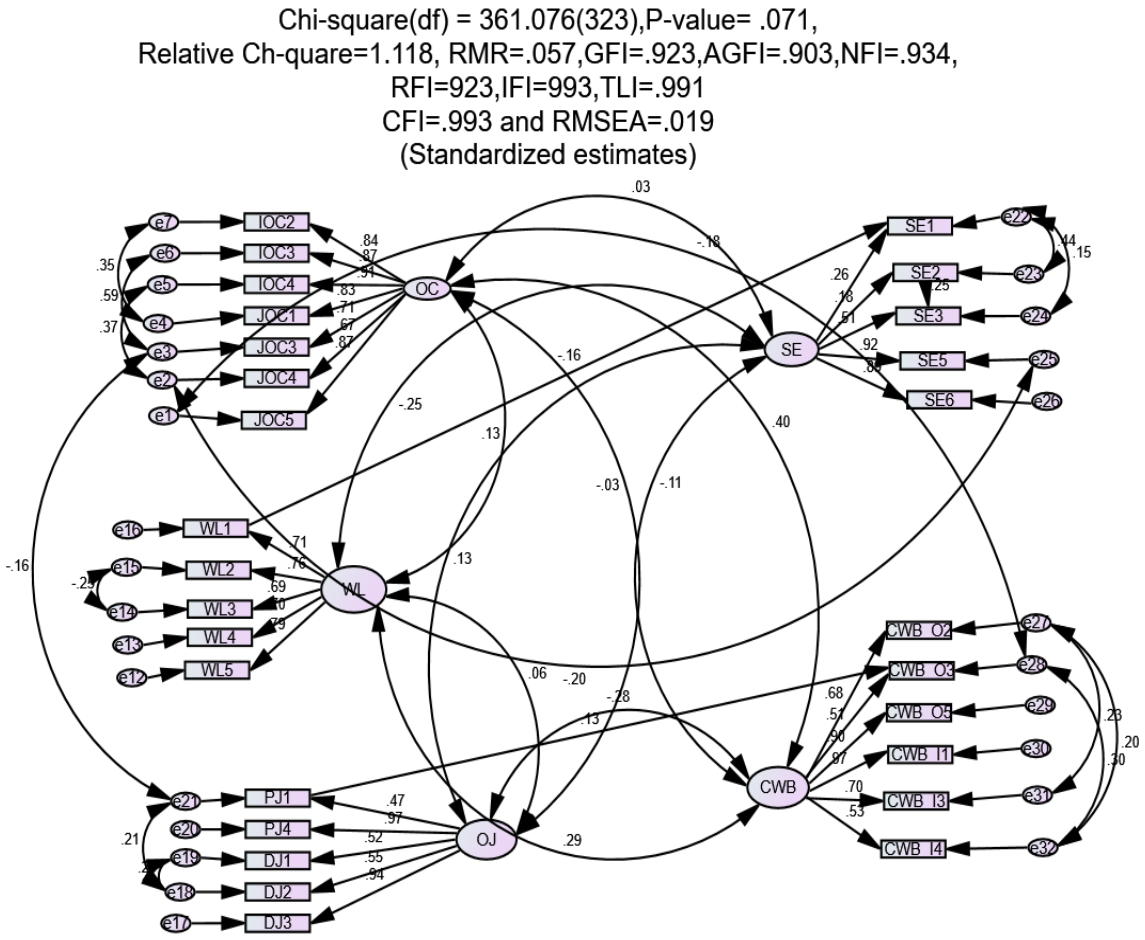
Before looking to the structural equation modeling mediation regressions let's have a look at the measurement model.

4.8 Mediation Analyses using SEM

The Measurement Model

The SEM is a blend of two models; the measurement model and the structural model. The measurement model paved the way for basic SEM model.

Figure 4. 3 the measurement model of the research



Sources: SPSS, Amos 25 output

The above figure shows the measurement model on the relationship between work stressors, self-efficacy and counterproductive work behaviors. This model fit the data (Relative Ch-square=1.118, RMR=.057, GFI=.923, AGFI=.903, NFI=.934, RFI=923, IFI=, 993, TLI=.991,

CFI=.993 and RMSEA=.019). Based on our measurement model, as in Baron and Kenny approach , the work stressors[19] (organizational constraints, workload and organizational justice) are significantly associated with counterproductive work behaviors (r=.40, .29 and -.28 respectively). Similarly, work stressors (Workload and organizational justice) are significantly related to counterproductive work behavior(r=-.25 and r=.13 respectively) while organizational constraints and interpersonal conflicts are not(r=.03 and r= -.07 respectively). Concerning the association between counterproductive behavior and self-efficacy, it was negative-insignificant(r=-.11) which is less than what was in correlation analysis(r=-.17). Thus, it was observed that the significant association between the dependent variable (CWB) and the mediator (SE) was changed in to insignificant effect in casual approach.

The Structural Model

Once the measurement model was developed, then the three models (the structural mediation regression equations) are shown in the appendix VI -Figure 4.4 represent the direct effect-mode1 ($\boldsymbol{m_1}$) with its model fit indices while figure 4.5 shows model 2 ($\boldsymbol{m_2}$) – both direct effect and indirect effect jointly while model 3 ($\boldsymbol{m_3}$) represent the relationship between work stressors and CWB.

From appendix VI the two figures yields the baseline structural equation model. The following diagram (figure 4.6) holds the blend of the two path diagram in a consolidated and simpler fashion. Based on this path analysis the hypotheses of our research were tested. Again for the purpose of simplicity it is represented by mediation regression equation as stated in our model speciation section.

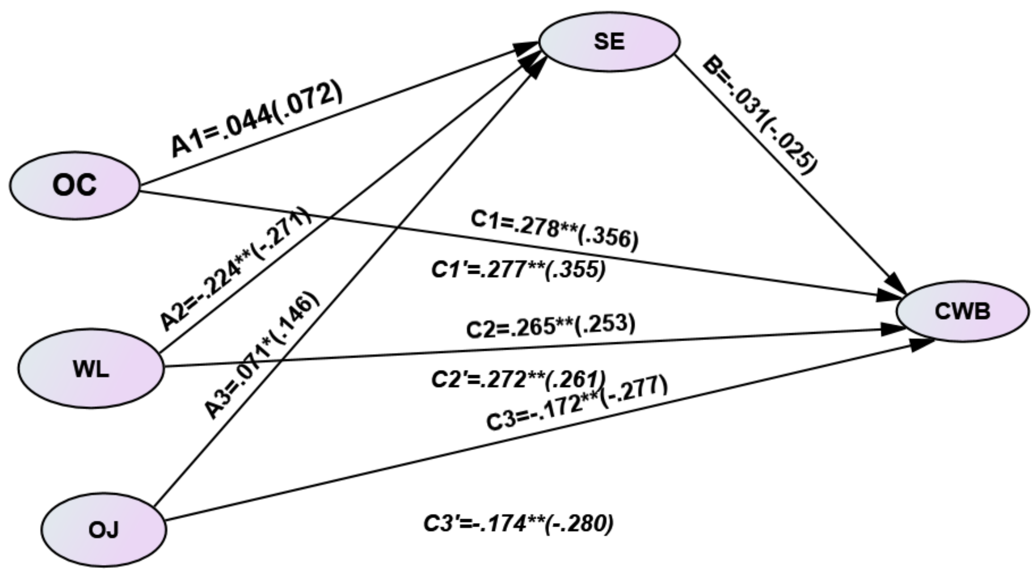
$$\boldsymbol{CWB = a_1 + 0.277OC + 0.272WL - 0.174OJ} \ldots\ldots\ldots\ldots\ldots\ldots\ldots\ldots\ldots\ldots \boldsymbol{m_1}$$

$$\boldsymbol{CWB = a_2 + .278OC + .265WL - .172OJ - .031SE} \ldots\ldots\ldots\ldots\ldots\ldots\ldots\ldots\ldots \boldsymbol{m_2}$$

[19] One of our work stressors variable- interpersonal conflicts(IC) was dropped from the measurement model (note that it was included in previous correlation and Baron and Kenny approach) to get admissible solution in basic SEM analysis. However, no change has been happened to our analysis and result as the result. Further , regardless of the method applied in this study this variable is found to have insignificant relationship to all variables except to self-efficacy in correlation approach(r=-.13). Furthermore, the output and the diagram representation of the analysis with IC will be presented up on request for both measurement and basic SEM models.

$$SE = a_3 + .044OC - .224WL + .071OJ. \ldots \ldots \ldots \ldots \ldots \ldots \ldots m_3$$

Figure 4. 4 Mediation path diagram relationship between work stressors, self-efficacy and Counterproductive work behavior.



*Note:** ,* indicate rejecting the null hypthesis at 1% and 5% significance level respectively and something outside the bracket are the unstandardizedand coefficients while others in the brackets are standardized coeffiecients.*
*Note also that the italic C's' are the coefficients of the total effect;e.g. C1'=(A1*B)+C1.*
*Generally,A'j*B=Indirect effect and Ci=Direct effect, where j,i=1,2,3*
*Thus,C'=Aj*B+Ci=> Total Effect=Direct effect+Inderect Effect*

Sources: SPSS, Amos 25 output

Thus, based on the above 3 models the below hypothesis testing analyses were performed, the decision was not changed however, except slightly variation in magnitudes of different statistical parameters.

Model 1 and Hypothesis Testing

The first hypothesis of the total effect model (m_1), in general, anticipated that work stressors will positively and significantly influence counterproductive work behavior. Hypothesis 1(a) stated that there is a significant positive relationship between OC and CWB. The outcome shows that organizational constraints (OC) was positively and significantly influence CWB (B=0.278,

t=6.637, p<0.05) supporting H1 (a). The more frequent the employee experienced with OC the higher their engagement in the CWB.

Similar to Baron and Kenny's techniques, the prediction of Hypothesis1(c) - a positive and significant relationship between workload (WL) and CWB with B=.272, t=4.652, p<0.05, is thus backed by the result. Since workload results in fatigue, busyness and stress, the more the employees gets loaded for a long period of time the higher the probability of the employees to engage in CWB.

Hypothesis1 (d) also predicted a negative significant effect of organizational justice on CWB (B=-.1744, t= -5.386, p<0.05). Employee's perception of fairness in organization, treated fairly in an organization leads to lower level of engagement in CWB.

Model 2 and Hypothesis Testing

Model 2($\boldsymbol{m_2}$) of SEM deal with the effects of SE and other predictor's on CWB i.e. what will happen on the direct model due to the inclusion of SE as additional predictors. The model attempts to test hypothesis 1 and hypothesis 3 of the study.

Like the total effect, from equation m_2 and figure 4.4, it was observed that CWB is significantly explained by OC, WL and OJ. However, the impact of new variable, SE, on CWB is negative but not significant (B=-.031, t=-.438, p>0.05). Explanations of all other variables (with respect to B, β, t and significance level) is similar to model 1(m_1) with the exception of a very slightly change in the magnitude of un-standardized coefficients, beta's and t-values (lower in m_2 than m_1)- results in no change on the decision as indicated in Baron and Kenny approach.

Generally ,the model 2 of SEM results in failing to reject hypothesis 1(in its null) (a, c and d)(b=.278,.265 and -.172; t=6.648,4.325 and 5.272 ; p<.05 respectively) but reject hypothesis 3 even at 10% significant level meaning that, our data do not support(B=-.031,t=-.438 ,p>.05(p=.669), self-efficacy(though the direction was as predicted) was not significantly predict counterproductive work behavior. However, the correlation approach as shown in table 4.2 showed that counterproductive behaviors were significantly associated with self-efficacy in opposite direction. This supports the idea that correlation doesn't meant causation.

Model 3 and Hypothesis Testing

The result of SEM path analysis on figure 4.5 partly illustrate model 3. Thus, hypothesis 2 of this study- which states that there is a significant negative relationship between work stressors and SE, was tested against the data.

Equation m_3 and figure 4.6 portrayed a positive insignificant effect of organizational constraints (OC) on self-efficacy (B=.044, t=1.184, p>.0.05), results in failing to reject the null hypothesis 2(a). The power of OC in explaining the SE is not supported by the data too. Despite its insignificancy, the OC positively related to SE in SEM as opposed to Baron and Kenny's approach-this might be due to the fact that the bootstrap estimation best describe the analysis.

Other thing remain constant, the positive relationship between SE and OC , might be the more constrained the employee at work place the more they face the strange and challenges in performing their task. This might push them to think about the solution, and then through process they develop a habit of working in a challenging- constrained environment through which they build the ability to cope with difficult situation more successfully- meaning that their belief in their ability to do certain task became higher. Thus, higher self-efficacy might arise as the result.

However, the effect of workload (WL) and organizational justice (OJ) on SE was in line with the proposed hypothesis. Accordingly, there was a negative significant relationship between workload and self-efficacy (B=-.224, t= -4.168, p<0.05). This support the idea that higher workload leads to frustration which in turn results in aggression and hence to CWB. Thus, the null hypothesis of hypothesis 2(c) was rejected –meaning the result support hypothesis2(c).

Furthermore, the positive significant effect of organizational justice on SE was also demonstrated by this result-which supported hypothesis 2(d) of the study (B=.071, t=2.437, p<.05).The reason behind might be the more the employees feel they are treated fairly in an organization the higher motivation there will be. This motivation could enhance their knowledge of doing job for better result. In due process they acquire the way how to solve the problems and hence the higher level of self –efficacy could be developed.

In spite of Baron and Kenny's approach (simple logical argument to decide on mediation analysis), further this study applies the bootstrap estimation and test the significance of the indirect effect using confidence interval technique.

4.9 Calculating and testing the significance of Mediation (Indirect) Effect: Testing Hypothesis 4

Calculating Indirect effect

Before looking to hypothesis testing it's vital to calculate indirect effect using un-standardized coefficients of model 1($\boldsymbol{m_1}$), model 2($\boldsymbol{m_2}$)$and\ model$ 3($\boldsymbol{m_3}$). It can be done in two ways i.e. coefficient difference (the difference between coefficient of model 1 and model 2) or the product of the coefficient in of mediator in model 2 ($\boldsymbol{m_2}$) and model 3 ($\boldsymbol{m_3}$). Table 4.7 illustrates the amount mediation (indirect) effect. From this table the mediation effect is too small mathematically.

Table 4. 7 the magnitude of the direct effect (comparative presentation)

Costructs	Unstandardized Coefficients(B) of Path A's SE<-work stressors		Unstandardized Coefficient of Path B CWB<-SE		*Indiect Effect=A*B	
	Baron and Kenny's	SEM	Baron and Kenny's	SEM	Baron and Kenny's	SEM
OC	-.008	.044	-.106	-.031	.001	-.001
WL	-.138	-.224	-.106	-.031	.015	.007
OJ	.122	.071	-.106	-.031	-.013	-.002

Source: Own survey result, 2020

* In calculating indirect effect, for the purpose of convenience, this study uses only the product rule and model's coefficient without IC.

In this stage hypothesis 4 of this study was tested. That is whether self-efficacy mediates the relationship between work stressors and counterproductive work behaviors. The statistical significance of the mediation effect can be checked by causal approach (Baron and Kenny, 1986 as indicated in section 4.7.4), normality theory (Kennyet al.1998 and Frazier et al. 2004) and bootstrap (Mallinckrodt et al. 2006).

Normality theory method (NT)

The fact that causal approach lacks statistical power (MacKinnon et al. 2002), another method needs to be applied to get more power full result. Next to causal approach, the normality theory approach comes in to place- which assumes the mediation (indirect) effects are normally distributed.

The normality theory method requires calculating the product of Paths coefficient of independent variable to mediator(x) and path coefficient of mediator variable to dependent variable(y) and dividing by the standard error of this cross-product to yield a Z statistic that can be evaluated for statistical significance using probabilities corresponding to the standard normal distribution.$Z = \frac{AB}{\sqrt{A^2B_S{}^2+B^2A_S{}^2+A_S{}^2B_S{}^2}}$,where A and B are un standardized coefficient; and $A_s$andB_s are the corresponding standard errors of A and B respectively (Kenny etal.1998). That is if Z is greater than 1.96, then one would say there exist mediation. Based on this method of hypothesis testing, hypothesis 4 was rejected which states SE significantly mediate the relationship between work stressors and CWB. Table 4.8 shows that under normality test of significance of the indirect effect, the calculated Z- values in both scenarios was less than 1.96 which implies failing to reject the null hypotheses of hypothesis 4.

Table 4. 8 the normality test

Constructs	Unstandardized Coefficients(B) of Path A's SE<-work stressors				Unstandardized Coefficient of Path B CWB<-SE				Indiect Effect=A*B		$Z=\frac{AB}{\sqrt{A^2B_s{}^2+B^2A_s{}^2+A_s{}^2B_s{}^2}}$		Z-value for both cases
	Baron and Kenny's	Std Err	SEM	Std Err	Baron and Kenny's	Std Err	SEM	Std Err	Baron and Kenny's	SEM	Baron and Kenny's	SEM	
OC	-0.008	0.019	0.044	0.040	-0.106	0.091	-0.031	0.067	0.001	-0.001	0.363	-0.237	Z<1.96
WL	-0.138	0.035	-0.224	0.069	-0.106	0.091	-0.031	0.067	0.015	0.007	1.113	0.408	Z<1.96
OJ	0.122	0.033	0.071	0.03	-0.106	0.091	-0.031	0.067	-0.013	-0.002	-1.081	-0.356	Z<1.96

Source: Own survey result, 2020

Bootstrap Estimation

That fact that NT is with some other critiques, MacKinnon et al (2002) and Frazier et al. (2004) initiate other more powerful estimation technique- called bootstrap re-sampling test with confidence interval(has two parts percentile and bias-correction confidence intervals). One of the critique of NT is there are situations in which mediation may occur in the absence of a

significant relationship between the predictor and dependent variable. Second, the product of two normally distributed variables is not itself normally distributed. Third, the sampling distribution of the product of Paths *A's* and B (indirect effect) tends to be asymmetric and highly kurtotic. Thus, fourth, confidence intervals derived from the NT approach exhibited poorer coverage of the actual parameter estimates and lower statistical power to detect true nonzero effects.

Due to this, the corresponding *Z* test lacks statistical power relative to methods that attempt to correct for this asymmetry. Although MacKinnon et al., (2002) found that the NT method was superior to the sequence of three causal steps approach, their simulation analyses suggested that the NT method lacks statistical power relative to other alternatives, especially when the sample size is small or the effect size is modest. Of the re-sampling methods compared, Shrout and Bolge (2002; cited in Mallinckrodt, 2006) bias-corrected bootstrap method performed relatively best even better than percentile bootstrap.

Table 4.9 shows bootstrapped estimates of the A's, B's and C's with their path coefficients. Note that these values are essentially "means of means" ($\overline{B}$) and mean standard errors based on the 1,000 empirical samples. As would be expected, they differ only slightly from the results of the regression analyses.

The last three columns of table 4.9 show the 95% confidence interval for three methods NT, bootstrap percentile and bootstrap bias correction. The first NT confidence calculated by adding and subtracting the mean of indirect effect (1.96*Std Err) from the standard error. The second and the third set of confidence interval were obtained from Amos output.

Table 4. 9 Demonstration of Standard Normality (NT) and Bootstrap Methods to Test Significance of Mediation (Indirect) Effects-A comparative tabulation

Paths/Effects		Regression Result		Bootstrap Estimate		95% Confidence interval					
						Normality Theory		Bootstrap Percentile		Bootstrap with Bias corrected	
		B	Std Err	B	Std Err						
Model 1 Path C's'	CWB<-OC	.212**	.029	.277	.047	.155	.268	.188	.369	.186	.369
	CWB<-WL	.245**	.053	.272	.060	.141	.350	.148	.390	.160	.405
	CWB<-OJ	-.235**	.050	-.174	.325	-.333	-.137	-.237	-.109	-.240	-.112
Model 2 Path C's	CWB<-OC	.211**	.029	.278	.048	.154	.268	.186	.373	.180	.371
	CWB<-WL	.231**	.054	.268	.068	.124	.338	.126	.391	.148	.412
	CWB<-OJ	-.222**	.051	-.172	.033	-.323	-.121	-.236	-.108	-.238	-.108
Model 2 Path B	CWB<-SE	-.106	.090	-.030	.067	-.282	.071	-.166	.099	-.163	.101
Model 3 Path A's	SE<-OC	-.008	.019	.044	.040	-.045	.029	-.035	.122	-.027	.132
	SE<-WL	-.138**	.035	-.224	.060	-.206	-.070	-.367	-.091	-.368	-.093
	SE<-OJ	.122**	.033	.071	.029	.057	.186	.011	.129	.013	.130
Indirect Effect (A's*B)	A1*B	.001[a]	.003	-.0001	.004	-.003	.008	-.011	.007[b]	-.015	.003[c]
	A2*B	.015[d]	.013	.0007	.017	-.013	.040	-.023	.046[e]	-.022	.049[f]
	A3*B	-.013[g]	.012	-.0002	.005	-.012	.036	-.014	.008[h]	-.016	.006[i]

Source: Own survey result , 2020

Note. N=296,NT=Baron–Kenny–Sobel method. Estimates are un-standardized. CWB=Counterproductive work behavior OC=Organization constraints WL= Workload OJ=Organizational justice SE=Self-Efficacy.$p^{a}_{=}.82\ p^{b}_{=}.71\ p^{c}_{=}.35\ p^{d}_{=}.61\ p^{e}_{=}.60\ p^{f}_{=}.56\ p^{g}_{=}.63\ p^{h}_{=}.61\ p^{i}=.49$ p**<.01

Although standard normal (NT method) confidence interval centers on the mean, as expected the percentile confidence interval do not. For example, the midpoint of the 95% confidence interval for percentile estimates of the *A1*B* indirect effect is (-.011+.007/2)) =-.004, whereas the corresponding bootstrap mean is .001. The percentile confidence interval (CI) for the indirect effect is wider and extends farther from zero than the corresponding NT confidence interval. The bootstrap bias correction confidence interval was the more accurate (-.015+.003)/2=-.006. The corresponding probability for the three method, A1*B, for example was p=.82, .71 and .35 respectively for NT, percentile and bootstrap bias correction, although not statistical significance.

Thus, based on the above tests of mediation effect, no result indicates statistically significant outcome- in each of confidence interval (in all methods) of the indirect effect zero was included Hence, the null hypotheses of hypothesis 4 were rejected. In other words self-efficacy was not

mediated the relationship between work stressors (OC, WL and OJ) and counterproductive work behavior (CWB). Generally, the overall outcome of research hypothesis presented with table 4.10(A&B).

Hypotheses and Sub Hypotheses	Models, Decisions and Reasons											
	Baron and Kenny's Approach						SEM /Bootstrap Estimation					
	Model 1		Model 2		Model 3		Model 1		Model 2		Model 3	
Hypothesis1: there is a significant positive relationship between work stressors and CWB	Decision	Reason	Decision	Reason	Decision	Reason	Decision	Reason	Decision	Reason	Decision	Reason
a. There is a significant positive relationship between organizational constraints and CWB	Fail to reject Ho	B=.212, p<.05	Fail to reject Ho	B=.211 p<.05			Fail to reject Ho	B=.277, p<.05	Fail to reject Ho	B=.278, p<.05		
b. There is a significant positive relationship between interpersonal conflict and CWB	Fail to reject Ho	B=.022, p<.05	Fail to reject Ho	B=.015, p>.05								
c. There is a significant positive relationship between workload and CWB	Fail to reject Ho	B=.243, p<.05	Fail to reject Ho	B=.230, p<.05			Fail to reject Ho	B=.272 p<.05	Fail to reject Ho	B=.265, p<.05		
d. There is a significant negative relationship between organizational justice and CWB	Fail to reject Ho	B=-.234, p<.05	Fail to reject Ho	B=-.222, p<.05			Fail to reject Ho	B=-.174 p<.05	Fail to reject Ho	B=-.172, p<.05		
Hypothesis 2 : there is a significant negative relationship between work stressors and SE	Decision	Reason	Decision	Reason	Decision	Reason	Decision	Reason	Decision	Reason	Decision	Reason
a. There is a significant negative relationship between organizational constraints and SE					Fail to reject Ho	B=-.010, p>.05					Fail to reject Ho	B=.044, p>.05
c. There is a significant positive relationship between workload and SE					Fail to reject Ho	B=-.131, p<.05					Fail to reject Ho	B=-.224, p<.05
d. There is a significant positive relationship between organizational justice and SE					Fail to reject Ho	B=.118, p<.05					Fail to reject Ho	B=-.071, p<.05
Hypothesis 3: There is a significant negative relationship between self-efficacy and CWB			Reject Ho	B=-.103, p>.05					Reject Ho	B=-.031, p>.05		

Source: Own survey result, 2020

Table 4. 10 Summary of the overall outcome of the research hypotheses mediation effect (hypothesis 4)

Hypothesis of mediation	Baron and Kenny		NT		SEM :Percentaile & Bootstrap CI	
Hypothesis 4: self-efficacy mediates the relationship between work stressors and CWB	Decision	Reason	Decision	Reason	Decision	Reason
a. Self-efficacy mediates the relationship between organizational constraints and CWB	Reject Ho	failing to meet the 3 conditions	Reject Ho	Z<1.96	Reject Ho	Zero was included
b. Self-efficacy mediates the relationship between workload and CWB	Reject Ho	failing to meet the 3 conditions	Reject Ho	Z<1.96	Reject Ho	Zero was included
c. Self-efficacy mediates the relationship between organizational justice and CWB	Reject Ho	failing to meet the 3 conditions	Reject Ho	Z<1.96	Reject Ho	Zero was included

Source: Own survey result, 2020

CHAPTER FIVE

SUMMARY OF FINDINGS, CONCLUSION AND RECOMMENDTION

5.1 Introduction

In this chapter the problem of the research and conclusion of the major finding with regard to the objective of the study are reviewed. Recommendations that focus on how the problem identified could be addressed are also included in this chapter. Finally, at the end of this chapter issue for future research are presented.

5.2 Major findings of the study

This study was initiated to investigate the mediating role of self-efficacy on the relationship between work stressors (as predictor of counterproductive work behavior (CWB)) and counterproductive work behavior in Commercial Bank of Ethiopia Addis Ababa, Ethiopia. Control variables such as gender, age, experience and level of education didn't have effect on CWB. But work stressors were assumed the most important predictors of counterproductive work behaviors. On the top of this self-efficacy was proposed as an intervene variable between the two. The study, as the result, found that counterproductive work behaviors were predicted by work stressors.

The findings of the study were analyzed using correlation analysis, multiple mediation regression (Baron and Kenny's approach) and SEM analysis. Correlation analysis using Pearson's correlation coefficient revealed the association between all variables (work stressors, self-efficacy and counterproductive behaviors). Based on this investigation the study found that all variables are significantly associated with employee's intension to harm the organization and people in the organization.

The Baron and Kenny's and SEM analysis has been performed by separately analyzing the equations and/or models-for the purpose comparison. The result of the direct effect (model 1) and total effect(in model 2) in both approaches shows that WL, OJ and OC are the highly important in determining the probability of employees in engaging on CWB in their order of importance. The study found that organization constraints and organizational justice were the most important factor than workload and interpersonal conflicts. This indicates that employee's

perception toward their organization most determine their engagement in CWB than their perception toward the amount of work and conflict they faced with.

Most importantly, in both approaches, the study found that workload and organizational justice has been positively correlated. This might be because of, the more the employees perceived higher justice in the organization; the more they become willing to do more job-higher load than before.

In addition, in Baron and Kenny's methods, there has been a negative relation between self-efficacy and organization constraints in model 3 as expected but not in SEM. Since the SEM is the power full technique and taking it as base line, this may happen due to the fact that sometimes challenges could make employees' beliefs toward their ability of doing something more higher; a-said like 'the challenge teaches you the way'.

The study also shows the mediating role of self-efficacy on the relationship between work stressors and counterproductive work behaviors. However, although the inclusion of mediator variable in the model (model 2) was expected to affect the relationship between the work stressors and CWB, the study found that self-efficacy was not in a position to yield the desired result- had no effect. The study also illustrated the significance of mediation effect with three difference tests of confidence interval estimations tools (NT, bootstrap percentile and bootstrap bias). Although the study shows which method was more accurate than other, it didn't yield any support to whether mediation was existed.

The result was consistent with all the testing mechanisms: causal approach, normality theory method and bootstrap percentile and bootstrap bias-correction confidence interval tests. Therefore, this study discloses there was a direct significant effect of work stressors on CWB while there was not the indirect effect at all due to self-efficacy.

5.3 Conclusion

This study was designed and carried out in order to know whether there is the mediation role of self-efficacy on the relationship between work stressors and CWB in Commercial Bank of Ethiopia, Addis Ababa, Ethiopia. According to the study findings, control variables didn't have effect on CWB at all, while work stressors (OC, WL and OJ) were found critical predictors of

employee's intention toward in the engagement of CWB activities. The presence of self-efficacy in between the two yields no result in changing the strength and direction of relationship. Therefore it can be conclude that:

- The existence of work stressors contribute to employee's level of engagement in CWB. But the chance of employee's engagement in CWB is most likely higher when they feel there is organizational constraints problem and organizational injustice. More organizational oriented CWB.
- Organizational center factors (organizational constraints and organizational justice) are less important than workload in determining the level of self-efficacy of employees'.
- Among the other thing, Employees of commercial bank of Ethiopia experienced higher workload; hence there might be a tendency to engage in CWB.
- Employee's level of self-efficacy doesn't affect their level of perception to or not to take part in CWB activities.

5.4 Recommendations

The study investigates the most important variable of employee's oriented behaviors that pushes and/or pulls employees to engage in CWB. Based on the study findings and conclusion made; the researcher come-up with some important recommendations that helps Commercial Bank of Ethiopia (CBE) to minimize CWB of employees. The recommendations are:

- First of all, the study suggested that work stressors have a high direct association with CWB. As a result, CBE should be aware of the work stressors that may contribute to CWB and try to diminish them in the workplace.
- Although self-efficacy is neutral in its direct and indirect effect in this study, the lower level of self-efficacy may lead employees in CWB. Thus, CBE is advised to balance employee's level of self-efficacy and their actual performance through various mechanisms such as capacity building trainings
- Based on the study finding, organizational oriented work stressors (organizational constraints and organizational injustice) are the most important sources of employees' tendencies to engage in CWB. This implies that CBE has a lot to do in avoiding situations that hinder employees not to exert their maximum job performance. Similarly, CBE's organizational fairness posed questions through its rewarding and promotional justice. Therefore, CBE should implement objective measure and clear HR procedure to

increase organizational justice and by doing so reduce the probability of employees engagement in CWB.

- The study also revealed that conflict among employees and with others has effect on employees' CWB activities, but the amount of task they are required to perform (workload) are, as though not like organizational oriented work stressors, important factors to pave the way for CWB in CBE. Thus, care should be taken by the bank in managing these cues as they may worsen the chance of getting in to CWB. Hence, it's important to look at the working condition or to check the amount work each single employee has either to share responsibility among its employees.

5.5 Limitations and Directions for further research

In this study robust method of data analysis was applied. Correlation analysis, multiple regression mediation analysis and confirmatory factor analyses (especially SEM-path analysis) were performed with correction for deviance from normality. Significance of mediation was tested by comparing normality theory method and bootstrap re-sampling procedures, giving greater power and reliability to the presented results. Thus, the study could be taken as comparative analysis between methods. Based on these techniques this study provide evidences that work stressors were important predictors of CWB but evidence don't support the mediation role of self- efficacy.

Despite such robust analysis, this study has the following limitations. The fist limitation of the study goes to the use of self-response measures as tools of data collecting method. As the result, study output may be influenced by common method bias. Since CWB is a deviance-related behavior, response to this measure may prone to social desirability as employees may not want to reveal the degree to which they are engaged in such behaviors.

The other form of drawback of the study is its cross sectional design. The data was collected from each individual observation at single point in time -makes it difficult to come-up with any causal conclusion on the relationship of the variables. The study shows the relationship between Work stressors, self-efficacy and CWB; though it is assumed stressors affect self-efficacy and self-efficacy affect CWB. As such, longitudinal research should be performed to determine the causal relationship between variables.

Further study limitations include the limited sample size. The sample includes banking sector employees with special focus on CBE. Future studies examining larger and more diverse samples, including diverse sectors and even cross cultural studies, are needed to underpin or disprove the outcome presented here.

In addition, this study simply adopted the ready-made questionnaires applied on other countries especially developed countries. Thus future research can be performed on the validation and adaptation of instruments to ward CWB in Ethiopia. In addition to this, the researcher faces data collection challenge due to the number of items included in the questionnaire. Hence future studies may overcome these problems by deploying electronic data collection techniques and by developing a shortest version of scales.

Moreover, this study conducted on the basis of self-efficacy as mediator variable but it is possible to 'look other way' - to test it as moderator. Finally, the coefficient of determination of the models is low which posed model sufficiency problem. Thus, to gain a more valid and explained model, future study should be done by adding more other variables of organizational behavior constructs such as organizational citizenship , employee engagement, employees satisfaction etc. as mediator/moderator using multiple mediation SEM analyses.

References

Abd-Elmotaleb, M., and Sudhir K. S.(2013). The Role of Academic Self-Efficacy as a Mediator Variable between Perceived Academic Climate and Academic Performance.*Journal of Education and Learning*; Vol.2, No. 3; 2013.

Asres, A.(2016). Business research methods, module for distance program, department of management, College of business and economics , AAU.

Bandura, Albert and J. Jourden, Forest. (1991). Self-Regulatory Mechanisms Governing the Impact of Social Comparison on Complex Decision Making.Journal of Personality and Social Psychology. 60. 941-951. 10.1037/0022-3514.60.6.941.

Baron, R. M., and Kenny, D. A. (1986). The moderator-mediator variable distinction in social psychological research: Conceptual, strategic and statistical considerations. *Journal of Personality and Social Psychology, 51*, 1173-1182.

Baron, R.M. and D.A. Kenny, The moderator-mediator variable distinction in social psychological research: Conceptual, strategic, and statistical considerations. *Journal of personality and social psychology*, 1986.**51**(6): p. 1173-1182.

Bayram,N., Gursakal,N., and Bilgel,N.(2009). Counterproductive Work Behavior Among White-Collar Employees: A study from Turkey. International *Journal of Selection and Assessment, Vol.*17(2). p 181-188.

Bennett, R., and Robinson, S.{1995).A topology of deviant workplace behavior. A multi-dimensional scaling study. *Academy of Management Journal, 38,355-572.*

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

Berry, C.M., Ones, D.S., and Sackett, P.R. (2007). Interpersonal deviance, organizational deviance, and their common correlates: A review and meta-analysis. *Journal of Applied Psychology, 92*(2), 410-424.

BitaParsa, ParisaParsa and Nakisa Parsa(2016). Mediation Effect of Self-Efficacy on the Relationship between Mentoring Function and Career Advancement among Academics inIran .Global Journal of Health Science; Vol. 8, No. 10; 2016. doi:10.5539/gjhs.v8n10p295 URL: http://dx.doi.org/10.5539/gjhs.v8n10p295

Björkqvist, K., Osterman, K., and Hjelt-Back, M. (1994). among university employees. Aggressive Behavior, 20(2), 173-184.

Bowling, N.A., and Eschleman, K.J. (2010).Employee personality as a moderator of the relationships between work stressors and counterproductive work behavior.*Journal of Occupational Health Psychology*, *15*(1), 91-103. 51

Brender-Ilan, Y., and Sheaffer, Z. How do self-efficacy, narcissism and autonomy mediate the link between destructive leadership and counterproductive work behavior, *Asia Pacific Management Review (*2018), https://doi.org/10.1016/j.apmrv.2018.05.003.

Brain C. Holtz and Crystal M.Harold(2013). Interpersonal Justice and Deviance: The moderating effect of justice values and justice orientation. *Journal of Management* ,39(2), 339-365.

Carver, C.S., Scheier, M.F., and Weintraub, J.K. (1989).Assessing coping strategies: A theoretically based approach. *Journal of Personality and Social Psychology, 56*(2), 267-283.

Chand, Piar and Chand, Pawan. (2014). Job stressors as predictor of Counterproductive work behaviour in Indian banking sector. *International Journal of Application or Innovation in Engineering and Management (IJAIEM). Vol.3 (12).* www.ijaiem.org

Chen, P.Y., and Spector, P.E. (1992). Relationships of work stressors with aggression, withdrawal, theft and substance use: An exploratory study. *Journal of Occupational and Organizational Psychology*, *65*, 177-184.

Coffin, B. (2003). Breaking the silence on white collar crime.*Risk Management*, *50*(9), 8-10.

Cohen-Charash, Y., and Spector, P.E. (2001). The role of justice in organizations: A meta-analysis. *Organizational Behavior and Human Decision Processes, 86*(2), 278-321.

Colquitt, J. A. (2001). On the dimensionality of organizational justice: A construct validation of a measure. Journal of Applies Pysychology.Vol86(3), 386-400.

Dalal, R.S. (2005). A meta-analysis of the relationship between organizational citizenship behavior and counterproductive work behavior.*Journal of Applied Psychology, 90*(6), 1241-1255.

Fida, Roberta , Paciello, Marinella , Tramontano, C. , Fontaine, Reid Griffith , Barbaranelli, Claudio and Farnese, Maria Luisa (2014) An Integrative Approach to Understanding Counterproductive Work Behavior: The Roles of Stressors, Negative Emotions, and Moral Disengagement. *Journal of Business Ethics*, volume 130 (1): 131-144

Flaherty, S., and Moss, S.A. (2007). The impact of personality and team context on the relationship between workplace injustice and counterproductive work behavior. *Journal of Applied Social Psychology, 37*(11), 2549-2575.

Fornell, C., and Larcker, D. (1981).Evaluating Structural Equation Models with Unobservable Variables and Measurement Error. *Journal of Marketing Research, 18* (1), 39-50.

Fox, S., and Spector, P.E. (1999).A model of work frustration-aggression. *Journal of Organizational Behavior, 20*, 915-931.

Fox, S., Spector, P.E., and Miles, D. (2001). Counterproductive work behavior (CWB) in response to job stressors and organizational justice: Some mediator and moderator tests for autonomy and emotions. *Journal of Vocational Behavior, 59,* 291-309.

Fox, S., Spector, P.E., Goh, A., and Bruursema, K. (2007). Does your coworker know what you're doing? Convergence of self and peer-reports of counterproductive work behavior. *International Journal of Stress Management, 14*, 41-60.

Fox,.S. and Spector, P.E. (2006). The many roles of control in a stressor-emotion theory of counterproductive work behavior. In P.L. Perrewe and D.C. Ganster (Eds.),

Geoffery, Marczyk, D.D.(2005).Essentials of Research Design and Methodology. New Jersey: John Wiley, Inc.

Ghozali,I.(2001).Analisis Multivanatedengan program SPSS(2nd ed),Badan Penerbit Universitas Diponegoro, Semarang.

Goh, A.(2006).An attributional analysis of counterproductive work behavior (CWB) in response to occupational stress. *Graduate Theses and Dissertations.* http://scholarcommons.usf.edu/etd/2535

Gosselin, Jennifer T., and Maddux, James E. "Self-Efficacy." Handbook of Self and Identity. Ed. mark R. Leary and June Price Tangney. NewYork: The Guilford Press, 2003. Print.

Greenberg, J. (1990). Employee theft as a reaction to underpayment inequity: The hidden cost of pay cuts. *Journal of Applied Psychology, 75*(5), 561-568.

Gruys, M. L., and Sackett, P. R., (2003).Investigating the Dimensionality of Counterproductive Work Behavior. I*nternational Journal of Selection and Assessment*,11(1), 30-42.

Gualandri,M.,(2012).Counterproductive work behavior and moral disengagement. Sapienza: Universita Di Roma, dissertation paper.

GUNZLER,D., CHEN,T., Pan WU, ZHANG,H.(2013).Introduction to mediation analysis with structural equation modeling. *Shanghai Archives of Psychiatry*, 2013, Vol. 25, No. 6

Gürbüz, S., and Mert,I.S(2009*).*Validity and Reliability Testing of Organizational Justice Scale: An Empirical Study in a Public Organization. *Review of Public Administration*, Volume 42 Issue 3 September 2009, p. 117-139

Hershcovis, M.S., Turner, N., Barling, J., Arnold, K.A., Dupré, K.E., Inness, M., et al. (2007).Predicting workplace aggression: A meta-analysis. *Journal of Applied Psychology, 92*(1), 228-238.

Hiriyappa, B. (2008). Organizational Behavior, New Age International PVT Ltd, India.

Hox, J.J., and Bechger, T.M.(1998).An introduction to structural equation modeling. *Family Science Review, 11, 354-373*

Hsi, E.(2017).An Examination of Predictors of Counterproductive Work Behaviors: Personality Traits and Transformational Leadership, San Jose State University.in behavioral research: A review of the literature and recommended remedies. *Journal of Applied Psychology, 88*(5), 879-903.

https://www.who.int/occupational_health/topics/stressatwp/en/

Jenatabadi, H.S.(2015). An Overview of Path Analysis: Mediation Analysis Concept in Structural Equation Modeling. University of Malaya, Kuala Lumpur, Malaysia.

Keashly, L. and Neuman, J. H. (2002). Exploring persistent patterns of workplace aggression. Workplace Abuse, Aggression, Bullying, and Incivility: Conceptual and Empirical Insights

Keashly, L., Trott, V., and MacLean, L. M. (1994). Abusive behavior in the workplace: A preliminary investigation. *Violence and Victims, 9*(4), 341-357.

Kumar,S.(2015). Structure Equation Modeling Basic Assumptions and Concepts: A Novices Guide. *Asian Journal of Management Sciences* , 03 (07), 25-28.

Lau, V.C., Au, W.T., and Ho, J.M. (2003).A qualitative and quantitative review of antecedents of counterproductive behavior in organizations. *Journal of Business and Psychology, 18*(1), 73-99.

Mallinckrodt, B., Abraham,W.T., Wei,M.,and Russell,D.W.(2006).Advances in Testing the Statistical Significance of Mediation Effects .*Journal of Counseling Psychology* 2006, Vol. 53, No. 3, 372–378. DOI: 10.1037/0022-0167.53.3.372

Manzoor,R, Khattak,A., and Hassa,S.,(2015).Psychological Capital and Counterproductive Work Behaviour with Intrusion of Employee Performance: Study from Kp, Pakistan Universities. *City University Research Journal,5(15),pp.372-383* ,CURJ, CUSIT

Marcus, B., and Schuler, H. (2004). Antecedents of counterproductive behavior at work: A general perspective. *Journal of Applied Psychology, 89*(4), 647-660.

Mascha, E.J., Dalton, J.E., Andrea Kurz,A., and Saager,L.(2013). Understanding the Mechanism: Mediation Analysis in Randomized and Nonrandomized Studies. *Journal of Economics, Education and Policy*. Volume 117 issue 4.

McCrae, R.R., and Costa Jr., P.T. (1987).Validation of the five-factor model of personality across instruments and observers. *Journal of Personality and Social Psychology, 52*(1), 81-90.

McGurn,X(1988).Spotting the thieves who work among us. *Wall street journal March 7,p.16a* measure. *Journal of Applied Psychology, 86*, 386-400.

Miles, D.E., Borman, W.E., Spector, P.E., and Fox S. (2002). Building an integrative model of extra role work behaviors: A comparison of counterproductive work behavior with organizational citizenship behavior. *International Journal of Selection and Assessment, 10*(2), 51-57.

Mohd, R.,Kirana,M., Kamaruddin,B.H.,Zainuddin,A.,and Ghazali,M.C.(2014).The Mediatory Effect of Self-Efficacy on the Relationship between Religious Values and Entrepreneurial Orientations: ACase of Malay Owner Managers of SMEs in Manufacturing Industry. *Procedia - Social and Behavioral Sciences* 130 (2014) 96 – 104.

MoleroMdM, Pérez-Fuentes MdC and Gázquez JJ (2018).Analysis of the Mediating Role of Self-Efficacy and Self-Esteem on the Effect of Workload on Burnout's Influence on Nurses' Plans to Work Longer. Front. Psychol. 9:2605.doi: 10.3389/fpsyg.2018.02605

Moorman, R.H. (1991). Relationship between organizational justice and organizational citizenship behaviors: Do fairness perceptions influence employee citizenship? *Journal of Applied Psychology, 76*(6), 845-855. 55

Morf, M., Feierabend, A., and Staffelbach, B. (2017). Task variety and counterproductive work behavior. Journal of Managerial Psychology, 32(8), 581-592. doi: 10.1108/JMP-02-2017-0048

Mount, M., Ilies, R., and Johnson, E. (2006). Relationships of personality traits and counterproductive work behaviors: The mediating effects of job satisfaction. *Personnel Psychology, 59*, 591-622.

Nauta, M. (2004). Self-Efficacy as a Mediator of the Relationships Between Personality Factors and Career Interests. *JOURNAL OF CAREER ASSESSMENT*, Vol. 12 No. 4, November 2004 381–394.DOI: 10.1177/1069072704266653.2004 Sage Publications

Neuman, J.H. and Baron, R.A. (1997).Aggression in the Workplace. In: Giacalone, R.A.,and Greenberg, J. (eds), Antisocial Behavior in Organizations. Thousand Oaks, CA:Sage, 37–67.

Neuman, J.H., and Baron, R.A. (1998). Workplace violence and workplace aggression: Evidence concerning specific forms, potential causes, and preferred targets. *Journal of Management, 24*(3), 391-419.

Parvez,A. and Anjum,A.(2013). Counterproductive Behavior at Work: A Comparison of Blue Collar and White Collar Workers: *Pakistan Journal of Commerce and Social Sciences7(3),*417-434.

Penney, L.M., and Spector, P.E. (2002). Narcissism and counterproductive work behavior: Do bigger egos mean bigger problems? *International Journal of Selection and Assessment, 10*(1), 126-134.

Penney, L.M., and Spector, P.E. (2005). Job stress, incivility, and counterproductive work behavior (CWB): The moderating role of negative affectivity. *Journal of Organizational Behavior, 26*, 777-796.

Podsakoff, P.M., MacKenzie, S.B., Lee, J.Y., and Podsakoff, N.P. (2003). Common method biases

Preacher, K. J., and Hayes, A. F. (2008).Asymptotic and resampling strategies for assessing and comparing indirect effects in multiple mediator models. Behavior Research Methods, 40(3), 879-891.

Price, J.L., and Mueller, C.W. (1986).Handbook of organizational measurement. Marshfield, MA: Pittman. Research in Occupational Stress and Well Being (pp. 171-201). Oxford: Elsevier. Retrieved from URL: http://dx.doi.org/10.5539/jel.v2n3p117

Rahman,W., Fayaz Ali Shah, F.A., and Rasli, A.(2015). Use of Structural Equation Modeling in Social Science Research. *Asian Social Science*; Vol. 11(4). doi:10.5539/ass.v11n4p371 URL: http://dx.doi.org/10.5539/ass.v11n4p371

Robbins, P. S. (2008). Principles of Business Management: For Universities and Autonomous Colleges, 6 Ed, Pearson Publishers USA. Replaced by 13ed

Robbins, P. S., and Coulter, K. M. (2002).Management, 14th Ed, Prentice Hall Canada.

Robinson, S. L., and Bennett, R. J. (1995). A typology of deviant workplace behaviors: A multidimensional scaling study. Academy of Management Journal, 38,555–572.

Robinson, S.L., O'Leary-Kelly, A.M. (1998). Monkey see, monkey do: The influence of work groups on the antisocial behavior of employees. Academy of Management Journal, 41(6), 658-672.

Rotter, J.B. (1990). Internal versus external control of reinforcement: A case history of a variable. American Psychologist, 45(4), 489-493.

Rotundo, N., and Spector, P.E. (2010).Counterproductive work behavior and withdrawal.In J.L. Farr and N.T. Tippens (Eds.), Handbook of Employee Selection (pp.489-511). Routledge: Taylor and Francis

Rotundo, N., and Spector, P.E. (2010).Counterproductive work behavior and withdrawal.In J.L. Farr and N.T. Tippens (Eds.), Handbook of Employee Selection (pp.489-511).Routledge: Taylor and Francis.

Sackett, P. R. (2002). The Structure of Counterproductive Work Behaviors: Dimensionality and Relationships with Facets of Job Performance. *International Journal of Selection and Assessment*, 10(1-2), 01-11.

Sackett, P.R. (2002). The structure of counterproductive work behaviors: Dimensionality and relationships with facets of job performance. *International Journal of Selection and Assessment*, 10, 5-11.

Saeed,L.M., Weldali,A., and Lubis,Z.(2016). "Personality Traits and Counterproductive Work Behavior: Moderator Effect of Perceived Organizational Support:" *Imperial Journal of Interdisciplinary Research (IJIR),* 2(5), 521-530.School of Business Innovation and Technopreneurship. Universiti Malaysia Perlis.

Salgado, J.F. (2002). The big five personality dimensions and counterproductive behaviors. *International Journal of Selection and Assessment*, 10(2), 117-125.

Sims, R. R. (2002). Managing organizational Behavior, 1st Ed. Greenwood Publishing Group USA.

Skarlicki, D.P., and Folger, R. (1997). Retaliation in the workplace: The roles of distributive, procedural, and interactional justice. *Journal of Applied Psychology*, 82(3), 434-443.

Sonnentag, S., and Frese, M. (2003). Stress in organizations. In W. Borman, D. Ilgen, and R. Klimoski (Eds.), Handbook of psychology: Vol. 12. Industrial and organizational psychology (pp. 453-492). Hoboken, NJ: John Wiley and Sons, Inc.

Souza,L.A.S.,Torres,A.R.R.,Barbosa,G.A.,Limam, T.J.S., and Souza, L.E.C(2014). Self-efficacy as a mediator of the relationship between subjective well-being and general health of military cadets.Cad.SaúdePública, Rio de Janeiro, 30(11):2309-2319, nov, 2014 http://dx.doi.org/10.1590/0102-311X00177513

Spector, P.E. (1998). A control model of the job stress process. In C.L. Cooper (Ed.), Theories of Organizational Stress (pp. 153-169). London: Oxford University Press.

Spector, P.E. (2006). Method variance in organizational research: Truth or urban legend? Organizational Research Methods, 9, 221-232.

Spector, P.E. and Fox, S. (2002) An Emotion-Centered Model of Voluntary Work Behavior: Some parallels between counterproductive work behavior (CWB) and organizational citizenship behavior (OCB). Human Resources Management Review, 12,269–292.

Spector, P.E., and Fox, S. (2003). Reducing subjectivity in the assessment of the job environment: Development of the Factual Autonomy Scale (FAS).*Journal of Organizational Behavior*, 24, 417-432. 58

Spector, P.E., and Jex, S.M. (1998). Development of four self-report measures of job stressors and strain: Interpersonal conflict at work scale, organizational constraints scale, quantitative workload inventory, and physical symptoms inventory. *Journal of Occupational Health Psychology*, 3(4), 356-367.

Spector, P.E., Fox, S., Penney, L.M., Bruursema, K., Goh, A., and Kessler, S. (2006). The dimensionality of counter productivity: Are all counterproductive behaviors created equal? *Journal of Vocational Behavior*, 68, 446-460.

Spector,P.E.,(2011). The relationship of personality to counterproductive work behavior(CWB). An integration of perspectives. *Human Resource Management Review*,vol.21,342-352.

Paul E. Spector, P.E and Zhou,Z.E.(2014).The Moderating Role of Gender in Relationships of Stressors and Personality with Counterproductive Work Behavior. Journal of Business and Psychology, Vol. 29, No. 4, Inductive Research in Organizations (December 2014), pp. 669-681.

Stacey R. Kessler, Kari Bruursema, BurcuRodopman, and Paul E. Spector (2013).Leadership Interpersonal conflict, Counterproductive Work Wehavior: An examination of Stressor-Strain process: Association for Conflict Management and Wiley Periodicals, Inc,6(3),pp.180-190.symposium, Meeting of the Academy of Management, Denver

Tellegen, A. (1991). Personality traits: Issues of definition, evidence and assessment.

Tepper, B.J. (2007). Abusive supervision in work organizations: Review, synthesis, and research agenda. *Journal of Management*, 33(3), 261-289.

Weiss, H.M., & Cropanzano, R. (1996). Affective events theory: A theoretical discussion of the structure, causes and consequences of affective experiences at work. *Research in Organizational Behavior, 18*, 1-74.

Whelpley,E., and McDaniel,A(2016)." Self-esteem and counterproductive work behaviors: a systematic review." *Journal of Managerial Psycology* ,31(4),pp.850-863.

ZADEH, F. R., and, ADHAMI, J (2015). The relationship between organizational justice and self-efficacy (Case Study: Employees of the six municipalities Kermanshah). Cumhuriyet University *Faculty of Science Journal (CSJ)*, Vol. 36, No: 4 Special Issue (2015).

Zahir Osman, L.(2017). The Mediating Effect of Self-efficacy on Leadership style and Job Performance in Malaysian Higher Education Institutions. *International Journal of Business Marketing and Management (IJBMM)* Vol. 2(8) pp.01-07

Zero, M.G.(2015,July29).Structural Equation Modeling in AMOS-SEM ZODA guided homework Retrieved from https://www.vimore.org/watch/VUzxquMgADc/structural-equation-modeling- in-amos-sem–zoda- guided-homework.

APPENDIX I Questionnaires

Addis Ababa University

College of business and Economics

Department of Management

Master of Business Administration (MBA)-Specialization in Management

Self-Efficacy as a Mediator on the Relationship between Work Stressors and Counterproductive Work Behavior

Dear respondents,

I, Mnshir Geto, a student at Addis Ababa University, conducting this study invite you to take part in this research. The purpose of this study is to investigate the mediating role of self-efficacy on the relationship between Work Stressor and Counterproductive Work Behavior in banking profession.

Your participation in this study helps me to complete my degree in MBA-Management and additionally, to some extent, add to the body literature on the topic, especially in Ethiopian banking business context as it relates to working under stresses.

Your response/ participation in the study is; voluntarily, completely secured, confidential and by no means disclosed for third party, and purely used only for academic purpose. Financial benefit is not allotted to this survey. You are kindly ask-for to take a moment and complete a survey.

Thank You!

If you have any question or concern or problem about this study, please contact:

Mnshir GetoTeferra: Mobile :0920590065

E-mail:eyohen20@gmail.com

MnshirGeto@cbe.com.et

Thank you!

General instruction: No need for writing your name. The survey has **FOUR** sections; please fill out all of them to the best of your interest.

Section 1-Demographic Information

Please mark √ when appropriate

i. Gender: Male ☐ Female ☐

ii. What is your age in years? 20-25 ☐ 25-30 ☐ 30-35 ☐ 35-40 ☐ 40-45 ☐ ≥ 45

iii. Years of experience : 1-5 ☐ 5-10 10-15 ☐ ≥15 ☐

iv. Educational level: Diploma ☐ Degree ☐ Masters ☐

Section 2-forms of Work Stressors

A. Organizational Constraints Scale

Please read carefully and indicate the level of frequency you find it difficult or impossible to do your job because of these constraints, by circling the number corresponding to the space in the column next to each items. ***Thank you!***

Remarks: *Less than once per month or never = 1, Once or twice per month = 2, Once or twice per week = 3, Once or twice per day = 4, Several times per day = 5*

S. No	***Organization constraint parameters***					
		Less than once per month or never	***Once or twice per month***	***Once or twice per week***	***Once or twice per day***	***Several times per day***
a) Interpersonal Organizational Constraints						
1	*Other employees*	*1*	*2*	*3*	*4*	*5*
2	*Interruptions by other employees*	*1*	*2*	*3*	*4*	*5*
3.	*Inadequate help from others*	*1*	*2*	*3*	*4*	*5*
4.	*Team problems.*	*1*	*2*	*3*	*4*	*5*
b) Job Context Organizational Constraints						
1	*Lack and/or poor of equipment or supplies.*	*1*	*2*	*3*	*4*	*5*
2.	*Organizational rules and Procedures*	*1*	*2*	*3*	*4*	*5*
3.	*Inadequate training*	*1*	*2*	*3*	*4*	*5*
4	*Lack of necessary information about what to do or how to do it*	*1*	*2*	*3*	*4*	*5*
5.	*Conflicting job demand*	*1*	*2*	*3*	*4*	*5*

B. Interpersonal Conflict

Please read carefully and indicate the level of frequency you may encounter in this situation, by circling the number in the corresponding space in the column next to each items. ***Thank you!***
Remarks: *Never = 1, Rarely = 2, Sometimes = 3 ,Quite Often = 4,Very Often = 5*

		Never	***Rarely***	***Sometimes***	***Quite Often***	***Very Often***
1.	*How often do you get into arguments with others at work?*	*1*	*2*	*3*	*4*	*5*
2.	*How often do other people yell at you at work?*	*1*	*2*	*3*	*4*	*5*
3.	*How often are people rude to you at work?*	*1*	*2*	*3*	*4*	*5*
4.	*How often do other people do nasty things to you at work?*	*1*	*2*	*3*	*4*	*5*

C. Quantitative Workload Inventory

Please read carefully and indicate of how many times you may expose to workload, by circling the number in the corresponding space in the column next to each item. ***Thank you!***
Remarks: *Less than once per month or never = 1, Once or twice per month = 2, Once or twice per week = 3, Once or twice per day = 4 and Several times per day = 5*

S.No	***Workload Questions***					
		Less than once per month or never	***Once or twice per month***	***Once or twice per week***	***Once or twice per day***	***Several times per day***
1.	*How often does your job require you to work very fast?*	*1*	*2*	*3*	*4*	*5*
2.	*How often does your job require you to work very hard?*	*1*	*2*	*3*	*4*	*5*
3.	*How often does your job leave you with little time to get things done?*	*1*	*2*	*3*	*4*	*5*
4.	*How often is there a great deal to be done?*	*1*	*2*	*3*	*4*	*5*
5.	*How often do you have to do more work than you can do well?*	*1*	*2*	*3*	*4*	*5*

D. Organizational Justice

The goal of this survey is to investigate your perceptions about workplace fairness. By using the following indexes show the degree to which you agree or disagree by circling the number in the corresponding space in the column next to each item. ***Thank you!***

	a) Procedural justice					
S. No	***When decisions about other employees in general or you in particular are made in this company…***	***Extent of Degree or disagree***				
		Strongly Disagree	***Slightly Disagree***	***Neither agree nor Disagree***	***Slightly Agree***	***Strongly Agree***
1	*…you are treated with respect and dignity.*	*1*	*2*	*3*	*4*	*5*
2	*… all the sides affected by the decisions are represented.*	*1*	*2*	*3*	*4*	*5*
3	*… the decisions are applied with consistency to the parties affected.*	*1*	*2*	*3*	*4*	*5*
4	*…accurate information upon which the decisions are based is collected.*	*1*	*2*	*3*	*4*	*5*
	b) Distributive Justice					
S. No	***To what extent are you fairly rewarded...***	***Very Unfairly***	***Unfairly***	***Undecided***	***Fairly***	***Very Unfairly***
1.	*…considering the responsibilities that you have.*	*1*	*2*	*3*	*4*	*5*
2.	*…for the amount of effort that you put forth.*	*1*	*2*	*3*	*4*	*5*
3.	*…for the work that you have done well.*	*1*	*2*	*3*	*4*	*5*

Section 3- Occupational Self-efficacy

Use the following scales to show your beliefs about your abilities to succeed or cope successfully in a given situation. Please indicate the degree of your belief by circling the numbers that most express your perception. ***Thank you!***

Scale Remarks: Not at all true=1, Barely true=2, Moderately true=3, Exactly true=4

S.N	**Questions**	**Strongly disagree**	**Dis-agree**	**Neither agree nor disagree**	**Agree**	**Strongly agree**
1	I can always manage to solve difficult problems if I try hard enough	1	2	3	4	
2	It is easy for me to stick to my aims and accomplish my goals.	1	2	3	4	
3	My past experiences in my job have prepared me well for my occupational future	1	2	3	4	
4	When I am confronted with a problem, I can usually find several solutions.	1	2	3	4	
5	No matter what comes my way, I'm usually able to handle it.	1	2	3	4	
6	I feel prepared for most of the demands in my job	1	2	3	4	

Section 4- Counterproductive Work Behavior (CWB)

Dear respondents please read each statement carefully and indicate how often you have done the following things on your job by circling the number that best describe your view correspondence to each item. Thank you!

Remark: Never = 1, Once or Twice = 2, Once or Twice per month = 3, Once or Twice per week = 4 and every day = 5

S.N	How often have you done each of the following things on your present job?	Never	Once or Twice	Once or twice per month	Once or Twice per week	Every day
	a) CWB-O					
1	Complained about insignificant things at work	1	2	3	4	5
2	Purposely wasted your employer's materials or supplies	1	2	3	4	5
3	Told people outside the job what a lousy place you work for	1	2	3	4	5
4	Came to work late without permission	1	2	3	4	5

5	*Stayed home from work and said you were sick when you weren't*	*1*	*2*	*3*	*4*	*5*
b) CWB-I						
1	*Insulted someone about their job performance*	*1*	*2*	*3*	*4*	*5*
2	*Made fun of someone's personal life*	*1*	*2*	*3*	*4*	*5*
3	*Ignored someone at work*	*1*	*2*	*3*	*4*	*5*
4	*Started an argument with someone at work*	*1*	*2*	*3*	*4*	*5*
5	*Insulted or made fun of someone at work*	*1*	*2*	*3*	*4*	*5*

APPENDIX II: Descriptive statistics of constructs under study

	Organizational Constriants(OC); Mean(M)= 3.31 and Standard Devation(SD)=1.29													
	IOC2		IOC3		IOC4		JOC1		JOC3		JOC4		JOC5	
	Frequency	Percent	Frequency	Percent	Frequency	Percent	Frequency	Percent	Frequency	Percent	Frequency	Percent	Frequency	Percent
Less than once per month or never	45	15.2	43	14.5	37	12.5	40	13.5	44	14.9	58	19.6	38	12.8
Once or twice per month	14	4.7	19	6.4	36	12.2	28	9.5	33	11.1	45	15.2	29	9.8
Once or twice per week	53	17.9	94	31.8	58	19.6	88	29.7	91	30.7	58	19.6	55	18.6
Once or twice per day	103	34.8	86	29.1	110	37.2	86	29.1	86	29.1	93	31.4	107	36.1
Several times per day	81	27.4	54	18.2	55	18.6	54	18.2	42	14.2	42	14.2	67	22.6
Total	296	100.0	296	100.0	296	100.0	296	100.0	296	100.0	296	100.0	296	100.0

	Interpersonal Conflicts M=3.63 SD=1.55							
	IC1		IC2		IC3		IC4	
	Frequency	Percent	Frequency	Percent	Frequency	Percent	Frequency	Percent
Never	25	8.4	15	5.1	27	9.1	22	7.4
Rarely	64	21.6	57	19.3	28	9.5	32	10.8
Sometimes	38	12.8	72	24.3			33	11.1
Quite often	101	34.1	96	32.4	130	43.9	114	38.5
Very often	68	23.0	56	18.9	111	37.5	95	32.1
Total	296	100.0	296	100.0	296	100.0	296	100.0

	Workload(WL) M=4.27 SD= 1.07									
	WL1		WL2		WL3		WL4		WL5	
	Frequency	Percent	Frequency	Percent	Percent	Frequency	Frequency	Percent	Frequency	Percent
Less than once per month or never	11	3.7	11	3.7	3.0	9	10	3.4	10	3.4
Once or twice per month	20	6.8	17	5.7	6.4	19	11	3.7	22	7.4
Once or twice per week	24	8.1	25	8.4	6.8	20	33	11.1	23	7.8
Once or twice per day	72	24.3	76	25.7	26.7	79	71	24.0	68	23.0
Several times per day	169	57.1	167	56.4	57.1	169	171	57.8	173	58.4
Total	296	100.0	296	100.0	100.0	296	296	100.0	296	100.0

	M=2.22 SD =1.10									
	PJ1		PJ4		DJ1		DJ2		DJ3	
	Frequency	Percent	Frequency	Percent	Frequency	Percent	Frequency	Percent	Frequency	Percent
strongly disagree	85	28.7	92	31.1	111	37.5	87	29.4	88	29.7
Disagree	146	49.3	65	22.0	118	39.9	185	62.5	70	23.6
Neutral	58	19.6	54	18.2	32	10.8	15	5.1	54	18.2
Agree	7	2.4	24	8.1	22	7.4	8	2.7	25	8.4
Strongly agree	0	0.0	61	20.6	13	4.4	1	0.3	59	19.9
Total		100.0	296	100.0	296	100.0	296	100.0	296	100.0

	Self-Efficacy(SE) M =1.71 SD .72									
	SE1		SE2		SE3		SE5		SE6	
	Frequency	Percent	Frequency	Percent	Frequency	Percent	Frequency	Percent	Frequency	Percent
strongly disagree	108	36.5	103	34.8	132	44.6	147	49.7	164	55.4
Disagree	157	53.0	98	33.1	144	48.6	121	40.9	93	31.4
Neutral	30	10.1	93	31.4	17	5.7	24	8.1	33	11.1
Strongly agree	1	0.3	2	0.7	3	1.0	4	1.4	6	2.0
Total	296	100.0	296	100.0	296	100.0	296	100.0	296	100.0

	Counterproductive Work behavior(CWB) M=3.19 SD 1.04											
	CWB_O2		CWB_O3		CWB_O5		CWB_I1		CWB_I3		CWB_I4	
	Frequency	Percent	Frequency	Percent	Frequency	Percent	Frequency	Percent	Frequency	Percent	Frequency	Percent
Never	2	0.7	6	2.0	6	2.0	6	2.0	10	3.4	21	7.1
Once or twice	57	19.3	57	19.3	71	24.0	53	17.9	75	25.3	53	17.9
Once or twice per month	156	52.7	97	32.8	116	39.2	117	39.5	111	37.5	78	26.4
Once or twice er week	55	18.6	136	45.9	83	28.0	97	32.8	88	29.7	111	37.5
Every day	26	8.8			20	6.8	23	7.8	12	4.1	33	11.1
Total	296	100.0	296	100.0	296	100.0	296	100.0	296	100.0	296	100.0

Descriptive Statistics using aggregate data

	OC	*OJ*	*CWB*	*IC*	*WL*	*SE*
Mean	*23.1086*	*11.1349*	*19.0362*	*14.4013*	*21.2961*	*8.6447*
Std. Deviation	*7.70269*	*4.43489*	*4.41965*	*3.77198*	*4.22992*	*2.62988*
Minimum	*7.00*	*5.00*	*8.00*	*6.00*	*8.00*	*5.00*
Maximum	*35.00*	*20.00*	*29.00*	*20.00*	*25.00*	*16.00*

Source: Own survey result.2020

M=mean and SD standard deviation

Appendix III: Multivariate collinearity test

Model		Unstandardized Coefficients		Standardized Coefficients	T	Sig.	Collinearity Statistics	
		B	Std. Error	Beta			Tolerance	VIF
1	(Constant)	41.051	45.592		.900	.369		
	IOC2	12.874	7.413	.207	1.737	.084	.203	4.915
	IOC3	-18.151	8.879	-.273	-2.044	.042	.162	6.162
	IOC4	10.980	8.476	.166	1.295	.196	.175	5.699
	JOC1	-11.333	7.090	-.170	-1.599	.111	.255	3.918
	JOC3	-3.062	7.099	-.045	-.431	.667	.260	3.843
	JOC4	.903	5.159	.015	.175	.861	.417	2.396
	JOC5	5.355	6.685	.083	.801	.424	.270	3.697
	IC1	11.228	8.132	.172	1.381	.169	.186	5.387
	IC2	-5.655	9.113	-.077	-.620	.535	.185	5.396
	CI3	-1.218	9.658	-.018	-.126	.900	.138	7.251
	IC4	-2.416	9.828	-.035	-.246	.806	.141	7.099
	WL1	7.250	5.878	.095	1.233	.219	.487	2.053
	WL2	-1.847	5.969	-.024	-.310	.757	.492	2.031
	WL3	1.023	5.718	.013	.179	.858	.566	1.766
	WL4	6.676	5.904	.082	1.131	.259	.547	1.829
	WL5	-.600	6.392	-.008	-.094	.925	.412	2.428
	PJ1	.371	7.460	.003	.050	.960	.629	1.590
	PJ4	15.040	8.179	.270	1.839	.067	.134	7.460

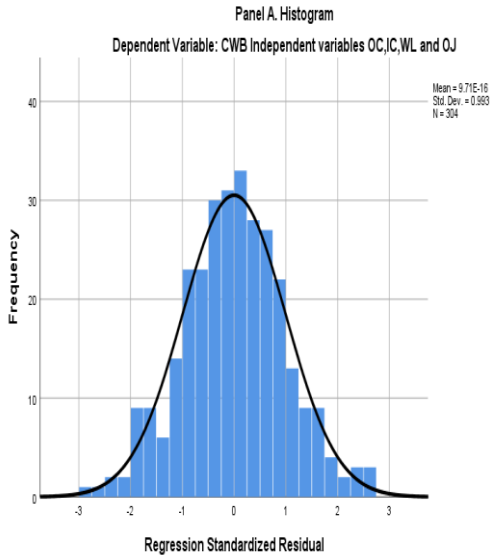
	DJ1	16.568	5.257	.215	3.152	.002	.620	1.612
	DJ2	-3.089	8.741	-.025	-.353	.724	.585	1.710
	DJ3	-12.081	8.149	-.214	-1.48	.139	.139	7.205
	SE1	-4.904	9.114	-.039	-.538	.591	.561	1.782
	SE2	5.674	6.715	.056	.845	.399	.649	1.541
	SE3	7.620	9.379	.058	.812	.417	.561	1.783
	SE5	-16.198	12.309	-.134	-1.32	.189	.277	3.615
	SE6	3.637	10.855	.033	.335	.738	.292	3.420
	CWB_O2	-3.134	7.988	-.032	-.392	.695	.431	2.320
	CWB_O3	20.503	7.021	.203	2.920	.004	.599	1.668
	CWB_O5	-.358	10.678	-.004	-.034	.973	.207	4.828
CWB_I1		28.361	12.203	.309	2.324	.021	.163	6.128
CWB_I3		-30.056	7.372	-.331	-4.077	.000	.439	2.278
CWB_I4		-11.582	5.799	-.152	-1.997	.047	.496	2.014

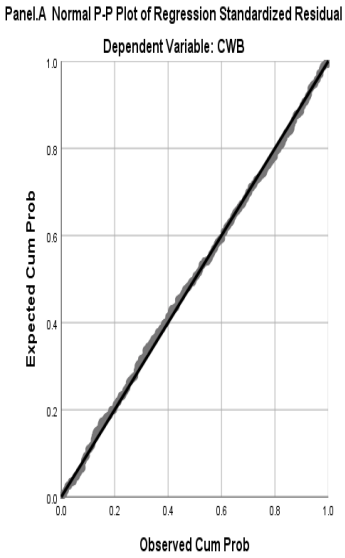
Source: Own survey result, 2020

APPENDEX IV : Normality test

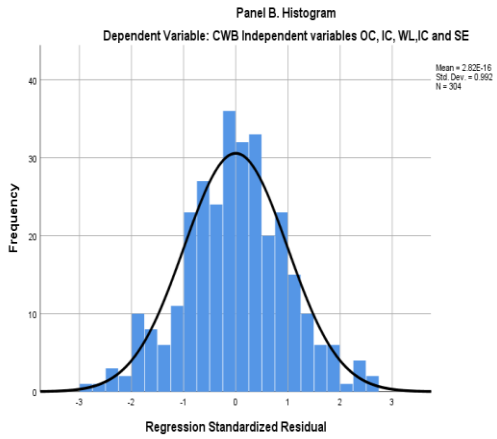
Figure 4. 5 Normality Test of the Data

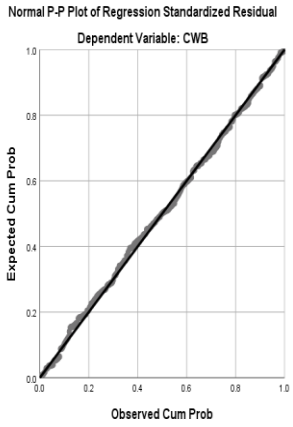
A. Normality test of the data using probability-plot (P-P) and histogram based on regression model1(m_1)



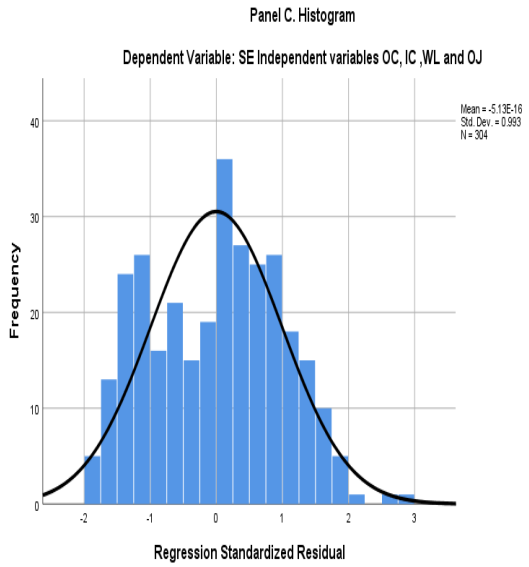


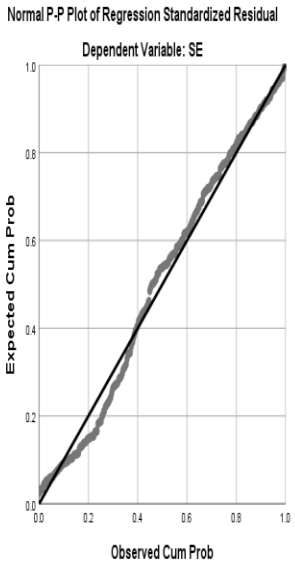
B. Normality test of the data using probability-plot (P-P) and histogram based on regression mode 2(m_2)





C. Normality test of the data using probability-plot (P-P) and histogram based on regression model 3(m_3)





Source: Own survey result SPSSvs25, 2020

APPENDIX V: Model Fit indices

To test whether the model fit the real data this study applies both absolute and incremental fit indices. This classification and the details of the indices are based on Jenatabadi's (2015) presentation.

Absolute Fit Indexes

I. Normal Chi-Square Fit Index" (CMIN/DF):

Normal chi-square fit index, $\chi 2$/df, serves to adjust the testing of chi-square according to the sample size. Some researcher argue that 5 is a good fit value while some other put a value 3 or less as acceptable.

II. Goodness-of-Fit Index (GFI):

GFI measures the difference between the predicted covariance and resulted or observed ones. It ranges between 0 and 1, where 1 indicates a perfect fit, which demonstrates that measures equal to or larger than 0.90 signify a 'good' fit

$$GFI = 1 - [\frac{\max[(\chi 2 - \mathrm{df})/\mathrm{n}, 0]}{\max[[\chi^2_{null} - df_{null}]\ /n, 0]}]$$

III. Adjusted Goodness-of-Fit Index(AGFI)

AGFI is utilized for adjustment of the GFI relating the complexity of the model.

$$AGFI = 1 - [\frac{(1 - GFI)dnull}{d}]$$

The measuring of AGFI is between 0 and 1, in which 1 or over 1 (AGFI>1.0) signifies a perfect fit, nevertheless, it cannot be bounded below 0, i.e., (AGFI>0). As in the case of GFI, AGFI values equal to or bigger than 0.90 signify a 'good' fit.

IV. The standard root mean square residual (RMR)

RMR shows the mean squared amount's square root, which separates the sample variances and covariances from the corresponding predicted variances and covariances (Hu and Bentler, 1995). The assessment relies on an assumption that considers the model to be correct. The smaller the RMR, the more optimal the fit is (Garson, 2007).

V. The root mean squared error of approximation (RMSEA)

.RMSEA is employed to gauge the approximation error in the population it is given by:

$$RMSEA = \left[\frac{(\chi 2 - df)}{(n-1)df}\right]^{1/2}$$

When the valve of RMSEA is small, the approximation is believed to be optimal. Where RMSEA≤ 0.05 means a more appropriate and closer model fit in connection with the degrees

of freedom. Nevertheless, between 0.05 and 0.08 displays the most preferable status and the more optimal fit results (Browne and Cudeck, 1993).

Incremental Indices

I. **The comparative fit index (CFI)**

CFI is not only less affected by the sample size, but also based on comparison of the hypothesized model to the null model (Keline,1998).

$$CFI = 1 - [\frac{\max[(\chi 2 - df), 0]}{\max[(\chi 2 - df), (\chi 2null - dfnull), 0]}]$$

The values of CFI range between 0 and 1. However, its values need to be a minimum of 0.90 to be usable for a model fit.

II. Tucker Lewis Index or Non-Normed Fit Index (TLI or NNFI)

The TLI or NNFI index is used to gauge parsimony, which is applicable through the evaluation and assessment of the degrees of freedom of the suggested model to the degrees of freedom of the null model (Bentler and Bonett,1983) $NFI = \frac{\chi^2/df(null\ model)/\chi^2/df(proposed\ model)}{\chi^2/df(null\ model)-1)}$ However, it is not certain whether TLI can vary from 0 to 1. A fit of model is required to possess a TLI that is larger than 0.90. These Model Fit Indices well-articulated by many authors (Ho 2006; Byren2010; Hair et al 2010).

APPENDEX VI The path diagram representation of direct effect and total effect

Figure 4. 6 The graphical (path diagram) representation of direct effect -model 1

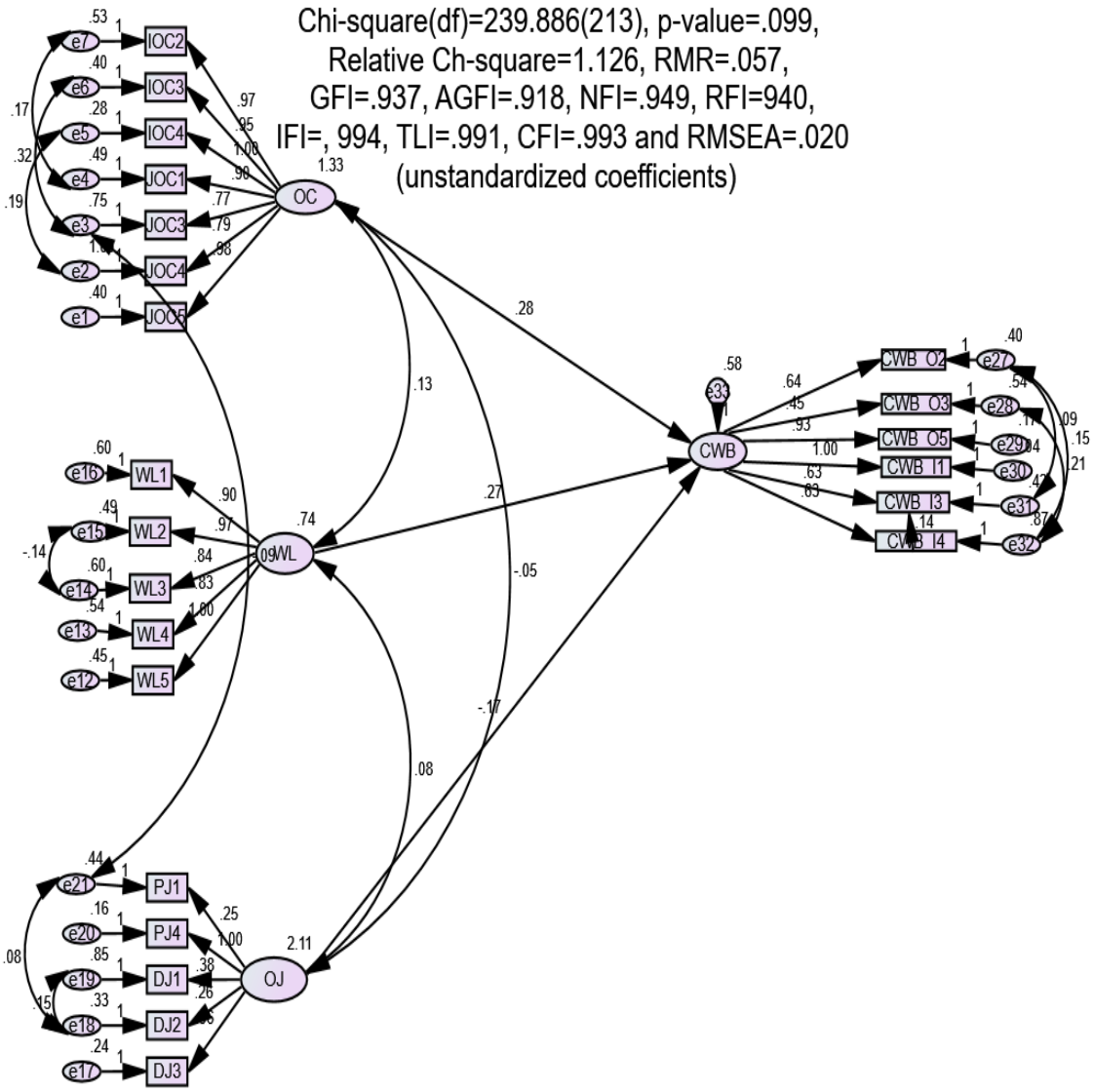


Figure 4. 7 The diagrammatical (path diagram) representation of direct and indirect model= total effect