International Journal of Research Studies in Education
2017 October, Volume 6 Number 4, 37-56

Shifting between counterproductive work behavior and organizational citizenship behavior: The effects of workplace support and engagement

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ISSN: 2243-7703
Online ISSN: 2243-7711

OPEN ACCESS

Received: 9 September 2016 **Revised**: 4 November 2016 **Accepted**: 7 November 2016
Available Online: 13 November 2016 **DOI**: 10.5861/ijrse.2016.1632

Abstract

Organizational behavior studies have noted the positive effects of perceived support and employees' engagement towards the overall institutional performance. However, recent studies suggest that both the positive organizational citizenship behavior (OCB) and the negative counterproductive work behavior (CWB) are also highly affected by job engagement. In the academic setting, maintaining a well-balanced work place is highly important. Recent studies in Taiwan have noted the moderate occurrence of CWBs within the academic setting; as students are greatly influenced by their teachers, it is imperative that CWBs be kept to a minimum. In light of the above-mentioned issues, the current study shall present the findings in determining the inter-relationships between perceived support (PS), job engagement (JE), OCB, and CWB Taiwan (CWB-T) model. Participants are 1,074 teachers from Taiwan. Structured equation modelling (SEM) was used to analyze the proposed mediation model. Instrument used are Hu, Hung, and Ching's (2015) *CWB Taiwan scale*, Eisenberger, Stinglhamber, Vandenberghe, Sucharski, and Rhoades' (2002) *perceived support*, Saks' (2006) *job engagement*, and Lee and Allen's (2002) *organizational citizenship behavior*. Lastly, findings suggest that job engagement seem to provide a negative effect on CWB-T, while at the same time provide a positive effect on OCB. In sum, appropriate organizational support is much needed in order to enhance workplace engagement. It is hoped that by pin-pointing the various determinants of CWBs, a clear understanding of the inter-relationships among the factors can be establish.

Keywords: work attitude; teacher; deviant behavior; support; counterproductive work behavior; organizational citizenship behavior; job engagement; latent mediator

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1. Introduction

Within workplace research, many have noted the significant relationship that exists between performance and the state of organizational citizenship behavior (OCB) (Podsakoff & MacKenzie, 1997; Podsakoff, MacKenzie, Paine, & Bachrach, 2000). Although their studies are accomplished more than a decade ago, in reality this phenomenon still holds true, wherein OCB is quite related to an individuals' performance (Zhong, Wayne, & Liden, 2015). More important is that within their study, they also noted the important role of *workplace support* and *job engagement* placed on an individuals' performance. It is said that in due time, effective workplace engagement does not only improved performance, but also creates loyalty (Salanova, Agut, & Peiró, 2005). While, the perceived supports including both from an *individuals' superior* and from the *organization* itself, are said to be beneficial in creating a healthy work environment (Kossek, Pichler, Bodner, & Hammer, 2011).

Within another spectrum, besides OCB, the notion that counterproductive work behavior (CWB) exists in all levels of the workplace is also gaining grounds in terms of its antecedents and perceived negative effects towards institutions and/or organizations (Martinko, Gundlach, & Douglas, 2002). More important, are the complex relationship that exists between OCB and CWB. Many have delved on either the distinct (Sackett, Berry, Wiemann, & Laczo, 2006) or the relative nature of the two concepts (Dalal, 2005; Spector & Fox, 2010), in fact, researchers have shown the existence of some apparent parallel concepts between OCB and CWB (Miles, Borman, Spector, & Fox, 2002). However, with the diverse conceptions of CWB, one fact still remains, which is the deviant workplace behaviors tend to *lowers the overall institutional performance and efficiency* (Robbins, Ford, & Tetrick, 2012).

Inside the academic setting, OCB and CWB are simultaneously occurring (Britt & Jex, 2015; T. H. Stone & Jawahar, 2015). Studies have noted the positive contributions of OCB in the academic workplace, which is actually quite promising (Bogler & Somech, 2004; Christ, Van Dick, Wagner, & Stellmacher, 2003; Somech & Bogler, 2002). This actually holds true with regards to Taiwan teachers. Recent students have noted that the perceived *administrative practices* within the academic workplace is quite relevant to the levels of teachers' OCB (Chang, Nguyen, Cheng, Kuo, & Lee, 2016; Nguyen, Chang, Rowley, & Japutra, 2016). Similarly, with regards to CWB, recent findings have noted the perceived *moderate occurrence* of various deviant behaviors within Taiwan academic workplace (Ching, Tsay, Hu, & Hung, 2016; Y.-L. Hu, Hung, & Ching, 2015). With these having said, it is noted that in order to improve the academic workplace in Taiwan, it would be advisable to further understand the inner workings of both OCB and CWB. More important, is the inter-relationship of work engagement and perceived support towards the occurrences of OCB and CWB.

2. Conceptual review

2.1 Organizational citizenship behavior

Within the seminal literature, Organ (1988) noted the complex nature of OCB that has an aggregate positive impact on *institutional effectiveness*. In general, OCB can be described as a voluntary act in helping others or altruism (Smith, Organ, & Near, 1983). Organ and Ryan (1995) further added that OCB is highly related to an individuals' job *satisfaction*, while also holding true for other workplace attitudinal measures, such as: *fairness*, *commitment*, and *support*. Stressing on the part of organizational justice, as noted by Moorman, Niehoff, and Organ (1993) that most of the relationship between OCB and satisfaction are actually contributed the sense of

equality or perceived *justice* within the organization. While, referring back to a study by Hu, Hung, and Ching (2016) suggesting that *equity* plays an important part in creating a *healthy workplace*. With these relationship in placed, it would seem that OCB is generated through having a healthy workplace. More important is that within this healthy workplace, the practice of fairness or equality and support are clearly felt by its constituents.

Later on, Organ (1997) expressed that OCB is not simply the concepts of performing beyond what is expected of an individual. OCB can be considered to be more *contextual* in nature (Borman & Motowidlo, 1997). Contextual in a sense that performance is directed towards the organization/institution (Borman & Motowidlo, 1993). This also includes the uplifting of the *social* and *psychological aspects* of the organization (Borman & Motowidlo, 1997), while can be refined to include *interpersonal facilitation* and *job dedication* (Van Scotter & Motowidlo, 1996). An important notion is that this contextual performance seems to varies from individual to individual (Motowildo, Borman, & Schmit, 1997) and could be highly related to a person's personality (Hogan, Rybicki, & Borman, 1998). Lastly, as with the aggregating nature of OCB construct, positive workplace performance such as organizational effectiveness, individual motivation, job satisfaction, and commitment are highly attributed. Hence, OCB is encouraged.

2.2 Counterproductive work behavior

As the notion of CWB exists in all workplace, various studies regarding the variability of its concepts have been published. In simple terms, day to day CWBs are various *negative workplace behaviors* such as minor conflicts and bullying (Ayoko, Callan, & Härtel, 2003), coming to work late and/or leaving early, non-work related internet use, and talking behind somebody's back or spreading rumors (Y.-L. Hu et al., 2015). More specifically, these CWBs are considered *intentional behaviors* that are harmful to the organization (or institution) and/or to the people within that organization (Dalal, 2005; Gruys & Sackett, 2003; Sackett, 2002). Besides the common day to day CWBs, some other more serious deviant behaviors are workplace related aggression towards coworkers (Hershcovis et al., 2007), workplace theft, fraud, and even embezzlement (Bowling & Gruys, 2010; Marcus & Schuler, 2004; Robinson & Bennett, 1995), just to name a few. With these day to day CWB occurrences, an overall damaging effect towards the organizational well-being is taking place (Klotz & Buckley, 2013). In essence, these negative behaviors are making its toll within the workplace.

Researches have shown the multi-dimensionality of CWBs. Many have classified CWB in terms of their severity from minor to severe and in terms of their impact either towards a personal or organizational level (Y.-L. Hu et al., 2015). Many have also used the classification method by Robinson and Bennett (1995), wherein they grouped CWBs into four distinct clusters, namely: production deviance, property deviance, political deviance, and personal aggression (p. 565). However, this was later reclassified into five simpler categories, such as: abuse towards others, production deviance, sabotage, theft, and withdrawal (Spector et al., 2006). However, Bowling and Gruys (2010) organized the CWBs within a comparative perspective, in terms of legal versus illegal activities, hostile versus instrumental aggression, and task-related versus non-task related, noting the complexity of CWBs.

Within the academic setting, as previous studies have shown that CWBs are also occurring (Ching et al., 2016; Y.-L. Hu et al., 2015, 2016). Citing previous researches, some have suggested that even in the unlikely place of occurring negative behaviors in teachers such as within the school, it can be noted that teaching can be a *stressful* occupation, hence, CWBs seems to be associated with work related tension and anxiety (Fox & Stallworth, 2010). In addition, Chughtai and Zafar (2006) noted that organizational factors such as: job satisfaction and perceived justice as some of the mediating factors for *organizational commitment*, which is considered as positive behaviors. In some cases, the actual enforcement of workplace monitoring and sanctioning are seen as preemptive measures for CWB occurrences (Y.-L. Hu et al., 2016). In sum, promoting a positive healthy workplace, such as with the like of enhancing organizational commitment is seen as helpful in minimizing CWBs.

As with the varied aspects of CWBs, this also holds true with the complexity of its predictors. An early study by Martinko (2002) and his colleagues argues that CWBs are caused either by *situational* issues or triggered by some *personal* concerns. Conforming to their notion, studies by Moretti (1986) and Dobbins, Pence, Orban, and Sgro (1983) both suggests that there are instances wherein CWBs are *gender* specific, such as with *male* employees are more prone to violence, alcohol (or substance) abuse, or theft, while *female* workers might have a tendency to undergo favoritism and participate in office politics. In addition, the *age* of the employee also seems to matter, for instance, *younger* individuals are more likely to exhibit CWB tendencies as compared to the more *senior* employees (Hershcovis et al., 2007; Penney & Spector, 2005). Furthermore, individual personalities also matters greatly (Hogan et al., 1998; Phillips, Meek, & Vendemia, 2011; Spector, 2011). For instance, the personality *conscientiousness* seems to counter the urged to commit CWBs (Berry, Ones, & Sackett, 2007). Lastly, as with the preferred antecedents of CWBs are situational, so as interventions can be implemented, whereas with personal triggers (such as gender and age) of deviant behaviors are beyond the control of an organization, hence, additional clarification on the various workplace settings are needed.

2.3 Workplace engagement

The concept of *engagement* in the workplace is fast becoming an important issue. Within the literatures, two parallel concepts have actually emerged, namely: *work engagement* and *job engagement*. Work engagement is a more generalized concept that described the *positive motivational state* of work-related well-being (Bakker, Schaufeli, Leiter, & Taris, 2008, pp. 187-188). This motivational state can also be described as being full of energy and enthusiasm (Bakker & Demerouti, 2008). More important, is that having a healthy engaged career would tend to lowered the tendency in having job related *burnout* (Schaufeli, Bakker, & Salanova, 2006), which is also quite true within the academic workplace (Hakanen, Bakker, & Schaufeli, 2006).

Bakker (2008) and his colleagues further described that a highly engaged individual should be

> *… proactive and show initiative, take responsibility for their own professional development, and to be committed to high quality performance standards …* (p. 188).

However, before an individual becomes engaged several antecedents should be present. Attridge (2009) suggests that before engagement occurs, certain workplace *behavioral health practices* should be practiced, such as: appropriate job design, adequate working conditions, resources, and support, and together with the positive (or healthy) organizational culture and leadership style. Besides these conditions, having adequate *job autonomy* (Bakker et al., 2008) and *control* over ones work are also precursors to becoming engaged (Mauno, Kinnunen, & Ruokolainen, 2007).

As for job engagement, this can be defined as an individual's *enthusiasm* and *involvement* on his or her job (Roberts & Davenport, 2002). In addition, job engagement is considered quite related to satisfaction (Wefald & Downey, 2009) and the perceived job suitability (Warr & Inceoglu, 2012). Roberts and Davenport (2002) further described that an engaged individual tend to *work harder* than his or her peers and would more likely to *produce better performance* as compared to others (p. 21). More specifically, positive job engagement leads to better task performance and OCB (Rich, Lepine, & Crawford, 2010). Lastly, Saks (2006) clarifies that there are actually two different and separate types of general workplace engagement, namely: *job* and *organizational engagement*. This would mean that an employee might be actively involved in doing his or her job, while at the same time does not care to become involved with the organization or institution. However, there findings suggest that precursor to healthy engagements is the employees' perceived *organization support* from the institution (Rich et al., 2010; Saks, 2006) and from their immediate supervisors (Luthans & Peterso, 2002).

2.4 Perceived support

As mentioned in the previous literature, perceived support is quite important in generating both positive workplace engagement and OCB. *Perceived support* actually includes the general belief that one's work is *being*

valued by his or her organization (Rhoades & Eisenberger, 2002). Yoon and Lim (1999) attributed perceived support to an individual's *positive affectivity*, such as with the likes of having a positive workplace outlook actually attracts relevant organizational support. Rhoades and Eisenberger (2002) further suggest that perceived support is reinforced with the presence of *workplace equality*. In addition, several studies all noted that the positive sense of support is quite important in *retaining employees*, in order words, lessen one's intention in leaving the organization (institution or company) (Aryee & Chay, 2001; Djurkovic, McCormack, & Casimir, 2008; Eisenberger, Stinglhamber, Vandenberghe, Sucharski, & Rhoades, 2002), while at the same time, tends to lowers workplace aggression (Schat & Kelloway, 2003) and job related stresses (Vagg & Spielberger, 1998). In contrast, *workplace inequality* and *bullying* lowers the sense of perceived support (Aryee & Chay, 2001; Djurkovic et al., 2008).

Lastly, with the notion that interactions within the workplace are instantaneous, various factors are actually ongoing at the same time. Within the academic workplace, creating a healthy workplace is quite important in establishing performance and what more could be more important than having teachers focusing on their teaching and refrain from doing negative deviant behaviors. Hence, the primary goal of the current paper is to understand the various interactions of perceived support and job engagement together with their impact towards organizational citizenship behavior and occurrence of counterproductive workplace behaviors.

3. Design

The current study primarily builds on the inter-relationships of perceived support (PS), job engagement (JE), organizational citizenship behavior (OCB), and the Taiwan model of counterproductive work behavior (CWB-T). The researchers proposed the model in hoping that occurrence of CWBs within the academic workplace can be further explain and understood. The following assumptions are noted: **PS** as the latent *Independent Variable* (IV), **JE** as the latent *mediator*, while **OCB** and **CWB-T** as the latent *Dependent Variable* (DV). A total of five hypotheses are proposed, namely (see figure 1 below for more details):

- Hypothesis 1 (H1): PS has significant positive effect on JE
- Hypothesis 2 (H2): JE has significant negative effect on CWB-T.
- Hypothesis 3 (H3): JE has significant positive effect on OCB.
- Hypothesis 4 (H4). JE mediates the PS to CWB-T relationship.
- Hypothesis 5 (H5). JE mediates the PS to OCB relationship.

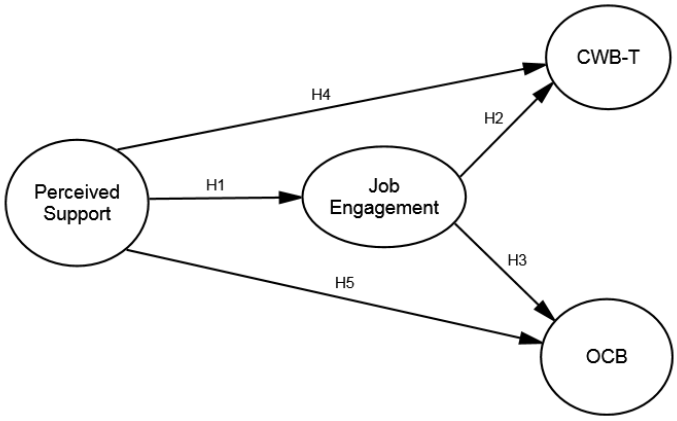

Figure 1. Hypothesized theoretical model

3.1 Participants and procedure

Participants of this study are volunteer elementary and high school teachers from the different regions in

Taiwan. Schools were first strategically selected and a call for participant was distributed during the Spring semester of 2015. In the current study, both paper and online survey were used to augment data collection (Nulty, 2008; Sax, Gilmartin, & Bryant, 2003). However, still majority of the respondents are from the localities with *Northern Taiwan* having 479 teachers or 45% and *Central Taiwan* having 499 teachers or 49%. In addition, the number of female and male participants is almost equal with *Male* teachers having 511 or 48% and *Female* teachers having 536 or 50%.

For the various school types, Table 1 shows that participants are working in *Elementary schools* with 644 teachers or 60%, *Junior high schools* with 323 teachers or 30%, *Senior high schools* with 67 teachers or 6%, and the remaining 40 teachers or 4% works in *Vocational high schools.* For the job positions, results show that *Subject teachers* comprises of 325 or 30%, *Teacher with class adviser duties* with 352 or 33%, *Teacher with administrative duties* with 304 or 28%, *Administrative staff* with 62 or 6%, and the remaining 31 or 3% are *School principals*. For the teachers' educational attainment, 500 or 47% are *Bachelor degree* holders, while the remaining teachers are *Graduate degree* holders. For the participants' school size, 722 or 67% worked at *Small* schools (12 class and below), 472 or 44% worked at *Medium* schools (13 to 48 class), and 481 or 45% worked at *Large* schools (49 class and above). Lastly, for the school location, 722 or 67% worked in *Urban/City* schools, while 280 or 26% worked in *Rural* schools.

Table 1

Participants' demographic background (N=1074)

Items	*n*	%
Gender		
Male	511	48%
Female	536	50%
School type		
Elementary	644	60
Junior high school	323	30
Senior high school	67	6
Vocational high school	40	4
Position		
Subject teacher	325	30%
Teacher w/ class adviser duties	352	33%
Teacher w/ administrative duties	304	28%
Administrative staff	62	6%
School Principal	31	3%
Highest educational attainment		
Bachelor degree	500	47%
MA	562	52%
PhD	12	1%
School location		
Northern Taiwan	479	45%
Central Taiwan	499	46%
Southern Taiwan	89	8%
Eastern Taiwan	7	1%
School size		
Small (12 class and below)	121	11%
Medium (13 to 48 class)	472	44%
Large (49 class and above)	481	45%
District		
Urban (city)	722	67%
Rural	280	26%
Remote (outer islands and/or mountain region)	72	7%

3.2 Research tools

To collect the various data, several scales were used to measure the teachers' perceived support (PS), job engagement (JE), organizational citizenship behavior (OCB), and the Taiwan model of counterproductive work behavior (CWB-T).

Counterproductive Work Behavior (CWB-T) - To measure the CWB occurrences of teachers, the study make use of the CWB Taiwan (CWB-T) scale pioneered in several previous studies (Y.-L. Hu et al., 2015). Within the scale, there are a total of eight factors used to describe the various CWBs. The factors are as follows: *time theft* (TT, seven items), *inappropriate use of resources* (IUR, four items), *inappropriate student-teacher relationship* (ISR, seven items), *inappropriate parent-teacher relationship* (IPR, five items), *lack of professionalism* (LOP, six items), *apathy* (AP, six items), *political tactics* (PT, seven items), and *reluctant to accept administrative duties* (RAD, four items) (Y.-L. Hu et al., 2015, p. 71). Test-retest Cronbach (1951) Alpha reliabilities of the various CWB-T ranges from .72 to .90 (Ching et al., 2016; Y.-L. Hu et al., 2015, 2016), denoting a reliable instrument (Cohen, Manion, & Morrison, 2007). Previous studies using CWB-T have consistently showed that TT and RAD as having the highest perceived deviant behaviors. While, the lowest CWB-T factors are IUR and IPR. *For more information regarding the CWB-T factors and items, please read* Hu et al. (2015).

Items for CWB-T are collected using a 4-point Likert (1932) type scale ranging from ***0***; denoting *zero occurrence* to ***3***; denoting *always occurring*. In addition, recoding was accomplished with the collected data following the suggestions of the original CWB-T study done by Hu et al. (2015). Data were recoded to ***0*** if original data is 0, 1, or 2, while ***1*** was used when the original data is 3. Hence, CWB-T items are now either ***0*** or ***1***, denoting *none* or *possible* CWB occurrence. Lastly, in order to lower the complexity of the computation, the mean scores of each of the eight factors are used as manifest variables into the proposed model.

Organization Citizenship Behaviors (OCB) – To measure the OCB of the teachers, the study uses the scale developed by Lee and Allen (2002), wherein two separate factors with four items each are collected. The two factors are OCB for individual (OCBI, four items) and OCB for organization (OCBO, four items). Cronbach (1951) Alpha reliabilities of the two factors are computed as .75 and .73 respectively. Items are collected using a 4-point Likert (1932) type scale ranging from ***1*** to ***4***, denoting from *never* to *always*. Some sample items for OCBI are *Willingly give your time to help others who have work-related problems* and *Adjust your work schedule to accommodate other employees' requests for time off*. While, for OCBO are *Attend functions that are not required but that help the organizational image* and *Defend the organization when other employees criticize it*.

Job Engagement (JE) – As for the job engagement of teachers, the study uses the two factors scale designed by Saks (2006), wherein the Cronbach (1951) Alpha reliabilities is computed to be .84, denoting a reliable instrument (Cohen et al., 2007). For Saks (2006), JE can be separated into the *actual work specific engagement* (JE01, five items) and *engagement within the organization* (JE02, six items) factors. Items for JE are used to assess the participants' psychological presence in their job. Items are all collected using a 4-point Likert (1932) type scale ranging from ***1*** to ***4***, denoting from strongly *disagree* to strongly *agree*. Some sample items for JE01 are *I really "throw" myself into my job* and a reverse coded item *My mind often wanders and I think of other things when doing my job*. While, sample items for JE02 are *Being a member of this organization is very captivating* and a reverse coded item *I am really not into the "goings-on" in this organization.*

Perceived Support (PS) - Two scales were used to measure the perceived support of Taiwan teachers, which includes *perceived organizational support* (POS, eight items) and *perceived supervisor support* (PSS, four items) as proposed by Eisenberger et al. (2002). Items for this scale are basically used to assess an individuals' perception on the value placed by the organization towards their well-being. Cronbach (1951) Alpha reliabilities

are computed to be from .83 to .85. Items are all collected using a 4-point Likert (1932) type scale ranging from ***1*** to ***4***, denoting from strongly *disagree* to strongly *agree*. Some sample items for POS are *The organization holds my supervisor in high regard* and *The organization gives my supervisor the chance to make important decisions*. While, sample items for PSS are *My supervisor influences decisions made by upper management* and *My supervisor participates in decisions that affect the entire organization*.

3.3 Reliability and validity of the study

Following the procedures of previous CWB-T studies, it is noted that within the issues of self-reported sensitive data gathering such as in organizational and work related topics, the issues of *social desirability* should be handled carefully (Podsakoff & MacKenzie, 1997; Spector, 1987). Studies have noted that respondents tend to become somewhat bias when faced with the previous mentioned sensitive issues (Donaldson & Grant-Vallone, 2002; Spector, 2006). To remedy this, within the current study, the researchers make use of the recoding scheme previously mentioned in *section 3.2*, wherein the initial Likert (1932) type scale ranging from ***0*** to ***3*** for the CWB-T; denoting the perceived occurrence of CWBs from ***zero*** to ***always***, was recoded into either ***0*** for ***none occurrence*** and ***1*** for ***possible occurrence*** of CWBs. Then after recoding the various CWB-T items, Cronbach (1951) alpha reliabilities were recomputed resulting with slight increase of values. Hence, making the scale more reliable (Cohen et al., 2007).

In addition, the current study also make used of the 10 item short-form of the Marlowe-Crowne Social Desirability Scale (SDS) (Fisher & Katz, 2000). After collecting the data with the other factors, correlation analysis with the different CWB-T factors was accomplished. Table 2 shows the various mean scores (including the overall mean score) of the SDS. While, Table 3 shows the various Pearson correlation values between the CWB-T factors and SDS. Results show that four of the CWB-T factors are slightly correlated with SDS. Such as IUR with $r = .083$, $p = .007$, $n = 1074$, ISR with $r = .079$, $p = .010$, $n = 1074$, LOP with $r = .081$, $p = .008$, $n = 1074$, and AP with $r = .082$, $p = .007$, $n = 1074$. It is noted that within the previous CWB-T studies ISR and LOP repeatedly resulted with a slight correlation with SDS. In-depth analysis of these phenomenon are currently beyond the scope of this paper, however, researchers should be able to find this issue interesting for future studies. Lastly, as most of the CWB-T factors resulted in having no correlations with SDS, the data collected can now be used in the succeeding part of the analysis.

Table 2

Social desirability items (N=1074)

Code	Factor/Items/Cronbach Alpha reliability	*M*	*SD*
SDS	Social Desirability Scale (α=.74)	2.48	0.38
SD01*	There have been times when I was quite jealous of the good fortune of others	2.09	0.70
SD02*	I sometimes feel resentful when I don't get my own way	2.17	0.71
SD03*	On a few occasions, I have given up doing something because I thought too little of my ability	2.21	0.82
SD04*	There have been occasions when I took advantage of someone	1.91	0.74
SD05*	I can remember "playing sick" to get out of something	1.92	0.79
SD06	I have never been irked when people expressed ideas very different from my own	2.59	0.71
SD07	I am always courteous, even to people who are disagreeable	2.83	0.66
SD08	No matter who I'm talking to, I'm always a good listener	2.95	0.66
SD09	I'm always willing to admit it when I make a mistake	3.03	0.58
SD10	When I don't know something I don't mind at all admitting it	3.06	0.56

Note. Data collected using 4-point Likert scale. *Reverse coded items.

Table 3

Correlational analysis with SDS (N=1074)

CWB-T Factors	Correlation
TT	.032
IUR	.083**
ISR	.079**
IPR	.039
LOP	.081**
AP	.082**
PT	.058
RAD	-.002

Note. ** $p < .01$ (2-tailed).

3.4 Data analysis

In order to test the proposed mediation model, the collected sample is now divided into two separate parts by random. 33% or 358 teachers are used in the measurement model for the Confirmatory Factor Analysis (CFA), while, the remaining 67% or 716 teachers are used in the structure model for the *mediation* test. Descriptive statistics is accomplished with the aid of the Statistical Package for the Social Sciences (SPSS) version 20 software. *Composite reliability* (CR) and *average variance extracted* (AVE) were used to prove the reliability and validity of the measurement model. At the same time, the structure model was used to explain the relationship together with the various effects among the latent variables. Structure equation modeling (SEM) was estimated using the maximum-likelihood method with the help of the Analysis of Moment Structures (AMOS) version 20 software (Arbuckle, 2011).

4. Results and discussions

4.1 Descriptive statistics

Descriptive statistics were accomplished on the collected with data. Tables 4 and 5 shows the various mean scores of the items, together with their overall mean scores, standard deviations, and Cronbach (1951) Alpha reliability values. Reliability check results with values ranging from .71 to .89, denoting that the various scales are reliable (Cohen et al., 2007). Similar with previous CWB-T studies (Ching et al., 2016; Y.-L. Hu et al., 2016), Table 4 also shows that the factor ***TT*** has the *highest* perceived occurrence with a mean of 0.66. In addition, within the factor ***TT***, the item *Doing personal stuff while on duty* has the highest mean with 0.86. With the dichotomous nature of the recoded CWB-T items, a mean score of 0.86 would mean that respondents perceived the item as occurring around 86% of the time. This is followed by the item *Being online (personal internet surfing; FB) while on duty* with a mean score of 0.76 and the item *Leaving without asking for leave* with a mean score of 0.71. This issue regarding ***TT*** has been repeatedly raised even in the previous studies conducted with Taiwan elementary and high school teachers, it can be noted that since there are no strict and obvious *monitoring and sanctioning* in placed (Y.-L. Hu et al., 2016), teachers might become relax and let down their guard against CWBs.

Besides time theft, the CWB-T factors ***RAD*** and ***AP*** both also have high overall mean scores with 0.61 and 0.60 respectively, denoting around 60% occurrences. Within the factor ***RAD***, the items *Unwilling to undertake administrative responsibilities* with a mean score of 0.76 and *Miscommunication between teachers and administrators* with a mean score of 0.70, seems to be frequently occurring. These are actually quite disturbing since educational administration within the current age should not be limited to classroom teaching, but includes more complex roles (Bascia & Young, 2001; Valli & Buese, 2007). Furthermore, within the factor ***AP***, the items *Wrong use of educational resources* with a mean score of 0.75 and *Lacks teaching enthusiasm* with a mean score

of 0.74, both are occurring more than 70% of the time. To explain this phenomenon, some studies mentioned that teachers are under a lot of stress (Burke, Greenglass, & Schwarzer, 1996; Kyriacou, 1987; Kyriacou & Chien, 2004), while signs of burnout might cause teachers to behave inappropriately. In addition, some other items such as *Favoritism or discriminating specific students* with mean score of 0.73 and *Too few or too much assignments/class activities* with mean score of 0.71 are also occurring with high frequencies.

In sum, as teaching can be considered as a stressful profession, nevertheless, it should not be the excuse for the occurrences of CWBs. Furthermore, many teachers might also consider that most of the deviant behaviors are so common and minor; *it is quite alright to do a little mistake once in a while*, which is but understandable. However, when the total number of common or minor CWBs is taken into consideration, the sheer volume of these negative incidents is also tantamount in causing seriously damage to the academic setting. More important, as students observe what is happening within the school, they can easily pickup and learn these CWBs.

Table 4

CWB-T items and overall mean scores (N=1074)

Code	Factors/Items/Cronbach Alpha reliability	*M*	*SD*
TT	Time Theft (α=.81)	0.66	0.30
TT01	Lying about being sick	0.45	0.50
TT02	Leaving without asking for leave	0.71	0.46
TT03	Coming to school late and/or going home early	0.69	0.46
TT04	Asking for leave regardless of the work situation	0.39	0.49
TT05	Doing personal stuff while on duty	0.86	0.34
TT06	Being online (personal internet surfing; FB) while on duty	0.76	0.43
TT07	Chatting while on duty	0.73	0.44
IUR	Inappropriate Use of Resources (α=.71)	0.29	0.30
IUR01	Waste of school's resources	0.52	0.50
IUR02	Occupying school's resources as if one's own property	0.44	0.50
IUR03	Stealing school resources	0.11	0.31
IUR04	Destruction of school's resources	0.09	0.29
ISR	Inappropriate Student-teacher Relationship (α=.85)	0.50	0.34
ISR01	Favoritism or discriminating specific students	0.73	0.45
ISR02	Improper student punishment	0.63	0.48
ISR03	Mocking students	0.51	0.50
ISR04	Discrimination against students	0.22	0.42
ISR05	Deliberate singling out of specific students	0.34	0.47
ISR06	Focusing only on students with good grades and ignoring others	0.51	0.50
ISR07	Separated and cold towards students' problems	0.58	0.49
IPR	Inappropriate Parent-teacher Relationship (α=.81)	0.29	0.33
IPR01	Deliberate concealment or providing misleading information	0.37	0.48
IPR02	Improper behavior in front of parents	0.36	0.48
IPR03	Encouraging parents to go against the school	0.23	0.42
IPR04	Conniving with parents	0.13	0.34
IPR05	Ignoring or unwilling to communicate with parents	0.33	0.47
LOP	Lack of Professionalism (α=.84)	0.55	0.36
LOP01	Inadequate teacher preparation	0.57	0.49
LOP02	Not following proper curriculum	0.55	0.50
LOP03	Saying improper things during class	0.50	0.50
LOP04	Too few or too much assignments/class activities	0.71	0.46
LOP05	Casual checking of students' assignments	0.41	0.49
LOP06	Improper use of teaching pedagogy (such as too much movie time)	0.54	0.50
AP	Apathy (α=.82)	0.60	0.34
AP01	Unwilling to undergo tutoring	0.40	0.49
AP02	Lacks teaching enthusiasm	0.74	0.44
AP03	Wrong use of educational resources	0.75	0.43
AP04	Lacks professional content knowledge	0.48	0.50
AP05	Unwilling to participate in professional development workshops	0.60	0.49
AP06	Lacks the motivation to join professional development programs	0.61	0.49

Table 4 … continued

Code	Factors/Items/Cronbach Alpha reliability	*M*	*SD*
PT	Political Tactics (α=.89)	0.46	0.37
PT01	Gossiping	0.73	0.44
PT02	Spreading wrong/bad information	0.43	0.49
PT03	Improver verbal conduct	0.35	0.48
PT04	Deliberate neglect or ignoring others	0.51	0.50
PT05	Deliberate singling out others	0.42	0.49
PT06	Forming small groups/alliances to go against others	0.45	0.50
PT07	Convincing others to go against the school	0.35	0.48
RAD	Reluctant to accept Administrative Duties (α=.78)	0.61	0.37
RAD01	Unwilling to cooperate with school administration	0.52	0.50
RAD02	Going against all educational reforms	0.49	0.50
RAD03	Unwilling to undertake administrative responsibilities	0.76	0.43
RAD04	Miscommunication between teachers and administrators	0.70	0.46

Note. Mean scores recoded into either 0 - no occurrence, 1 - possible occurrence.

For Table 5, results show that teachers perceived POS, PSS, JE01, JE02, OCBI, and OCBO to occurring within a *moderate* to *high* frequency with overall mean scores ranging from 2.65 to 2.87. Results actually are quite promising since, most teachers noted that ***PSS*** and ***OCBI*** to be the highest. Further analysis reveals that within the ***PSS*** the item *The organization gives my supervisor the freedom to determine how to treat me* with mean score of 2.98, *The organization consults my supervisor when deciding on new policies and procedures* with a mean score of 2.95, *The organization supports decisions made by my supervisor* with a mean score of 2.93, and *The organization allows my supervisor to run things the way he/she wants* with a mean score of 2.91. Such findings clearly display that schools in Taiwan are quite supportive of their administrators and teachers.

Similarly, for the teachers' job engagement, Table 5 also shows that the ***reversely*** coded item *My mind often wanders and I think of other things when doing my job* with mean score of 2.95 and *I am really not into the "goings-on" in this organization* with mean score of 2.94, and the items *Sometimes I am so into my job that I lose track of time* with mean score of 2.93 and *I am highly engaged in this job* with mean score of 2.92, both denotes moderately high involvement.

Table 5

Organizational support, job engagement, and organizational citizenship behavior items mean scores (N=1074)

Code	Factors/Items/Cronbach Alpha reliability	*n*	*M*	*SD*
POS	Perceived Organizational Support (α=.84)	1074	2.85	0.43
POS01	The organization holds my supervisor in high regard		2.70	0.65
POS02	The organization gives my supervisor the chance to make important decisions		2.72	0.65
POS03	The organization values my supervisor's contributions		2.83	0.68
POS04	The organization gives my supervisor the authority to try new things		2.78	0.63
POS05	The organization supports decisions made by my supervisor		2.93	0.53
POS06	The organization allows my supervisor to run things the way he/she wants		2.91	0.50
POS07	The organization consults my supervisor when deciding on new policies & procedures		2.95	0.62
POS08	The organization gives my supervisor the freedom to determine how to treat me		2.98	0.70
PSS	Perceived Supervisor Support (α=.86)	1074	2.75	0.56
PSS01	My supervisor influences decisions made by upper management		2.81	0.59
PSS02	My supervisor participates in decisions that affect the entire organization		2.72	0.69
PSS03	If my supervisor decided to quit, the organization would try to persuade him/her to stay		2.73	0.59
PSS04	Even if my supervisor did well, the organization would fail to notice		2.88	0.65
JE01	Job Engagement (α=.76)	575	2.87	0.45
JEn01	I really "throw" myself into my job		2.81	0.59
JEn02	Sometimes I am so into my job that I lose track of time		2.93	0.62
JEn03	This job is all consuming; I am totally into it		2.73	0.72
JEn04*	My mind often wanders and I think of other things when doing my job		2.95	0.56
JEn05	I am highly engaged in this job		2.92	0.68

Table 5 … continued

Code	Factors/Items/Cronbach Alpha reliability	*n*	*M*	*SD*
JE02	Organizational Engagement (α=.89)	575	2.65	0.49
OEn01	Being a member of this organization is very captivating		2.66	0.61
OEn02	The most exciting for me is getting involved with things happening in this organization		2.44	0.62
OEn03*	I am really not into the "goings-on" in this organization		2.94	0.64
OEn04	Being a member of this organization make me come "alive"		2.61	0.60
OEn05	Being a member of this organization is exhilarating for me		2.57	0.61
OEn06	I am highly engaged in this organization		2.67	0.59
OCBI	Organizational Citizenship Behavior – Individual (α=.80)	575	2.85	0.39
OCBI01	Willingly give your time to help others who have work-related problems		2.89	0.56
OCBI02	Adjust your work schedule to accommodate other employees' requests for time off		2.74	0.55
OCBI03	Go out of the way to make newer employees feel welcome in the work group		2.89	0.43
OCBI04	Assist others with their duties		2.88	0.44
OCBO	Organizational Citizenship Behavior – Organization (α=.76)	575	2.83	0.39
OCBO01	Attend functions that are not required but that help the organizational image		2.91	0.52
OCBO02	Defend the organization when other employees criticize it		2.90	0.46
OCBO03	Offer ideas to improve the functioning of the organization		2.82	0.50
OCBO04	Take action to protect the organization from potential problems		2.70	0.55

Note. Data collected using 4-point Likert scale. *Reverse coded items.

Lastly, for the correlations among the various factors, Table 6 shows that the various CWB-T factors are quite correlated with each other. This would mean the occurrence of some CWBs would also have the tendency for other deviant behaviors to occur (denoted by the lightly shaded values in the table). In contrast for the correlations of the various positive factors, such as PS, JE, and OCB; Table 6 shows that these factors are quite correlated with each other (denoted by the darkly shaded values in the table). This actually indicates that the positive atmosphere has the tendency to promote each other. As for the inter-correlations between the negative CWB-T and positive PS, JE, and OCB, results show that there are significant ***negative*** correlations among the two groups of factors. These results would somehow indicate that the groups are occurring in opposition with each other. In other words, an increased in CWB-T would signify a decrease in PS, JE, and OCB.

Table 6

Correlational analysis among the factors

	TT	IUR	ISR	IPR	LOP	AP	PT	RAD	POS	PSS	JE	OE	OCBI	OCBO
TT	1													
IUR	.623**	1												
ISR	.591**	.635**	1											
IPR	.504**	.630**	.675**	1										
LOP	.584**	.611**	.719**	.670**	1									
AP	.536**	.542**	.633**	.603**	.740**	1								
PT	.498**	.513**	.614**	.638**	.625**	.642**	1							
RAD	.475**	.476**	.526**	.551**	.612**	.682**	.685**	1						
POS	-.126**	-.189**	-.128**	-.171**	-.127**	-.206**	-.192**	-.204**	1					
PSS	-.127**	-.145**	-.118**	-.188**	-.129**	-.201**	-.176**	-.185**	.779**	1				
JE	-.255**	-.315**	-.223**	-.241**	-.229**	-.290**	-.267**	-.281**	.210**	.269**	1			
OE	-.290**	-.314**	-.239**	-.244**	-.251**	-.330**	-.249**	-.274**	.569**	.590**	.512**	1		
OCBI	-.203**	-.222**	-.160**	-.169**	-.170**	-.231**	-.239**	-.256**	.383**	.411**	.476**	.459**	1	
OCBO	-.244**	-.270**	-.213**	-.188**	-.227**	-.253**	-.234**	-.265**	.461**	.476**	.518**	.620**	.699**	1

Note. ** Correlation is significant at the .01 level (2-tailed). Lightly shaded = CWB-T factors. Darkly shaded = PS, JE, and OCB factors.

4.2 Preliminary Analyses

Means, standard deviations, and zero-order correlations for the various factors are presented in Tables 4 to 6. Since the number of items of each of the factors are not equal, to make the computation *less* complex, mean scores of each of the factors were used in the model analysis. Multivariate normality test was used to examine whether the data met the normality assumptions underlying the maximum-likelihood procedure used to test the models in the present study. The results of the multivariate normality test indicated that the data were multivariate normal, multivariate kurtosis was 12.30. Therefore, maximum-likelihood method was appropriate (Arbuckle, 2011).

4.3 Measurement Model

Prior to the structural model test, Anderson and Gerbing (1988) performed a confirmatory factor analysis to examine whether the measurement model provides an acceptable fit to the data. Within their study, they noted that once an acceptable measurement model is developed that is the time the structural model can be tested. Six model fit indices were used to assess the goodness of fit of the model (Byrne, 2009; L. T. Hu & Bentler, 1999; Tucker & Lewis, 1973). The various fit indicators are as such: the *Goodness of Fit Index* (**GFI**; values >0.90 indicating good fit), the *Comparative Fit Index* (**CFI**; values >0.90 indicating good fit), the *Tucker-Lewis Index* (**TLI**; values >0.90 indicating good fit), the *Non-normed Fit Index* (**NFI**; values >0.90 indicating good fit), and the *Root Mean-Square Error of Approximation* (**RMSEA**; values <0.08 indicating good fit), and the *Standardized Root Mean Square Residual* (**SRMR**; values <0.08 indicating good fit).

Using the statistical method of SEM, the test of the measurement model resulted in a relatively good fit to the data with $\chi^2 = 189.74^{***}$, $df = 71$, GFI = .93, CFI = .96, TLI = .95, NFI= .94, RMSEA = .068, SRMR = .037. All of which of the standardized loadings of the measured variables on the latent variables were statistically significant with $p < .001$ (see Table 7). In addition, it is computed that the CR of the latent variables with values ranging from .77~.93 and with AVE values ranging from.63~.77 (see Table 8), denoting acceptable ranges (Fornell & Larcker, 1981; Hair, Black, Babin, & Anderson, 2010). Therefore, all of the latent variables appear to have been adequately operationalized by their respective indicators. In addition, most of the correlations among the independent latent variables, the mediator latent variable, and dependent latent variables were statistically significant with $p < .001$ (see Table 9).

Table 7

Model Fit Indices

Indices	Measurement model	Structural model	Criteria
n	358	716	
χ^2	189.74^{***}	345.36^{***}	
df	71	72	
GFI	.950	.925	>.90
CFI	.961	.955	>.90
TLI	.950	.962	>.90
NFI	.940	.933	>.90
RMSEA	.068	.071	<.08
SRMR	.037	.041	<.08

Note. *** $p < .001$

Table 8

Factor loadings for the measurement model (33% sample, n = 358)

Factors/Items	Standardized factor loading	*SE*	*t*	AVE	CR
CWB- T				.63	.93
TT	.68				
IUR	.73	0.08	12.72		
ISR	.83	0.09	14.30		
IPR	.81	0.09	14.05		
LOP	.85	0.10	14.53		
AP	.84	0.09	14.40		
PT	.80	0.10	13.87		
RAD	.77	0.10	13.38		
OCB				.70	.82
OCB-Individual	.79				
OCB-Organization	.88	0.08	14.06		

Table 8 … continued

Factors/Items	Standardized factor loading	*SE*	*t*	AVE	CR
Perceived support (PS)				.77	.87
POS	.87				
PSS	.89	0.16	9.43		
Job engagement (JE)				.63	.77
JE01	.81				
JE02	.78	0.07	14.20		

Note. All standardized factor loading is significant at the .001 level.

Table 9

Latent correlations matrix for the measurement model (33% sample, n = 358)

Latent Variables	(1)	(2)	(3)	(4)
(1) CWB-T	1			
(2) OCB	-.34	1		
(3) Job Engagement (JE)	-.32	.66	1	
(4) Perceived Support (PS)	-.24	.57	.41	1

Note. All latent correlation is significant at the .001 level (2-tailed).

4.4 Structural model for testing mediated effects

In testing the mediated effects of the structural model, the statistical method of SEM was used. Within the mediated model, **PS** was taken as the latent IV, **JE** as the latent *mediator*, while **OCB** and **CWB-T** as the latent DV. After the computation, SEM results indicate a good model fit with χ^2=345.36***, *df* = 72, GFI = .93, CFI = .96, TLI = .96, NFI= .93, RMSEA = .071, SRMR = .041 (see Figure 2). In addition, *path* effects (or *direct* effects) are medium and significant with $p < .001$ (see Table 10). In addition, MacKinnon, Lockwood, Hoffmann, West, and Sheets (2002) assessed many approaches to examine mediation considering Type I error and statistical power. They suggested that the method used by Baron and Kenny (1986) has the least power, while other suggested the Sobel (1982) test to examine the significance of mediation effect. However, there is evidence that the distribution of mediation effect is *not* normal (Bollen & Stine, 1990; MacKinnon & Dwyer, 1993; C. A. Stone & Sobel, 1990) , and the utilization of a significance test, such as the *Sobel test*, which assumes a normal distribution when examining the mediation effect, is not appropriate. In answering the various uncertainty, recently, Shrout and Bolger (2002) suggested the *bootstrap method* as a better way to examine mediation. Within the bootstrap method, the model acquires 95% of the confidence intervals (CI) for the indirect effect by *resampling* procedure. Based on the *central limit theorem*, bootstrap method is robust even for models with distribution of mediation effect is not normal. As suggested by Shrout and Bolger (2002), bootstrap procedure were accomplished using the AMOS program.

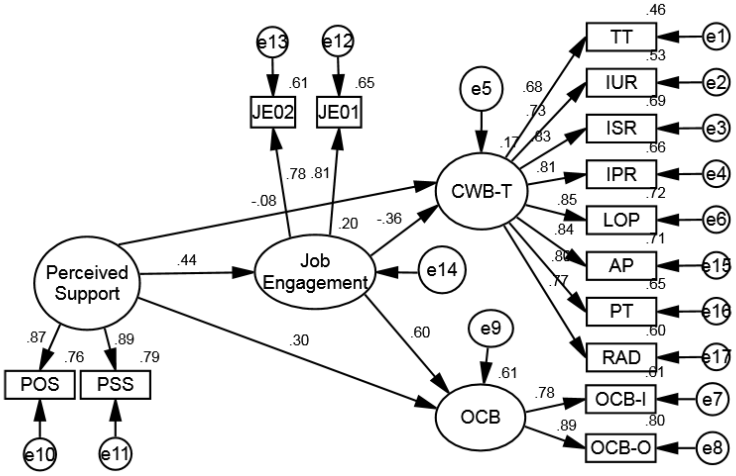

Figure 2. Structure equation model with maximum likelihood estimates (standardized)

Results of the mediation test shows that the indirect effect from **PS** to **CWB-T** is -.16 (see Table 10), while the 95% CI for the estimates of the indirect effects with values ranging from -.259~-.097 (not including zero) with statistically significant mediation effect at .05 level. This result suggests that within the Taiwan academic setting, **JE** plays an important role of mediator between **PS** and **CWB-T**. As the **PS** to **CWB-T** path is not significant, however, according to Baron and Kenny (1986) this can be considered a complete mediation. Hence, **JE** is a very important mediator for decreasing the deviant behaviors on school workplace. Furthermore, the total effect; which is the summation of direct effect and indirect effect, the total effect from **PS** to **CWB-T** is -.25. While the 95% CI for total effects with values ranging from -.347~-.135 (not including zero) with the total effect statistically significant at the .05 level.

On the other hand, the indirect effect from **PS** to **OCB** is .27. The 95% CI for the estimates of the indirect effects with values ranging from .171~.402 (not including zero), and then it can be concluded that the mediation effect is statistically significant at the .05 level. Therefore, within the Taiwan academic setting, **JE** plays the role of mediator between **PS** and **OCB**. While the total effect from **PS** to **OCB** is .57, the 95% CI for total effects with values ranging from .431~.671 (not including zero) with the total effect statistically significant at the .05 level (see Table 10).

Table 10

Bootstrap Analysis of Structural Model（67% sample, n = 716）

Hypothesis	Path	Standardized coefficient	95% CI
H1	PS→JE	.44***	
H2	JE→CWB-T	-.36***	
H3	JE→OCB	.60***	
H4	PS→JE→CWB-T	-.16	-.259~-.097
H5	PS→JE→OCB	.27	.171~ .402
	Total effect on CWB-T	-.25	-.347~-.135
	Total effect on OCB	.57	.431~ .671

Note. *** $p < .001$.

5. Conclusion

The current study portrays the various underlying indicators of both OCB and CWB-T within the academic setting. Results of the model testing noted the support of the proposed hypotheses. While the test of mediation confirmed the mediator role of job engagement between perceived support and counterproductive work behaviors. At the same time, the test of mediation also confirmed the mediator role of job engagement between perceived support and organizational citizenship behavior. Note that one path is producing a positive effect, while the other a negative effect. Therefore, in order for the academic setting to be a healthy workplace, it is important that a positive atmosphere of support be encouraged. Furthermore, policy makers (including school administrators) should focus on improving and promoting various support strategies from both the school organization and school administrators (supervisors) and reinforce the job engagement of teachers. Lastly, as per suggestion of Baron and Kenny (1986), the paths of *direct* effect is still *significant*, hence, the mediation path within the proposed model; **OCB** can be considered as *partial* mediation. Therefore, the current study suggests that there may be other effective mediator that can be taken into consideration in future studies.

Acknowledgement: This work is supported in part by the *Taiwan Ministry of Science and Technology* projects 103-2410-H-004-143 and 104-2410-H-004-151-SS2.

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