

# Association of Structural and Psychological Empowerment with Depersonalization and Personal Accomplishment Among Nurses: a Systematic Review

Kulwadee Abhicharttibutra, Patraporn Tungpunkom\*

**Abstract:** Burnout is a significant issue among nurses, and it impacts to the quality of care they provide. This systematic review evaluated the association between structural empowerment, psychological empowerment and two dimensions of burnout, depersonalization and personal accomplishment among nurses in the health care setting. Cross-sectional studies from 1990 to 2018 were searched from data bases of MEDLINE, CINAHL, EBSCO, ScienceDirect, Scopus, Springer Link, and Cochrane library, as well as unpublished studies and 35 eligible studies were found. After critical appraisal of their methodological quality, only 8 were included in the review. Cochran's Q and I square statistic was used to test the heterogeneity.

Meta-analysis results indicated a negative association between structural empowerment and depersonalization, and a positive association between structural empowerment and personal accomplishment. There was also a negative association between psychological empowerment and depersonalization, and a positive association between psychological empowerment and personal accomplishment. However, only 2-6 studies were combined in the meta-analysis for each outcome and they were of low to very low quality, so more primary studies need to be conducted to increase confidence in results and provide recommendations for policy and practice.

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## Introduction

Nursing shortage is a significant issue that needs urgent intervention for healthcare organizations across the globe, and is increasingly being researched, for example in China<sup>1</sup> and Canada.<sup>2</sup> The shortage of nurses accompanied with shorter length of stays in hospitals, rising average patient acute stage, and less resources provided contributes to nurses carrying

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greater workloads.<sup>3</sup> These high workloads are more likely to be associated with higher adverse effects of patient's mortality and job dissatisfaction.<sup>4</sup> In addition, heavy workloads and limited resources, and other daily stressors require nurses to put their energy in work, and help eventually to lead to burnout.<sup>5</sup>

Burnout is the psychological process interplayed among the three components which are the feeling of emotional exhaustion, depersonalization, and reducing personal accomplishment.<sup>6</sup> Emotional exhaustion occurs when the person feels overextended and exhausted on the job. Depersonalization is a negative, impersonal sense, or extreme detachment from the job. A situation that contributes to emotional exhaustion or depersonalization seems to erode a sense of the effectiveness of person.<sup>6</sup> Inefficacy reduces personal accomplishment which is developed in parallel with emotional exhaustion and depersonalization. In contrast, the third component of burnout is positive and called personal accomplishment. This refers to a person's sense of competence, achievement, and productivity at work.<sup>1</sup> A person who experiences a sense of personal accomplishment may have low burnout level, while a person who experiences reducing personal accomplishment may have a higher burnout level.<sup>7, 8</sup>

Evidence reveals that burnout is reported by nurses in a variety of clinical setting. For example, burnout was experienced by 210 nurses who worked in a hemodialysis setting in the Republic of Serbia<sup>9</sup>, and 171 nurses who worked in nursing homes and extended care units in Croatia.<sup>10</sup> In the former study, 40.9% and 8.6% of high levels of emotional exhaustion, and depersonalization respectively were found, and 31.3% of low levels of personal accomplishment<sup>9</sup>, while in the latter there was 43.9% and 22.2% of high levels of emotional exhaustion, and depersonalization respectively, and 39.8% of low levels of personal accomplishment.<sup>10</sup>

Burnout could be a consequence of constant exposure to stressful situations in the workplace; also a lack of autonomy, organizational support, and resources, a heavy workload, and poor management.<sup>11</sup> Among nurses, an important cause of burnout is stress related to working conditions.<sup>12</sup> Multiple environmental stressors in healthcare organizations seem to have increased. More important, burnout among nurses is found to be related to the quality of care they provide and work performance<sup>13</sup>, patient satisfaction<sup>11</sup>, patient safety and the reporting of mistakes<sup>14</sup>, and

work-related injuries such as needlestick injuries.<sup>15</sup> Furthermore, burnout has been reported to be related to psychological problems of nurses, job performance, job satisfaction, attrition rates, and relationships between nurses and their families and colleagues.<sup>11</sup>

Empowerment is the action through which individuals can control their own lives and the situations they encounter,<sup>16</sup> and it may contribute to less burnout.<sup>1</sup> It has been classified into two different perspectives: organizational/ structural and psychological attributes. Empowerment, both structural and psychological components, is evidently negative associated with burnout. Meng, Jin, and Gou<sup>17</sup> reported the negative relationship between structural empowerment and burnout ( $r = -.373$ ,  $p < .01$ ). Also, a negative relationship was found between psychological empowerment and burnout ( $r = -.553$ ,  $p < .01$ ).

According to the theory of structural empowerment of Kanter<sup>18</sup>, attitudes and behaviours of employees are shaped by the situation and power in their organizations, where power is the ability to allocate or use resources to achieve an end. Power can be shared and accumulated and there are two types of power in an organization. Formal power refers to jobs that are constructed, considered and appreciation given to any actions that relevant to the organization goals. Informal power refers to the relationships among people within and across departments, and outside the organization. Employees who have formal and informal power can gain access to four sources of work structure that empower them to accomplish tasks: opportunity, information, support, and resources. Information includes both the formal and informal forms of knowledge that can be used to be productive in work, whilst support is useful guidance, recommendations, and feedback from sponsors, peers and subordinates. Resources refer to fiscal resources, materials, supplies, and times that will be used to achieve the organizational goals.<sup>2,19</sup>

Psychological empowerment refers to the psychological experiences of empowerment an employee finds at work. Psychological experience includes four dimensions: meaning, competence,

self-determination, and impact.<sup>20</sup> Meaning is the compatibility between employee's beliefs, performances and requirements of job. Competence is the employee's confidence regarding their abilities to perform a good job.<sup>21</sup> Self-determination is the feelings of the employee's control over work, including initiating and continuing work processes. Finally, impact is defined as the employee's sense of being able to influence the outcomes of work at the operational, administrative, and strategic levels.<sup>20</sup>

Healthcare settings are places that produce a continuum of care and services for a population by healthcare providers. In recent years, global crises have forced healthcare settings to reform their structures, and this leads to greater workloads.<sup>22</sup> Additionally, nursing shortage and heavy workload in such settings may lead to nurses' burnout that may affect the quality of care and an intent to leave their jobs. Therefore, creating positive work environments is an important role for nursing management for these have positive impacts on performance of nurses and the quality of care they provided.<sup>12</sup> Structural empowerment is a method for leaders to socially engage with and empower their staff.<sup>23</sup> When nurses are empowered, they are more likely to experience congruence between work expectation and performance, feel their workload is reasonable, have control over their work and good relationships with their colleagues, get rewards when achieved, which are less likely to develop burnout.<sup>12</sup>

Our preliminary database search found a systematic review protocol focusing on the occurrence of burnout among healthcare providers including nurses who worked in palliative care units.<sup>22</sup> Additionally, three systematic reviews were found. The first studied the association between the shortage of nurses, job satisfaction, and stress and burnout among oncology nurses.<sup>24</sup> The second targeted the occurrence of burnout and related factors anesthesiology staff,<sup>25</sup> while the third focused on prevalence and factors related to burnout among the healthcare workforce in Arab countries.<sup>26</sup> Previous systematic reviews have also revealed that working and personal factors are associated with burnout and these factors included a

strained working pattern,<sup>25</sup> gender, nationality, duration of service, hours of working, and pattern of shift.<sup>26</sup> In addition, we found 2 systematic reviews focusing only on empowerment on nurses. These addressed the relationship of structural and psychological empowerment<sup>27</sup>. Another systematic review conducted on studies across 1990–2009 evaluated nurse managers' work-related empowerment,<sup>28</sup> but was limited in sample size, and comparability because of different methodologies in the primary studies, and which resulted in heterogeneity. A 2018 systematic review evaluated the association between empowerment and burnout, but it evaluated only one sub-component of these, that is association between structural empowerment and emotional exhaustion.<sup>29</sup> Additionally, the relationship between structural and psychological empowerment and the other two dimensions, depersonalization and personal accomplishment, were omitted.

## **Aim and Review Questions**

No recent or ongoing systematic review of the associations between structural and psychological empowerment, depersonalization, and personal accomplishment among nurses in health care settings were found based on searches of the JBI Database of Systematic Reviews and Implementation Reports, Cochrane Library, PROSPERO, MEDLINE (PubMed), and CINAHL, so we aimed to evaluate these associations with this review. The synthesized findings can serve as valid information to support decision-making for nurse managers and nursing and health policy makers to improve working conditions to prevent burnout among nurses and which will hopefully lead to good quality of care, and job satisfaction among nurses.

The specific questions of this review were: 1) What is the evidence on the association between structural empowerment and depersonalization and personal accomplishment among nurses? and 2) What is the evidence on the association between psychological empowerment and depersonalization and personal accomplishment among nurses in the healthcare setting?

## **Methods**

This systematic review followed the process in our protocol registered in the PROSPERO (#CRD 42018106712). The details of the methodology are as follows:

### **Inclusion Criteria/Participants**

This review considered any studies related to burnout, structural and psychological empowerment in nurses in the healthcare setting. No limits were set regarding the educational level or position titles of registered nurses (RNs), nurse manager, and nurse executives for inclusion. Nurses in non-health care settings working in university or college faculty members or nurse educators from nursing education institutes were excluded from the review.

### **Exposures**

We considered studies that evaluated two concepts of empowerment: 1) structural empowerment comprised of formal power and informal power, opportunity, information, support, as well as resources. These studies were evaluated by instruments such as the Conditions for Work Effectiveness Questionnaire<sup>30</sup> and 2) psychological empowerment comprised of meaning, competence, self-determination, and impact. They were evaluated using standardized tools, for example, the Psychological Empowerment Instrument.<sup>20</sup>

### **Outcomes**

The outcomes of this review were measured by relevant standardized tools, for example, but not limited to the Maslach Burnout Inventory.<sup>6</sup>

### **Contexts**

This review evaluated studies undertaken in hospitals, health centres, outpatient units, primary care clinics, and nursing homes. The numbers of participants were 3,135 for the meta-analysis between structural empowerment and depersonalization, 1,502 for the meta-analysis between structural empowerment and personal accomplishment, 1,550 for the meta-analysis between psychological empowerment and depersonalization, and 1,550 for the meta-analysis between psychological empowerment and personal accomplishment.

### **Study Types**

Studies considered to include to this review were analytical descriptive studies. These included cohort studies (both prospective and retrospective types), case-control studies, analytical cross-sectional studies (descriptive and predictive studies) which were published during January 1990–August 2018.

### **Search Strategy**

The initial search using keywords/free-text was done with MEDLINE and CINAHL. The index terms/subject heading were identified and a full search strategy was conducted on the databases of MEDLINE, CINAHL, EBSCO, ScienceDirect, Scopus, Springer Link, and Cochrane library. Grey literature such as proceedings, a case report from an organization, and newsletters were included in the review if report findings were relevant for this review. The search for grey literature included Google Scholar, MedNar, ProQuest Dissertations and Theses, as well as reports from the World Health Organization (WHO) and the International Council of Nurses (ICN). Initial keywords used are detailed in **Table 1**. Additional studies were screened from reference list of critical appraisal studies for eligibility. The search was undertaken during July–October, 2018 with the date was used to limit the year of publication.

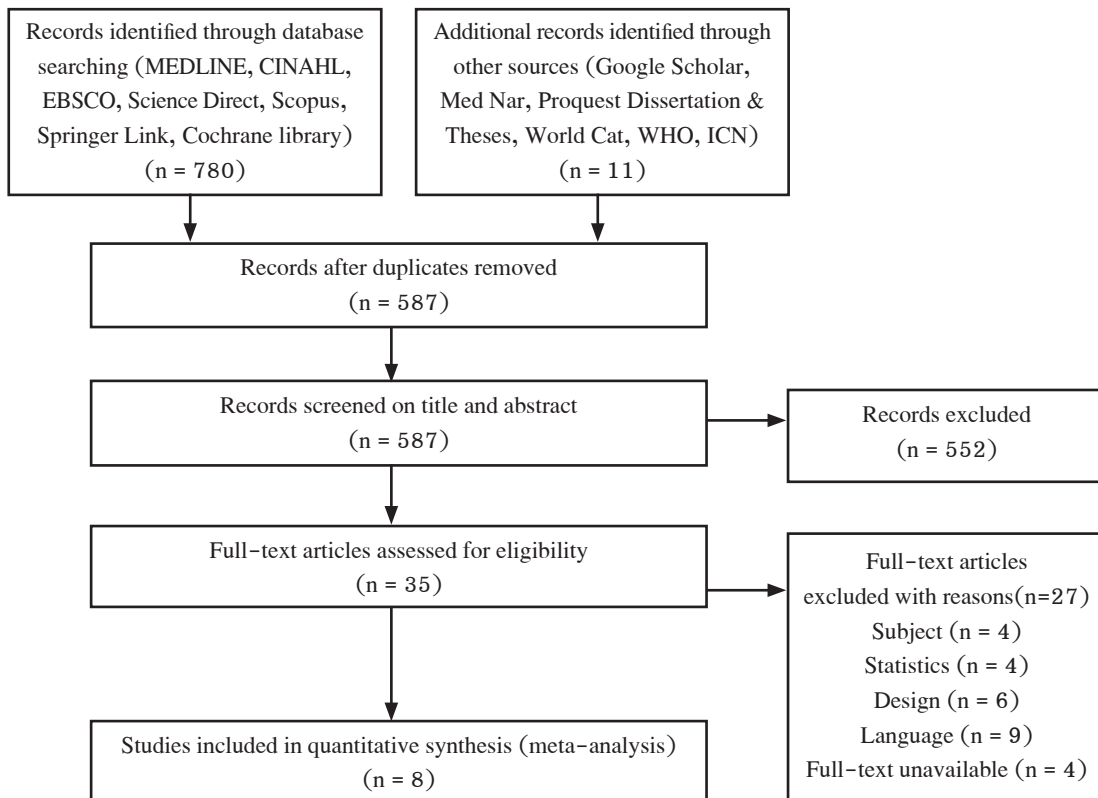
### **Study Selection**

All identified citations were collated after searching across identified databases, and uploaded into the reference management software (Endnote V.X) and duplicates removed. Titles and abstracts of 587 studies were then independently screened by two reviewers based on the inclusion criteria. Thirty-five full-text studies then assessed in detail based on the inclusion criteria and excluded with the following reasons: 27 studies were excluded due to unmet criteria related to subjects, statistics, design, and languages. Also excluded were four studies where the full-text was unavailable. A primary study that met the inclusion criteria, and had been included in a previous systematic review<sup>29</sup> was also selected. Our PRISMA flow diagram (**Figure 1**) shows the search and study selection process. No disagreements arose between the reviewers regarding study selection.

**Table 1.** Initial Keywords of Searching

search	Query
#1	Nurs*[Mesh] OR nursing[Mesh] OR person*[All Fields] OR “registered nurse*”[Mesh] OR manager*[Mesh] OR executive*[Mesh] OR administrator*[Mesh] OR “head nurse*”[All Fields] OR “charge nurse*”[All Fields] OR “supervisory nursing” [All Fields]
#2	Power*[Mesh]OR empower*[All Fields] OR empowerment [Mesh]OR “workplace empowerment” [All Fields] OR “staff empowerment” [All Fields] OR “structural empowerment” [All Fields] OR “psychological empowerment” [All Fields]
#3	burnout[Mesh] OR “job burnout” [All Fields] or “professional burnout” [All Fields] OR “occupational burnout” [All Fields] OR exhaustion[Mesh] OR stress[Mesh]
#4	Hospital* OR hospice* OR “health center*” OR “outpatient clinic*” OR “outpatient center*” OR “health clinic*” OR “primary care clinic*” OR “home health care*” OR “nursing home*” OR facility*
#5	#1 AND #2
#6	#1 AND #2 AND #3
#7	#1 AND #2 AND #3 AND #4

Limits: publication date from 1990 to 2018, English language



**Figure 1.** PRISMA Flow Diagram for the Systematic Review of Association of Structural and Psychological Empowerment with Depersonalization and Burnout

**Assessment of Methodological Quality**

The eight included studies were critically appraised independently by two reviewers for methodological quality using the standardized tools from the Joanna Briggs Institute<sup>31</sup> (Checklist for Analytical Cross-Sectional

Studies) priori included the studies into the review. Studies having six out of eight of criteria were included, and following critical appraisal, eight studies met quality criteria and were included. **Appendix II** reports the result of each item of critical appraisal of included studies.

**Appendix I.** Description of Studies Included in Review

Authors z(year)	Research objective	Research design	Study Setting	Sample	Measures Used
1. Hatcher & Laschinger (1996)	Examine the relationship between staff nurses' perception of power and opportunity and level of burnout	Cross-sectional	One acute care teaching hospital, Ontario city, Canada	85 staff nurses	<u>Structural empowerment</u> CWEQ (Chandler, 1986) <u>Burnout</u> Human Service Survey (Maslach & Jackson, 1986)
2. Hochwalder (2007)	Explore the main effect of psychological empowerment on burnout	Cross-sectional	Three hospitals and two primary health care centers, Stockholm, Sweden	Two separated groups: 838 registered nurses and 518 assistant nurses	<u>Psychological empowerment</u> Spreitzer's Empowerment Scale (Spreitzer, 1995) <u>Burnout</u> Maslach Burnout Inventory (Maslach & Jackson, 1981)
3. Laschinger, et al. (2009)	Examine the influence of empowering work conditions and civility on nurses' experience of burnout	Cross-sectional	Five organizations, Canada	612 staff nurses	<u>Structural empowerment</u> Subscales of CWEQ II (Laschinger et al, 2001) <u>Burnout</u> subscales of Maslach Burnout Inventory-General Survey (Schaufeli et al.,1996)
4. Cavus & Demir (2010)	Examine the relationship between the level of perceived structural and psychological empowerment and the level of burnout	Cross-sectional	Two state hospitals, Turkey	194 nurses	<u>Structural empowerment</u> CWEQ II (Laschinger et al, 2000) <u>Psychological empowerment</u> Psychological Empowerment Scale (Spreitzer, 1995) <u>Burnout</u> Maslach Burnout Inventory Maslach et al., 1996)
5. Laschinger et al. (2010)	Test the model linkage of structural empowerment to workplace bullying and burnout	Cross-sectional	Data from longitudinal study in hospitals, Ontario, Canada	415 newly graduated nurses	<u>Structural empowerment</u> CWEQ II (Laschinger et al, 2000) <u>Burnout</u> Maslach Burnout Inventory-General Survey (Schaufeli et al.,1996)
6. Laschinger et al. (2013)	Examine the effect of authentic leadership and structural empowerment on emotional exhaustion and cynicism	Cross-sectional	Data from two studies conducted in hospitals, Ontario, Canada	342 newly graduated nurses and 273 experienced acute-care nurses	<u>Structural empowerment</u> CWEQ II (Laschinger et al, 2001) <u>Burnout</u> Maslach Burnout Inventory-General Survey (Schaufeli et al.,1996)
7. Boamah et al. (2016)	Test the model linkage of authentic leadership to structural empowerment, short staffing, and work-life interfere on burnout	Time-lagged study	Database, ten Canadian provinces.	406 newly graduated nurses	<u>Structural empowerment</u> CWEQ II (Laschinger et al, 2001) <u>burnout</u> Maslach Burnout Inventory-General Survey (Schaufeli et al.,1996)
8. Guo et al. (2016)	Explore the relationship among structural empowerment, job stress and burnout	Cross-sectional	Ten teaching hospitals, China	1002 nurses	<u>Structural empowerment</u> CWEQ II (Laschinger et al, 2001) <u>Burnout</u> Maslach Burnout Inventory (Maslach & Jackson, 1986)



**Appendix II.** Summary of Critical Appraisal of Included Studies

authors (year)	Q1	Q2	Q3	Q4	Q5	Q6	Q7	Q8
1. Hatcher & Laschinger (1996)	Y	Y	Y	Y	N	N	Y	Y
2.Hochwalder (2007)	Y	Y	Y	Y	Y	Y	Y	Y
3. Laschinger, et al. (2009)	Y	Y	Y	Y	N	N	Y	Y
4.Cavus & Demir(2010)	Y	Y	Y	Y	N	N	Y	Y
5. Laschinger et al. (2010)	Y	Y	Y	Y	N	N	Y	Y
6. Laschinger et al. (2013)	Y	Y	Y	Y	Y	Y	Y	Y
7. Boamah et al. (2016)	Y	Y	Y	Y	N	N	Y	Y
8. Guo et al. (2016)	Y	Y	Y	Y	N	N	Y	Y

**Appendix III.** Summary of Findings

outcome	number of participants (studies)	quality of the evidence	correlation coefficient (95% CI)	Comments
depersonalization	3135 (6 studies)	very low*	-.344 (-.394 to -.291)	* Downgraded one level due to inconsistency of results (I <sup>2</sup> =59.03%, p=.0232)
personal accomplishment	1,502 (3 studies)	very low*	.333 (.241 to .419)	* Downgraded one level due to inconsistency of results (I <sup>2</sup> =61.93%, p=.0723)

**Systematic review title:** Association of Structural and Psychological Empowerment with Nurses’ Burnout: a Systematic Review

**Population:** nurses (assistant nurses, registered nurses, nurse manager, and nurse executives)

**Exposures:** structural empowerment

**Outcomes:** depersonalization and personal accomplishment

**Context:** nurses in the health care setting who has burnout

**Appendix IV.** Summary of Findings

outcome	number of participants (studies)	quality of the evidence	correlation coefficient (95% CI)	Comments
depersonalization	1,550 (2 studies)	very low*	-.277 (-.381 to -.165)	*Downgraded one level due to inconsistency of results (I <sup>2</sup> =78.72%, p=.0091)
personal accomplishment	1,550 (2 studies)	low	.334 (.289 to .377)	-

**Systematic review title:** Association of Structural and Psychological Empowerment with Nurses’ Burnout: a Systematic Review

**Population:** nurses (assistant nurses, registered nurses, nurse manager, and nurse executives)

**Exposures:** psychological empowerment

**Outcomes:** depersonalization and personal accomplishment

**Context:** nurses in the health care setting who has burnout

**Data Extraction**

Data extraction was done independently by two reviewers using the Joanna Briggs Data Extraction Form.<sup>31</sup> The specific details extracted were about characteristics of the study and the results which were relevant to the questions and objectives of the review. All exposures and outcomes were continuous data

and were analysed by the coefficient of the relationship using Pearson’s product-moment correlation coefficient.

**Data Synthesis**

Research findings were pooled in statistical meta-analysis using MEDCALC statistical software. The Hedges-Olkin method is used to calculate the weighted summary correlation coefficient, and a Fisher

Z transformation is used to transform correlation coefficients.<sup>32</sup> Data analysis was done to calculate the combined result of correlation coefficient of included studies with the random effects model with 95% confidence intervals. Heterogeneity was assessed statistically using Cochran's Q and I<sup>2</sup> statistic. Cochran's Q is the weighted sum of squared deviation of each study from the actual effect estimate. It is reported with a P-value. However, in the case of small studies included in the review, it is suggested to use a P-value less than 0.10 as the cut-off for heterogeneity. This also confirms with I<sup>2</sup> value which ranges from 0–100% to represent the real heterogeneity rather than chance occurred across study. The higher value represented more heterogeneity<sup>33</sup>.

## Results

Meta-analysis was used to combine eight included studies. The results were presented by each outcome as follows:

### Structural Empowerment and Depersonalization

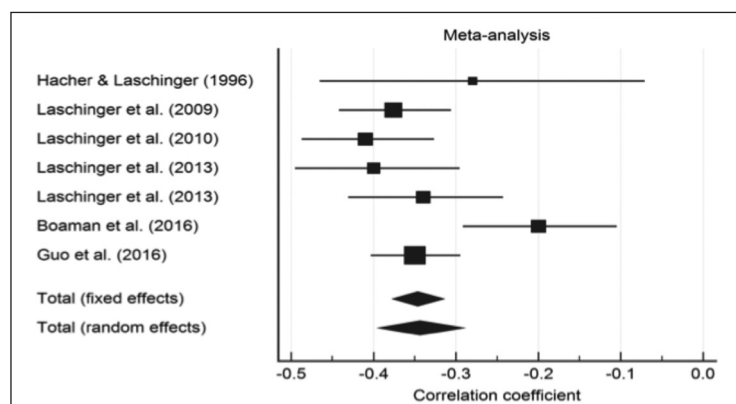
Six studies<sup>8,34,35,36,37,38</sup> were combined using meta-analysis. The random effects model suggested a negative correlation (the summary correlation coefficient =  $-.344$ ; CI =  $-.394, -.291$ ;  $n=3,135$ ), however this analysis demonstrated high risk of heterogeneity of the data ( $I^2=59.03\%$ ,  $p=.0232$ ) (Table 2). A forest plot shows the correlation coefficients of six studies and the overall effect with 95% CI (Figure 2).

**Table 2:** The Summary Correlation Coefficient Between Structural Empowerment and Depersonalization

Study	Sample size	Correlation coefficient	95% CI	z	P
Hacher & Laschinger (1996)	85	-0.280	-0.465 to -0.0711		
Laschinger et al. (2009)	612	-0.376	-0.442 to -0.306		
Laschinger et al. (2010)	415	-0.410	-0.487 to -0.327		
Laschinger et al. (2013)	273	-0.400	-0.495 to -0.295		
Laschinger et al. (2013)	342	-0.340	-0.431 to -0.243		
Boaman et al. (2016)	406	-0.200	-0.292 to -0.105		
Guo et al. (2016)	1002	-0.350	-0.403 to -0.294		
Total (fixed effects)	3135	-0.346	-0.377 to -0.315	-20.161	<0.001
Total (random effects)	3135	-0.344	-0.394 to -0.291	-11.983	<0.001

#### Test for heterogeneity

Q	14.6446
DF	6
Significance level	P = 0.0232
I <sup>2</sup> (inconsistency)	59.03 %
95% CI for I <sup>2</sup>	5.60 to 82.22



**Figure 2.** Forest Plot of the Correlation Coefficient of Six Studies and the Overall Effect

Forest plot shows the correlation coefficients between structural empowerment and depersonalization of six studies included in the meta-analysis, and the overall effect with 95% CI. The study of Laschinger et al. (2013) was divided into two groups: newly graduated and experienced nurses.



**Structural Empowerment and Personal Accomplishment**

Three studies<sup>8,35,38</sup> were combined using meta-analysis. The random effects model suggested a positive correlation (the summary correlation coefficient = .333;

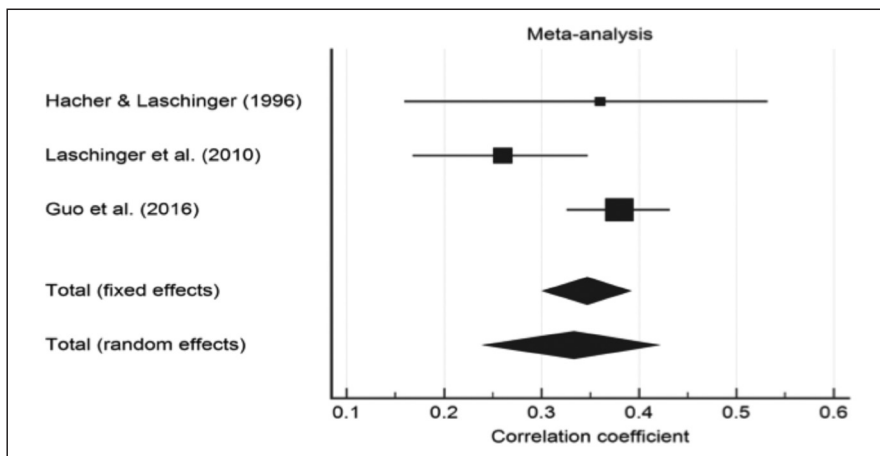
CI= .241, .419; n=1502,), however this analysis demonstrated high risk of heterogeneity of the data ( $I^2=61.93\%$ ,  $p=.0723$ ) (**Table 3**). The correlation coefficients of three studies and the overall effect with 95% CI were showed in a forest plot (**Figure 3**).

**Table 3.** Summary Correlation Coefficient Between Structural Empowerment and Personal Accomplishment

Study	Sample size	Correlation coefficient	95% CI	z	P
Hacher & Laschinger (1996)	85	0.360	0.159 to 0.532		
Laschinger et al. (2010)	415	0.260	0.168 to 0.348		
Guo et al. (2016)	1002	0.380	0.326 to 0.432		
Total (fixed effects)	1502	0.347	0.301 to 0.391	13.981	<0.001
Total (random effects)	1502	0.333	0.241 to 0.419	6.751	<0.001

**Test for heterogeneity**

Q	5.2536
DF	2
Significance level	P = 0.0723
$I^2$ (inconsistency)	61.93 %
95% CI for $I^2$	0.00 to 89.14



**Figure 3.** Forest Plot of the Correlation Coefficient of Three Studies and the Overall Effect

The correlation coefficients between structural empowerment and personal accomplishment of three studies and the overall effect of 95% CI are shown in forest plot.

**Psychological Empowerment and Depersonalization**

Two studies<sup>39,40</sup> were combined using meta-analysis. The random effects model suggested a negative correlation (the summary correlation coefficient =  $-0.277$ ;

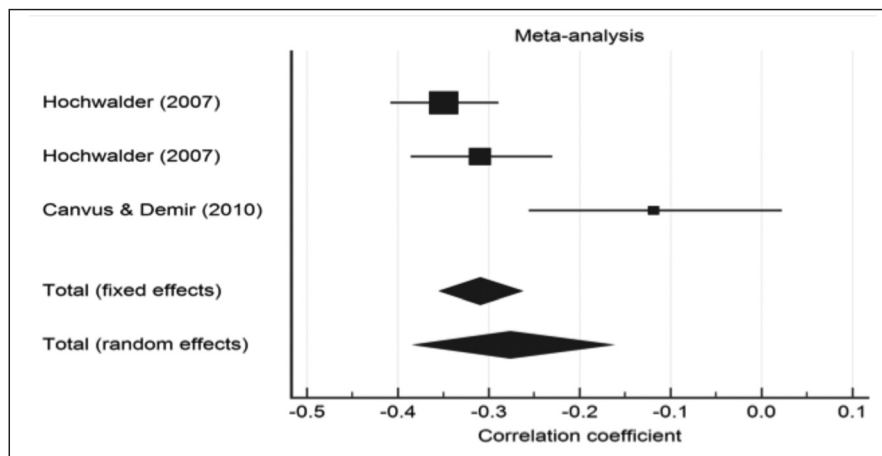
CI= $-0.381, -0.165$ ,  $n=1,550$ ), however this analysis demonstrated high risk of heterogeneity of the data ( $I^2=78.72\%$ ,  $p=.0091$ ) (Table 4). A forest plot of the correlation coefficients of two studies and the overall effect with 95% CI is shown in Figure 4.

**Table 4.** Summary Correlation Coefficient Between Psychological Empowerment and Depersonalization

Study	Sample size	Correlation coefficient	95% CI	z	P
Hochwalder (2007)	838	-0.350	-0.408 to -0.289		
Hochwalder (2007)	518	-0.310	-0.386 to -0.230		
Canvus & Demir (2010)	194	-0.119	-0.256 to 0.0223		
Total (fixed effects)	1550	-0.309	-0.354 to -0.264	-12.560	<0.001
Total (random effects)	1550	-0.277	-0.381 to -0.165	-4.728	<0.001

**Test for heterogeneity**

Q	9.3977
DF	2
Significance level	P = 0.0091
$I^2$ (inconsistency)	78.72 %
95% CI for $I^2$	31.78 to 93.36



**Figure 4.** Forest Plot of the Correlation Coefficient of Two Studies and the Overall Effect

A forest plot of the correlation coefficients between psychological empowerment and depersonalization of two studies and the overall effect of 95% CI. Hochwalder’s study (2007) was divided into two groups, registered nurses and assistant nurses.

**Psychological Empowerment and Personal Accomplishment**

Two studies<sup>39,40</sup> were combined using meta-analysis. There was no observed heterogeneity ( $I^2=0\%$ ,  $p=.4435$ ). Under the fixed effects model, the result showed that there was a positive relationship

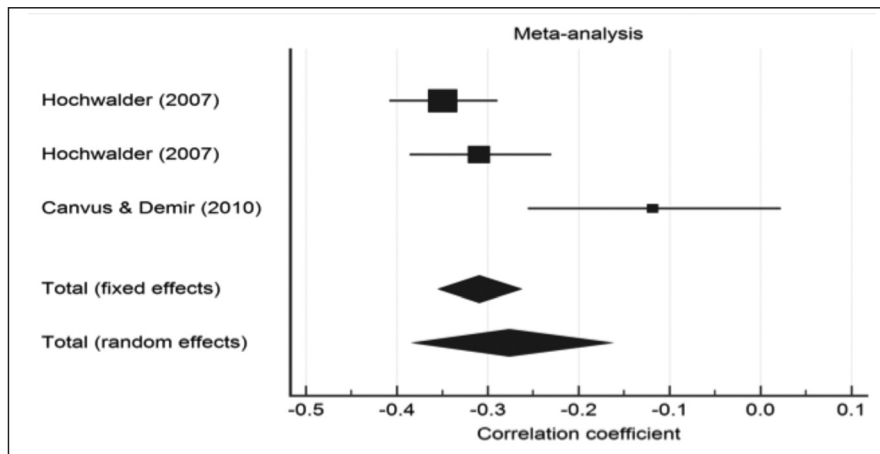
between psychological empowerment and personal accomplishment (the summary correlation coefficient = .334; CI=.289, .377,  $n=1,550$ ) (Table 5). A forest plot of the correlation coefficients of two studies and the overall effect with 95% CI are shown in Figure 5.

**Table 5.** Summary Correlation Coefficient Between Psychological Empowerment and Personal Accomplishment

Study	Sample size	Correlation coefficient	95% CI	z	P
Hochwalder (2007)	838	0.360	0.300 to 0.418		
Hochwalder (2007)	518	0.300	0.220 to 0.376		
Canvus & Demir (2010)	194	0.308	0.175 to 0.430		
Total (fixed effects)	1550	0.334	0.289 to 0.377	13.626	<0.001
Total (random effects)	1550	0.334	0.289 to 0.377	13.626	<0.001

**Test for heterogeneity**

Q	1.6262
DF	2
Significance level	P = 0.4435
$I^2$ (inconsistency)	0.00 %
95% CI for $I^2$	0.00 to 95.87



**Figure 5.** A Forest Plot of the Correlation Coefficient of Two Studies and the Overall Effect

A forest plot of the correlation coefficients between psychological empowerment and personal accomplishment of two studies and the overall effect with 95% CI. Hochwalder’s study (2007) was divided into two groups, registered nurses and assistant nurses.

## **Discussion**

This systematic review evaluated the association between structural empowerment, psychological empowerment and two dimensions of burnout: depersonalization and personal accomplishment. There was a total of eight studies included in the review. The methodological quality of the evidence is low to very low based on the GRADE system. Meta-analysis indicated a negative relationship between structural empowerment, psychological empowerment and depersonalization, as well as a positive relationship between structural empowerment, psychological empowerment and personal accomplishment. Each association is discussed below:

### **Structural Empowerment and Depersonalization**

This systematic review provided evidence that there is a negative relationship between structure empowerment and depersonalization. The literature treats depersonalization as a negative trait, involving the impersonal or excessively detached response to the job. Greater workloads due to the shortage of nurses and increased demands of patients as well as lack of organizational support and resource were all stressors for nurses. Once nurses experience prolonged exposure to stressful working conditions, they become exhausted, then, develop depersonalization to some extent.<sup>36</sup> As Leiter and Maslach<sup>41</sup> noted, employees experience depersonalization only when emotional exhaustion is continued for a long time. With high empowerment, feeling in control over one's work, such as having an increase in know-how and what to do, can lead to less depersonalization.<sup>39</sup> Moreover, one systematic review showed that depersonalization was associated with twice times increased odds of involvement of patient safety incidents among physicians.<sup>42</sup> Therefore, our findings encourage that depersonalization among nurses should be diminished to reduce risk to the patient and improve the quality of care.

### **Structural Empowerment and Personal Accomplishment**

This meta-analysis indicated a positive relationship between structural empowerment and personal accomplishment. According to Leiter and Maslach<sup>41</sup>, emotional exhaustion is considered as the significant attribute of burnout which, in the long term, leads to depersonalization and ultimately a low level of personal accomplishment which is the person's competence, achievements, and productivity at work. Improvements in structural empowerment, for example, information or knowledge and skills provision, can improve a person's competence to address problems arising on the job. In contrast, budget, materials, supplies, and times can be used to achieve the organizational goals which lead to personal accomplishment.

### **Psychological Empowerment and Depersonalization**

Our findings indicated a negative relationship between psychological empowerment and depersonalization. As previously addressed, depersonalization is a negative, impersonal or extremely detached reaction to the job and others. Therefore, people show negative behaviours to others. Psychological empowerment enables nurses to feel confident regarding their abilities to do their job and a sense of influencing the outcomes of their own work<sup>20</sup>, which subsequently enables a person to initiate and continue work processes. As a result, exhaustion and depersonalization are decreased.

### **Psychological Empowerment and Personal Accomplishment**

The findings indicated that there was a positive relationship between psychological empowerment and personal accomplishment. An opportunity and resource provision from the organization, as well as social support, that is guidance and feedback from sponsors, peers, and subordinates, can enhance nurses' feelings of control over their work and increase their psychological empowerment. This was supported by a systematic review which found structural empowerment to be moderately related to

psychological empowerment.<sup>29</sup> When nurses experience psychological empowerment at work, either the meaningfulness, competence, self-determination, or the impact that they have toward their own work, they are confident and can control their work, and enhance personal accomplishment.

#### **Limitations and Recommendations of the Review**

Our review found few available studies that could be included in this meta-analysis and most were studies from western countries that had nuances on work situation, norm, and culture across the workplace which might impact the perception of structural and psychological empowerment, as well as depersonalization and personal accomplishment among nurses. Although the meta-analysis found the relationship between variables, statistical heterogeneity was significantly presented both from Cochran's Q and I<sup>2</sup> statistic. According to Tufanaru<sup>43</sup>, studies that are similar in terms of PICO as well as context, study designs and risk of bias could be combined in the meta-analysis. This meta-analysis had similar study designs (correlational study), exposure (structural and psychological empowerment), outcomes (depersonalization and personal accomplishment), and setting (hospitals). However, participants of some studies<sup>35,36</sup> had different characteristics with other studies. They were new nurses who may be not good representatives of population in that they may have different perceptions of depersonalization, personal accomplishment and empowerment. This may lead to the heterogeneity of studies which may also result from a small number of studies included. Although the random effect model was applied to combine the results and yielded to the significant of the relationship among targeted variables, the heterogeneity found in the review is an issue requiring concern. Moreover, studies included in this review ranged from a low to a very low of quality based on GRADEing system.<sup>44</sup> They were downgraded because all studies were observational or non-experimental research type studies, had heterogeneity of data, and

each of the outcomes did not produce large effects. Therefore, the certainty of the evidence is a big challenge and we cannot make any recommendations regarding the contribution of this meta-analysis to policy and practice. Critically, more primary research studies that test the causal relationship between structural, psychological empowerment interventions and burnout are strongly recommended to strengthen the evidence before any recommendation can make for clinical practice and policymaking.

#### **Conclusion**

This systematic review found that structural and psychological empowerment had negative relationship with depersonalization. In contrast, they had positive relationship with personal accomplishment. Although the results add to a body of knowledge for relationship between two variables, we cannot recommend them yet for use in policy and practice due to the heterogeneity and the low to very low quality of evidence included in this meta-analysis. However, structural empowerment and psychological experiences can positively influence the environment for nurses and should be enhanced. Moreover, reducing depersonalization and improving personal accomplishment should be done in all healthcare settings in order to improve job satisfaction and quality of care.

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#### **Contributions**

Study Design: KA, PT

Data Collection and Analysis: KA, PT

Manuscript Writing: KA, PT

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## ความสัมพันธ์ระหว่างการเสริมสร้างพลังอำนาจเชิงโครงสร้างและการเสริมสร้างพลังอำนาจด้านจิตใจกับการลดค่าความเป็นบุคคลในผู้อื่น และความรู้สึกประสบความสำเร็จ: การทบทวนวรรณกรรมอย่างเป็นระบบ

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**บทคัดย่อ:** ความเหนื่อยหน่ายพบได้มากในพยาบาลและส่งผลกระทบต่อคุณภาพการดูแล การทบทวนวรรณกรรมอย่างเป็นระบบครั้งนี้เป็นการประเมินความสัมพันธ์ระหว่างการเสริมสร้างพลังอำนาจเชิงโครงสร้างและการเสริมสร้างพลังอำนาจด้านจิตใจกับการลดค่าความเป็นบุคคลในผู้อื่น และความรู้สึกประสบความสำเร็จของพยาบาลที่ปฏิบัติงานในสถานบริการสุขภาพ โดยสืบค้นงานวิจัยแบบภาคตัดขวางจากฐานข้อมูล MEDLINE, CINAHL, EBSCO, ScienceDirect, Scopus, and Springer Link, และ Cochrane Library และเอกสารที่ไม่ได้ตีพิมพ์เผยแพร่ระหว่างปี ค.ศ. 1990 จนถึง 2018 พบงานวิจัยที่มีคุณสมบัติตามที่กำหนด 35 ฉบับ โดยมีเพียง 8 ฉบับที่เป็นไปตามเกณฑ์การประเมินคุณภาพและนำเข้ามาใช้ในการวิเคราะห์แบบเมต้า ตรวจสอบความแตกต่างของแต่ละงานวิจัยโดยใช้สถิติ Cochran's Q and I-square ผลการวิเคราะห์ข้อมูลโดยการทำเมต้า พบว่าการเสริมสร้างพลังอำนาจเชิงโครงสร้างมีความสัมพันธ์ทางลบกับการลดค่าความเป็นบุคคลในผู้อื่น ในขณะที่มีความสัมพันธ์ทางบวกกับความรู้สึกประสบความสำเร็จ นอกจากนี้ยังพบว่า การเสริมสร้างพลังอำนาจด้านจิตใจมีความสัมพันธ์ทางลบกับการลดค่าความเป็นบุคคลในผู้อื่น ในขณะที่มีความสัมพันธ์ทางบวกกับความรู้สึกประสบความสำเร็จ ผลการศึกษาเป็นข้อมูลสนับสนุนการตัดสินใจ อย่างไรก็ตาม เนื่องจากมีการศึกษาเพียง 2 ถึง 6 การศึกษาที่ถูกรวมเข้าไปในการวิเคราะห์เมต้า และมีคุณภาพในระดับต่ำและต่ำมาก จึงมีความจำเป็นที่ต้องมีการทำวิจัยในเรื่องเหล่านี้มากขึ้นเพื่อเพิ่มความเชื่อมั่นให้แก่ผลการวิจัยและสามารถให้ข้อเสนอแนะในการปฏิบัติและในเชิงนโยบายได้

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**คำสำคัญ:** การลดค่าความเป็นบุคคลในผู้อื่น การเสริมสร้างพลังอำนาจเชิงโครงสร้าง การเสริมสร้างพลังอำนาจด้านจิตใจ ความรู้สึกประสบความสำเร็จ พยาบาล

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