

# The Role of Hope and Self-efficacy on Nurses' Subjective Well-being

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## Abstract

Although subjective well-being is considered important for nurses, the relationship between hope, self-efficacy, and subjective well-being among nurses has rarely been assessed. This study purposes to explore the relationships between hope, self-efficacy, and subjective well-being. The analysis relies on data from 1757 female nurses in 3 hospitals in China. Nurses completed a demographic form, General Self-efficacy Scale, Hope Scale, General Well-Being Schedule. A mediate model of the hypothesized relationships between the constructs was tested. Significant direct relationships of hope, self-efficacy, and subjective well-being were displayed. Mediation analyses reveal that the impact of self-efficacy on subjective well-being is partially mediated by two components of hope, agency and pathways. Hope was shown to be a key mediator for the relationships between self-efficacy and subjective well-being. These findings advance current understandings on the hopeful thinking in nurses.

**Keywords:** self-efficacy, hope, subjective well-being, mediation analysis

## 1. Introduction

Subjective well-being (SWB) is one of the most important indicators of people's evaluations of their lives. SWB includes optimism, life satisfaction, and positive emotions. SWB has been considered affect various domains of life such as work performance, mental health (Diener & Ryan, 2009). For nurses, SWB is associated with their life satisfaction and the quality of nursing services (Bégat, Ellefsen, & Severinsson, 2005). Increased workloads and job demands contribute to decreases in SWB and higher levels of burnout in nurses. Previous research has focused on normal populations, yet research on nurses' SWB is relatively scant. It is particularly valuable to study nurses' SWB.

Self-efficacy is a belief that one can effectively deal with hardships and reach goals (Bandura, 1997). High self-efficacy is related to high SWB and good physical condition, while low self-efficacy is related to low SWB and depression (Weiss, Freund, & Wiese, 2012). People tend to avoid activities that they cannot handle, and involved in situations that they can cope with. Research indicated that nurses' self-efficacy influences the quality of their patient care (Dunn, Osborne, & Link, 2014). Nurses with low self-efficacy often lack confidence in communicating with patients. Therefore, they failed to provide medical care that met patients' needs (Stump, Husman, & Brem, 2012).

Hope is a cognitive construct which reflects people's motivation and capacity to strive toward personal goals (Snyder et al., 2002). Hope and self-efficacy are different constructs. Self-efficacy means the expectancy that one can perform behaviors, whereas hope refers the expectancies that one can attain goals. Psychometric study shows that hope includes two important dimensions: agency and pathways (Geraghty, Wood, & Hyland, 2010). Agency reflects a person's perceived capability to actively and constantly engage in goal attainment. Pathways instead refers to a person's perceived capability to generate the necessary routes that aids in goal attainment (Yavas, Babakus, & Karatepe, 2013). A loss of hope often leads to losses, illness, impoverishment and life-threatening situations (Herth, 1990). When hope is lost, there is no reason to work hard to leave adverse situations, because there is no way out (Shea & Hurley, 1964).

Study indicated hope predicts self-efficacy and optimism (Magaletta & Oliver, 1999). Hope, self-efficacy, and optimism are related. Hopeful person incline to have a high sense of self-efficacy (Waddell et al., 2015). In bad situations, individuals with high self-efficacy would find alternative new goals and focus on those new goals. Therefore, they would reduce mental suffering that result from the unattainable goals. Hopeless person have no

expectation that anything can help them out of their bad situations. Thus, hopeless person do not set goals. Also, hope significantly predicts SWB (Alarcon, Bowling, & Khazon, 2013). There is a significant relationship between hope and life satisfaction. Hopelessness creates low self-efficacy and poor SWB (Steca et al., 2014). Moreover, faith, relationships, helping others and positive thinking helped people to have hope, hope had a positive influence on their job satisfaction (Duggleby, Cooper, & Penz, 2009). It is reasonable to deduce that hope can play a role as a mediator between self-efficacy and SWB. Further understanding of the concept of hope in nurses may help to develop strategies to reduce burnout and increase SWB. There is a need to understand the underlying mechanism of this relationship.

This study aimed to investigate the associations between self-efficacy, SWB, and hope, especially for nurses by means of mediation analysis. The research questions were as follows: (i) Do the two components of hope (agency and pathways) affect self-efficacy and SWB? (ii) How do the constructs of agency and pathways, self-efficacy, and SWB interrelate? We hypothesize that agency and pathways would play a mediation role between these relationships. Based on the theoretical knowledge mentioned above, the following hypotheses were formulated: Hypothesis 1 (H1): self-efficacy ( $X$ ) positively affects SWB ( $Y$ ). Hypothesis 2 (H2): agency ( $M_1$ ) and pathways ( $M_2$ ) play mediation roles between self-efficacy and SWB.

## 2. Method

### 2.1 Participants

The data was gathered from 1757 female nurses in 3 hospitals located in two cities (Dongguan and Zhanjiang) of China between June and September 2015. Their average age was  $31.57 \pm 5.37$  years (range from 23 to 37 years). 1124 had a four-year college education, others had community college education. Participants were all voluntary. They were informed the procedure of this study. The study procedure was reviewed by the institutional review board of Guangdong medical university (ethical approval number: PJ2013039). Researchers distributed informed consent forms and instruments to participants. All participants were not currently undergoing treatment for a psychological disorder. It took about 20 minutes to fill out the questionnaire. The participants were each given 2 USD for their participation. Participants were free to withdraw at any time without penalty or loss of benefits. Questionnaires were distributed to the participants. 146 incomplete questionnaires were excluded. The response rate was 91.7%.

### 2.2 The Measures

*Self-efficacy.* 10 items comprise General Self-efficacy Scale (Zhang & Schwarzer, 1995). Participants indicate their agreement with statements on a 4-point Likert scale (1= Not at all true, 4= Exactly true). For example: "I can always manage to solve difficult problems if I try hard enough". The General Self-efficacy Scale has a reported *Cronbach's alpha* between .75 and .94 (Löve, Moore, & Hensing, 2012). In this study, the *Cronbach's alpha* was found to be acceptable at .68.

*Hope.* Adult hope scale (AHS) is a 12-item measure of a respondent's level of hope, four are distracters, four are agency thinking, and four are pathways thinking. Subjects respond on an eight point continuum (1 = definitely false, to 8 = definitely true). The scale is divided into two subscales that comprise Snyder's cognitive model of hope: (1) agency (i.e., goal-directed energy) and (2) pathways (i.e., planning to accomplish goals). For example: "I can think of many ways to get out of a jam (Pathways)", "I energetically pursue my goals (Agency)". *Cronbach's alpha* have been reported ranging from .74 to .84 (Chan, Pittman, & Munoz, 2013). In this study, the *Cronbach's alpha* was found to be acceptable at .62(agency), and .68(pathways).

*Subjective well-being.* The General Well-Being Schedule is a widely used self-reported questionnaire measuring SWB. It consists of 18 items, 14 items 6-point Likert scale, and 4 items are 10-point Likert scale. For example: "Have you been bothered by nervousness or your nerves". The total score ranges from 0 to 110. High scores represent better well-being. The GWB is hypothesized to contain six dimensions: anxiety, depression, general health, positive well-being, self-control, and vitality. There is a reported *Cronbach's alpha* ranging from .68 to .85 (Taylor et al., 2003). In this study, the *Cronbach's alpha* was found to be acceptable at .88.

All three measures have an expert panel back-translation procedure. Measures have been translated into Chinese and translate it back into English and compare the two.

### 2.3 Data Analysis

Data analyses were carried out using SPSS 23.0. To assess common method bias, we employed Harman's one-factor test. *Cronbach's alpha* was calculated to assess internal reliability. The correlational relationships between self-efficacy, hope and SWB were described by *Pearson* correlations. To test whether hope mediates the relationship between self-efficacy and SWB, the Preacher-Hayes procedure with bootstrap analyses was used

(Hayes, 2013). Bootstrapping method was used to assess significance of indirect effects of self-efficacy on SWB through hope.

### 3. Results

In current study, all variables were collected from same respondent on same time. In this way, data were exposed to potential for common method bias (Rigtering & Weitzel, 2013). We conducted a post hoc test of the common method bias. The Harman’s single factor test is indicated if a single factor emerges as a dominant factor explaining most of the variance (> 50%) in the dataset. In the current study, the unrotated principal component analysis of all items with a single factor solution yielded 10 factors with an eigenvalue larger than the value of 1. Moreover, these 10 factors explained a total of 51.36% variance. Furthermore, the factor with the greatest eigenvalue only accounted for 21.08% variance. It provided evidence that common method bias was not driving our findings.

The relationships among self-efficacy, agency, pathways and SWB were investigated by *Pearson* correlation. All variables are positively related (*rs* range from .56 to .73, *ps* < .01).

To examine the mediation model we proposed in Hypothesis 2, we conducted a mediation analysis. Firstly, All three models are significant ( $F_{M1}=945.790$ ,  $F_{M2}=1950.558$ ,  $F_Y=502.018$ ). We then applied the Preacher–Hayes procedure “process”, with bootstrap analyses based on 5,000 resamples (Hayes, 2013). As shown in Table 3, both mediation effects through agency and through pathways are significant. The direct effect from self-efficacy to SWB is also significant. All effects are positive. The results suggest a partially mediation, which means mediated effect and direct effect both exist (Zhao, Lynch, & Chen, 2010).

Table 1. Mediation Analysis Results

	<i>M</i> <sub>1</sub> : agency				<i>M</i> <sub>2</sub> : pathways				<i>Y</i> : Subjective Well-being			
	Coefficient	<i>SE</i>	<i>t</i> Statistic	<i>p</i> Value	Coefficient	<i>SE</i>	<i>t</i> Statistic	<i>p</i> Value	Coefficient	<i>SE</i>	<i>t</i> Statistic	<i>p</i> Value
Constant	2.927**	.2031	14.412	<.001	3.894**	.174	22.323	<.001	3.814**	1.051	3.629	<.001
<i>X</i> : Self-efficacy	.233**	.008	30.754	<.001	.288**	.007	44.165	<.001	.591**	.049	12.004	<.001
<i>M</i> <sub>1</sub> : agency									1.356*	.094	14.397	<.001
<i>M</i> <sub>2</sub> : pathways									.999*	.110	9.108	<.001
<i>R</i> <sup>2</sup>	.268				.431				.369			
<i>F</i>	945.790**				1950.558**				502.018**			
Bootstrap Analyses								Effect	Boot SE	95% BCCI [LL, UU]		
Indirect effect of Self-efficacy through agency on Subjective Well-being								.316	.026	[.270, .370]		
Indirect effect of Self-efficacy through pathways on Subjective Well-being								.288	.033	[.223, .353]		
Direct effect of Self-efficacy on Subjective Well-being								.591	.049	[.495, .688]		

*Note.* The coefficients are unstandardized. Bootstrap analyses based on 5,000 resamples; LL = lower limit; UL = upper limit; SE = standard error; BCCI = bias corrected bootstrap confidence interval. \*\**p* < .001 (two-sided)

### 4. Discussion

Results of this investigation generally support the mediation role of hope. We further examined the mediation effects of two component of hope. The positive relationship between hope, SWB and self-efficacy supports our assumption. We argue that self-efficacy predicts SWB in both ways, directly and indirectly through agency and pathways. The results confirm that two components of hope partially mediate the effect of self-efficacy on SWB. These results suggest that increased self-efficacy predicted greater agency and pathways thinking, which in turn predicted greater SWB. Moreover, two mediators explain more variance in SWB, compared with the situation that self-efficacy regress on SWB alone. For nurses, more hopeful thinking are employed in stress situations, a higher level of SWB is developed. It is confirmed that hope is an important protective factor for SWB.

Agency thinking helps nurses sustain their motivation to achieve goals, while pathways thinking helps nurses withdraw effort and find alternative routes to succeed. Moreover, pathways thinking frees nurses’ resources to promote their life in other areas. It should be noted that goal alternation also would be associated with SWB. Both agency and pathways thinking may help a person avoid accumulated failure experiences, which may result in reduced SWB and enhanced psychological distress and depression. Hopeful nurses tend to have more positive emotion, which increases their motivation and SWB in turn.

Self-efficacy contributes to one's hope. Self-efficacy is an optimistic construct. Nurses who are self-efficacious can deal with potential stressors effectively. On the contrary, nurses who suspect their own abilities to control stressful events suffer more distresses which may impair their level of functioning. In light of this, high self-efficacy nurses incline to perceive stressful events and obstacles with less apprehension and may regard this as a good chance for them to prove themselves. The results of this study demonstrated that high self-efficacy nurses incline to create more agency thinking to pursue goal, or more pathways thinking to generate alternative paths to succeed. This is consistent with previous finding that high self-efficacy nurses perceive that they are better capable of accomplishing tasks (Dunn et al., 2014). Prior research also supported that high self-efficacy affects how people cope with negative events (Asselmann, Wittchen, Lieb, Höfler, & Beesdo-Baum, 2016). High self-efficacy nurses are able to generate more pathways and agency thinking than low self-efficacy nurses.

Hope is an important mediator in the association between self-efficacy and SWB. On one hand, improving self-efficacy enables nurses to employ high hope to combat with stressors, which in turn enhances SWB. On the other hand, nurses who lacked hopeful thinking often failed to work with high self-efficacy. Snyder's theory proposed that hopeful thoughts include goal-directed focus, finding available pathways, and being motivated to achieve goals (Snyder et al., 2002). In line with our findings, McGregor indicated that achievable goals is associated with well-being (McGregor & Little, 1998). The findings indicate that we should pay high attention to those nurses with less self-efficacy, for the reason that they create low hope in dealing with stressors, which in turn decrease their SWB.

Limitations to this study were related to design. The study was a one-time measurement of the variables. The possibilities of generalizing to longitudinal cases need to be demonstrated. Future longitudinal studies would be helpful to further understand patterns of hope, self-efficacy, SWB. Also on the issue of generalization, this research study was conducted in China. It would be interesting to replicate the study in other countries. Moreover, cross-sectional data do not allow making causal conclusion.

Findings from the current study intend to provide implication for intervention strategies on how to improve nurses' SWB. Our study contributes to previous research (Magaletta & Oliver, 1999; Salanova, Lorente, Chambel, & Martínez, 2011) in the sense that hope is a powerful psychological mechanism that partially mediates the link between self-efficacy and SWB, at least among nurses.. This provides us information to design effective intervention to improve nurses' SWB. To improve SWB, it would be better to focus more on hope, which seems to have a remarkable influence on SWB. This study establishes an integrative model of self-efficacy, hope, and SWB that has a generative effect on each relevant literature. The current study not only enriches and extends our understanding of SWB, but also deepens our knowledge of hope.

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