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Radhika Sharma & Rakesh Kumar

## Self-Efficacy and Psychological Well-Being in Young Adults: The Moderating Effect of Dispositional Optimism

Radhika Sharma\* Rakesh Kumar\*\*

### Abstract

*Psychological well-being (PWB) is one's level of psychological happiness/health which involves life satisfaction, and feelings of accomplishment. Self-efficacy, our belief about our own capabilities, plays a critical role in PWB. Further, dispositional optimism, a general and stable tendency to expect positive outcomes in life, is also found to be an essential factor for PWB. The aim of the current investigation is to study the moderating effect of dispositional optimism on the relationship between self-efficacy and psychological well-being (PWB). This investigation is a correlational study. The sample comprised 148 participants (63 male and 85 female), with the Mean age of 24.23 (SD = 4.23). The data was collected through an online survey using Google forms. The following tools were used: General Self-Efficacy Scale, Psychological Well-Being Scale, Revised Life Orientation Test (LOT-R). The obtained data was analysed for moderation analysis using PROCESS macro. The conditional effect of self-efficacy on psychological well-being ( $b = 1.30$ ,  $SE = 0.37$ ,  $t = 3.49$ ,  $p < 0.01$ ) and of dispositional optimism ( $b = 1.72$ ,  $SE = 0.77$ ,  $t = 2.24$ ,  $p < 0.05$ ) has been found to be significant. However, the interaction term was not significant ( $b = -0.04$ ,  $SE = 0.02$ ,  $t = -1.92$ ,  $p = 0.06$ ). The total model explained 32% of the variance of psychological well-being. This study is a preliminary attempt to explore the role of dispositional optimism in the relationship between self-efficacy and psychological well-being. Further explorations in this direction can be helpful in identifying other factors and co-variates (like age, gender etc.) along with the dispositional optimism that moderate the link between self-efficacy and psychological well-being.*

**Keywords:** psychological well-being, self-efficacy, dispositional optimism, moderating effect.

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### INTRODUCTION:

All human pursuits are nothing but a deep strive for happiness. This unending and eternal search of humankind is the reason for their involvement in various creative endeavours. Happiness is, often, associated with achieving something, or becoming something. Happiness can also be seen as a state of being. This state of being is analogous to psychological well-being. Psychological well-being is 'the state of optimal functioning' characterised by (Ryff & Singer, 2008): *Autonomy, Environmental Mastery, Self-Acceptance, Personal Growth, Purpose in Life, and Positive Relations.*

The concept of psychological well-being gain acceptance with the arrival of positive psychology approach in the mainstream. Here, the aim is not just to alleviate the ill-being, but to pro-actively promote well-being. Research indicate that psychological well-being is found to be negatively associated with depression, anxiety, and cognitive distortions (Yüksel & Bahadır-Yılmaz, 2019). People high on psychological well-being report higher level of happiness and life satisfaction (Yeşiltepe et al., 2022). Further, it had been found to be related with and predictor

of speedy health recovery (Almgren et al., 2021).

**Self-efficacy:** ‘I believe I can do it’

Self-efficacy is one’s belief in one’s ability to succeed in a particular situation. The idea of self-efficacy is at the core of the Social Learning Theory which was propounded by Bandura (1977). He believed that self-efficacy is a “person’s particular set of beliefs that determine how well one can execute a plan of action in prospective situations” (Bandura, 1977, 1978, 1982; Bandura et al., 1999). Thus, self-efficacy is not about one’s actual abilities, but belief in one’s abilities. Self-efficacy emanates from four sources (Bandura, 1977): *Mastery experiences* (mastering a difficult task or controlling the environment), *Vicarious experiences* (learning through modelling), *Verbal Persuasion* (reinforcement from the significant others), and *Emotional and Physiological States*.

People with high self-efficacy show a sense of control over their environment and do not easily succumb to the internal and external stressors. On the other hand, people with low self-efficacy, many times despite having enough capacity, easily fall victim to adverse situations. In research, self-efficacy has been found to mediate the relationship between different dimensions of psychological well-being and resilience among students (Sabouripour et al., 2021). Further, the relationship between self-efficacy and psychological well-being is mediated by meaning-making (Krok & Zarzycka, 2020). Moreover, self-efficacy has been found to be significant predictor of happiness (Sobhani et al., 2020), and optimized post-stroke recovery (Gangwani et al., 2022; Nott et al., 2021).

### **Dispositional Optimism**

The construct of optimism rests on cognitive as well as motivational grounds (Carver & Scheier, 2014). Optimist people tend to expect more positive events in life

than negative events (cognitive expectancy). They also tend to exert themselves to achieve those positive outcomes (motivation). Optimism has been viewed as personality (fixed) trait in many research (*trait view of optimism*) (Carver & Scheier, 2014). Others view it as a state in terms of how do we attribute events of life (*Optimist vs. pessimist attributional style*; Gillham et al., 2004). Trait approach believes optimism to be a stable factor, hard to modify, whereas, state approach believes that optimism can be increased by changing the attributional styles. Nonetheless, the interventions to increase the optimism level has been found to be effective (Meevissen et al., 2011), at least in the short run. Optimism has been found to be highly correlated with and significant predictor of the subjective well-being (Zou et al., 2022), and quality of life and better recovery (Jowsey et al., 2012).

In the review of related literature, a significantly large gap was noted with respect to the moderating effect of dispositional optimism on the link between self-efficacy and psychological well-being. This preliminary investigation was conducted to address this gap in literature. The aim of the current investigation was to

**Objective:** Explore the potential moderating effect of dispositional optimism on the relationship between self-efficacy and psychological well-being.

Drawing inferences from available literature demonstrating a positive association between dispositional optimism and self-efficacy, it was hypothesised that the

**Hypothesis:** Dispositional optimism would have a positive moderating effect on the self-efficacy-psychological well-being relationship. The establishment of this link can help enhance psychological well-being with the combined self-efficacy and optimism-based interventions.

### **METHODOLOGY:**

**Sample:**

The present investigation is based on descriptive and correlational research design. The sample consisted of 148 participants (42.57% male and 57.43% female). The age of participants ranged from 18 to 30 years ( $M = 24.23$ ,  $SD = 4.23$ ). The sample composed of 8.11% of the participants who had a history of physical or mental illnesses and 91.89% were healthy adults.

**Tools used:**

1. **Generalized Self-efficacy scale** (Schwarzer & Jerusalem, 1995). This is a self-administered scale that assesses general sense of self-efficacy of general adult population. It constitutes ten items. Each item has four choice response ranging from 'Not at all true', which is scored as 1 to 'Exactly true', scored as 4. The sum of scores on all ten items, from 10 to 40, gives a composite score of self-efficacy. The higher the score, the higher the self-efficacy of the individual. The internal reliability of the test has been found high (in samples from 23 nations, Chronbach's alphas ( $\alpha$ ) ranged from .76 to .90). Criterion related validity was assessed by correlating the scale with related variables.
2. **Psychological Well-Being Scale** (Diener et al., 2010). This is an eight-item scale which measures different aspects of psychological well-being on a 7-point Likert scale. The responses can range from 1 (strong disagreement) to 7 (strong agreement). The final scores of an individual will range from 8 to 56. Higher score represents that the person views himself having many psychological resources and strengths. The scale showed adequate psychometric

properties with high internal validity ( $\alpha = 0.86$ ) and temporal stability (0.71). The convergent validity was assessed by correlating the scale with the scales of other related variables like subjective well-being, happiness etc. The correlation value ranged from 0.89 and 0.69 which is sufficient to establish the validity.

3. **Revised Life Orientation Test (LOT-R)** (Scheier et al., 1994). It is a self-report measure that assesses an individual's generalised tendency to expect positive events in life. The responses are recorded on a 5-point scale, where 0=strongly disagree, 1=disagree, 2=neutral, 3=agree, 4=strongly agree. Reverse coding is to be administered for item 3, 7, and 9 (0=4, 1=3, 2=2, 3=1, 4=0). Out of all items, items 2, 5, 6, and 8 are filler items. The score on these items doesn't count in the final score. The scores on items 1, 3, 4, 7, 9, and 10 are summed to obtain an overall score. Thus, the total score ranges from 0 to 24. A higher score represents higher level of optimism. The scale shows an adequate internal consistency ( $\alpha = 0.78$ ) and temporal reliability. Also, the convergent and divergent validity of the scale is well-established.

**Procedures**

The data was collected through online medium using Google Forms. The participation in the survey was informed and voluntary. In the initial stage, a total response of 164 individuals were recorded, out of which 16 responses were discarded because of incomplete responses. Finally, a total sample of 148 individuals was included in the study.

**Statistical analysis**

The statistical analyses of the obtained data were performed using Statistical Package for Social Science (SPSS IBM Corp., v.21, 2012). The inter-correlations between variables were explored using Pearson correlation coefficients. The moderating effect of dispositional optimism on the relationship between self-efficacy and psychological well-being was calculated using PROCESS computation macro (Ver. 4.2; Model 1; Hayes, 2022). The conditional effects (simple slopes) of self-efficacy, dispositional optimism, and the interaction term (self-efficacy X dispositional optimism) on psychological well-being were calculated. Moderation effect is considered to exist if interaction

term is significant at the threshold of 0.05. For the graphical representation of moderation effect, the following cut points were decided: one SD below  $M$ ,  $M$ , one SD above the  $M$ .

**RESULTS:**

The obtained data was first analysed using descriptive statistics (Table 1). The data was screened to assess the nature of data. The primary assumption for performing moderation analysis using linear regression (normality, linearity, homoscedasticity etc.) were checked. Means and standard deviations of study variable are shown in Table 2.

**Table 1**

Descriptive Statistics

	N= 148	%	M±SD
Age (in years)			24.23±4.23
Gender			
Male	63	42.57	
Female	85	57.43	
Physical/Mental Illness			
Yes	12	8.11	
No	136	91.89	

**Table 2:** Means, standard deviations, and Pearson correlations among study variables

	<i>M</i>	<i>SD</i>	1	2
1. Self-Efficacy	32.55	4.62	-	
2. Psychological Well-Being	47.78	5.81	0.529**	-
3. Dispositional Optimism	16.41	3.55	0.294**	0.302**

\*\* $p < 0.01$  (at 2-tailed)

The inter-correlations among all study variables were significant ( $p < .01$ , 2-tailed) (Table 2). Self-efficacy and dispositional optimism were positively correlated with psychological well-being. Table 3 presents the unstandardised regression coefficients ( $b$ ) and standard errors ( $SE$ ) of the variables (independent

variable – self-efficacy; moderator – dispositional optimism; and interaction – self-efficacy X dispositional optimism) the moderation model, and the model summary.

The conditional effect of self-efficacy ( $b = 1.30$ ,  $SE = 0.37$ ,  $t = 3.49$ ,  $p < 0.01$ ) on

psychological well-being as well as the conditional effect of dispositional optimism ( $b = 1.72, SE = 0.77, t = 2.24, p < 0.05$ ) on psychological well-being was significant (Table 3). However, the interaction term (self-efficacy X dispositional optimism) ( $b = -0.04, SE = 0.02, t = -1.92, p = 0.06$ ) was not significant; accounted merely for 2% of

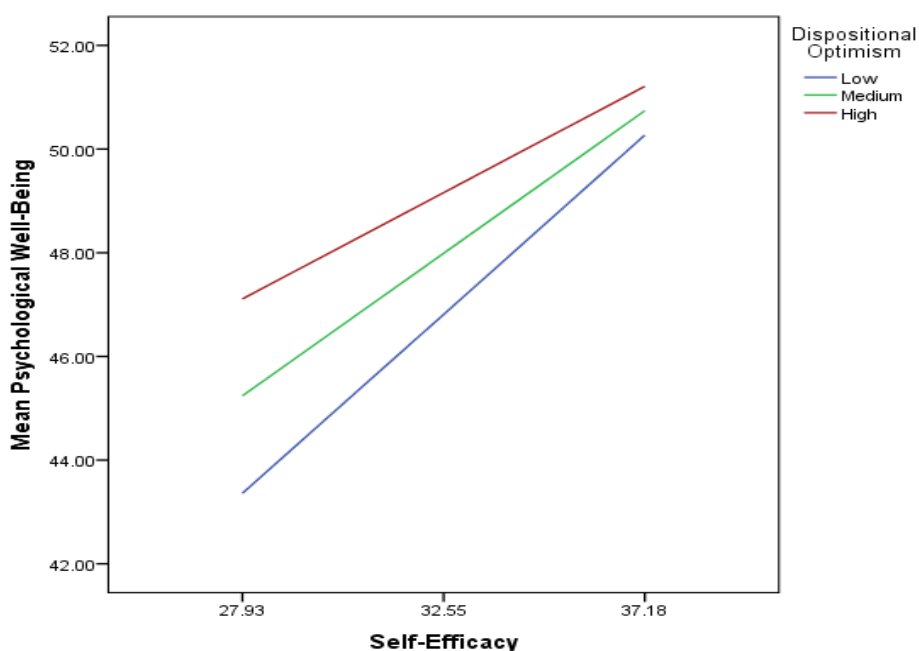
incremental variance in psychological well-being. The full model was significant; explained 32% of the variance in psychological well-being ( $F_{(3,144)} = 22.70, p < 0.01, R^2 = 0.32$ ) (Table 3). Nonetheless, dispositional optimism was not found to be a statistically significant moderator of the relationship between self-efficacy and psychological well-being.

**Table 3:** Moderation analysis (N=148)

	Psychological Well-Being			
	<i>B</i>	<i>SE</i>	<i>t</i>	$\Delta R^2$
Self-Efficacy	1.30**	0.37	3.49	
Dispositional Optimism	1.72*	0.77	2.24	
Self-Efficacy X Dispositional Optimism	-0.04	0.02	-1.92	0.02
<i>Total R<sup>2</sup></i>	0.32			
<i>F (final model)</i>	22.70**			

\* $p < 0.05$ ; \*\* $p < 0.01$

**Figure 1:** The visual representation of the moderating effect of dispositional optimism on the relationship between self-efficacy and psychological well-being



The visual representation of moderation effect is shown in Figure 1. The line graph breaks the continuous scores on

dispositional optimism into an ordinal variable. The cut points were decided on the basis of Mean; 1 standard deviation

below Mean dispositional optimism denoting low optimism; Mean dispositional optimism, medium optimism; and 1 standard deviation above dispositional optimism Mean, high optimism. At all three levels of dispositional optimism, the slope of self-efficacy was positive. Moreover, a gap was visible between three lines which indicates difference in self-efficacy at different levels of dispositional optimism. However, this gap was not statistically significant at  $p$  value of .05.

### DISCUSSION:

Psychological well-being is one's optimal state of functioning. It also promotes resilience in individuals (Sabouripour et al., 2021) which helps them bounce back easily, in case of any adverse situation. Self-efficacy is one's belief in one's abilities to manage any situation successfully. It also relates to improved quality of life (Chan, 2021). Dispositional optimism refers to generalised tendency to expect more positive events in life than negative events. It has been found to be positively correlated with self-efficacy (Niewiadomska et al., 2022). Moreover, high optimism is also related with improved health outcomes (Jowsey et al., 2012), and better psychological functioning and subjective well-being (Zou et al., 2022).

The findings of the present study didn't support the interaction effect (self-efficacy x dispositional optimism) to be significant. However, individually, both self-efficacy and dispositional optimism significantly predicted psychological well-being. This means that though both self-efficacy and dispositional optimism account for variance in psychological well-being, but the impact of self-efficacy is independent of the different levels of dispositional optimism on psychological well-being.

This study comes with many limitations also. Causal relationships can't be established on the basis of cross-sectional

design. The sample size was inadequate for robust methodology of statistical analysis. Moderation analysis using linear regression does not account for measurement error. A general population sample was used. The findings can't be generalised to clinical sample. Next, co-variables were not identified and controlled for the effect on the relationship among variables. Moreover, the use of self-report measures comes with the pitfall of socially desirable responses.

Nonetheless, this study was a preliminary attempt to explore the moderating effect of dispositional optimism on the link between self-efficacy and psychological well-being. Further explorations in this direction are required to identify other factors of individual differences (personality, social support system, and other positive attributes) and/or co-variables (age, gender, socio-economic status etc.) that along with dispositional optimism mediate and moderate the relationship between self-efficacy and psychological well-being. Next, a larger sample size along with a more robust methodology would be useful for further research. Randomized controlled trials of both self-efficacy and dispositional optimism-based interventions could be helpful to examine such research problems.

### Declarations of conflicting interests

The authors declare no competing or conflict of interest.

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