The Immediate Relationship Between Hope and Depression: The Self-Esteem as a Mediator

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Abstract

The concepts of hope and self-esteem in positive psychology can help people resist psychological distress. But it's not clear how they interact to protect each other. This study used a cross-sectional survey of 1185 participants to explore the role of two factors of hope and self-esteem in reducing depressed mood. The results suggest that self-esteem plays a mediating role between motivational thinking and depression. This finding reveals the intrinsic role of motivational thinking and self-esteem in protecting well-being, and has positive implications for mental health interventions such as alleviating depression.

Keywords: positive psychology, hope motive, hope pathways, Self Esteem, depression

1. Introduction

Depression is a heterogeneous disorder. Major depressive disorder has a lifetime prevalence of up to 17% worldwide(Kessler et al., 2007). In addition to the physical distress and personal debilitation associated with the individual, the high incidence of depression and its chronic nature can affect the patient's work efficiency, significantly increasing the socioeconomic burden(Greenberg, 2003). Symptoms of depression include low mood, loss of interest, loss of pleasure, inability to concentrate, lack of energy, sleep or eating disorders, feelings of worthlessness or guilt, and even suicidal thoughts and intentions (DSM-IV) (Duman, 2010). The qualifying symptoms associated with the seizure are similar to those in the DSM-IV, but there is an additional symptom of loss of confidence or self-esteem(Paykel, 2008). It becomes ever more important to investigate factors affecting the development of depressive symptoms.

1.1 Model or Framework

Hope is a core concept of positive psychology and is believed to have a positive impact on an individual's adaptation and development. Snyder's theory of hope is the most widely accepted theory of hope(Li et al., 2018).According to Snyder and his colleagues, hope is defined as "a positive state of motivation that is based on a kind of agency and path."(Reichard et al., 2013a; Snyder et al., n.d.). The agency or "willpower" component of hope generates the determination to identify and achieve goals, and the path thinking or "path power" component refers to an individual's perceived ability to find one or more effective ways to achieve a goal, as well as the perceived ability to make alternative plans when encountering obstacles in the process of achieving a goal(Arnau et al., 2007; Reichard et al., 2013b; Snyder, 2002).

In previous studies, basic hope was inversely associated with depression(Kaleta & Mróz, 2020). However, the psychological mechanisms linking hope and depression are not well understood. The literature suggests that a sense of hope boosts self-esteem(Du et al., 2015). In addition, self-esteem is an effective positive resource for coping with stress and depression(Du et al., 2016). Therefore, we hypothesize that the Agent Thinking of Hope and the Path of Hope Thinking can alleviate depression by enhancing self-esteem. In our model, self-esteem mediates the relationship between different thoughts of hope and depression.

1.2 Hope and Depression

The variable hope has been shown to be strongly negatively correlated with many negative emotions and clinically significant depressive symptoms. This relationship has been proven across a range of cultures and geographical locations(Ritschel & Cassiello-Robbins, 2023). The results of a longitudinal study suggest that a decrease in hope predicts worsening of depression and anxiety symptoms over time(Germann et al., 2018). In another longitudinal study, only the desired motility component was significantly associated with a reduction in depression(Arnau et al., 2007). As a result, research has shown that depression and hope are inversely correlated, and that different

aspects of hope may have different effects on depression over time. A review of the literature showed that most studies focusing on the relationship between hope and depression were conducted cross-sectionally. However, a single measure indicates a correlation between variables, but does not confirm causality or prediction. In addition, the relationship between path thinking, agency thinking, and depression needs to be further explored(Li et al., 2018).

1.3 Hope and Self-Esteem

The meta-analysis found that self-esteem is beneficial for important areas of life such as relationships, school, work, mental health, physical health, etc(Orth & Robins, 2022). Self-esteem is a person's evaluation of their worth as a person(Reitz, 2022). Self-esteem is also how well people like and accept themselves(Orth & Robins, 2014; Weber et al., 2023).Self-esteem is an important positive psychological factor and a protective factor for mental health, specifically, self-esteem can influence an individual's assessment of the environment, thereby regulating the individual's stress response relationship(Chen et al., 2023).Self-esteem plays a key role in building resilience, shaping a positive self-concept(Orth & Robins, 2013).People with high self-esteem tend to use more effective coping strategies in challenging situations(Orth et al., 2009).As the theory of hope suggests, people will focus on the goal-seeking process, and when they are able to achieve their goals, emotions and self-esteem can be developed(Snyder, 2002). In addition, hope therapy shows that hope can promote life meaning and self-esteem(Cheavens et al., 2006). Therefore, self-esteem and hope may be interrelated(Chan & Huang, 2024).

1.4 Self-Esteem and Depression

Various studies have reported a negative correlation between self-esteem and depression. High self-esteem is often considered an important part of mental health and well-being, and high self-esteem is a protective factor against depressive symptoms(Donnellan et al., 2011; Garaigordobil et al., n.d.). Studies have shown that low self-esteem is a relevant and fragile factor in depression(Orth & Robins, 2013).Cognitive theory suggests that negative self-beliefs play a key causal role in the etiology of depression(Orth & Robins, 2022). People with low self-esteem are more likely to suffer from depression, regardless of clinical level or mild depression, and they are more likely to feel worthless and incompetent(Garaigordobil et al., n.d.). Moreover, low self-esteem predisposes individuals to mental health problems, which may increase depression and create a suicide risk(Mashiach-Eizenberg et al., 2013; Orth & Robins, 2013).

1.5 The Present Study

Based on relevant theories and previous studies, this study intends to use the questionnaire survey method to explore the relationship between the sub-dimension of hope and depression by constructing a latent variable mediation model, and further examine the role of self-esteem in it.

2. Method

2.1 Participants and Procedure

This study used a random sampling method to collect two waves of data in different parts of different cities in China in November 2022. A total of 1,185 people were validated at this time point, of which 715 (60.338%) were female, 956 (80.675%) were under the age of 26, 761 (64.219%) had a bachelor's degree, and 781 (65.907%) had a monthly income of less than 5,000 RMB. Details can be found in Table 1. This study was approved by the Scientific Research Ethics Committee of the institution. We obtained informed consent from all participants prior to collecting data and participants were informed that there were no correct or wrong answers, and that the data would only be used as a study. After the participant completes the answer, they will be rewarded with a minimum of 4 RMB.

Table 1. Number of Participants in Study.(n=1185)

Variable	Category	Number	Percentage
Gender	Female	715	60.338%
	Male	470	39.662%
Age	< 26 years old	956	80.675%
	26-30	111	9.367%
	31-40	68	5.738%
	> 40 years old	50	4.219%
Education level	≤ High school	102	8.608%
	Associate	150	12.658%

monthly income (yuan)	Bachelor	761	64.219%
	≥ Master	172	14.515%
	< 1000	65	5.485%
	1001-1500	127	10.717%
	1501-2000	111	9.367%
	2001-3000	178	15.021%
	3001-5000	300	25.316%
	5000—8000	210	17.722%
	5000—8000	72	6.076%
	10000-20000	96	8.101%
	> 20000	26	2.194%

2.2 Measures

Hope: The measure of hope was the Chinese version of the Adult Hope Dispositional Scale (Chen et al., 2009), which was adapted from (Snyder et al., 1991). The scale has a total of 12 items.   Four items are used to evaluate agent thinking, four items are used to evaluate pathways thinking, and four fill items are not used for analysis. Participants rated these items on a 4-point Likert scale, ranging from 1 (absolutely wrong) to 4 (absolutely right). One example item for pathways thinking reads: 'I can always come up with many ways and means deal with the difficulties in my life'. In this study, the Cronbach's alpha coefficient in the agent thinking was 0.782, the Cronbach's alpha coefficient in the pathways thinking was 0.802.

Self Esteem: Self Esteem was assessed using the Rosenberg Self-Esteem Scale(*Rosenberg Self-Esteem Scale (Rosenberg, 1965)*, n.d.), which was translated into Chinese by Ji and Yu (Ji & Yu, 1993). The scale is translated and revised to assess an individual's overall perception of self-worth and self-acceptance. Rated on a four-point Likert scale. From 0 (never) to 3 (absolutely), with higher scores indicating higher levels of self-esteem. One of the descriptions is that I feel that I have many good qualities. This scale showed satisfactory reliability in our study. The Cronbach's alpha coefficient is 0.894.

Depression: Depression was measured using the Depression, Anxiety, and Stress Scale (DASS-21)(Lovibond & Lovibond, 1995), which was translated into Chinese by Wen and colleagues(Wen & Wu, 2012). Participants rate each item on a four-point scale on how relevant it is to their situation during the past week. Like what, I did not seem to feel happy at all. Answers range from 0 (never) to 3 (always).   Higher scores correspond to more severe depression symptoms. In this study, the depression subscale had a Cronbach's alpha coefficient of 0.837.

Covariates: Covariates included demographic variables. Such as gender, age, education level, monthly income, etc.

2.3 Statistical Analyses

SPSS 27.0 was used to analyze the correlation of the data, and then the structural equation model was used to analyze the mediated model. Firstly, the motivational thinking of hope and the path thinking of hope were taken as independent variables, self-esteem was used as the mediating variable, and depression was used as the dependent variable, and the mediating effect model was analyzed by Mplus8.30. Secondly, the significance test was carried out by the Bootstrapping method for the mediating effect, and the sample estimation size of Bootstrapping was set to 5000, and the confidence interval was 95% standard. Finally, the fitting index of χ^2, df, CFI, TLI, RMSEA, SMR and other models was investigated.

3. Results

3.1 Common Method Bias, Descriptive Statistics and Correlation

Artificial co-variation between variables can be caused by the same data source, measurement context, or rater characteristics, which can distort the results of the study and cause systematic errors. In this study, the common method bias was controlled by anonymous measurement and reverse scoring of some items. The Harman one-way test was used to calculate and test all the items, and the results showed that there were 4 factors with eigenroots greater than 1, and the first principal component obtained before rotation accounted for 36.6% of the total load of the factors, which did not exceed the critical value of 40%, indicating that there was no serious common method bias in the questionnaire results in this study.

The mean, standard deviation, correlation coefficient, and skewness and kurtosis between the variables are shown in Table 2. There is a significant positive correlation between hope and self-esteem. There was a significant

negative correlation between hope and depression, self-esteem and depression. In addition, the results in the table show that the skewness and kurtosis of each variable are less than 2 and 7(Finney & DiStefano, 2006), respectively, and it can be assumed that these variables obey or approximately obey a normal distribution. To further understand the relationship between the sub-dimensions of hope, self-esteem, and depression, a mediating test will be performed in a follow-up study.

Table 2. Descriptive Statistics and Correlations among Key Variables(n=1185)

Variable	1	2	3	4	5
1 Gender (0 = male)	1.00				
2 Agent Thinking	-0.76**	1.00			
3 Pathways Thinking	-0.03	0.653***	1.00		
4 Self Esteem	-0.018	0.562***	0.528***	1.00	
5 Depression	0.064*	-0.456***	-0.354***	-0.580***	1.00
Mean	0.603	2.537	2.925	4.314	1.621
SD	0.489	0.559	0.526	0.543	0.473
Skewness	-0.423	0.158	-0.165	-0.429	1.073
Kurtosis	-1.824	0.139	0.565	0.103	1.939

Note：***$p < 0.001$, **$p < 0.01$, *$p < 0.05$

3.1 The Test of the Mediating Effect of Self-Esteem Between the Sub-Dimensions of Hope and Depression

The structural equation analysis of latent variables was performed using Mplus8.30 on the data, with hope (including pathway thinking and agent thinking subdimensions) as independent variables, self-esteem as mediator variables, and depression as dependent variables. The entire model is shown in Figure 1. After controlling for demographic statistical variables such as gender, age, education level, and economic income, the fit coefficient of the model is acceptable (χ^2 = 3088.645, df = 461, CFI = 0.825, TLI = 0.810, RMSEA = 0.069, SMR = 0.062)(Doll et al., 1994). The agent thinking of hope can significantly positively predict self-esteem (β = 0.489, p<0.001), self-esteem can further significantly negatively predict depression (β = -0.503, p<0.001), and the agent thinking aspect of hope can significantly negatively predict depression (β = -0.338, p<0.001). The path thinking of hope can significantly predict self-esteem positively (β = 0.209, p<0.001), and the self-esteem can prominently negatively predict depression (β = -0.503, p<0.001). Using Mplus8.30 to test the mediation effect of bootstrapping, it was found that the mediation effect of agent thinking of hope and depression is significant through self-esteem (β = -0.246, 95% CI = [-0.336, -0.167]). The direct effect of agent thinking of hope on depression is significant (β = -0.338, 95% CI = [-0.515, -0.173]), but the direct effect of path thinking of hope on depression is not significant (β = 0.160, 95% CI = [-0.006, 0.331]).
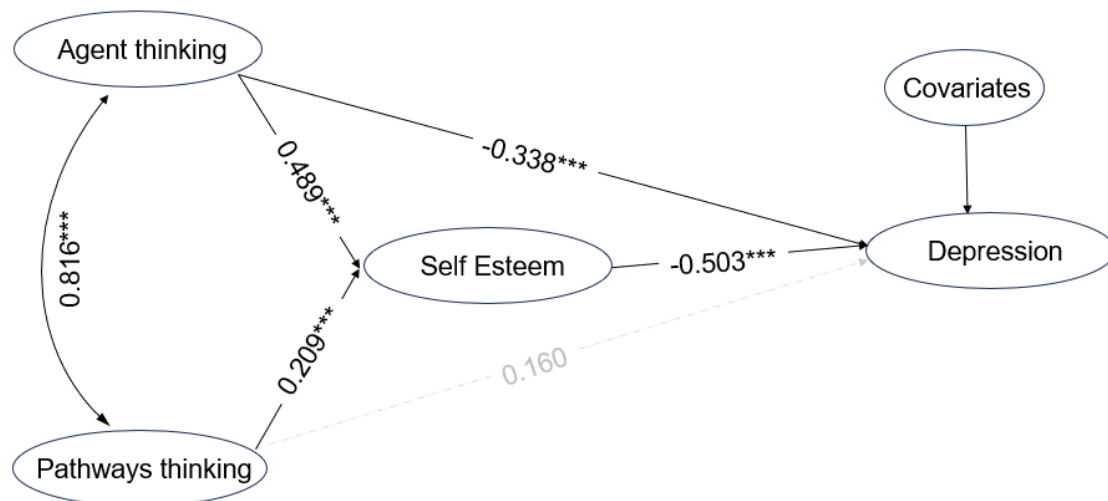
Note: *** $p<0.001$, **:$p<0.01$, *:$p<0.05$

Figure 1. The mediating model of self-esteem between hope and depression

4. Contributions and Implications

Our research found that the agent-thinking aspect of hope and self-esteem can reduce depression, and current research shows that that self-esteem plays a vital role in the middle of agent thinking of hope and depression. Therefore, this study reveals that hope and self-esteem can be valuable components of psychological intervention programs. This study also reveals the mediating role of self-esteem in the relationship between hope and depression. In addition, due to the fact that in the moderation model of depression. The impact of agent thinking goes beyond path thinking. Therefore. In future interventions, special attention should be paid to this variable. Participants should be motivated to work towards the long-term future, and an agency mindset can be fostered to create avenues for participants to express emotions, share experiences, and love, either through support groups or significant others(Dee et al., 2020).

5. Limitations and Future Directions

There are some limitations in this study. First, the study was designed horizontally, which hindered the study of the longitudinal moderating effect of self-esteem. Second, the variable scale is a retrospective measure of past experiences. Retrospective reports may be affected by the individual's current status, which may exaggerate the relationship between variables and experimental methods should be used to further examine the association between the dimension of hope, self-esteem, and depression.

6. Conclusion

Summing up, the study extends the lines of previous research by addressing the need to understand mechanisms of the hope-depression relationship. This study explores the relationship between hope, self-esteem, and depression. The results showed that the motivational thinking dimension of hope could predict depression by the self-esteem. Therefore, self-esteem is the psychological pathway from feeling depressed from hope, and these findings further support and expand the theory of hope, strengthening our understanding of the relationship between hope and depression.

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