

The Relationship between Human Agency and Optimism with Students' Psychological Well-Being

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Reihaneh Manouchehri^{1*}; Hamid Reza Vatankhah²

1. MSC in Psychology, Department of Psychology, Tehran West Branch, Islamic Azad University, Tehran, Iran. **Corresponding Author:** reyhanemanoochehri780@gmail.com

2. Assistant Professor, Department of Psychology, Tehran West Branch, Tehran, Islamic Azad University, Iran.

Abstract

Aim: The main goal of this study was to explore how human agency and optimism are related to the psychological well-being of students.

Method: This study utilized a descriptive correlational method to conduct the research. The target population for the study included all high school students in the 3rd district of Karaj Education during the second semester of the 2022-2023 academic year. A sample size of 150 individuals was chosen using the Krejci and Morgan (1970) table through cluster random sampling. Information for the study was gathered through questionnaires on human agency developed by Woody, Palito, and Barnier (2013), optimism by Scheier and Carver (1985), and psychological well-being by Riff (2002). The data was analyzed using linear multivariate regression tests along with simultaneous and correlation methods. The analysis was conducted using SPSS software, specifically version 23.

Results: The analysis of research data revealed a significant negative correlation between human agency, involuntary effort, and psychological well-being ($P < 0.01$). Additionally, there was a significant positive correlation between optimism and psychological well-being ($P < 0.01$). The analysis of the research data revealed that 35% of the variations in psychological well-being can be attributed to human agency and optimism, with a statistically significant result ($P < 0.01$ and $F_{(147,2)} = 41.19$).

Conclusion: The research findings indicate that agency is crucial for the personal development and adjustment of individuals to their surroundings. Human agency greatly influences the actions and situations in life, helping people to manage their endeavors in reaching their objectives and aspirations.

Keywords: Human agency, Optimism, Psychological well-being, Students.

Introduction

Students, as valuable human resources in any society, have the potential to contribute to the long-term goals and development of societies if provided with appropriate conditions and education. It is essential to implement effective measures aimed at enhancing personal satisfaction, mental health, creativity, communication skills, academic performance, and career advancement among students. Improving the psychological well-being of students is a crucial strategy as it can significantly enhance their overall quality of life (Tuason et al., 2021). Psychological well-being encompasses various psychological traits that positively impact human performance, such as purpose in life, perfectionism, and self-efficacy (Trudel-Fitzgerald et al., 2021). Ryff and Keyes (1995) proposed six components of psychological well-being- positive relationships with others, self-acceptance, autonomy, purposefulness in life, personal growth and development, and mastery over the environment (Ryff & Keyes, 1995), which are essential for individuals' satisfaction, well-being, and happiness (Pan et al., 2023).

A decrease in psychological well-being can lead to psychological issues like depression, isolation, and loneliness, impacting a person's psychological, physical, and social well-being negatively. The absence of psychological well-being in students' lives may result in adverse experiences such as anxiety, fear, anger, depression, and dissatisfaction while enhancing psychological well-being can promote positive emotions, healthy relationships, meaning in life, environmental mastery, social interaction, and academic success (Rao & Rao, 2021). Various factors influence psychological well-being, and interventions must be tailored to address them effectively, given the significance of well-being in students' lives (Oskrochi et al., 2018). Bromfield (2022) emphasized the role of human agency as a factor influencing the psychological well-being of students (Bromfield, 2022). Human agency refers to individuals' capacity to make choices, shape their environment, and impact future outcomes through conscious actions (Bryant, 2021). It is considered fundamental to motivation, well-being, and a sense of competence, with researchers suggesting that individuals with a strong sense of agency tend to be psychologically healthier, happier, and more engaged in academic pursuits. Bandura's (2008) cognitive theory underscores the importance of agency in education over passive approaches, emphasizing the need for environments that support students' agency through opportunities for action and witnessing the outcomes (Bandura, 2008; Parsell et al., 2017). The human agency plays a crucial role in students' learning process, shaping their values, beliefs, attitudes, and thoughts, all of which have a significant impact on their academic performance and psychological well-being. Components such as ethics, self-confidence, self-esteem, and motivation within human agency can contribute to enhancing students' well-being, underscoring the importance of recognizing and nurturing agency in educational settings for improving educational quality, as noted by Cadenas, Peña, Minero, Rojas-Araúz, and Lynn (2021) (Cadenas et al., 2021).

Alternatively, Mead, Fisher, Tree, Wong & Kemp (2021) conducted research suggesting that optimism in students is a contributing factor to their psychological well-being (Mead et al., 2021). Optimism is described as an outlook or behavior related to expectations about the future that is considered socially desirable and fulfilling (Liu et al., 2018). Essentially, it entails having a positive attitude towards one's environment, where

individuals with this trait aim to view the world in a more favorable light (Mens et al., 2020). Optimistic individuals tend to perceive positive events and influences as enduring and negative events and influences as temporary. Optimism is characterized as a fluid process encompassing gentleness towards the past, appreciation for the present, and anticipation for the future. As such, optimism is deemed pivotal in enhancing the quality of life while serving as a source of motivation and emotions (Scheier et al., 2021). Optimistic individuals attribute their successes to their internal abilities and attribute failures to specific external and fleeting factors (Marton et al., 2020). Positive psychology and Bandura's social cognitive theory have historically played a role in shaping the concept of scientific optimism. According to Bandura (1986), optimism fosters an environment conducive to active learning and constructive thinking (Bandura, 1986). Consequently, optimism is believed to play a crucial role in how students navigate various life situations, achieve their goals, and ultimately enhance their psychological well-being (VanderWeele & Kubzansky, 2021). In spite of the significance of understanding the psychological attributes of students, including well-being and its correlates, there has been a paucity of research in this realm. For instance, while Broomfield (2022) explored the impact of human agency on psychological well-being (Bromfield, 2022) and Mead et al. (2021) studied the role of optimism in students' psychological well-being, no research has concurrently examined the interconnectedness of human agency and optimism with students' psychological well-being (Mead et al., 2021). Therefore, this study aims to address whether there exists a relationship between human agency, optimism, and the psychological well-being of students, given this existing gap. The study holds practical implications, notably in providing educators and organizations involved in student education with valuable insights. Should a positive and significant correlation be found between human agency, optimism, and students' psychological well-being, educators and counselors can leverage these findings to teach students how to enhance abilities like human agency to feel more in control of life events. By instilling hope and optimism in students for the future, educators can positively impact students' psychological well-being, enabling them to tap into their potential and progress toward success. Neglecting psychological well-being can have detrimental effects on individuals' quality of life, highlighting the importance of managing emotions and feelings in challenging situations. Individuals with well-being can effectively communicate with others, a skill that can contribute to their success and overall quality of life (Samanloo, 2021). Therefore, prioritizing this crucial component and exploring its related factors is imperative, underscoring the necessity of this study in addressing the research gap concerning the relationship between human agency, optimism, and students' psychological well-being. The study's objective is to investigate the link between human agency, optimism, and students' psychological well-being in Karaj.

Research Method

The research employed a descriptive and correlational methodology. The target population consisted of all high school students in District 3 of Karaj Education during the second semester of the academic year 2022-23. The sample size of 150 individuals was determined using the Krejcie & Morgan (1970) table (Krejcie, 1970).

Cluster random sampling was utilized to select the sample by organizing students by school and then randomly choosing a cluster.

The sample was selected through a multi-stage cluster random sampling method. District 10 was chosen randomly from the ten districts of Karaj city. Following that, the 3rd Education District and six schools were randomly selected, and ultimately, 150 students from these schools were randomly picked to participate in the research.

After obtaining approval from the security department of the 3rd Education District in Karaj, the researcher personally visited schools to gather the necessary data for the field research. During this process, the researcher explained the research objectives and obtained permission from the school principal before providing detailed instructions to the school staff on the questionnaires and how to answer them. The questionnaire utilized in the study consisted of 2 separate sections. The first section included initial questions (not numbered) focusing on demographic characteristics to gather demographic data of the participants. The following sections of the questionnaires used Likert scale statements to assess responses, prompting participants to indicate their agreement or disagreement on a scale from completely agree to disagree. Before distributing the questionnaires, students were briefed on the importance of confidentiality in their responses and the significance of providing honest answers. Following the collection of the questionnaires, the data was analyzed using SPSS software.

The study utilized various techniques in descriptive and inferential statistics. The descriptive statistics part involved utilizing measures such as the mean and standard deviation. On the other hand, the inferential statistics part incorporated the use of linear multivariate regression tests with simultaneous and correlation methods. Additionally, the Kolmogorov-Smirnov test was conducted to assess the normality of the variables. The data analysis was performed using SPSS software version 23.

Data Collection Tool

Human agency: The scale created by Polito et al. (2013) is an experimental tool used to evaluate individuals' ability to complete tasks independently (Polito et al., 2013). This scale assesses the sense of agency through a seven-point Likert scale ranging from strongly disagree (1) to strongly agree (7) in two subscales: incontinence and effortlessness. A rating of 1 indicates strong disagreement, 4 denotes neutrality, and 7 signifies strong agreement. Through a meta-analysis, two factors predicted 48.2% of the questionnaire's total variance, with a correlation coefficient of 0.55 between them. The reliability coefficient for incontinence was 0.90, and for effortlessness was 0.73. In Iran, the validity of this questionnaire was verified by Pashrpour and Ahmadi in 2017 (Basharpour, 2017). Additionally, Basharpour, Mikaeili, and Ghasemi (2017) reported alpha coefficients of 0.90 for the involuntary component and 0.73 for the effortlessness component (Basharpour, 2017).

Optimism: Scheer and Carver (1985) created a 10-question Life Orientation Test to evaluate innate optimism (Scheier & Carver, 1985). This questionnaire measures a type of optimism that involves positive personal expectations for the future as a personality trait. The scoring system uses a Likert scale with five options: never = 1, sometimes = 2, usually = 3, often = 4, and always = 5. Statements 3, 7, and 9 are scored in the opposite direction. The questionnaire was standardized and validated by Kajbaf, Erezi, and Khodabakhshi (2006) with a reliability score of 0.72 (Kajbaf, 2006).

Psychological well-being: Riff (2002) developed a questionnaire to assess psychological well-being (Ryff & Singer, 2002). The questionnaire consists of 18 questions and is a self-assessment tool. Respondents answer on a 5-point scale, with "I strongly disagree" receiving a score of 1 and "I strongly agree" receiving a 5. A higher score on the questionnaire indicates better psychological well-being. Some questions are scored in reverse. The correlation of the Riff Psychological Well-Being Scale with the original scale has ranged from 0.70 to 0.89. In Iran, Khanjani, Shahidi, Fathabadi, Mazaheri, and Shokri (2014) confirmed the validity and reliability of the questionnaire (Khanjani et al., 2014). The reliability coefficient of the questionnaire for the subscales was reported to be between 0.71 and 0.76, with an overall reliability of 0.71.

Results

This section presents descriptive statistics related to the scores of the research variables and each of its components.

Table 1. Descriptive statistics of research variable scores

Group	M	SD	Min	Max
Psychological Well-Being	60.61	6.46	50	80
Human Agency	35.79	5.70	21	49
Optimism	33.85	4.82	22	45

The information in Table 1 shows the mean and standard deviation of psychological well-being, human agency, and optimism separately.

Table 2. Tolerance coefficient and variance inflation of research variables

Variable	Tolerance factor	Variance Inflation	Durbin Watson
Optimism	0.881	1.135	1.971
Human agency	0.881	1.135	

According to the findings presented in Table 2, the tolerance coefficient and variance inflation index of the variables under study are above 0.1 and below 10, respectively. This suggests that there is no issue of collinearity among the research variables. Additionally, the Durbin-Watson statistic falls between 1.5 and 2.5, indicating no autocorrelation among the residuals and that they are independent. In other words, the residual value from one case does not impact the residual value of another case.

0.001

Table 3. Pearson correlation test to examine the relationship between human agency and psychological well-being

Variable	Index	Human agency	Optimism
Psychological Well-Being	R	-0.443**	0.531**
	Sig	0.001	0.001

****P< 0.01**

Based on the findings from Table 3, there is a strong inverse correlation between human agency and psychological well-being, with a correlation coefficient of -0.443 ($r=-0.443$), between incontinence and psychological well-being with a correlation coefficient of -0.428 ($r=-0.428$), and between effortlessness and psychological well-being with a correlation coefficient of -0.281 ($r=-0.281$) at a 99% confidence level. However, since the human agency variable scores are reverse-coded, there is actually a positive association between human agency and its components with psychological well-being. Additionally, the correlation test revealed a significant positive correlation between optimism and psychological well-being with a correlation coefficient of 0.531 ($r=0.531$) at a 99% confidence level.

Table 4. Summary of the regression model and autocorrelation analysis

Criterion variable	R	R ²	AR ²	SD
Psychological well-being	0.59	0.36	0.35	5.20

According to the data in Table 4, the strength of the correlation for psychological well-being is 0.36, and the adjusted R^2 is 0.35. This suggests that 35 percent of the variability in psychological well-being can be attributed to human agency and optimism.

Table 5. Analysis of variance table to examine the significance of the regression model

Criterion variable	Source of change	SS	DF	MS	F	P
Psychological well-being	Regression	2233.882	2	1116.941	41.19	0.001
	Residual	3985.691	147	27.114		
	Total	6219.573	149	-		

According to the data in Table 5, the F significance level for psychological well-being with 2 and 147 degrees of freedom is below 0.01. This suggests that the regression model is highly significant at the 99% confidence level ($p < 0.01$ and $F_{(147,2)} = 19.41$) and psychological well-being is predicted by at least one of the other variables.

Table 6. Correlation and regression coefficient of human agency and optimism on psychological well-being

Factor	Non-standard coefficients		Beta	t	P
	B	SD			
Constant Value	53.083	4.979	-	10.662	0.001
Human Agency	-0.334	0.080	-0.295	-4.196	0.001
Optimism	0.576	0.094	0.430	6.106	0.001

According to the data presented in Table 6, optimism has a significant impact on explaining the variance of psychological well-being, with a standardized regression coefficient of 0.430 and a significance level of 0.001. Similarly, human agency also plays a significant role in explaining the variance, with a standardized regression coefficient of -0.295 and a significance level of 0.001. The constant value in the analysis was found to have a significance level of 0.001, indicating its impact on the criterion variable. The results of the regression analysis, including the unstandardized coefficients of the variables in the model, are provided below.

$$(\text{Psychological well-being} + (\text{Human Agency} \times -0.334) = (\text{Optimism} \times 0.576) + 0.53$$

Discussion

The primary aim of this research was to investigate the connection between human agency and optimism and the mental health of students. Based on the correlation test results, there is a strong negative correlation between human agency and its elements, such as involuntary and effortless, and psychological well-being. However, since the human agency variable scores are reverse-scored, there is a positive correlation between human agency and its elements of psychological well-being. The research data analysis confirms a significant negative correlation between human agency, involuntary and effortless actions, and psychological well-being. This discovery aligns with the findings of previous studies by Ashurnejad et al. (2017), Ashurnejad (2018), Broomfield (2022), and Hossain et al. (2023) (Ashurnejad et al., 2017; Ashournezad, 2018; Bromfield, 2022; Hossain et al., 2023).

Hossain, O'Neill & Strnadová (2023) conducted a study on the factors that impact the mental well-being of students (Hossain et al., 2023). They gathered the necessary information for their research through a meta-analysis and reviewing previous studies. The findings indicated that factors like positive emotions, interpersonal relationships, human agency, academic engagement, and school purposefulness influence students' psychological well-being. Bourne, Powell, Jamieson & Stultz (2022) examined the role of human agency in the mental well-being of individuals during the epidemic(Bourne et al., 2022). This study had a sample size of 1074 participants. The findings revealed that human agency plays a significant role in enhancing the psychological well-being of individuals. Broomfield (2022) investigated the impact of human agency on the psychological well-being of individuals (Bromfield, 2022). The study included 110 students who had recently entered the workforce. The results showed a notable connection between the characteristics of human agency and the mental well-being of individuals.

The study discovered that lack of control, a component of human agency, has a detrimental impact on the mental health of students. When individuals feel unable to influence their environment or circumstances, it can lead to feelings of hopelessness and decreased motivation. This can result in increased stress and worry, ultimately affecting the overall quality of life. Lack of control can also diminish self-confidence and self-efficacy, making it more difficult for individuals to cope with challenges and achieve their goals. This sense of helplessness and instability can contribute to ongoing dissatisfaction and psychological distress. Overall, lack of control can diminish psychological well-being by causing dissatisfaction, reducing self-confidence, promoting social isolation, and lowering overall quality of life.

According to another explanation of this research finding, a negative correlation exists between the ease of effort as another aspect of human agency and students' mental well-being. It can be argued that, per the self-determination theory, humans inherently possess a drive to explore, learn, discover, and develop. This theory distinguishes between extrinsic motivation, driven by external rewards or avoidance of punishment, and intrinsic motivation, fueled by the satisfaction and pleasure derived from the activity itself, without external incentives. Intrinsic motivation, the theory highlights, is crucial for spontaneity, creativity, and personal advancement (Ejei, 2018). Consequently, based on this theory, inactivity can result in a decline in mental well-being. When individuals fail to reach their goals or give up in the face of obstacles, they may feel dissatisfied and powerless over their lives and circumstances. In reality, lack of action and passivity can diminish intrinsic motivation, leading to a reduction in feelings of control and self-efficacy, vital for satisfaction and happiness. Inactivity can also limit learning opportunities, negatively impacting mental well-being.

The correlation test results indicate a strong positive connection between optimism and psychological well-being. The research data analysis also reveals a significant positive relationship between optimism and psychological well-being. These findings align with previous studies by Heydari, 2019; Lehnert, 2021; Mead et al., 2021; Mohammadi, 2021; Nasiri, 2022).

Padmanabhanunni, Pretorius & Khamisa (2023) conducted a study to explore how optimism impacts the psychological well-being of individuals during the epidemic (Padmanabhanunni et al., 2023). The study included a statistical sample of 355 participants. The results revealed a direct and meaningful connection between optimism and psychological well-being. Additionally, the study confirmed this relationship with the mediating factors of life satisfaction, anxiety, and depression. In a separate study, Mead et al. (2021) investigated the influence of optimism on the psychological well-being of students during the Corona period (Mead et al., 2021). Klainin-Yobas, Vongsirimas, and Ramirez (2021) explored the relationship between stress, optimism, and psychological well-being in young people using a statistical sample of 630 Filipino youth (Klainin-Yobas et al., 2021). The findings suggested that optimism could predict autonomy and personal growth - both components of psychological well-being. Furthermore, the study confirmed the mediating role of stress in this relationship.

The findings of the current research indicate a direct correlation between optimism and the psychological well-being of students. This can be attributed to the fact that individuals with an optimistic outlook tend to interpret life events positively, leading to a greater sense of psychological tranquility (Scheier & Carver, 2018). Optimism, defined as the inclination to anticipate positive outcomes in the future, has noteworthy impacts on students' mood, behavior, and mental well-being. Optimists typically choose to seek out positive resolutions and possibilities during challenging circumstances rather than fixating on issues and anxieties. This optimism not only helps them to persevere in the face of challenges, but it can also serve as a source of inspiration to work harder and achieve their academic goals. When students expect their efforts to pay off, they are more willing to invest their time and energy in learning. They tend to view challenges as opportunities for learning and growth rather than obstacles that cannot be overcome. This positive attitude can lead to a virtuous cycle and improve students' psychological well-being. Therefore, in general, it can be said that optimism acts as a protective factor that can help students cope with the pressures and challenges of life and allows them to look at their experiences with a more positive outlook. This positive attitude can play a huge role in students' psychological health and well-being (Mead et al., 2021; Mohammadi, 2021; Nasiri, 2022).

The research data analysis results indicated that 35 percent of the changes in psychological well-being can be attributed to human agency and optimism. Both human agency and optimism play a role in explaining the variance of psychological well-being. This finding aligns with previous studies by Ashournejad et al., 2017; Ashournezad, 2018; Bromfield, 2022; Heydari, 2019; Hossain et al., 2023; Lehnert, 2021; Mead et al., 2021; Mohammadi, 2021; Nasiri, 2022.

The presence of optimism among students is important, as this positive characteristic can help them withstand academic and social pressures and persevere in pursuing their objectives. Optimism is also linked to self-acceptance and personal development. Optimistic students typically embrace themselves, including their strengths and weaknesses, and use this self-acceptance as a foundation for personal growth and advancement. They are more inclined to look for opportunities to enhance their skills and capabilities and actively seek out experiences that promote their personal development (Heydari, 2019; Hossain et al., 2023). When fostering positive relationships with others, optimism aids students in cultivating healthier and more productive connections with their peers, instructors, and families. This optimistic bond can result in inclusion, support, and increased self-assurance. Optimism enables them to adopt a more positive outlook and search for constructive solutions when confronted with conflicts and social concerns. Ultimately, optimism can empower students to gain more command over their surroundings. This control over their environment may involve effective time management, task organization, and future planning. Optimism aids them in maintaining a positive outlook in the presence of obstacles and challenges and encourages them to pursue more innovative solutions to their issues (Ashournezad, 2018; Bromfield, 2022).

In terms of another discovery from the study, it is suggested that agency plays a critical role in the personal growth and adaptation of individuals to their environment. Human agency significantly impacts life functions and circumstances, aiding individuals in

controlling their efforts to achieve their goals and desires (Lehnert, 2021; Mead et al., 2021; Mohammadi, 2021; Nasiri, 2022). Autonomy is supported by human agency, granting individuals the ability to make independent decisions and lead their lives according to personal values, fostering self-confidence and satisfaction. Self-acceptance is also reinforced through human agency, allowing individuals to embrace their true selves and acknowledge strengths and weaknesses. Purpose in life is another crucial aspect of well-being that is enhanced by human agency, as setting and pursuing goals provides a sense of meaning and direction. Personal growth is influenced by human agency, enabling individuals to learn and evolve from experiences and identify new development opportunities (Mohammadi, 2021; Nasiri, 2022). Mastery over the environment is directly linked to human agency, empowering individuals to actively participate in shaping their surroundings and feeling more in control of their living conditions. Overall, the human agency supports students in leveraging their abilities to bring positive changes to their lives, ultimately leading to improved psychological well-being (Lehnert, 2021; Mead et al., 2021).

This study has limitations that should be considered in future studies. The results are limited to high school students in District 3 of the Karaj Education Department, so caution is needed when generalizing to other educational levels. The lack of gender separation may limit the generalization of results to girls and boys separately. Future studies should explore the moderating role of gender. Various methods should be used to encourage honest answers and avoid bias in research. Disruptive demographic variables should be considered. Future studies should examine and control individual differences among subjects. Educational programs focused on developing optimism and personal control should be implemented, especially in elementary and secondary schools.

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