

# A Scoping Review On Optimism: The Concept And Its Measure

Didin Kusuma Jasmani <sup>1</sup>, Annastasia Edianti<sup>2</sup>

{didinkusuma0799@gmail.com<sup>1</sup>, ediati.psi@gmail.com<sup>2</sup>}

Magister of Psychology, Faculty of Psychology, Universitas Diponegoro, Jl. Prof. Mr. Sunario Tembalang, Semarang 50275, Indonesia<sup>1</sup>. Faculty of Psychology, Universitas Diponegoro, Jl. Prof. Mr. Sunario Tembalang, Semarang 50275, Indonesia<sup>2</sup>

**Abstract.** This study aims to describe the concept and measurement of optimism and its relationship with other variables. This study used the keyword search method and the PRISMA checklist in three databases: Pubmed, SCOPUS, and ScienceDirect. From 887 relevant articles, 11 articles that met the inclusion criteria were selected for analysis. The results showed that optimism is a complex and multidimensional concept that can be measured by various scales and measurement tools. One of the most commonly used instruments is the Life Orientation Test Revised (LOT-R) scale, which consists of 10 items and is rated on a 5-point Likert scale. Reliability in this scale is  $\alpha=0.71$ . This study also found significant relationships between optimism and health, work engagement, and self-esteem. However, development and refinement of optimism measurement methods are needed to make it more accurate and reliable.

**Keywords:** Optimism; Measurement; Concept; Scoping Review.

## 1 Introduction

Optimism is a psychological concept that describes positive expectations of the future and the belief that the likelihood of a good outcome outweighs the likelihood of a bad outcome. In recent decades, many researchers have looked at optimism as one of the important components of mental well-being. Optimism is associated with various aspects of physical and mental health, including decreased risk of depression, increased resilience to stress, and improved general well-being [1], [2] .

The concept of optimism has evolved historically, and various theoretical methodologies have been used to explain and measure the concept. Dispositional optimism and learned optimism are the two main literature approaches. One way to measure dispositional optimism is the Life Orientation Test (LOT). According to Scheier and Carver, the LOT indicates stable personality traits that influence one's expectations of the future [1]. On the other hand, the concept of learned optimism, proposed by Martin Seligman, emphasizes how people learn to adopt an optimistic outlook through experience and learning [3] .

In addition, optimism research utilizes various measurement tools to measure the level of optimism of individuals. In addition to the LOT, several additional scales and instruments have been developed to measure optimism in various population and cultural contexts [4]. These measurement tools differ in terms of their validity, reliability, and practical applications, suggesting that understanding the advantages and disadvantages of each measurement tool is crucial.

It is hoped that this review will provide a deep understanding of the concept of optimism, discuss the various theories that have been used to study it, and review the various measurement tools that have been created to measure optimism. As such, this review will provide psychology and mental health researchers and practitioners with a broad understanding of how best to evaluate and apply the concept of optimism in their practice.

## 2 Method

### 2.1. Study design

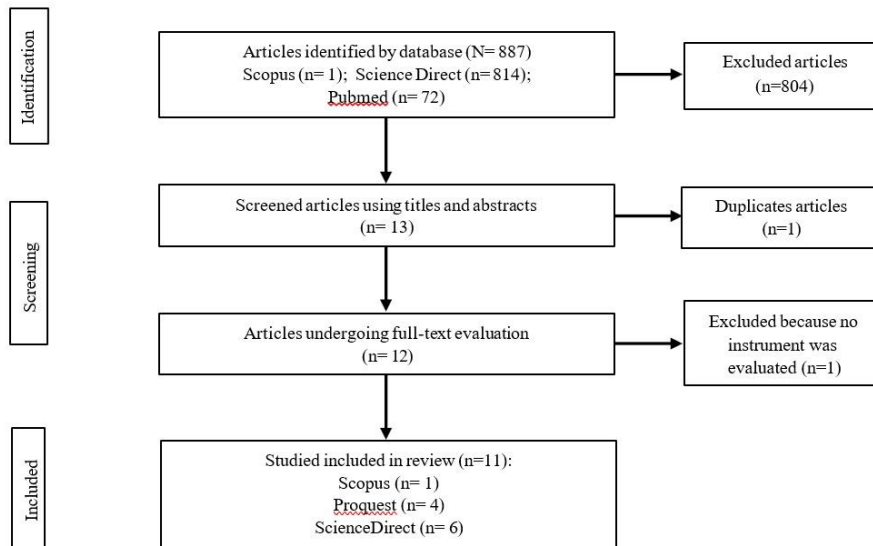
This is a scoping review that was conducted through a literature search on three journal databases, namely Pubmed, SCOPUS and ScienceDirect using keywords relevant to the research topic. Keywords for each database used were presented in Table 1.

**Table 1.** Databases and Keywords

Database	Key words
Pubmed	'optimism' AND 'measurement' AND 'concept'
Scopus	'optimism' AND 'measurement' AND 'concept'
Google Scholar	'optimism' AND 'measurement' AND 'concept'

### 2.2. Procedure

In this study, we applied inclusion criteria to select relevant articles. These inclusion criteria include: 1) Publication period between 2020-2024; 2) Article type focusing on original or empirical studies; 3) Articles written in English. We used the Preferred Reporting Items for Systematic Reviews and Meta- Analyses extension for Scoping Reviews (PRISMA-ScR) guidelines in the article selection process through identification, screening, and eligibility stages. In the initial stage, we defined the main topic and applied the predefined inclusion criteria. Next, we selected pertinent papers by going through the database's article titles and abstracts. After that, we reviewed the full text of the selected articles. A PRISMA diagram illustrating our article selection process is presented in Figure 1 (Fig. 1).



**Fig. 1.** PRISMA flowchart diagram.

### 3 Result

#### 3.1. Data analysis

Based on the initial search using 3 databases, we found 887 potential articles using the keywords: 'optimism' AND 'measurement' AND 'concept'. After removing duplicate articles that did not meet the inclusion criteria, 11 articles were eligible for the literature review.

**Table 2.** Article Review Results

Authors (Year)	Concepts	Instrument	Subject	Results
Ofem, et al (2024)	Academic optimism, as defined by [16], is the belief that academic institutions can assist students in reaching any academic objectives they have established, as well as the support they can receive from	-Academic Optimism and Capital Indicator Scales (AOCIS); 5 items are used for each subscale of academic optimism assessment. -Learning Outcome Scale (LOS); 20	534 senior high school class II students	Students will perform at their best cognitively, emotionally, and psychomotorly if they retain positive social interactions, cultural values and standards, and attitudes. In reality, this research is

	relevant parties to accomplish those objectives. The three key terms that best sum up academic optimism are academic emphasis, faculty confidence, and collective achievement.	items.			crucial in measuring and educational psychology since these modal elements are required for predicted learning results. [5]
Almagro Gil, et al (2024)	- Optimism has become a significant variable in positive psychology, concentrating on what individuals believe will happen in the future [19]. It has demonstrated itself to be protective in relation to a variety of issues and different developing phases [17; 18].	- The 10-item Life Orientation Test-Revised (LOT-R) in Spanish was used to evaluate dispositional optimism [20]. - The 17-item Occupational Hardiness Questionnaire (OHQ) [21]. - Openness to experience has been measured in Spain using the BFI-10 [22]. The BFI-10, according to [23], consists of ten components.	151	nurses in Spain	Openness to experience has positive effects on hardiness and optimism [6]
Furnham, et al (2023)	- Although optimism may alter the course of significant life events, it is a stable characteristic that represents a worldview that expects the best of most difficulties [24]. - Optimism is trait-like and can be reliably measured by a single trait scale item [25].	- Self-esteem: The other four factors: physical attractiveness, physical health, intelligence, and emotional intelligence were rated on a 100-point scale. - Mindset Quiz [26] a 20- item questionnaire that has four groups of items	503	participants: 254 men and 249 women.	1) Older, more devout, but less intellectual men who believed in a just world (BJW) and had better self-esteem were shown to be more optimistic in Study 1. 2) Older and more religious people with higher self-esteem were more optimistic in their studies 2. 3) According to Study 3, such individuals are open,

---

				<p>extroverted, consoling, emotionally stable, religious, have a better sense of self and a low tendency towards negative aggression and detachment, but with high inhibition.</p> <p>4) Based on 4 studies, we have observed younger and more educated individuals, with higher self-confidence, belief in themselves, belief in their stronger personality, and higher optimism. [7]</p>
Pitcho, et al (2024)	<p>Optimism is the subjective belief that positive things will occur in the future. [27].</p> <p>Optimistic people use their optimistic dispositions as self-regulatory attributes that support resilience, self-efficacy, self-esteem, hope, and the capacity to thrive [28].</p>	<p>- Anxiety and depression:</p> <p>(1) The Generalized Anxiety Disorder-7 (GAD-7) scale was used to quantify anxiety symptoms (Diener, 2013).</p> <p>2) The 9-item Patient Health Questionnaire (PHQ-9) was used to evaluate depression and depressed symptoms (D.T.H. Chen, 2021).</p> <p>- Optimism: using the Cantril ladder index [29].</p>	1921 Israeli adult representative participants	<p>Positive correlations were found between the level and variation of food insecurity over time and symptoms of anxiety and depression, while negative fluctuations were found. Over time, optimism was found to reduce the association between food insecurity and anxiety symptoms, but not the association between food insecurity and depressive symptoms. Optimism was found to reduce the association between food insecurity and anxiety and depression in women, but not in men; in married or partnered people, but not in unmarried</p>

---

				people; in people with no parents for anxiety; and in parents for depression. [8]
Li, et al (2023)	Academic optimism, according to [30], is associated with a common mindset among educators that emphasizes the significance of academic accomplishment, that educators can assist kids, and that parents and students may collaborate with educators to support these efforts. - Teacher reflection: Reflective thinking was first defined by [31] as an ongoing, methodical, and intentional process used to challenge or validate a proposition or course of action. - Work Engagement: as a fulfilling and optimistic mental state brought about by commitment, enthusiasm, and focus in work, [34].	- Teachers' academic optimism scale; 11 assertions total, addressing three essential components of: (Academic Emphasis= 4 items), (Teacher's Trust in learners and parents= 4 items), (Teacher Efficacy= 3 items). [32]. - Teacher reflection scale; this questionnaire consists of 29 items that assess five aspects of teacher reflection. [33].	289 university English instructors in Iran	The findings indicated that among UK university instructors, work engagement was strongly influenced by reflective teaching and academic optimism. [9]
Nieto, et al (2022)	According to [35; 36], dispositional optimism is an optimistic outlook that is primarily grounded on a general hope of success [37].	- Maslach Fatigue Inventory General Survey: Consists of 16 items [38; 39]. - Utrecht Work Engagement Scale: Passion, Dedication, and Absorption are the three dimensions	265 workers who look after elderly people in need.	The findings demonstrated that the grounded optimism score accounted for almost half (51%) of the variance in resilience. Burnout was mostly explained by external locus of control (ELC), while resilience and

	<p>that make up the scale. 15 elements (Salanova et al., 2000; Schaufeli et al., 2002; Spanish version).</p> <ul style="list-style-type: none"> <li>- Connor-Davidson Resilience Scale: Consists of 25 items (CD-RISC, Connor &amp; Davidson, 2003).</li> <li>- Grounded Optimism Scale (GOS): Battery of General Expectations of Control Scales- 20 = Three GECs—the subscales measuring consistency, self-efficacy, and success— define the GOS. The personal control theory served as the foundation for the creation of this instrument (Palenzuela, 1987, 1988, 1989; Palenzuela, et al., 1997).</li> </ul>		<p>optimism were the greatest indicators of work engagement. Lastly, the effect of optimism was still important in predicting job engagement even after accounting for the resilience effect. [10]</p>	
Hinz, et al (2023)	<p>Sense of coherence, resilience, and optimism were the three dimensions examined in this study.</p> <ul style="list-style-type: none"> <li>- A global viewpoint that sees the universe and a person's surroundings as something that can be comprehended, controlled, and meaningful is known as coherence [40].</li> <li>- The ability to adjust to circumstances that</li> </ul>	<ul style="list-style-type: none"> <li>- Sense of Coherence Scale-3 (SOC-3); has three items drawn from the 29-item scale. [41].</li> <li>- The six-item Brief Resilience Scale (BRS) gauges a person's capacity to recover from stress. [42].</li> <li>- The 10-item Life Orientation Test (LOT-R) was developed by [43].</li> <li>- EORTC QLQ-</li> </ul>	<p>1108 patients With mixed cancers at a German oncology rehabilitation clinic</p>	<p>When comparing the sick sample to the general population controls, all three resource variables displayed lower levels, with impact values ranging from -0.10 to -0.23. Significant age disparities were seen in the resource factors, and younger patients had larger losses, despite the fact that there were little changes in the resource variables according to sex. The</p>

	jeopardize a system's existence, growth, or	C30 quality of life		resource variables have correlations ranging from 0.53 to 0.61. Sense of coherence and
Moloud, R. (2022)	- Self-esteem refers to the beliefs a person has about his or her worth or value [44]. Contrary to pessimism, optimism arouses pleasant feelings and enhances one's ability to deal with stress and depressive causes [45].	- Rosenberg Self Esteem Scale (RSES); the most popular instrument for evaluating one's own self-worth, with ten items [46] - The 10-item Life Orientation Test Revised (LOT-R) [47].	64 individuals suffering from serious depression.	As a result of the intervention, there were statistically significant differences between the two groups' mean ratings for optimism and self-esteem at three months and six months ( $p < 0.05$ ). Although these ratings gradually declined throughout the three measurement time points following the intervention, compared to before the intervention, the CBGT group's mean optimism and self-esteem scores rose significantly. [12]
Wunderlich et al., (2023)	Dispositional optimism/pessimism is a situation-related psychological construct that refers to a general tendency to anticipate either positive or negative life events. Positive expectations lead to greater patient effort to reach goals, whereas negative expectations determine the opposite [48].	- Life Orientation Test (LOT-R); Ten elements make up the score: three (items 1, 4, and 10) examine optimism; three (items 3, 7, and 9) assess pessimism; and four (items 1-4) assess filler [49]. - KOOS-12 score: include items from the discomfort, functionality, day-to-day activities, and lifespan subscales to assess symptoms and function. [50; 51].	740 total knee arthroplasty patients	Findings indicated that, both before and after surgery, the KOOS-12 mean score was significantly positively associated with optimistic LOT-R (pre-operative: optimistic $p=0.001$ , pessimistic $p=0.001$ ; postoperative optimistic: 3M $p=0.001$ , 6M $p=0.001$ , 12M $p=0.001$ ; postoperative pessimistic: 3M $p=0.01$ , 6M $p=0.004$ , 12M $p=0.001$ ). [13]



De Meza & Dawson, 2021	When someone is extremely optimistic, they tend to overestimate the chance of great things happening and underestimate the chance of bad things happening. This is known as an overly positive prediction tendency. [52; 53].	<ul style="list-style-type: none"> <li>- Optimism: Two items from each wave of the British Household Panel Survey (BHPS) were included in the empirical study. [54].</li> <li>- Psychological well-being: General Health Questionnaire (GHQ) 12 items [55].</li> </ul>	1,601 UK representatives	<p>Unrealistic optimism was defined in this study as the yearly difference over an 18-year period between financial expectations and financial realizations. It had a significant effect: long-term well-being decreased by 21.8% (13.5%) among those with the most pessimistic (optimistic) expectations. These results can be the consequence of poor decision-making and emotional denial brought on by prejudicial ideas. While pessimists believe that despair results from anticipating the best and that pleasure will ultimately triumph when the worst is avoided, optimists may experience eventual disappointment as the dominant emotion during anticipatory sentiments of wishing for the best. Plans that are founded on false ideas will also unavoidably provide worse outcomes to those that are based on reason. [14]</p>
Hashmi, F. (2021)	- To put it literally, self-esteem is the degree to which an individual regards themselves. It is a crucial component in	<ul style="list-style-type: none"> <li>- Self-esteem: Consists of 10 items [58].</li> <li>- LOT-R: consists of 10 items [59].</li> <li>- Self-control:</li> </ul>	429 students from public and private sectors	The results of PLS path analysis show that non-cognitive factors, such as self-control and deliberative thinking,

---

examining how well one understands himself [56].

- As to Carver, Scheier, and Segerstrom's (2010) findings, those who anticipate positive outcomes in life are pessimistic, whereas those who anticipate negative outcomes are optimists.

- Self-control refers to a person's capacity to change an initial reaction to a situation or provide a more appropriate response. This ability helps a person not to react impulsively, so as to maintain more adaptive behavior, [57].

consists of 13 scale items [60].

- Financial behavior: 2 of the items [61].

- Financial well-being: consists of 5 items [62].

are significantly related to financial behavior and financial security. However, self-esteem does not play a significant role in shaping financial behavior, but has a significant relationship with financial well-being. Optimism, on the other hand, has no significant relationship with financial behavior and financial well-being. This study further analyzes the relationship between self-esteem and financial well-being, as well as identifies other factors that influence the role of non-cognitive factors on financial behavior and financial well-being. The PLS-SEM approach was used in this study. [15]

---

## **4 Discussion**

### **4.1. The Concept of Optimism**

This research focuses on describing the concept and measurement of optimism used in various studies that have been reviewed. Based on the table of results of the review of several studies, it was found that optimism is a complex and multidimensional concept that can be measured using various scales and measuring instruments.

Optimism is a very important concept in various disciplines. states that optimism comes from the word “optimism,” which means the condition of always having good hopes. The essence of optimism lies in the way a person thinks when facing problems [3]. With its protective effects on a range of issues and developmental stages, optimism has become a significant variable in positive psychology. It is mostly concerned with what individuals anticipate will happen in the future. [1]

Optimism, a form of personal motivation, reflexes from subjective predictions that good things will happen in the future. As such, optimism is important for living a better, healthier and happier life. Optimists often report reduced psychological stress and use their optimistic tendencies as a self-regulating characteristic that increases their effectiveness, self-esteem, confidence, resilience and ability to thrive. [1]

Of the 11 articles on optimism, there is one study that uses the concept of optimism described by Chopik et al. [7] and there are two studies that explain the concept of optimism stated by Scheier and Carver [11; 13]. There is only one study that uses the concept of optimism adapted from the theory of Aghatabay [12], and there is one other study that uses the concept of optimism from Seligman's theory [6]. In addition, there is 1 study using the concept of academic optimism based on the theory of Hoy et al. [5]. In addition, there is one study that uses the concept of academic optimism according to the theory of McGuigan and Hoy [9]. There is also one study that discusses the concept of dispositional optimism according to the theory of Rotter [10]. Finally, there is one study that discusses the concept of optimism according to Weinstein & Klein's theory [14] and there is one study that discusses the concept of optimism according to the theories of Carver Scheier, and Segerstrom and Puri and Robinson [15].

### **4.2. Measurement of Optimism**

Of the 11 articles found, there are several studies on optimism that use the LOT-R measuring instrument, namely 5 studies [6; 11; 12; 13; 15]. Measuring tools used to measure optimism other than LOT-R include Academic Optimism and Scales (AOS) for 2 studies [5; 9], Optimism using the Cantril ladder index for 1 study [8], Grounded Optimism Scale (GOS) and ELC: Battery of Generalized Expectancies of Control Scales (BEEGC-20) as much as 1 study [10], measurement of Optimism using empirical analysis using two questions asked at each wave of the British Household Panel Survey (BHPS) as much as 1 study [14], measurement using a mindset quiz as much as one study [7].

Measurement of optimism can be done with various instruments. Research [6] used The Life Orientation Test-Revised (LOT-R) instrument, which was created in Spanish (Cano Garcia et al., 2015) and is intended to measure a person's level of pessimism and optimism. The instrument consists of ten statements, which respondents must answer using a Likert scale. The total score ranges between 0 and 24; higher scores indicate greater optimism. The psychometric quality of this instrument has been demonstrated in previous studies (Cano Garcia et al., 2015; Scheir et al., 1994). In this study, 0.71 was the Cronbach alpha value.

The Academic Optimism and Capital Indicator Scales (AOCIS) are another tool that is employed. The six subvariables that comprise AOCIS are academic emphasis, collective self-efficacy, teacher trust, social capital, cultural capital, and family economic capital. Academic optimism gauges how much the school's potential to assist students in reaching their own learning objectives and how much support they can receive from both parents and other students in doing so. Each subscale of academic optimism is assessed using five items [9].

Furthermore, the Grounded Optimism instruments: Battery of Generalized Expectancies of Control Scales- 20, it was created under the principle of personal control (Palenzuela et al., 1997) was used in this study [10]. Grounded optimism is defined by three GECs (Contingency, Self-Efficacy, and Success), while ELC is defined by two GECs: Helplessness and Luck. Both were evaluated using nine points on a Likert scale, scored from 1 to 9. All items from each subscale were combined to obtain a final score. Internal consistency of Cronbach  $\alpha$  subscales ranged between 0.75 and 0.87.

In a study conducted by [8], researchers assessed respondents' optimism towards the future using the Cantril ladder index instrument. Adults' life satisfaction and well-being may be measured with this instrument, which has been proven to be dependable. The scale is widely used in research that aims to capture a person's view of the future and their optimism or hope in both the short and long term. Participants in this study were asked to imagine a ladder where the top represents the best life and the bottom represents the worst life, and indicate where they feel they are right now, after three months and after five years. Due to the rapid and constant changes and stress caused by the COVID-19 pandemic, this evaluation of life happiness in the future was centered around a three-month measure.

### **4.3. Implementation of Optimism**

Optimism implementation is the process of applying an optimistic attitude or positive outlook in everyday life. In this study, the implementation of optimism has a relevant relationship with various variables including health, work engagement, and self-esteem.

#### **4.3.1. Health**

Optimists, disappointment ultimately dominates anticipatory feelings that expect the best, while for pessimists it is depression which is the effect of expecting that will ultimately dominate joy when the worst can be avoided. Also, plans based on inaccurate beliefs are bound to yield worse results than rational expectations [14].

#### **4.3.2. Work engagement**

Reflective teaching and academic optimism were important factors in predicting work engagement among teachers in UK universities [9]. The researchers suggested that institutions could take steps such as creating policies to promote reflective teaching among teachers, as this

has a positive impact on work engagement. The study also highlights the role of academic optimism in improving work engagement, where university leaders can encourage professors to be more engaged by creating a positive environment. University leaders can also enhance professors' sense of academic optimism by distributing leadership responsibilities, power and authority within the university. This not only allows professors to have more opportunities to build trust and contribute to decision-making, but also encourages greater emphasis on academics. Overall, these findings demonstrate the importance of reflective teaching and academic optimism in promoting work engagement among university professors.

#### 4.3.3. Self-esteem

Furnham & Robinson found several findings, including the following: 1) Optimism is higher among older, less intellectual, more devout, and self-reliant men who believe in a just world; 2) Those who are older, more devout, agreeable, emotionally stable, open, extraverted, and religious as well as those who have higher self-esteem and low negative affect and detachment but high disinhibition are also more optimistic; 3) and 4) the most optimistic individuals are those who are older, more devout, have higher self-esteem, and reject the Dweck fixed personality mindset [7].

## 5 Conclusion

Optimism as a way of thinking when facing problems is a very important concept in various disciplines. Optimism becomes a person's need in living a better, healthier, and happier life, because an optimistic attitude is a form of self-motivation. Optimism has a complex and multidimensional concept that can be measured using various scales and measuring instruments. A frequently used measurement of optimism is The Life Orientation Test-Revised (LOT-R). This instrument serves to measure a person's level of pessimism and optimism and consists of 10 question items that respondents must answer on a Likert scale. Although measurement tools such as the LOT-R have been widely used, there is a need to develop and refine the measurement method to make it more accurate and reliable. In addition, in its implementation optimism has a significant relationship with various variables such as, health, work engagement and self-esteem. Further research is needed to better understand how optimism affects various aspects of life and how psychological interventions can improve individual optimism.

**Acknowledgments.** The authors would like to extend to the reviewers for providing thoughtful feedback on the earlier version of this manuscript.

## References

- [1] Scheier, M. F., & Carver, C. S. (1985). Optimism, coping, and health: Assessment and implications of generalized outcome expectancies. *Health Psychology*, 4(3), 219-247. <https://doi.org/10.1037/0278-6133.4.3.219>

- [2] Peterson, C. (2000). The future of optimism. *American Psychologist*, 55(1), 44-55. <https://doi.org/10.1037/0003-066X.55.1.44>
- [3] Seligman, M. E. P. (1991). *Learned Optimism: How to Change Your Mind and Your Life*. New York: Knopf.
- [4] Carver, C. S., Scheier, M. F., & Segerstrom, S. C. (2010). Optimism. *Clinical Psychology Review*, 30(7), 879-889. <https://doi.org/10.1016/j.cpr.2010.01.006>
- [5] Ofem, U. J., Idika, D., Otu, B., Ovat, S. V., Arikpo, M. I., Anakwue, A. L., ... & Effiong, I. E. (2024). Academic optimism, capital indicators as predictors of cognitive, affective, and psychomotor learning outcome among students in secondary school. Hierarchical regression approach (HRA). *Heliyon*, 10(9).
- [6] Gil-Almagro, F., García-Hedrerá, F. J., Carmona-Monge, F. J., & Peñacoba-Puente, C. (2024). A study on optimism as a psychological strength in nurses through a prospective study from the outbreak of the COVID-19 pandemic to two years later. *Brain, Behavior, & Immunity-Health*, 38, 100782.
- [7] Furnham, A., & Robinson, C. (2023). Correlates of self-assessed optimism. *Current Research in Behavioral Sciences*, 4, 100089.
- [8] Pitcho, S., Heller, O., Chun, Y., Schwartz-Tayri, T. M., & Grinstein-Weiss, M. (2024). Optimism in dire times: The buffering role of optimism in the relationship between food insecurity and mental health during the COVID-19 pandemic. *Heliyon*, 10(9).
- [9] Li, F., Mohammaddokht, F., Hosseini, H. M., & Fathi, J. (2023). Reflective teaching and academic optimism as correlates of work engagement among university instructors. *Heliyon*, 9(2).
- [10] Nieto, A., Contador, I., Palenzuela, D. L., Ruisoto, P., Ramos, F., & Fernández-Calvo, B. (2022). The distinctive role of grounded optimism and resilience for predicting burnout and work engagement: A study in professional caregivers of older adults. *Archives of Gerontology and Geriatrics*, 100, 104657.
- [11] Hinz, A., Schulte, T., Ernst, J., Mehnert-Theuerkauf, A., Finck, C., Wondie, Y., & Ernst, M. (2023). Sense of coherence, resilience, and habitual optimism in cancer patients. *International Journal of Clinical and Health Psychology*, 23(2), 100358.
- [12] Moloud, R., Saeed, Y., Mahmonir, H., & Rasool, G. A. (2022). Cognitive-behavioral group therapy in major depressive disorder with focus on self-esteem and optimism: an interventional study. *BMC psychiatry*, 22(1), 299.
- [13] Wunderlich, F., Ghaemi Kerahrodi, J., Kuchen, R., Klonschinski, T., Afghanyar, Y., Wegner, E., ... & Eckhard, L. (2023). Optimism and pessimism are antithetically associated with post-operative knee function in patients' undergoing total knee arthroplasty. *Knee Surgery, Sports Traumatology, Arthroscopy*, 31(9), 3971-3980.
- [14] De Meza, D., & Dawson, C. (2021). Neither an optimist nor a pessimist be: Mistaken expectations lower well-being. *Personality and Social Psychology Bulletin*, 47(4), 540-550
- [15] Hashmi, F., Aftab, H., Martins, J. M., Nuno Mata, M., Qureshi, H. A., Abreu, A., & Mata, P. N. (2021). The role of self-esteem, optimism, deliberative thinking and self-control in shaping the financial behavior and financial well-being of young adults. *Plos one*, 16(9), e0256649.

- [16] W.K. Hoy, J.C. Tarter, A.W. Hoy, Academic optimism of schools: a force for student achievement, *Am. Educ. Res. J.* 43 (3) (2006) 425–446, <https://doi.org/10.3102/00028312043003425>.
- [17] Gallagher, M.W., Long, L.J., Phillips, C.A., 2020. Hope, optimism, self-efficacy, and posttraumatic stress disorder: a meta-analytic review of the protective effects of positive expectancies. *J. Clin. Psychol.* 76 (3), 329–355. <https://doi.org/10.1002/jclp.22882>.
- [18] Rincón Uribe, F.A., Neira Espejo, C.A., Pedroso, J. da S., 2022. The role of optimism in adolescent mental health: a systematic review. *J. Happiness Stud.* 23 (2), 815–845. <https://doi.org/10.1007/s10902-021-00425-x>.
- [19] Scheier, M.F., Carver, C.S., 1985. Optimism, coping, and health: assessment and implications of generalized outcome expectancies. *Health Psychol.* 4 (3), 219.
- [20] Cano-García, F.J., Sanduvete-Chaves, S., Chacón-MoscOSO, S., et al., 2015. Factor structure of the Spanish version of the life orientation test-revised (LOT-R): testing several models. *Int. J. Clin. Health Psychol.* 15 (2), 139–148. <https://doi.org/10.1016/j.ijchp.2015.01.003>.
- [21] Moreno Jiménez, B., Rodríguez Muñoz, A., Garrosa Hernández, E., Blanco Donoso, L.M., 2014. Development and validation of the occupational hardiness questionnaire. *Psicothema* 26 (2), 207–214 doi: psicothema2013.49.
- [22] Rammstedt, B., 2007. The 10-item big five inventory. *Eur. J. Psychol. Assess.* 23 (3), 193–201. <https://doi.org/10.1027/1015-5759.23.3.193>.
- [23] Dominguez-Laraa, S., Merino-Soto, C., 2018. Dos versiones breves del Big Five Inventory en universitarios peruanos: BFI-15p y BFI-10p. *Liberabit* 24 (1), 81–96. <https://doi.org/10.24265/liberabit.2018.v24n1.06>.
- [24] Chopik, W.J., Oh, J., Kim, E.S., Schwaba, T., Krämer, M.D., Richter, D., Smith, J., 2020. Changes in optimism and pessimism in response to life events: Evidence from three large panel studies. *Journal of Research in Personality* 88, 10398 .
- [25] Allen, M.S., Iliescu, D., Greiff, S., 2022. Single Item Measures in Psychological Science: A Call to Action. *European Journal of Psychological Assessment* 38 (1), 1–5. doi: 10.1027/1015-5759/a000699.
- [26] Dweck, C.S., 2012. *Mindset: How You Can Fulfill Your Potential*. London: Constable & Robinson.
- [27] C.S. Carver, M.F. Scheier, Optimism, in: C.R. Snyder, S.J. Lopez (Eds.), *Handbook of Positive Psychology*, Oxford University Press, England, 2002, pp. 231–243.
- [28] C.S. Carver, M.F. Scheier, S.C. Segerstrom, Optimism, *Clin. Psychol. Rev.* 30 (2010) 879–889.
- [29] H. Cantril, *The Pattern of Human Concern*, Rutgers University Press, New Jersey, USA, 1965.
- [30] L. McGuigan, W.K. Hoy, Principal leadership: creating a culture of academic optimism to improve achievement for all students, *Leader. Pol. Sch.* 5 (3) (2006 Sep 1) 203–229.
- [31] J. Dewey, *How We Think. A Restatement of the Relation of Reflective Thinking to the Educative Process*, DC Heath and Company, Boston etc., 1933.
- [32] W.K. Hoy, C.J. Tarter, A.W. Hoy, Academic optimism of schools: a force for student achievement, *Am. Educ. Res. J.* 43 (3) (2006) 425–446.

- [33] X. Xiaojing, E. Badakhshan, J. Fathi, Exploring teacher reflection in the English as a foreign language context: testing factor structure and measurement invariance, *Front. Psychol.* 12 (2022 Feb 10) 6708.
- [34] W.A. Kahn, Psychological conditions of personal engagement and disengagement at work, *Acad. Manag. J.* 33 (4) (1990 Dec 1) 692–724.
- [35] Carver, C. S., & Scheier, M. F. (2014). Dispositional optimism. *Trends in Cognitive Sciences*, 18(6), 293–299. <https://doi.org/10.1016/j.tics.2014.02.003>.
- [36] Scheier, M. F., Carver, C. S., & Bridges, M. W. (2001). Optimism, pessimism, and psychological well-being. In E. C. Chang (Ed.), *Optimism & pessimism: Implications for theory, research, and practice* (pp. 189–216). American Psychological Association. <https://doi.org/10.1037/10385-009>.
- [37] Rotter, J. B. (1954). *Social learning and clinical psychology* (pp. ix, 466). Prentice-Hall, Inc. <https://doi.org/10.1037/10788-000>
- [38] Schaufeli, W. B., Leiter, M. P., Maslach, C., & Jackson, S. E. (1996). *The Maslach Burnout Inventory: General Survey (MBI-GS)*. In *Maslach Burnout Inventory Manual*. (pp. 19- 26). Consulting Psychologist Press.
- [39] Salanova, M., Schaufeli, W. B., Llorens, S., Peiro, J. M., & Grau, R. (2000). Desde el burnout al engagement: ¿una nueva perspectiva? *Revista de psicología del trabajo y de las organizaciones*, 16(2), 117–134.
- [40] Antonovsky, A. (1993). The structure and properties of the sense of coherence scale. *Social Science and Medicine*, 36(6), 725–733. doi:10.1016/0277-9536(93)90033-Z.
- [41] Schmalbach, B., Tibubos, A. N., Zenger, M., Hinz, A., & Brähler, E. (2020). Psychometrische Evaluation und Normwerte einer Ultrakurzform der Sense of Coherence Scale “SOC-3” [Psychometric evaluation and norm values of an ultra-short version of the Sense of Coherence Scale “SOC-3“]. *Psychotherapie Psychosomatik Medizinische Psychologie*, 70(2), 86–93. doi:10.1055/a-0901-7054.
- [42] Kunzler, A. M., Chmitorz, A., Bagusat, C., Kaluza, A. J., Hoffmann, I., Schäfer, M., & Lieb, K. (2018). Construct validity and population-based norms of the German Brief Resilience Scale (BRS). *European Journal of Health Psychology*, 25(3), 107–117. doi:10.1027/2512-8442/a000016.
- [43] Hinz, A., Schulte, T., Finck, C., Gomez, Y., Brähler, E., Zenger, M., & Tibubos, A.-N. (2022). Psychometric evaluations of the Life Orientation Test-Revised (LOT-R), based on nine samples. *Psychology and Health*, 37(6), 767–779. doi:10.1080/08870446.2021.1892111.
- [44] Negovan V, Sterian M, Martin OP. Interparental Relationships and Preparatory Class Children’s Self-Esteem and Self-Efficacy. *Procedia Soc Behav Sci.* 2015;187:637–41.
- [45] Aghatabay S, Sepahmansour M, Hatami M, Rafieipour A. The Effect of Optimism Training on Emotional Problems and Life Satisfaction in Patients with Myocardial Infarction. *International Journal of Applied Behavioral Sciences.* 2019;6(4):51–9.
- [46] Rosenberg M. Rosenberg self-esteem scale (RSE). *Acceptance and Commitment Therapy. Measures Package*, 61. Society and the adolescent self-image. 1965.



- [47] Herzberg PY, Glaesmer H, Hoyer J. Separating optimism and pessimism: A robust psychometric analysis of the Revised Life Orientation Test (LOT-R). *Psychol Assess.* 2006;18(4):433.
- [48] Scheier MF, Carver CS, Bridges MW (1994) Distinguishing optimism from neuroticism (and trait anxiety, self-mastery, and self-esteem): a reevaluation of the Life Orientation Test. *J Pers Soc Psychol* 67:1063-1078.
- [49] Glaesmer H, Rief W, Martin A, Mewes R, Brahler E, Zenger M et al (2012) Psychometric properties and population-based norms of the Life Orientation Test Revised (LOT-R). *Br J Health Psychol* 17:432-445
- [50] Eckhard L, Munir S, Wood D, Talbot S, Brighton R, Walter B et al (2021) The KOOS-12 shortform shows no ceiling effect, good responsiveness and construct validity compared to standard outcome measures after total knee arthroplasty. *Knee Surg Sports Traumatol Arthrosc* 29:608-615.
- [51] Gandek B, Roos EM, Franklin PD, Ware JE (2019) Item selection for 12-item short forms of the Knee injury and Osteoarthritis Outcome Score (KOOS-12) and Hip disability and Osteoarthritis Outcome Score (HOOS-12). *Osteoarthr Cartil* 27:746-753.
- [52] Weinstein, N. D. (1980). Unrealistic optimism about future life events. *Journal of Personality and Social Psychology*, 39, 806–820.
- [53] Weinstein, N. D., & Klein, W. M. (1996). Unrealistic optimism: Present and future. *Journal of Social and Clinical Psychology*, 15, 1–8.
- [54] Brown, S., & Taylor, K. (2006). Financial expectations, consumption and saving: A microeconomic analysis. *Fiscal Studies*, 27, 313–338.
- [55] Banks, M. H., Clegg, C. W., Jackson, P. R., Kemp, N. J., Stafford, E. M., & Wall, T. D. (1980). The use of the General Health Questionnaire as an indicator of mental health in occupational studies. *Journal of Occupational Psychology*, 53, 187–194.
- [56] Mischel W, Ebbsen EB, Raskoff Zeiss A. Cognitive and attentional mechanisms in delay of gratification. *J Pers Soc Psychol.* 1972; 21(2):204–18. <https://doi.org/10.1037/h0032198>
- [57] Baumeister RF. Purchasing, Impulsive Behavior, Consumer. *J Consum Res Inc.* 2002; 28(4):670–6.
- [58] Rosenberg M. Society and the adolescent self-image. Society and the Adolescent Self-Image. Princeton University Press; 1965.
- [59] Scheier MF, Carver CS, Bridges MW. Distinguishing Optimism From Neuroticism (and Trait Anxiety, Self-Mastery, and Self-Esteem): A Reevaluation of the Life Orientation Test. *J Pers Soc Psychol.* 1994; 67(6):1063–78. <https://doi.org/10.1037//0022-3514.67.6.1063>
- [60] Tangney JP, Baumeister RF, Boone AL. High self-control predicts good adjustment, less pathology, better grades, and interpersonal success. *J Pers.* 2004; 72(2):271–324. <https://doi.org/10.1111/j.0022-3506.2004.00263.x>
- [61] Dew J, Xiao JJ. The financial management behavior scale: Development and validation. *J Financ Couns Plan.* 2011; 22(1):43–59.
- [62] Netemeyer RG, Warmath D, Fernandes D, Lynch JG. How Am i Doing? Perceived Financial Well-Being, Its Potential Antecedents, and Its Relation to Overall Well-Being. *J Consum Res.* 2017; 45(1):68–89.