International Journal for Multidisciplinary Research (IJFMR)
E-ISSN: 2582-2160 ● Website: www.ijfmr.com ● Email: editor@ijfmr.com

Relationship Between Hope and Metacognition

Mariyam[1], Ms. Janki Kumari[2], Sonia Tyagi[3], Tanisha Agarwal[4], Abha Shree Pandey[5], Monal Biswal[6]

[1]Student, Amity University Greater Noida Campus
[2,3,4,5,6]Assistant Professor, Amity University Greater Noida Campus

Abstract

This study aims to explore the relationship between hope and metacognition among young adults, contributing to the understanding of how positive psychological constructs influence cognitive processes. Hope, defined as a motivational state involving agency and pathways thinking, has been linked to better cognitive strategies and self-regulation, both of which are central to metacognition. A total of 100 participants (50 males, 50 females) aged 18-25 were selected through convenience sampling. Data was collected using the Metacognition Self-Assessment Scale (MSAS) and the Adult Hope Scale (AHS). The MSAS assessed participants' metacognitive abilities, including self-awareness, regulation, and control over cognitive processes, while the AHS measured pathways and agency thinking. Pearson correlation analysis was conducted to examine the relationship between the two constructs. The analysis revealed a positive correlation between hope and metacognition, suggesting that individuals with higher levels of hope tend to exhibit stronger metacognitive abilities. This relationship supports the hypothesis that hope acts as both a motivational driver and cognitive enabler for metacognitive engagement. The findings highlight that hope may enhance metacognitive skills such as reflective thinking, self-monitoring, and goal setting, particularly in educational contexts. The study underscores the potential of fostering hope to improve metacognitive abilities in young adults.

KEYWORDS: Hope, Metacognition, Young Adults, Agency Pathways Thinking, Cognitive strategies, Self-regulation, Adult Hope Scale, Metacognition Self-Assessment Scale.

1. INTRODUCTION

The relationship between hope and metacognition is an emerging area of interest in psychology, I exploring how individuals' awareness and control over their thinking (metacognition)interact with their sense of hope. Both hope and metacognition are critical for motivation, problem-solving, and overall psychological well-being. Hope is generally understood as the ability to set and pursue goals with a positive outlook, involving both the drive (agency) and the strategies (pathways) needed to achieve those goals. Metacognition, on the other hand, involves the awareness and regulation of one's cognitive processes, including the ability to plan, monitor, and evaluate one's thoughts and actions. Understanding the link between hope and metacognition is key to explaining how people handle challenges. Metacognitive skills allow individuals to reflect on and adjust their thinking strategies, aligning well with the hopeful mindset that enables them to find multiple ways to overcome obstacles. High levels of hope may improve metacognitive functioning by increasing confidence in one's ability to think critically and stay persistent in solving problems. At the same time, strong metacognitive abilities can support hope by

providing people with the tools to manage their emotions, maintain focus, and sustain belief in their capacity to reach their goals. By studying the connection between hope and metacognition, researchers can gain insights into how these two factors work together to build resilience, achieve goals, and foster personal growth in areas of education, career development, and mental health.

Hope: Hope is a complex psychological concept that plays a crucial role in motivating people, helping them cope with challenges, and contributing to their overall well-being. At its core, hope is not just about having a general expectation that things will turn out well, but rather it involves actively striving toward goals with both motivation and strategic planning. Unlike optimism, which is more of a broad expectation that positive outcomes will happen, hope focuses on the belief that we have the ability to achieve specific goals. According to Snyder (1994), hope is a motivational state that is driven by two key components: agency and pathways. Agency is the belief in one's ability to take action and keep working toward a goal, while pathways refer to the ability to come up with different strategies or routes to reach that goal, even if challenges arise. Essentially, hope involves a balance of willpower and problem-solving. People with high levels of hope tend to be more resilient when facing difficulties because they can create alternative solutions, stay motivated, and continue working toward their goals even in tough situations. There are several important theories that understand the concept of hope and how it influences our lives. One of the most well-known is Snyder's Hope Theory, which breaks hope down into two main components: agency and pathways. Agency is the belief in our ability to take action and work towards our goals, while pathways are the strategies we come up with to reach those goals. According to Snyder, having both agency and pathways is crucial for experiencing hope effectively. In Erik Erikson's psychosocial development theory, hope is seen as the first essential virtue that develops in infancy. If infants learn to trust their caregivers, they develop hope for the future, which sets the stage for healthy emotional development. Herth's Hope Theory emphasizes the importance of hope in healthcare settings, especially for patients facing serious illness. Herth identifies three key components of hope: cognitive (how we think about our goals), behavioral (the actions we take to achieve those goals), and contextual (how our environment and support systems influence our hope). the social constructivist approach proposed by Averill and others suggests that hope is shaped by social and cultural factors, meaning our relationships and environment play a significant role in how we experience hope. Overall, these theories show that hope is a dynamic and multifaceted concept that helps us navigate challenges and pursue our goals in various aspects of life. In Dufault and Martocchio's Multidimensional Model of Hope, which highlights that hope can be both general and specific. Generalized hope is about having an overall positive outlook on life, while particularized hope focuses on specific goals, like wanting to succeed in a particular class.

Metacognition: Metacognition is the aware and understanding of one's own thought processes, often described as "thinking about thinking." It has two components: metacognitive knowledge and metacognitive regulation. Metacognitive knowledge involves awareness of one's cognitive abilities, strategies for learning, and understanding how and when to use these strategies effectively. Metacognitive regulation is the ability to monitor, , and adjust cognitive processes throughout the learning experience. This includes planning how to approach a task, assessing one's progress, and making necessary changes to strategies when faced with challenges. Overall, metacognition plays a crucial role in enhancing learning and problem-solving skills, empowering individuals to reflect on and improve their thinking processes for better outcomes. Flavell (1978) was the first to define metacognition when he said it was "knowledge that takes as its object or regulates any aspect of any cognitive endeavor." Baker and Brown (1984) later modified their definition of metacognition claiming that it is "an awareness of what skills, strategies, and

resources are needed to perform a task effectively; and the ability to use self- regulatory mechanisms to ensure successful completion of a task" (p. 345).Although, originally, Flavell used the term metacognition to describe the awareness "of knowing'' in relation to memory, more recently Babbs and Moe (1983), based on the preceding theoretical work of Flavell, Baker and Brown, have presented a model for metacognition related specifically to the reading task. As a metacognitive skills because they can be consciously invoked by the reader to aid in focusing on the important content in monitoring comprehension" (p. 423). Babbs and Moe (1983) claim the advantage in viewing these reading skills metacognitively is that the reader must assume more responsibility for this knowledge and control. According to the classic models, metacognition primarily consists of metacognitive knowledge (a declarative component) and regulation (a procedural component). Metacognitive knowledge refers to the knowledge about cognitive tasks, strategies and knowledge learners possess about themselves and people (Flavell, 1979). Regulation refers to the monitoring and control of one's cognitive processes during learning (Nelson & Narens, 1990). In addition to these two prime components, recent findings show that metacognitive knowledge requires competence in using it (Corsale & Ornstein, 1980; Schneider, 1985). Use of learning strategies is certainly a necessary component. Another major component is evaluation of or reflection on the result of one's learning, and experience. This metacognitive activity is an overall judgement of the product of a learning experience. It provides feedback to the learner on the selection and use of strategies leading to the refinement of one's metacognitive knowledge (Flavell, 1979; Schunk & Ertmer, 1999). Research shows that all these metacognitive components develop with age. Children show a developmental trend in understanding the effects of task difficulty and strategy use on memory performance and that, by age 11 or 12, knowledge of most facts about memory is well developed (see Schneider & Lockl, 2002). Children of 10 and 12 years old have been found to be more able to regulate their learning by devoting more time to studying hard items than easy items when compared to 6- and 8-year-old children (Dufresne & Kobasigawa, 1989). The 10-year-olds did better than 7-year-olds in judgements of learning (Pressley et al., 1987) and ease of learning judgements improved from young to late elementary school years (Schneider et al., 1990). The 11- to 12-year- olds were more likely to reflect on their own performance and evaluate or control their cognitive abilities compared to 7- to 8-year-olds (Schunk & Rice, 1987). A whole host of research studies has shown the importance of metacognitive competencies in learning, Koriat et al. (2001) found that although older children outperformed younger ones, young children (8-year-olds) could also produce an accurate record of past events when they were explicitly motivated to do the task. Similarly,

2. LITERATURE REVIEW

Razani et al (2024) This study explores the effectiveness of Cognitive-Behavioral Therapy (CBT) and Metacognitive Therapy (MCT) in enhancing hope among patients with obsessive-compulsive disorder (OCD). The research utilized a semi-experimental design with a pre-test-post-test-follow-up plan and included 45 patients from psychological counseling centers in Tehran, randomly assigned to CBT, MCT, or a control group. Using the Miler Hope Scale, ensuring validity and reliability through established methods. Results indicated that both CBT and MCT significantly improved hope in patients ($P<0.01$), with no significant difference between the two therapies. The findings suggest that both therapeutic approaches are effective in enhancing life expectancy and overall outlook for patients with OCD, recommending their implementation in clinical practice.

Obando et al. (2024) Exploring the Relationship of Hope, Metacognition, and the Practices of L2 Teachers

During COVID-19 Gabriel Obando's 2024 study at Florida State University examined how the COVID-19 pandemic impacted foreign language teachers' practices, focusing on hope, metacognition, and teaching strategies. It explored how hope, defined as goal-setting and perseverance, influenced teachers' experiences and classroom dynamics during the pandemic.

Thomas et al (2022) This article aims to promote an integrative approach to studying metacognition, connecting it with related constructs like motivation and affect to address gaps in understanding. While the article does not involve specific participants or scales, it highlights the need for combining methodologies from subfields such as cognitive psychology, educational psychology, and emotion research. The result is a framework that encourages studying metacognition alongside meta-affect, offering a more comprehensive view of how individuals monitor and control their mental processes.

Akbari et al. (2022) Research highlights hope as crucial for mental health, with hopeful individuals less likely to face depression or physical issues. Self-esteem has also emerged as a critical factor in mental health, while life satisfaction reflects individuals' outlook on their future. Additionally, motivation progress plays a significant role in psychological well-being.

Gorichanaz et al. (2022) This study identifies four types of information sources that foster hope: shaping beliefs about past or future events, stimulating moral imagination, igniting desire for moral outcomes, and aiding metacognition. By highlighting these, it suggests a role for information professionals in enhancing hope, particularly during difficult times, and calls for further research into optimizing information behavior to support hopefulness.

Benjamin W. Corn et al.(2020) This study explores hope in oncology, focusing on its impact on cancer outcomes and quality of life. The purpose is to examine hope as a therapeutic target and how it can be influenced by personality, environment, physiological factors, and the disease process. The review includes studies showing hope as a mediator of outcomes and the effects of hope-enhancing therapies. The authors suggest further research to explore how boosting hope can improve both survival rates and the well-being of cancer patients. Participants were cancer patients, and results indicate hope may positively affect oncological outcomes.

F.Molin (2020) This study examines the effects of formative feedback on metacognitive skills among 633 Dutch secondary school physics students using polling technology. The results reveal that cooperative feedback, involving both peer discussions and teacher input, significantly improves metacognitive skills and motivation, particularly for students with low initial skills. Individual feedback yielded no substantial benefits, although girls in this group showed some improvements. Overall, combining peer and teacher.

Georgia et al. (2019) This study examined students' use of metacognitive knowledge and regulation affects their performance in language and mathematics, and how hope influences self-efficacy and metacognition. Data from 165 fifth and sixth graders in Greek primary schools revealed moderate use of conditional metacognitive knowledge and monitoring. Pathway thinking improved self-efficacy and its impact on metacognition, while agency thinking was a key predictor of performance. General self-efficacy mediated the relationship between metacognition and performance, and hope directly influenced performance beyond these factors. The findings offer useful insights for educational practices and future research.

González, A. et al (2017) This study investigates the relationships between emotions in a physics classroom—specifically.The purpose is to understand how these factors interplay to influence learning outcomes among students. Data were collected from 520 grade 11 Spanish students, with a gender distribution of 54.7% girls. The researchers employed structural equation modeling (SEM) and bootstrap procedures to analyze direct and mediated relationships among the variables. The findings indicate

negatively and positively influences metacognitive strategies and performance. Additionally, metacognitive strategies were shown to positively predict performance. The study also confirmed significant mediated relationships among these factors, suggesting important implications for physics teaching and learning, as well as potential avenues for future research.

Özsoy,G.et al (2017)This study examines the relationship between metacognition level of students in Turkey. The purpose of the research is to understand how metacognitive knowledge and skills correlate with students' approaches to studying. Utilizing a sample of 221 participants—125 females and 96 males—enrolled in six public primary schools, the study employed appropriate scales to measure metacognition, study habits, attitudes, and orientation. The results indicate a medium positive relationship between metacognitive knowledge and skills Notably, findings revealed that there is no significant relationship between metacognition and study habits and attitudes for low and medium achievers, while a significant relationship was found for high achievers.

Stephen M et al (2014) This study investigates how to quantitatively measure metacognition by examining the relationship between individuals' confidence and their accuracy in cognitive tasks like perception and memory. Its aim is to establish reliable measures of metacognitive sensitivity—how accurately individuals assess their judgments—while reducing the impact of response biases typical of traditional statistical methods, such as Pearson's r. Participants complete various cognitive tasks, allowing researchers to differentiate between metacognitive bias, sensitivity, and efficiency. The findings suggest that metacognitive sensitivity effectively indicates a person's ability to distinguish correct from incorrect judgments, while metacognitive efficiency reveals the effectiveness of cognitive processing at a specific performance level. Overall, this research enhances our understanding of metacognition and its role in cognitive psychology.

Papantoniou et.al (2013)This study examined how the cognitive components of hope—pathways thought and agency thinking—affect self-regulated learning (SRL) strategies and course attainment, independent of volitional traits like disengagement, initiative, and persistence. A total of 275 undergraduate students participated, using the Adult Dispositional Hope Scale (ADHS), Action Control Scale (ACS-90), and the Learning Strategies Scales from the Motivated Strategies for Learning Questionnaire (MSLQ). Course grades were used to measure attainment. The results showed that hope components predicted the use of most learning strategies, with disengagement and initiative linked to time management and effort regulation, while persistence and pathways thought contributed to course success.

Emily et al (2011) The purpose of this study is to explore the relationship between critical thinking skills and specific outcomes, particularly in contexts such as evaluating and problem-solving in real-world situations. This study investigates how individuals, including participants with diverse backgrounds, apply critical thinking components like reasoning, judgment, and decision-making when faced with complex scenarios. By using scales designed to measure critical thinking dispositions and competencies, researchers aim to assess the influence of background knowledge, cognitive skills, and dispositions on critical thinking performance. Findings suggest that fostering open-mindedness, flexibility, and a willingness to consider various perspectives enhances critical thinking outcomes. Additionally, the study examines how explicit instruction, cooperative learning methods, and authentic assessments influence critical thinking development, with results indicating that structured guidance and real-world application can improve participants' ability to reason, support judgments, and arrive at informed decisions.

F. Holtslander et al.(2008)This study uses Carper's ways of knowing (empirics, esthetics, personal knowing, and ethics) to guide research on hope in bereaved palliative caregivers. The purpose is to explore

how different types of knowledge can help address the unmet needs of these caregivers during their grief. Empirical research looks at hope as a factor in resolving grief, while esthetic and personal knowing guide qualitative studies. Ethical knowing highlights the moral responsibility to evaluate care practices. The study emphasizes the importance of using various research perspectives to improve evidence-based practice in nursing for caregivers.

Dunlosky, J. et al (2008) The study examines both theoretical and empirical research in various psychological fields, addressing key questions that drive metacognitive research. Its purpose is to define the scope of metacognition, cover its historical origins, and present both established theories and unresolved questions in the field. The text includes practical applications through "Application" boxes, introduces unanswered questions via "Mystery" boxes, and provides demonstrations for students, such as the tip-of-the-tongue experience. Designed for undergraduate cognitive psychology students and advanced researchers, the book serves as both an educational resource and a comprehensive handbook on metacognitive processes.

Edwards et al.(2007) In "Understanding Hope" by Edwards, Rand, Lopez, and Snyder, the focus is on Snyder's hope theory, which measures hope using tools for children and adults. The research discusses the usefulness of hope in different life areas and the reliability of these measurement tools. Both works highlight the importance of studying hope for better mental health outcomes.

Coutinho, S. A. (2006) This study examined the relationship between the need for cognition, defined as the tendency to engage in effortful cognitive activity, and metacognition which is one's thinking about thinking and how these variables relate to intellectual task performance. Participants completed measures of need for cognition, metacognition, and problem-solved GRE analytical items. There was a significant correlation between the need for cognition and metacognition. However, only the need for cognition was a significant predictor of intellectual task performance.

J Wilson et al (2004) This study examines the role of metacognition in mathematical problem-solving and learning, highlighting the need for promoting metacognitive activity. The researchers aim to achieve four goals: describing a multi-method technique for studying students' mathematical metacognition, outlining a coherent model of metacognition in this domain, Participants include students engaged in mathematics learning, and various assessment tools are utilized to collect data. Findings underscore the importance of metacognitive awareness in enhancing problem-solving abilities and offer strategies for integrating metacognitive skills into mathematics education.

C.R. Synder (2002) The Adult Hope Scale (AHS) assesses Snyder's cognitive model of hope, which defines it as a motivational state involving goal-directed energy (agency) and planning (pathways). Comprising 12 items—four each for pathways and agency, plus fillers—the scale uses an 8-point response format and takes only a few minutes to complete. For more details, see Snyder (2002).

J.Hartman et al.(2001) The book explores both teaching and learning contexts, with contributions from leading experts on domain-general and domain-specific aspects, including applications in reading, speaking, mathematics, and science. Organized into sections on students' learning, motivation, culture, and teachers' instructional metacognition, it covers theory, research, and practice across all educational levels.

4. METHODOLOGY

4.1 Objective:

To understand the relationship between hope and metacognition in young adults. The study is to explore the relationship between hope and metacognition in young adults. A total of 74 participants, aged between 18 to 25 years, will be selected using convenience sampling. Data collection will be conducted online through a Google Form survey. Participants will complete the Metacognition Self-Assessment Scale (2017), which is designed to evaluate various aspects of metacognitive awareness and regulation. The Metacognition self–assessment scale (30 item, five Likert scale) and Adult hope scale (12 items, eight-point Likert scale) were used for assessment. The data were pooled for 100 participants and correlation was used for analysis.

4.2 Hypothesis

There will be a significant relationship between metacognition and hope in young adults

4.3 Data Collection

The study involves 74 participants, all fluent in English whose age ranges between 18 to 25 years. Participation will be entirely voluntary, with informed consent obtained from each participant.

4.4 Tools description

The Metacognition Self-Assessment Scale (MSAS) by Pedon et.al (2017) is designed to evaluate metacognitive abilities. It typically consists of around 30 items. The MSAS has demonstrated strong construct validity, effectively measuring metacognitive skills, and exhibits robust internal consistency, often reflected in high Cronbach's alpha values ranging from 0.80 to 0.90 indicating reliable and consistent scores .The scale is a tool used to evaluate an individual's metacognitive abilities, which include self-awareness, regulation, and control over one's cognitive processes.

The Adult Hope Scale (ADHS) by Snyder et al. (1991) is a 12-item tool designed to measure hope as a psychological construct. It has demonstrated strong construct validity, confirming its effectiveness in assessing hope. Additionally, the scale shows good reliability, with high internal consistency often reflected in Cronbach's alpha values, ensuring stable and consistent measurements. Participants respond to each item using a 8-point Likert scale ranging from 1= definitely false to 8=definitely true.

4.5 Procedure

The study is to explore the relationship between hope and metacognition in young adults. A total of 74 participants, aged between 18 to 25 years, will be selected using convenience sampling. Data collection will be conducted online through a Google Form survey. Participants will complete the Metacognition Self-Assessment Scale (2017), which is designed to evaluate various aspects of metacognitive awareness and regulation. The Metacognition self–assessment scale (30 item, five likert scale) and Adult hope scale (12 items, eight point Likert scale) were used for assessment. The data were pooled for 100 participants and correlation was used for analysis.

5. RESULT AND INTERPRETATION

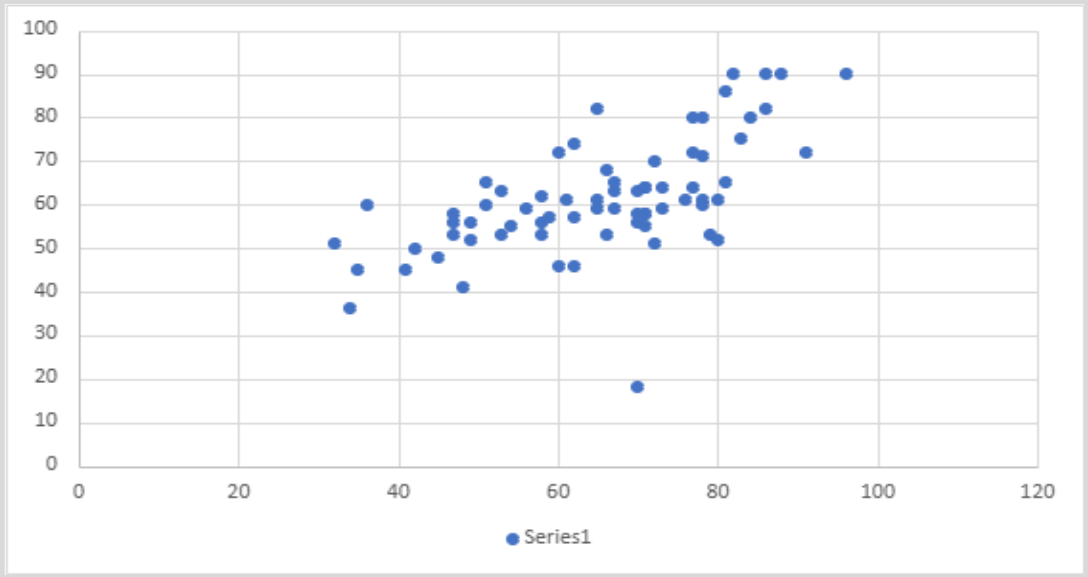
Table 1: Descriptive Statistics, Correlation between Metacognition and Hope

	Mean	SD	Correlation
Hope Score	51.5	2.757	0.616
Metacognition Score	53	2.828	

The Pearson correlation coefficient between the "Total Hope Score" and the "Total Metacognition Score" is 0.616($p<.01$). This indicates a moderate positive correlation between hope and metacognition. As hope increases, metacognition also tends to increase and vice versa.

The figure below depicts the same relationship.

Figure 1: Relationship between hope and metacognition



Discussion

This study aimed to explore the relationship between hope and metacognition among young adults, hypothesizing a significant correlation between the two variables. The results of the Pearson correlation analysis indicated a positive relationship ($r = 0.616$, $p < 0.01$), suggesting that individuals with higher levels of hope also exhibit stronger metacognitive abilities. This finding aligns with Snyder's (2002) Hope Theory, which posits that hope encompasses agency and pathways thinking, essential for goal-directed behavior. Consistent with previous literature, such as Georgia et al. (2019), which highlights the role of hope in enhancing self-efficacy and metacognitive strategies, our study contributes to the understanding of how positive psychological constructs influence cognitive processes. The results suggest that hopeful individuals engage more in reflective thinking, self-monitoring, and effective planning, essential aspects of metacognition. However, the study's limitations, including a relatively small sample size and reliance on self-report measures, highlight the need for future research to explore objective assessments and potential mediators of the relationship, such as self-efficacy or emotional regulation. Overall, these findings have significant implications for educational and psychological interventions, indicating that fostering hope could enhance metacognitive skills and promote better academic outcomes. Feldman & Dreher (2012) hopeful individuals demonstrated stronger planning, monitoring, and self-assessment—components of metacognition. This study is closely aligned with your findings, emphasizing the role of hope in promoting effective cognitive strategies hope enhances metacognitive abilities such as goal-setting and self-regulation, particularly in academic contexts. It highlights the motivational aspects of hope (such as agency and pathway thinking) that promote better cognitive functioning. Tarricone (2011) - The Role of Metacognition in Learning Tarricone's work provides a broad overview of how metacognitive skills,

such as planning, monitoring, and evaluating one's cognitive processes, are essential for learning. While the study doesn't focus explicitly on hope, it explores the role of motivation in engaging metacognitive strategies. Tarricone argues that individuals who are motivated (including by hope) are more likely to use metacognitive strategies effectively. Although the study focuses primarily on metacognition, it can provide a strong theoretical framework to link motivation (in your case, hope) to cognitive regulation, further supporting the connection between the two concepts. Gallagher et al. (2020) - Hope, Optimism, and Metacognitive Reflection in Adolescents explored the relationship between hope, optimism, and metacognitive reflection among adolescents. It found that higher levels of hope were significantly with better self-reflection and cognitive monitoring, that hope is a cognitive and motivational driver for metacognitive engagement. Adolescents with higher hope tended to set clearer goals and used reflective thinking to adjust their approaches. Gallagher et al.'s study extends your findings by exploring hope and metacognition in adolescents, providing insights into the developmental aspects of these constructs. It also reinforces the idea that hope supports not only motivation but also cognitive engagement in self-regulated learning. One possible explanation for the observed correlation between hope and metacognition is that individuals who are more hopeful are likely to engage in proactive self-regulation. Hopeful individuals may be more inclined to set clear goals, develop strategies to achieve them, and monitor their progress along the way. These behaviors are inherently metacognitive in nature, as they require the individual to reflect on their thinking, plan effectively, and make adjustments as needed. In this sense, hope acts as both a motivational driver and a cognitive enabler, helping individuals to not only persevere toward their goals but also refine their strategies to improve outcomes. This explanation is supported by previous research, two key components of metacognition. Moreover, hope may instill a greater sense of agency, which is crucial for the development of metacognitive skills. Agency, as a component of hope, empowers individuals to believe in to take control of their learning and problem-solving processes. This sense of control is closely tied to metacognition, as it involves an individual's ability to regulate their cognitive processes, set goals, and monitor their progress. As such, the findings from this study suggest that the development of hope in young adults may have far-reaching implications for enhancing their cognitive abilities, particularly in educational and academic contexts. Self-report scales may miss important aspects of metacognitive abilities that could be better captured through objective measures, like task-based evaluations. This limitation suggests that future research should use a more well-rounded approach to assessing metacognition, which might offer a deeper understanding of how hope affects cognitive processes. Additionally, the analysis did not consider potential confounding factors like personality traits, socio-economic status, or academic background, which could impact the connection between hope and metacognition. Including these factors in future research would improve the accuracy of the findings and give a clearer understanding of the dynamics involved.

CONCLUSION

The Pearson correlation coefficient between the "Total Hope Score" and the "Total Metacognition Score" is 0.616($p<.01$).This indicates a positive correlation between hope and metacognition. As hope increases, metacognition also tends to increase and vice versa.The study reveals a significant positive correlation between hope and metacognition with suggests that individuals with higher level of hope tend to exhibit stronger metacognitive abilities. these findings highlight the potential of fostering hope to enhance cognitive processes particularly in academic settings. The sample size of 100 participants, with demographic homogeneity, limits of the results. Additionally, the dependency on self-report measures the

potential for response biases, and the cross-sectional design precludes causal inferences.
Future research should address these limitations by using larger, more diverse samples, incorporating objective measures, and exploring the influence of other variables to deepen understanding of the relationship between hope and metacognition.

REFERENCES

1. Flavell, J. H. (1979). Metacognition and cognitive monitoring: A new area of cognitive–developmental inquiry. American Psychologist, 34(10), 906–911.
2. Baker, L., & Brown, A. L. (1984). Metacognitive skills and reading. In P. D. Pearson (Ed.), Handbook of reading research (Vol. 1, pp. 353-394). Longman.
3. Nelson, T. O., & Narens, L. (1990). Metamemory: A theoretical framework and new findings. In G. Bower (Ed.), The Psychology of Learning and Motivation (Vol. 26, pp. 125-173). Academic Press.
4. Snyder, C. R., Harris, C., Anderson, J. R., Holleran, S. A., Irving, L. M., Sigmon, S. T., et al.(1991) – the ways: Development and validation of an individual-differences measure of hope. Journal of Personality and Social Psychology, 60, 570-585.
5. Snyder, C. R. (1994). The psychology of hope: You can get there from here. Free Pr.
6. Hartman, H. J. (2001). Metacognition in science teaching and learning. Metacognition in learning and instruction: Theory, research and practice, 173-201.
7. Schneider, W., & Lockl, K. (2002). The development of metacognitive knowledge in children and adolescents. In T. J. Perfect & B. L. Schwartz (Eds.), Applied metacognition (pp. 224–257). Cambridge University Press.
8. Snyder, C. R. (2002). Hope theory: Rainbows in the mind. Psychological Inquiry, 13(4), 249-275. https://doi.org/10.1207/S15327965PLI1304_01
9. Wilson, J., & Clarke, D. (2004). Towards the modelling of mathematical metacognition. Mathematics Education Research Journal, 16(2), 25-48.
10. Coutinho, S. A. (2006). The relationship between the need for cognition, metacognition, and intellectual task performance. Educational research and reviews, 1(5), 162.
11. Larssen, A. T., Robertson, T., Loke, L., & Edwards, J. (2007). Introduction to the special issue on movement-based interaction. Personal and Ubiquitous Computing, 11, 607-608.
12. Dunlosky, J., & Metcalfe, J. (2008). Metacognition. Sage Publications.
13. Holtslander, L. F. (2008). Ways of knowing hope: Carper's fundamental patterns as a guide for hope research with bereaved palliative caregivers. Nursing Outlook, 56(1), 25-30.
14. Lai, E. R. (2011). Metacognition: A literature review. Always learning: Pearson research report, 24, 1-40.
15. Tarricone, P. (2011). The taxonomy of metacognition. Psychology press.
16. Papantoniou, G., Moraitou, D., Dinou, M., & Katsadima, E. (2013). Dispositional hope and action-state orientation: Their role in self-regulated learning. A positive psychology perspective on quality of life, 219-241.
17. Feldman, D. B., & Dreher, D. E. (2012). Hope and hopelessness: A look at agency and pathways in adolescents. The Journal of Positive Psychology, 7(3), 242-248.
18. Fleming, S. M., & Lau, H. C. (2014). How to measure metacognition. Frontiers in human neuroscience, 8, 443.

19. Pedone, R., Semerari, A., Riccardi, I., Procacci, M., Nicolò, G., & Carcione, A. (2017). Metacognition Self-Assessment Scale (MSAS) [Database record]. APA PsycTests. https://doi.org/10.1037/t82174-000
20. Özsoy, G., Memiş, A., & Temur, T. (2017). Metacognition, study habits and attitudes. International Electronic Journal of Elementary Education, 2(1), 154–166. Retrieved from https://iejee.com/index.php/IEJEE/article/view/263
21. González, A., Fernández, M. V. C., & Paoloni, P. V. (2017). Hope and anxiety in physics class: Exploring their motivational antecedents and influence on metacognition and performance. Journal of Research in Science Teaching, 54(5), 558-585.
22. Gallagher, M. W., et al. (2020). Hope, optimism, and metacognitive reflection in adolescents. Journal of Adolescence, 84, 87-96. https://doi.org/10.1016/j.adolescence.2020.07.002
23. Moore, J. X., Tingen, M. S., Coughlin, S. S., O'Meara, C., Odhiambo, L., Vernon, M., ... & Cortes, J. (2022). Understanding geographic and racial/ethnic disparities in mortality from four major cancers in the state of Georgia: A spatial epidemiologic analysis, 1999–2019. Scientific reports, 12(1), 14143.
24. Semwal, R., Tripathi, N., & Pandey, U. K. (1 C.E.). Leveraging Artificial Intelligence in Service Marketing to Enhance Electronic Word of Mouth (eWOM). *Https://Services.Igi-Global.Com/Resolvedoi/Resolve.Aspx?Doi=10.4018/979-8-3693-7909-7.Ch012*, 249–269. https://doi.org/10.4018/979-8-3693-7909-7.CH012
25. Semwal, R., Tripathi, N., & Tyagi, P. K. (1 C.E.). Leveraging AI for Diversity, Equity, and Inclusion in Service Marketing. *Https://Services.Igi-Global.Com/Resolvedoi/Resolve.Aspx?Doi=10.4018/979-8-3693-7909-7.Ch017*, 339–358. https://doi.org/10.4018/979-8-3693-7909-7.CH017
26. Semwal, R., Tripathi, N., Tyagi, P. K., & Nadda, V. (1 C.E.a). AI-Infused Strategies for Customer Retention. *Https://Services.Igi-Global.Com/Resolvedoi/Resolve.Aspx?Doi=10.4018/979-8-3693-7122-0.Ch007*, 115–134. https://doi.org/10.4018/979-8-3693-7122-0.CH007
27. Semwal, R., Tripathi, N., Tyagi, P. K., & Nadda, V. (1 C.E.b). Neural Networks and Customer Connectivity. *Https://Services.Igi-Global.Com/Resolvedoi/Resolve.Aspx?Doi=10.4018/979-8-3693-7122-0.Ch023*, 477–498. https://doi.org/10.4018/979-8-3693-7122-0.CH023