# Astrologic: The Effectiveness of Priming Using Chinese Zodiac Characteristics on Logical Thinking Ability

Sofia Paramita Sutikno
Faculty of Psychology, Surabaya University
Indonesia
sofiaparamita343@gmail.com

Lina Natalya
Faculty of Psychology, Surabaya University
Indonesia
lina.metabus@gmail.com

Ide Bagus Siaputra
Faculty of Psychology, Surabaya University
Indonesia
std@staff.ubaya.ac.id
(Corresponding author)

**Abstract**

This experimental study examined whether Chinese zodiac personality descriptions, when used as priming stimuli, affect logical thinking ability among Generation Z students. A 2x2 factorial design (valence x validity) was applied to 105 college students aged 18-25, who were randomly assigned to one of four groups: positive-valid, positive-invalid, negative-valid, or negative-invalid. Logical thinking was measured using 15-minute *Sudoku Logical Task* administered before and after priming. A one-way ANOVA showed no significant overall effect of priming on logical thinking ability ($F = 1.290$, p-value $= 0.282 \geq 0.05$). However, paired sample t-tests revealed a significant improvement in the negative-valid ($t = 3.266$, p-value $= 0.003 < 0.05$) and negative-invalid ($t = 2.495$, p-value $= 0.020$) groups, whereas no significant changes were observed in the positive conditions. These exploratory results were based on uncorrected p-values and should be interpreted with caution due to potential Type I error inflation. These results suggest that negative descriptions, even when perceived as valid or invalid, may elicit compensatory motivation to protect one's self-concept. The findings extend the Situated Inference Model and Self-Enhancement Theory by emphasizing affective valence as a stronger determinant of cognitive engagement than perceived validity. Practically, challenge-based feedback may enhance logical thinking when framed constructively.

**Keywords**: Logical thinking ability, priming, Chinese zodiac, Sudoku

Received 8 July 2025/Revised 8 November 2025/Accepted 5 December 2025 

## Introduction

In recent years, astrology has witnessed a significant resurgence among younger generations, especially Generation Z, who regularly engage with astrological content across digital platforms and social media (Allum, 2011; Das et al., 2022; George-Parkin, 2021). Astrology has been increasingly consumed as a form of digital entertainment, appearing in memes, podcasts, and personality quizzes (Page, 2023; Siyabonga, 2024). This phenomenon shows that there is high public interest in understanding astrology in more depth.

Astrology, as a symbolic art and ancient system of knowledge, seeks to interpret the movements of celestial bodies and their relationship to human affairs (Nurachman & Retnoningsih, 2018; Susantio, 2014). While Western astrology emphasizes planetary alignment and individual fate, Chinese astrology which rooted in East Asian philosophy including Indonesia, comprises twelve animal symbols representing distinct personality traits. These traits remain influential in everyday decision-making and cultural identity in Indonesia (Ocvitalia, 2019; Oktavia & Azeharie, 2019; Tan et al., 2022). This enduring significance provides a meaningful framework for examining cognition and motivation in collectivist cultural contexts.

While the Chinese zodiac continues to hold sociocultural relevance in Indonesia, few studies have examined its role as a psychological prime capable of influencing motivation or reasoning. Therefore, this study aims to examine whether Chinese zodiac descriptions can act as cognitive primes that influence logical thinking through motivational mechanisms among Indonesian Generation Z students.

This cultural relevance extends to younger generations, particularly Generation Z, who show a growing interest and belief in the Chinese zodiac (Gutierrez, 2020; Nathania, 2014). As digital natives, they frequently encounter zodiac-related content on social media platforms, where astrological predictions are widely shared and easily accessible, (Cionca & Fu, 2020; Hidayah et al., 2023). Preliminary findings from a survey conducted by the researcher revealed that while most Generation Z were familiar with the Chinese zodiac, only about one-third expressed genuine belief in its predictions. Many respondents described their belief as conditional or symbolic, accepting positive descriptions but dismissing negative ones. This selective engagement suggests that the Chinese zodiac serves both as entertainment and as a means of self-reflection, reflecting how astrological beliefs can subtly influence cognition and behaviour in everyday contexts (Brown et al., 2015).

Prior studies have shown that Chinese zodiac descriptions can serve as priming stimuli that influence cognition and behavior. Brown et al. (2015) found that positive zodiac-based feedback enhanced logical reasoning performance. Priming refers to the process through which exposure to specific stimuli activates related concepts in memory, shaping subsequent cognitive processing or behaviour without conscious awareness (Bargh et al., 1996; Molden, 2014). These cognitive effects can be explained through the Situated Inference Model (Loersch & Payne, 2011) which suggests that priming effects occur when individuals misattribute externally provided information as their own internal thoughts or feelings. In this context, Chinese zodiac descriptions may be perceived as self-relevant cues, activating associated self-concepts, subsequently guiding cognition and behavior. Meanwhile, the Self-Enhancement Theory explains how individuals are motivated to maintain and protect a positive self-view (Dufner et al., 2019; Taylor & Brown, 1988). Individuals tend to readily accept and internalize positive information that confirms their self-concept, as it reinforces their sense of competence and self-worth. Conversely, when faced with negative feedback that threatens their self-concept, individuals may either reinterpret or counteract the threat through compensatory behaviors to restore a positive self-image (Taylor & Brown, 1988). This motivational tendency drives individuals to engage in effortful cognitive or behavioral responses, such as improving task performance, to reaffirm their perceived capability and maintain psychological well-being.

When exposed to feedback perceived as self-relevant, such as personality descriptions derived from the Chinese zodiac, individuals may adjust their motivation and cognitive engagement accordingly. Positive descriptions can reinforce confidence and task engagement, leading to improved logical performance. Conversely, negative descriptions can threaten self-image but may also trigger compensatory motivation, prompting individuals to exert greater cognitive effort to restore a positive sense of self (Dufner et al., 2019; Sedikides & Alicke, 2012). In this context, priming using Chinese zodiac description may influence logical thinking not through belief in astrology itself, but through motivational mechanisms that regulate cognitive performance.

This experimental study aimed to examine the effectiveness of priming using Chinese zodiac description in influencing behavioral changes related to logical thinking performance among Generation Z participants. Logical thinking ability refers to the capacity to solve problems based on patterns, rules, and structured logic (Suriasumantri in Usdiyana et al., 2009) , as measured through participants' performance on *Sudoku Logical Task*, which requires deductive reasoning, pattern recognition, and structured problem-solving (Baek et al., 2008; Hadinata, 2011). Building on Brown et al. (2015), this research adapts their design to the Indonesian context, focusing on Generation Z's high engagement with digital astrology content.

This study examined how the valence (positive or negative) and validity (valid or invalid) of Chinese zodiac descriptions were expected to influence self-perception, motivation, and cognitive performance. While previous research suggested that positive feedback enhances performance by activating congruent behavioral responses (Brown et al., 2015; Macrae & Johnston, 1998), the self-enhancement perspective proposes that even negative information may elicit compensatory motivation, prompting individuals to exert greater cognitive effort to restore a positive self-view (Dufner et al., 2019; Taylor & Brown, 1988).

Based on the findings of Brown et al. (2015) and self-enhancement theory, this study proposes the following hypothesis:

H1: Priming using Chinese zodiac descriptions significantly influences logical thinking ability.

H2: Positive priming (both valid and invalid) is expected to enhance or maintain logical thinking ability.

H3: Negative priming (both valid and invalid) is expected to either reduce or stimulate logical thinking ability.

## Method

*Design*

This study employed a 2x2 between-subject factorial design to examine the effects of priming using Chinese zodiac descriptions on logical thinking ability among Indonesian Generation Z participants. The two manipulated variables were valence (positive vs. negative) and validity (valid vs. invalid), resulting in four experimental groups: positive-valid, positive-invalid, negative-valid, and negative-invalid. The factorial design is presented in Table 1.

**Table 1**

*Experimental Design*

| **Validity** | **Valence** | |
|---|---|---|
| | Positive | Negative |
| Valid | Group 1 | Group 3 |
| Invalid | Group 2 | Group 4 |

*Participants*

The participants in this study were undergraduate students from the Faculty of Psychology at the University of Surabaya. They were selected using a non-probability sampling technique, specifically accidental sampling, whereby participants were recruited based on convenience and their availability to participate in the study (Fauzy, 2019). Accidental sampling was chosen due to the accessibility of participants who met inclusion criteria. This sampling method allowed for practical

data collection within a controlled academic context but may introduce sampling bias, as participants from a single faculty likely share similar educational backgrounds and cognitive orientations. However, because all participants were drawn from a single faculty, the findings cannot be generalized to the broader student population. This limitation reflects a constraint in external validity inherent to the use of accidental sampling, as such non-probability approaches produce estimates that lack generalizability to any identifiable target population or subpopulations beyond the sample studied (Bornstein et al., 2013).

Recruitment took place after classroom sessions, where students were approached and invited to participate if they met the inclusion criteria and expressed interest in topics such as Chinese zodiac or Sudoku. To be eligible, participants had to fulfil the following criteria: (1) be part of Generation Z, defined as individuals born between 1997 and 2012 and aged between 18 and 25 years at the time of data collection; (2) be enrolled as a student at the Faculty of Psychology, University of Surabaya; (3) have completed an online registration form and pretest (*Sudoku Logical Task*); (4) voluntarily agree to participate and commit to completing the experimental sessions; and (5) have no close personal relationship with the researcher (e.g., family, romantic partner, or close friend).

The determination of sample size in this study followed methodological recommendations by Gall et al. (2003), who suggest a minimum of 15 participants per group for experimental comparisons, and by Islam (2018), who note that a minimum of 30 participants per group ensures sufficient approximation to a normal distribution according to the Central Limit Theorem. Based on these guidelines, the researcher targeted approximately 120 participants to be distributed evenly across four experimental conditions.

Before data collection, the study complied with the ethical procedures applicable to undergraduate research at the Faculty of Psychology, University of Surabaya at the time of data collection (2024). During that period, the faculty had not yet issued formal numbered ethical clearance letters for student research. Instead, the researcher completed and signed the Faculty's Ethical Feasibility Form, which was reviewed and approved by academic supervisors and served as the formal internal ethical authorization for conducting the study.

Prior to participation, all students received a verbal briefing explaining the research purpose, procedures, voluntary nature of participation, and the option to withdraw at any time. Informed consent was obtained verbally, indicated by participants' voluntary decision to remain in the classroom and proceed with the study. A structured debriefing was conducted afterward to clarify the cover story, explain the true aim of the study, and ensure participants' emotional well-being. All data were collected anonymously and stored confidentially in accordance with the APA Ethical Principles of Psychologists and Code of Conduct.

A total of 128 students initially registered and completed the pretest. However, due to absences during the posttest phase, the final sample included 105 participants who completed the full experimental procedure from beginning to end although the initial target was approximately 120 participants. A post-hoc power analysis was conducted using G*Power 3.1.9.7 with a medium effect size ($f = 0.25$) and $\alpha = 0.05$. With 105 participants across four groups, the achieved statistical power for the one-way ANOVA was approximately 0.541, indicating limited sensitivity to detect medium effects (Murphy & Myors, 2004).

No additional exclusion criteria were applied beyond posttest absence. All data from participants who completed both sessions were included in the final analysis, and no cases were removed due to incomplete responses or extreme outliers.

These participants were then randomly assigned to one of four experimental groups based on a 2 (valence: positive vs. negative) × 2 (validity: valid vs. invalid) factorial design. The final group sizes were as follows: 25 participants in the positive-valid group, 28 in the positive-invalid group, 28 in the negative-valid group, and 24 in the negative-invalid group.

*Instruments*

This study utilized several instruments, including a demographic form, priming materials, manipulation checks, re-priming, and a logical thinking assessment. The demographic form was administered during the registration process to collect participants' background information using Google Form, such as gender, year of enrolment, and faculty. It also included questions regarding participants' prior exposure to Chinese zodiac predictions (i.e., whether they had ever read them, their level of belief in such predictions, and their self-assessed logical thinking ability). The purpose of the demographic questionnaire was to gather individual data and contextual characteristics that could support the interpretation of results and provide descriptive insights into the participant sample.

The priming materials consisted of four narrative Chinese zodiac descriptions created by manipulating two factors: valence of the description (positive or negative) and perceived validity of the description (valid or invalid). Valence determined whether the description portrayed participants as having strong (positive) or poor (negative) logical thinking ability, whereas validity referred to the extent to which the text appeared credible to participants. In the valid condition, the description stated that most zodiac predictions were consistent with real-life experiences, while in the invalid condition, it stated that only a small portion of predictions typically came true. Therefore, "validity" did not refer to measure the validity of the instrument, but rather to the extent to which the description appeared credible to participants. These descriptions were adapted and constructed based on prior research by Brown et al. (2015), with adjustments made to suit the cultural context of Indonesian participants. Each participant received a narrative tailored to their experimental condition. In this study, the zodiac sign itself served merely as a thematic tool to deliver the priming content and was not intended to be interpreted as meaningful or accurate.

To verify the effectiveness of the priming manipulation, a manipulation check was administered after participants read the zodiac description. Manipulation checks are essential tools used to determine whether participants have perceived and cognitively processed the experimental manipulation as intended (Gruijters, 2022; Hoewe, 2017). In this study, the manipulation check consisted of two multiple-choice questions developed specifically for this experiment that assessed whether participants perceived the intended valence and validity of the priming description. The first item measured valence, asking about whether the description indicated high logical thinking ability ("*Apakah deskripsi yang Anda baca menggambarkan bahwa diri Anda memiliki kemampuan berpikir logis yang tinggi?*"). The second item measured validity, asking whether the text mentioned research supporting the zodiac accuracy ("*Apakah deskripsi yang Anda baca menyebutkan hasil penelitian terdahulu yang membuktikan bahwa hasil Zodiak Cina dianggap sangat akurat?*"). Each question had three response options: "Yes," "No," and "Unsure." These questions served to confirm that participants received and interpreted the manipulation in accordance with

their assigned experimental group, and to validate the distinction between the priming conditions. While these items confirmed participants cognitive understanding of the manipulation, future studies could incorporate additional measures to assess affective or self-referential reactions, as manipulation checks should verify perception, comprehension, and reaction to experimental manipulations (Hoewe, 2017).

To reinforce the priming effect, a brief re-priming phase followed immediately after the manipulation check. Participants were asked to reread a condensed version of the original description, designed to refresh the primed information and strengthen its potential influence on subsequent cognitive performance. This approach was intended to maintain the activation of the relevant self-schema just before the posttest task was administered. Repeated exposure to the same stimulus has been shown to enhance cognitive efficiency by sustaining neural synchronization (Gotts et al., 2001), supporting the use of re-priming as a method to reinforce priming effects.

Logical thinking ability was measured using a 9×9 medium-level *Sudoku Logical Task*, which had been selected through pilot testing to evaluate the feasibility of the task, ensuring that the puzzles were appropriately challenging, practical, and consistent across sessions (VanTeijlingen & Hundley, 2002). In the pilot phase, several Generation Z students (not included in the main sample) completed Sudoku of varying difficulty levels (easy, medium, and hard). The medium-level puzzle was selected based on its balanced completion rate and an average solving time of 10-15 minutes, ensuring comparable cognitive demand between the pretest and posttest. Sudoku was chosen for its emphasis on pattern recognition, rule-based reasoning, and logical problem-solving, as supported by prior studies linking Sudoku to core components of logical reasoning (Baek et al., 2008; Hadinata, 2011).

Participant performance on the *Sudoku Logical Task* was scored based solely on accuracy, with one point awarded for each correctly filled cell and a maximum possible score of 47. Incorrect or blank entries received zero points, and completion time was not used as a scoring criterion. Both the pretest and posttest employed the same medium-level puzzle identified during pilot testing to ensure equal difficulty and comparable cognitive load. Although using the same puzzle may introduce a potential practice effect, this risk was considered minimal due to the puzzle's moderate complexity and the time interval between sessions.

*Procedure*

The experiment consisted of three sessions: pretest, randomization, and posttest, separated by an interval of one to two weeks.

*Pretest.* Participants first completed a briefing and demographic registration in 15 minutes. They then performed a pretest to measure their baseline logical thinking ability using a medium-level *Sudoku Logical Task* in paper-and-pencil format. Each participant worked individually within a 15-minute time limit, and no external aids or collaboration were permitted.

*Randomization***.** After completing the pretest, participants were randomly assigned to one of four experimental conditions: positive-valid, positive-invalid, negative-valid, and negative-invalid, using a stratified randomization method to control and balance the influence of baseline differences in *Sudoku Logical Task* performance across groups (Suresh, 2011). Randomization is conducted by the researcher. Participants' scores (N = 128) were first arranged from highest to lowest in

Microsoft Excel. A repeating sequence of numbers 1, 2, 3, and 4 was then assigned down the list to distribute participants evenly across the four conditions: 1 = positive-valid, 2 = negative-valid, 3 = positive-invalid, and 4 = negative-invalid. This method aims to balance the distribution of participants with high and low pretest scores in each group while maintaining random allocation.

*Posttest.* The posttest was conducted approximately one to two weeks after the pretest. The interval between sessions was determined primarily by class schedules and logistical considerations but was kept consistent across groups to ensure comparable timing conditions for all participants. The sequence of activities in this session was: (1) priming (2 minutes), (2) manipulation check (5 minutes), (3) re-priming (2 minutes), (4) *Sudoku Logical Task* posttest (15 minutes), and (5) debriefing (5 minutes).

Each group received a different version of a priming text corresponding to their assigned condition. The positive-valid group read a description stating that their sign was associated with high logical ability and that such predictions were supported by research. The positive-invalid group read the same positive trait description but accompanied by a disclaimer that such predictions were rarely accurate. Conversely, the negative-valid group read a description portraying their sign as associated with poor logical ability with claims of scientific support. The negative-invalid group read a similar negative description but with low validity claims.

Immediately after, a manipulation check consisting of two multiple-choice questions was administered to verify whether participants correctly identified the valence (positive or negative) and validity (valid or invalid) of the priming. However, the numerical data from the manipulation check were no longer available at the time of manuscript preparation due to the loss of physical records and the deletion of archived files following graduation procedures. All participants were retained in the main analyses, consistent with an intent-to-treat approach.

A re-priming sheet, a shortened version of the original description, was then distributed to reinforce the priming effect after the manipulation check was done. After that, participants then completed a 15-minute *Sudoku Logical Task* posttest, with no collaboration allowed.

At the end of the session, participants were given a debriefing, in which the actual purpose of the study was explained. This was necessary due to the use of a cover story presented during the briefing, which described the study as an examination of beliefs in Chinese zodiac predictions. During the debriefing, participants were informed that the true aim was to test the psychological effects of priming on logical thinking ability. They were also told that the Chinese zodiac descriptions provided during the experiment were fictious and did not reflect their actual zodiac traits or scientifically validated personality information. The debriefing process ensured that participants left the session without misunderstanding or discomfort.

*Data Analysis*

Data were analyzed using one-way ANOVA, factorial ANOVA (2×2), and paired sample t-test with the assistance of SPSS version 27.0. Assumption tests included Kolmogorov-Smirnov for normality and Levene's test for homogeneity of variances. All analyses adopted a significance level of 0.05. Descriptive statistics (means and standard deviations) were computed for each experimental condition: positive-valid, positive-invalid, negative-valid, and negative-invalid to facilitate comparison across groups.

In addition to significance testing, effect sizes were calculated to evaluate the magnitude of observed differences and to provide practical interpretation beyond p-values. Partial eta squared ($\eta p^2$) was reported for ANOVA analyses, while Cohen's *d* was used for paired-sample *t*-tests. Confidence intervals (95%) were also included to indicate the precision of the estimates.

## Results

This study involved 105 participants divided into four experimental groups: positive-valid (n = 25), positive-invalid (n = 28), negative-valid (n = 28), and negative-invalid (n = 24). This study aimed to test the effectiveness of priming using Chinese zodiac descriptions in influencing behavioural changes related to logical thinking ability, especially in Generation Z. To evaluate this, several analyses were conducted.

Descriptive statistics for each group, including mean (M), standard deviation (SD), and confidence intervals, are summarized in Table 2 to provide an overview of performance differences before and after the priming manipulation.

**Table 2**

*Descriptive Statistics of Logical Thinking Scores* (N = 105)

| Groups | N | Pretest | | Posttest | | ΔM | |
|---|---|---|---|---|---|---|---|
| | | Mean | SD | Mean | SD | Mean | SD |
| Positive-Valid | 25 | 18.28 | 9.427 | 21.40 | 10.054 | 3.12 | 9.667 |
| Positive-Invalid | 28 | 16.04 | 10.254 | 17.93 | 8.331 | 1.89 | 6.238 |
| Negative-Valid | 28 | 16.96 | 10.847 | 23.29 | 12.733 | 6.32 | 10.242 |
| Negative-Invalid | 24 | 17.42 | 10.346 | 21.04 | 9.580 | 3.62 | 7.119 |

*Note.* ΔM = M Posttest – M Pretest

A bar chart was also generated to visualize the mean differences across the four priming conditions (Figure 1), providing a clearer depiction of how each valence-validity combination influenced logical thinking performance.

Figure 1 illustrates the mean logical thinking scores across the four priming conditions in both pretest and posttest sessions. The y-axis represents mean logical thinking scores, while the x-axis displays the four priming groups. Blue bars denote pretest scores, and red bars denote posttest scores. Overall, all groups showed an increase in mean scores after priming, with the largest improvement observed in the negative-valid condition. This visual pattern supports the statistical results, indicating that while priming generally did not produce significant between-group differences, negative feedback, particularly valid descriptions, appeared to elicit greater cognitive effort and performance improvement.

Prior to hypothesis testing, assumption checks were conducted to ensure the suitability of parametric analyses. All assumptions were met, with Kolmogorov-Smirnov tests indicating normal data distribution ($p = 0.077 - 0.200$, all $p \geq 0.05$) and Levene's tests confirming homogeneity of variances for both pretest and posttest ($p = 0.087 - 0.952$, all $p \geq 0.05$).

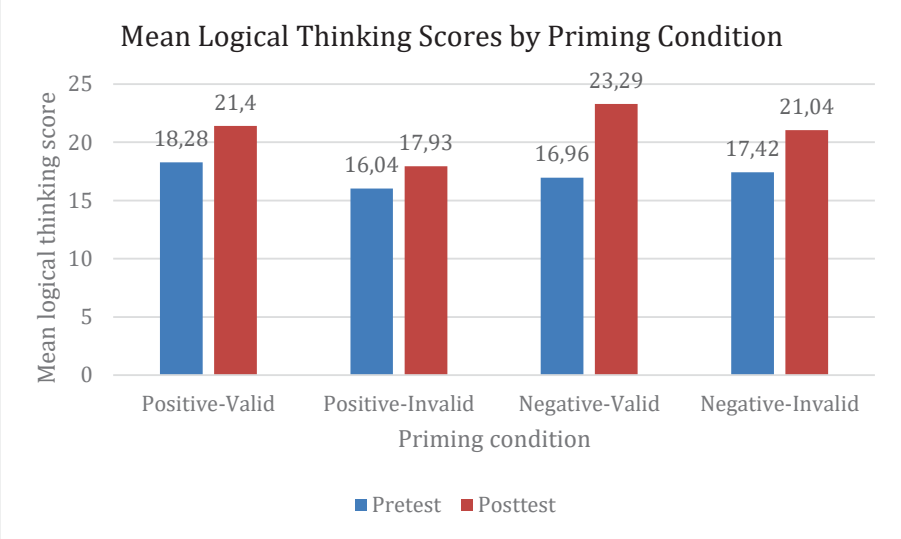



**Figure 1.** Mean Logical Thinking Scores by Priming Condition

*Note.* Blue bars represent pretest scores, and red bars represent posttest scores. The y-axis represents the mean logical thinking scores, which were derived from a *Sudoku Logical Task* scored on a 0-47 scale. Although only the observed range (0-25) is displayed for clarity. The x-axis represents the four priming conditions (positive-valid, positive-invalid, negative-valid, and negative-invalid).

The major hypothesis stated that priming would influence logical thinking ability. This was tested using a one-way ANOVA comparing the four experimental groups. Results showed no significant differences in logical thinking ability across groups on the posttest ($p = 0.282$, $p \geq 0.05$), nor in the difference between posttest and pretest scores ($p = 0.263$, $p \geq 0.05$), suggesting that overall, priming had no significant main effect on logical thinking ability. Consistent with this, the post-hoc power analysis indicated that the observed statistical power for the one-way ANOVA was 0.541, reflecting moderate sensitivity for detecting medium-sized effects.

**Table 3**

*Post-Hoc Tukey HSD Test for Logical Thinking Ability Posttest Scores*

| Comparison Groups | Mean Differences | Std. Error | Tukey Sig. | Hochberg Sig. | 95% CI | |
|---|---|---|---|---|---|---|
| | | | | | Lower Bound | Upper Bound |
| Positive-Valid vs. Positive-Invalid | 3.471 | 2.844 | 0.615 | 0.778 | -3.96 | 10.90 |
| Positive-Valid vs. Negative-Valid | -1.886 | 2.844 | 0.911 | 0.985 | -9.31 | 5.54 |
| Positive-Valid vs. Negative-Invalid | 0.358 | 2.954 | 0.999 | 1.000 | -7.36 | 8.07 |
| Positive-Invalid vs. Negative-Valid | -5.357 | 2.762 | 0.218 | 0.285 | -12.57 | 1.86 |
| Positive-Invalid vs. Negative-Invalid | -3.113 | 2.875 | 0.701 | 0.858 | -10.62 | 4.40 |
| Negative-Valid vs. Negative-Invalid | -2.244 | 2.875 | 0.863 | 0.967 | -9.75 | 5.27 |

*Note.* Hochberg adjustment controls the false discovery rate (Hochberg and Benjamini , 1995)

To identify any specific mean differences among the four priming groups, a post-hoc Tukey HSD test was conducted. As shown in Table 3, no significant pairwise differences were found across the conditions (all $p \geq 0.05$), indicating that neither the valence (positive vs. negative) nor the validity (valid vs. invalid) of the priming description led to statistically distinct levels of logical thinking performance. In descriptive terms, the largest mean difference was observed between the positive-invalid and negative-valid groups (M = -5.357), though this was not statistically significant (all p Tukey $\geq 0.05$). Consistent with this, the negative-valid group showed the highest posttest mean overall, followed by negative-invalid, positive-valid, and positive-invalid groups. Although these differences did not reach significance, the pattern suggests that negative priming, particularly when presented as valid was associated with slightly higher logical thinking performance.

Although the omnibus ANOVA was non-significant, these post-hoc comparisons were treated as exploratory. To control for Type I error inflation across multiple pairwise comparisons, Hochberg's false discovery rate adjustment (Hochberg and Benjamini, 1995) was applied. After adjustment, none of the comparisons reached significance (all p Hochberg $\geq 0.05$), confirming that the observed mean differences reflect only small, non-significant variations.

**Table 4**

*Tests of Between-Subjects Effects of Posttest*

| Sources | F | Sig. | Partial Eta Squared ($\eta p^2$) |
|---|---|---|---|
| Valence | 1.528 | 0.219 | 0.015 |
| Validity | 1.998 | 0.161 | 0.019 |
| Valence * Validity | 0.092 | 0.762 | 0.001 |

A two-way ANOVA was conducted to examine the effects of valence (positive vs. negative) and validity (valid vs. invalid) of priming on logical thinking scores. The main effect of valence was not significant ($F = 1.528$, $p = 0.219$, $p \geq 0.05$, $\eta p^2 = 0.015$), indicating that positive and negative descriptions did not differ significantly in their impact on logical thinking. Similarly, the main effect of validity was non-significant ($F = 1.998$, $p = 0.161$, $p \geq 0.05$, $\eta p^2 = 0.019$), suggesting that valid and invalid descriptions did not produce distinct performance outcomes. The interaction between valence and validity was also not significant ($F = 0.092$, $p = 0.762$, $p \geq 0.05$, $\eta p^2 = 0.001$), representing a very small effect size (small ≈ 0.10) (Cohen in Richardson, 2011). Overall, the results indicate that neither valence nor validity, nor their combination, significantly influenced logical thinking ability.

However, to evaluate within-group effects and test the specific minor hypotheses, paired-sample t-tests were conducted for each group comparing their pretest and posttest performance. Effect sizes (Cohen's d) are reported to clarify the magnitude of each difference.

**Table 5**

*Paired-Sample t-Test and Effect Size for Each Priming Condition*

| Groups | t | df | Sig. | Cohen's d | 95% CI | |
|---|---|---|---|---|---|---|
| | | | | | Lower Bound | Upper Bound |
| Positive-Valid | 1.614 | 24 | 0.120 | 0.323 | -0.083 | 0.722 |
| Positive-Invalid | 1.606 | 27 | 0.120 | 0.303 | -0.078 | 0.680 |
| Negative-Valid | 3.266 | 27 | 0.003 | 0.617 | 0.207 | 1.017 |
| Negative-Invalid | 2.495 | 23 | 0.020 | 0.509 | 0.078 | 0.930 |

Results of the paired-sample *t*-tests for each priming condition are presented in Table 5. Positive-valid (t = 1.614, p = 0.120, d = 0.323) and positive-invalid (t = 1.606, p = 0.120, d = 0.303) groups showed no significant difference in logical thinking performance, both reflecting small effect sizes according to Cohen's (1988) guidelines (small ≈ 0.20). This result indicating that positive feedback, regardless of validity, did not enhance cognitive outcomes. In contrast, both negative conditions produced significant improvements: negative-valid (*t* = 3.266, p = 0.003, d = 0.617) and negative-invalid (t = 2.495, p = 0.020, d = 0.509), each reflecting medium sizes according to Cohen's (1988) guidelines (medium ≈ 0.50). These significance levels reflect uncorrected p-values prior to multiple-comparison correction and should therefore be interpreted with caution. Overall, the pattern indicates that negative priming had a moderate practical impact on improving logical thinking, while positive priming effects were minimal.

**Discussion**

The results in this study demonstrated that in general, priming had no significant effect on logical thinking ability. This finding contrasts with several previous studies which have suggested that priming can effectively influence behaviour (Bargh et al., 1996; Dijksterhuis & Van Knippenberg, 1998; Hill et al., 2019). However, it supports more recent perspectives that question the reliability of priming effects, emphasizing the role of awareness, contextual relevance, and individual differences (Doyen et al., 2012).

The null results may be attributed to the explicit nature of the stimuli, which limited subtle schema activation. When participants recognize external manipulation, priming effects weaken (Bargh, 2014; Loersch & Payne, 2011). In this study, the Chinese zodiac descriptions were overtly descriptive, making them less likely to be perceived as internally generated. Thus, the primes may have lacked the subtlety required to activate internal motivation.

Another factor that may have contributed to the null results is involves task-related factors. The *Sudoku Logical Task*, which may have been unfamiliar to some participants, could have elicited curiosity or intrinsic engagement regardless of priming manipulation. Moreover, demand characteristics may have emerged if participants became aware of the study's purpose and unconsciously adjusted their responses to align with perceived expectations. Such effect can lead individuals to act in ways they believe are consistent with the experiment's purpose, rather than responding naturally (McCambridge et al., 2012). These possibilities underline the need to control for task familiarity and participant expectations to ensure that observed effects truly reflect the influence of priming.

Interestingly, priming using negative traits, both valid and invalid, was found to significantly enhanced logical thinking ability. This result suggests that negative feedback, even when perceived as inaccurate, may function as a psychological threat that motivates individuals to perform better in an attempt to protect their self-concept (Anseel & Martinescu, 2020; Taylor & Brown, 1988). Rather than inducing discouragement, negative information may have triggered challenge appraisals, where participants interpreted the feedback as an opportunity to prove their capability.

This finding partially supports the third hypothesis, indicating that negative priming can indeed stimulate rather than reduce performance. The observed improvement suggests that exposure to negative feedback may have activated compensatory motivation and self-protective effort to maintain a positive self-view (Anseel & Martinescu, 2020; Sedikides & Alicke, 2012). In this sense,

negative information functioned as a constructive challenge rather than a discouraging cue, prompting participants to engage more deeply with the logical task.

This interpretation aligns with self-enhancement theory, which proposes that individuals are driven to restore or maintain positive self-views after receiving self-threatening information (Sedikides & Alicke, 2012). Such a response aligns with the negativity bias, which posits that negative information tends to exert a stronger psychological impact than positive stimuli (Baumeister et al., 2001). The findings of this study indicate that when negative information is perceived as fair and constructive, can elicit defensive but adaptive motivation, stimulating cognitive engagement and effort (Anseel & Martinescu, 2020).

Negative priming in this study may also be understood as a form of feedback that encourages adaptive motivation. When presented as a constructive challenge rather than criticism, negative information can prompt individuals to invest more effort and engage more deeply with cognitive tasks. This aligns with educational perspectives suggesting that feedback emphasizing challenge and clear goals encourages learners to exert greater effort and achieve higher outcomes (Hattie & Timperley, 2007). Moreover, as noted by Baumeister et al. (2001), negative information tends to be processed more deeply than positive, making constructively framed negative feedback especially effective in stimulating adaptive cognitive and motivational responses.

The absence of a validity effect further reflects how cultural and generational factors shaped participants' responses. Among Generation Z participants, who tend to be skeptical toward traditional authority and show minimal belief in pseudoscientific systems such as astrology (Podara et al., 2025), the accuracy or validity of the zodiac descriptions was likely less influential than their emotional tone (valence). Rather than believing the descriptions to be true, participants may have viewed them playfully or critically, consistent with Loersch & Payne's (2011) view that externally recognized primes lose cognitive impact. Moreover, for Generation Z, who are more reactive to challenges or perceived criticism (Yildirim, 2021), positive feedback that aligns with existing self-views may fail to elicit compensatory motivation or activate a defensive response (Anseel & Martinescu, 2020; Sedikides & Gregg, 2008).

Thus, these findings diverge from Brown et al. (2015), who found that participants exposed to positive personality descriptions about their logical ability performed better on a *Sudoku Logical Task* than those exposed to negative descriptions. In contrast, the present findings revealed that negative priming, regardless of its validity, was more effective in enhancing logical thinking performance. This discrepancy suggests that the impact of priming may vary depending on individual context (O'donnell et al., 2018), including cultural, temporal, and generational differences. While Brown et al. (2015) emphasized the reinforcing effect of positive expectations, the current results indicate that for contemporary participants, particularly those from Generation Z, negative information may act as a constructive challenge that stimulates greater cognitive effort.

The stronger influence of valence compared to validity suggests that affective cues, rather than informational credibility, play a more decisive role in shaping motivational responses. Negative valence appears to activate self-protective or compensatory mechanisms, prompting individuals to exert greater cognitive effort to restore a positive self-view (Sedikides & Alicke, 2012). In contrast, validity cues were less impactful, possibly because Generation Z participants tended to attribute such information to external rather than internal sources. According to the Situated

Inference Model (Loersch & Payne, 2011), priming is more effective when the activated information is perceived as arising from one's own internal thought processes, rather than recognized as externally imposed. Because the zodiac descriptions in this study were explicitly presented as external statements about personality, participants were more likely to treat them as situational information instead of self-generated cues, thereby reducing the strength of the priming effect. Consequently, the emotional tone of the feedback (valence) exerted a stronger motivational influence than its perceived validity.

Theoretically, the present findings extend contemporary priming models by showing that motivational responses may depend more on affective valence than on the perceived validity of the prime. This supports both the Situated Inference Model and Self-Enhancement frameworks, suggesting that priming effectiveness depends on both self-relevance and motivational regulation processes. Practically, although the Chinese zodiac descriptions used in this study were descriptive rather than motivational, the findings suggest that feedback framed as constructive challenges could more effectively stimulate cognitive engagement (Anseel & Martinescu, 2020).

Nevertheless, the application of negative or evaluative feedback as a motivational tool must adhere to ethical principles, ensuring beneficence and nonmaleficence (American Psychological Association, 2017). Feedback interventions should aim to challenge rather than harm, promoting adaptive self-reflection and sustained learning motivation.

Finally, several limitations should be acknowledged. First, participants were exclusively psychology students, which may limit the generalizability to other academic disciplines with potentially different cognitive characteristics. Their familiarity with psychological concepts such as priming might also have increased awareness of the manipulation, thereby reducing priming effects. Therefore, future research should consider involving participants from diverse academic backgrounds, include larger, and more heterogeneous samples to enhance representativeness. Second, this study only assessed the short-term effects of priming without evaluating how long these effects persist or whether they change over time. Future research should include longitudinal designs to assess persistence and decay of priming effects over time.

Third, participants' prior experience with *Sudoku Logical Task* was not controlled, which may have influenced performance outcomes. Moreover, the same medium-level Sudoku puzzle was administered in both pretest and post-test sessions to ensure task equivalence, which may have inadvertently introduced a minor practice effect, as participants could recall number patterns or problem-solving strategies from the pretest. Future studies should standardize task difficulty, provide brief training sessions, or use parallel puzzle versions of equivalent difficulty to minimize potential practice effects and skill variance.

Fourth, the use of explicit primes in this study may have reduced automatic activation. Replication using implicit or incidentally presented priming stimuli (e.g., briefly displayed words or cues embedded within unrelated tasks) could more effectively trigger nonconscious goal activation and strengthen the test of priming effects on cognitive performance (Weingarten et al., 2016).

Fifth, although a manipulation check was administered to assess participants' recognition of the valence and validity cues, the numerical response records were no longer available at the time of manuscript preparation due to the loss of physical forms and deletion of archived archives following graduation procedures. Nevertheless, all participants were retained in the analyses,

consistent with an intent-to-treat approach. However, the absence of the detailed manipulation-check data limits the ability to evaluate how accurately participants processed the priming cues. Future studies should ensure proper archival of manipulation-check data to allow verification and sensitivity analyses.

Sixth, because four paired-sample t-tests were performed without statistical correction (e.g., Holm-Bonferroni), the risk of Type I error inflation cannot be entirely ruled out. Therefore, the within-group findings, particularly those observed in the negative-valid and negative-invalid conditions, should be interpreted cautiously and regarded as exploratory. Future studies are encouraged to apply adjusted procedure to confirm the robustness of these within-group effects.

## Conclusion

This study examined the effect of priming using personality descriptions, categorized by valence (positive vs. negative) and validity (valid vs. invalid) on the logical thinking ability of Generation Z students. This study found that priming using Chinese zodiac descriptions did not yield a significant main effect on logical thinking. However, further analysis revealed that negative priming regardless of perceived validity, improved performance, while positive priming had no significant effect. These results suggest that negative trait priming may act as a psychological motivator, triggering self-defensive responses and enhancing task engagement, particularly in younger individuals who are highly self-aware and motivated to prove their capabilities. In contrast, the validity of the priming content was not a determining factor in performance.

These findings indicate that negative priming holds greater potential in enhancing logical thinking than positive priming, suggesting its possible application in constructive feedback strategies. When delivered with care and focused on areas for growth, such feedback may serve as a motivational challenge that encourages individuals to improve their performance. Therefore, to effectively enhance logical thinking, priming should be designed to connect with participants' daily experiences or personal relevance to elicit stronger intrinsic motivation. Nevertheless, the use of negative priming warrants ethical consideration to ensure that it does not cause adverse psychological effects, such as anxiety, discomfort, or stress due to exposure to negative stimuli.

**Acknowledgment**
The authors would like to thank all experimental facilitators and student participants for their involvement in this research. Special thanks to Dr. Jennifer L. Frymiare for providing the priming script used in this study and valuable insights.

## References

Allum, N. (2011). What makes some people think astrology is scientific? *Science Communication*, *33*(3), 341–366. doi: 10.1177/1075547010389819

American Psychological Association. (2017). *Ethical principles of psychologists and code of conduct*. Retrieved October, 2025. https://www.apa.org/ethics/code

Anseel, F., & Martinescu, E. (2020). Praise from a self-enhancement perspective: More, I want more? *Psychological Perspectives on Praise*, 3–10. doi: 10.4324/9780429327667-2

Baek, Y., Kim, B., Yun, S., & Cheong, D. (2008). Effects of two types of sudoku puzzles on students' logical thinking. In T. C. Mark Stansfield (Ed.), *2nd European Conference on Games Based Learning*, 19–24.

Bargh, J. A. (2014). The historical origins of priming as the preparation of behavioral responses: Unconscious carryover and contextual influences of real-world importance. *Social Cognition*, *32*, 209–224. doi: 10.1521/SOCO.2014.32.SUPP.209

Bargh, J. A., Chen, M., & Burrows, L. (1996). Automaticity of social behavior: Direct effects of trait construct and stereotype activation on action. *Journal of Personality and Social Psychology*, *71*(2), 230–244. doi: 10.1037/0022-3514.71.2.230

Baumeister, R. F., Bratslavsky, E., Finkenauer, C., & Vohs, K. D. (2001). Bad is stronger than good. *Review of General Psychology*, *5*(4), 323–370. doi: 10.1037/1089-2680.5.4.323

Bornstein, M. H., Jager, J., & Putnick, D. L. (2013). Sampling in developmental science : Situations, shortcomings, solutions, and standards. *Developmental Review*, *33*(4), 357–370. doi: 10.1016/j.dr.2013.08.003

Brown, R. L., Kisch, M. E., Miller, M. R., Pacera, N. M., Perrottet, R. M., & Stevenson, J. L. (2015). The effect of the nature and perceived validity of zodiac personality predictions of on logic test performance. *The Undergraduate Journal of Psychology*, *28*(1), 46–54.

Cionca, E., & Fu, L. (2020, April 16). *Astrology extends into social media – the Epic*. Retrieved March, 2024. https://lhsepic.com/7701/in-depth/astrology-extends-into-social-media/

Cohen, J. (1988). *Statistical power analysis for the behavioral sciences* (2nd ed.). Lawrence Erlbaum Associates.

Das, A., Sharma, M. K., Kashyap, H., & Gupta, S. (2022). Fixating on the future: An overview of increased astrology use. *International Journal of Social Psychiatry*, *68*(5), 925–932. doi: 10.1177/0020764021094155

Dijksterhuis, A., & Van Knippenberg, A. (1998). The relation between perception and behavior, or how to win a game of trivial pursuit. *Journal of Personality and Social Psychology*, *74*(4), 865–877. doi: 10.1037/0022-3514.74.4.865

Doyen, S., Klein, O., Pichon, C. L., & Cleeremans, A. (2012). Behavioral priming: It's all in the mind, but whose mind?. *PLoS ONE*, *7*(1), 1-7. doi: 10.1371/journal.pone.0029081

Dufner, M., Gebauer, J. E., Sedikides, C., & Denissen, J. J. A. (2019). Self-enhancement and psychological adjustment: A meta-analytic review. *Personality and Social Psychology Review*, *23*(1), 48–72. doi: 10.1177/1088868318756467

Fauzy, A. (2019). Metode sampling. In *Universitas Terbuka*, *9*(1). Universitas Terbuka.

Gall, M. D., Gall, J. P., & Borg, W. R. (2003). *Educational research an introduction* (7th ed.). Pearson Education.

George-Parkin, H. (2021, February 9). *The anxieties and apps fuelling the astrology boom*. Retrieved February, 2024. https://www.bbc.com/worklife/article/20210205-why-astrology-is-so-popular-now

Gotts, S. J., Chow, C. C., & Martin, Al. (2001). Repetition priming and repetition suppression: A case for enhanced efficiency through neural synchronization. *American Journal of Health-System Pharmacy*, *58*(22), 227–237. doi: 10.1080/17588928.2012.670617

Gruijters, S. L. K. (2022). Making inferential leaps: Manipulation checks and the road towards strong inference. *Journal of Experimental Social Psychology*, *98*, 1-9. doi: 10.1016/J.JESP.2021.104251

Gutierrez, P. J. M. (2020, January 26). *More young people believe in Chinese zodiac*. Retrieved March, 2024. https://businessmirror.com.ph/2020/01/26/more-young-people-believe-in-chinese-

zodiac/

Hadinata, J. (2011). Problem solving sudoku menggunakan algoritma genetika. *Jurnal Ilmiah Sisfotenika*, *1*(1), 48–58. https://doi.org/http://dx.doi.org/10.30700/jst.v1i1.6

Hattie, J., & Timperley, H. (2007). *The power of feedback*. 77(1), 81–112. doi: 10.3102/003465430298487

Hidayah, A. N., Ruliyani, H., Dewantari, P. N., & Islami, M. R. F. (2023). *Ramalan di era digital : pengaruh video tiktok terkait kepercayaan remaja kepada zodiak*.

Hill, L. D., Starratt, V. G., Fernandez, M., & Tartar, J. L. (2019). Positive affective priming decreases the middle late positive potential response to negative images. *Brain and Behavior*, *9*(1), 1–10. doi: 10.1002/brb3.1198

Hochberg, Y., & Benjamini, Y., (1995). *Controlling the false discovery rate: A practical and powerful approach to multiple testing*. *57*(1), 289–300. doi: 10.1111/j.2517-6161.1995.tb02031.x

Hoewe, J. (2017). Manipulation check. In *The International Encyclopedia of Communication Research Methods*. doi: 10.1002/9781118901731.iecrm0135

Islam, M. R. (2018). *Sample size and its role in central limit theorem (CLT)*. *1*(1), 37–46. doi: 10.31295/ijpm.v1n1.42

Loersch, C., & Payne, B. K. (2011). The situated inference model: An integrative account of the effects of primes on perception, behavior, and motivation. *Perspectives on Psychological Science*, *6*(3), 234–252. doi: 10.1177/1745691611406921

Macrae, C. N., & Johnston, L. (1998). Help, I need somebody: Automatic action and inaction. *Social Cognition*, *16*(4), 400–417. doi: 10.1521/soco.1998.16.4.400

McCambridge, J., de Bruin, M., & Witton, J. (2012). The effects of demand characteristics on research participant behaviours in non-laboratory settings: A systematic review. *PLoS ONE*, *7*(6), 1–6. doi: 10.1371/journal.pone.0039116

Molden, D. C. (2014). Understanding priming effects in social psychology: What is "social priming" and how does it occur? *Social Cognition*, *32*(SPEC. ISSUE), 1–11. doi: 10.1521/soco.2014.32.supp.1

Murphy, K. R., & Myors, B. (2004). *Statistical power analysis: A simple and general model for traditional and modern hypothesis tests* (2nd ed.). Lawrence Erlbaum Associates.

Nathania, N. (2014). Faktor-faktor yang mempengaruhi pandangan masyarakat tionghoa surabaya terhadap peruntungan shio 影响泗水华裔生肖运势看法的因素. *Century*, *2*(1), 123–133. https://doi.org/https://doi.org/10.9744/century.2.1.123-133

Nurachman, M. A. R., & Retnoningsih, S. (2018). Mengenalkan asal mula 12 shio binatang melalui perancangan buku digital interaktif. *Jurnal Rekamakna Institut Teknologi Nasional*, 1-13.

O'donnell, M., Nelson, L. D., Ackermann, E., Aczel, B., Akhtar, A., … & Zrubka, M. (2018). Registered Replication Report: Dijksterhuis and van Knippenberg (1998). *Perspectives on Psychological Science*, *13*(2), 268–294. doi: 10.1177/1745691618755704

Ocvitalia, S. (2019). Shio dalam tinjauan values of children. *Jurnal Insight* , *15*(1), 112-123. doi: 10.32528/ins.v15i1.1701

Oktavia, C., & Azeharie, S. (2019). Studi komunikasi budaya : makna shio pada etnis tionghoa dalam memilih pasangan hidup. *Koneksi*, *3*(1), 112-117. doi: 10.24912/KN.V3I1.6153

Page, S. (2023, June). *Young people are flocking to astrology, but it comes with risks*. Retrieved

February, 2024. https://www.washingtonpost.com/lifestyle/2023/06/13/astrology-millennials-gen-z-science/

Podara, A., Saridou, T., Kostarella, I., Georgiadou, E., & Veglis, A. (2025). Talking to gen z about media and pseudoscience: trends and perceptions. *Societies*, *15*(6), 1-16. doi: 10.3390/soc15060148

Richardson, J. T. E. (2011). Eta squared and partial eta squared as measures of effect size in educational research. *Educational Research Review*, *6*(2), 135–147. doi: 10.1016/j.edurev.2010.12.001

Sedikides, C., & Alicke, M. D. (2012). Self-enhancement and self-protection motives. *The Oxford Handbook of Human Motivation,* 303-322. doi: 10.1093/OXFORDHB/9780195399820.013.0017

Sedikides, C., & Gregg, A. P. (2008). Self-Enhancement: Food for thought. *Perspectives on Psychological Science*, *3*(2), 102–116. doi: 10.1111/j.1745-6916.2008.00068.x

Siyabonga, T. (2024, March 20). *Unveiling the cosmos: A journey through the stars and the mind*. Retrieved March, 2024. https://medium.com/mr-plan-publication/unveiling-the-cosmos-a-journey-through-the-stars-and-the-mind-660de8a354e7

Suresh, K. P. (2011). *An overview of randomization techniques : An unbiased assessment of outcome in clinical research*. *4*(1), 8-11. doi: 10.4103/0974-1208.82352

Susantio, D. (2014). Astrologi sebagai ilmu epigrafi: Sebuah pemikiran. *Berkala Arkeologi*, *34*(1), 85–96. doi: 10.30883/JBA.V34I1.18

Tan, J. R., Gulendra, I. W., & Supriyatini, S. (2022). The meaning of colors in shio as implications of painting objects. *Cita Kara: Jurnal Penciptaan Dan Pengkajian Seni Murni*, *2*(2), 109-124. doi: 10.59997/citakara.v2i2.1852

Taylor, S. E., & Brown, J. D. (1988). Illusion and well-being: A social psychological perspective on mental health. *Psychological Bulletin*, *103*(2), 193–210. doi: 10.1037/0033-2909.103.2.193

Usdiyana, D., Purniati, T., Yulianti, K., & Harningsih, E. (2009). Meningkatkan kemampuan berpikir logis siswa SMP melalui pembelajaran matematika realistik. *Jurnal Pengajaran Matematika Dan Ilmu Pengetahuan Alam*, *13*(1), 1–14. doi: 10.18269/jpmipa.v13i1.300

Van Teijlingen, E., & Hundley, V. (2002). The importance of pilot studies. *Nursing Standard*, *16*(40), 33–36. doi: 10.7748/ns.16.40.33.s1

Weingarten, E., Chen, Q., McAdams, M., Yi, J., Hepler, J., & Albarracín, D. (2016). From primed concepts to action: A meta-analysis of the behavioral effects of incidentally presented words. *Psychological Bulletin*, *142*(5), 472–497. doi: 10.1037/BUL0000030

Yildirim, A. (2021). Examining the distinction between self-enhancement and self-protection in young adults: The roles of basic need satisfaction and psychological adjustment. *PSICOLOGIA*, *35*(2), 1–16. doi: 10.17575/psicologia.v35i2.1718

## About the Journal

| | |
|---|---|
| Journal title | **JOURNAL OF EDUCATIONAL, HEALTH, COMMUNITY PSYCHOLOGY** |
| Initials | **JEHCP** |
| Abbreviation | ***J Educ Health Community Psychol*** |
| Frequency | **4 issues per year \| March June September December** |
| DOI | **Prefix 10.12928/jehcp** |
| ISSN | **E-ISSN: 2460 8467** |
| Editor-in-chief | Associate Prof. Triantoro Safaria, Ph.D. |
| Publisher | **Universitas Ahmad Dahlan** |
| Citation Analysis | **Google Scholar \| Sinta** |

**Journal of Educational, Health, and Community Psychology (JEHCP)** published an article and empirical study that have originality, novelty, and fill the gap of knowledge, that focused on educational psychology, health psychology, and community psychology for the International academic community. **JEHCP** is an open-access peer-reviewed, multidisciplinary journal that publishes quality studies related to psychology. **JEHCP** is interdisciplinary in approach and includes reports of qualitative case studies, quantitative experiments and surveys, mixed-method studies, action research, meta-analyses, and discussions of conceptual and methodological issues.

**The field of educational psychology** includes the effectiveness of educational interventions, the psychology of teaching, and the social psychology of schools as organizations, motor skills, and other psycho-physiological processes; cognitive development involving areas such as problem-solving, language acquisition; social, personality, and emotional development; self-concept and identity formation. **The field of Health Psychology** includes stress-related illnesses, the health coping strategy, resiliency, work on health attitudes and behavior, health locus of control, quality of life in chronic disease, the influence of emotion on health and health-related behaviors, psychological interventions in health and disease as well as psychological aspects of prevention. **The field of Community Psychology** includes research, evaluation, assessment and intervention, and review articles that deal with human behavior in community settings. Articles of interest include descriptions and evaluations of service programs and projects, studies of youth, parenting, and family development, methodology and design for work in the community, the interaction of groups in the larger community, and criminals and corrections. **ISSN 2088 3129 (Print)/ISSN 2460 8467 (online).**

Quick Links

Author Guideline
Editorial Boards
Reviewers
Online Submissions
Abstracting and Indexing
Peer review Process
Publication Ethics
Open Access Policy
Copy Right Notice
Ethical Clearance
Digital Archiving
Allegation of Misconduct
Business Model
Advertising Policy
Sponsorship
Visitor Statistics

template

Journal Template

TOOLS

# VOL 14 NO 4 DECEMBER 2025

**Published:** 2025-12-09

## Articles

# JOURNAL OF EDUCATIONAL, HEALTH, COMMUNITY PSYCHOLOGY

UAD PRESS

P-ISSN : 24608467 E-ISSN : 24608467 Subject Area : Health, Education

0
Impact

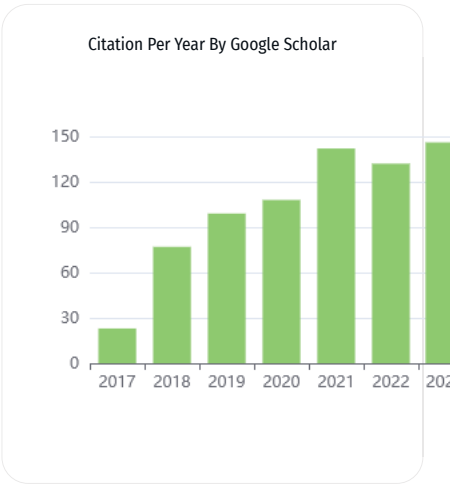
879
Google Citations

Sinta 2
Current Acreditation

Google Scholar Garuda Website Editor URL

History Accreditation

| 2016 | 2017 | 2018 | 2019 | 2020 | 2021 | 2022 | 2023 | 2024 | 2025 |
|---|---|---|---|---|---|---|---|---|---|




Journal By Google Scholar

| | All | Since 2020 |
|---|---|---|
| Citation | 879 | 727 |
| h-index | 17 | 15 |
| i10-index | 20 | 19 |

Garuda Google Scholar

## Publication Not Found