

# The Role of Horoscope Reading Timing in Shaping Daily Experience: A Cross-Sectional Study of Expectations, Behavioral Influence, and Reinterpretation

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## Abstract

Astrology often faces criticism as a pseudoscience, yet it remains a source of comfort and insight for many people, helping them navigate their daily lives. While past studies have largely focused on the psychological aspects that drive belief in horoscopes, less attention has been given to how the timing of these readings might affect daily thoughts and actions. This study aimed to explore whether reading a daily horoscope before or after the day's events influences how individuals form expectations, act on those expectations, and reinterpret their experiences. We conducted an online survey involving 52 adults who occasionally read horoscopes. Participants provided information on their belief in horoscopes, expectations, behavioral influence, interpretations of daily experiences, and their levels of uncertainty intolerance. We then analyzed the data using various statistical methods. Results revealed that those who read their horoscopes in the morning reported significantly higher expectations and were more influenced in their actions compared to those who read them in the evening. However, there were no significant differences found in how participants reinterpreted their experiences based on when they read their horoscopes. Additionally, belief in horoscopes was linked to greater expectations and behavioral influence but showed no significant relationship with reinterpretation or uncertainty intolerance. These findings highlight that the timing of horoscope readings may impact how individuals process and respond to the information, particularly regarding their expectations and behaviors. This research adds to the ongoing discussion surrounding astrology, emphasizing the importance of considering when horoscopes are read in relation to their psychological effects.

**Keywords:** Astrology; Horoscope Reading; Behavioral Influence; Expectations; Reinterpretation; Intolerance of Uncertainty; Confirmation Bias

## Introduction

If we look back at time, we can see the tendency of humans to try to understand and explain the events happening around them and influencing their lives, even as simple as giving meaning to the rain. Such behavior was useful to relieve fear, uncertainty, bring comfort, and help them be more in control in everyday events. Although civilization has progressed so much, and especially with the undeniable development of science and technology astrology and similar beliefs have been considered a pseudoscience, it is still very much a part of many people's everyday life. It still poses as a harmless guide before making decisions, but also as a "translator" or a tool to help interpret and give meaning to events and happenings, especially those that bring anxiety and uncertainty (1).

Individuals generally show differences in the ways they re-

spond to uncertainty, meaning that some people might deal with higher levels of intolerance of uncertainty. In these individuals, there is a strong discomfort that comes with the unknown, and a need for predictability and reassurance emerges to manage and handle the feeling of anxiety. They often struggle with the lack of control they have in many situations where something negative can come up as the outcome, as well as when they need to decide but are faced with unclear outcomes. All of these uncomfortable feelings can create a drive in these individuals to resort to external sources that give some explanation and prediction that they will apply to their situation, such as astrology and horoscope (2,3).

When people believe that vague, generic information and statements apply specifically to them, they are embodying the psychological phenomenon known as The Barnum Effect. These individuals are thought to be very gullible because they perceive

and interpret descriptions specifically to them and their situations, especially statements that are positive and come from someone perceived as an authority figure. According to Bertram Forer, a psychology professor, the reason people believe in horoscopes is because they provide generalized statements that fulfill their hopefulness and wishful thinking. Although the Barnum effect is relatively harmless, individuals should pay more attention and critically think and decide before acting according to such vague and general statements (4,5).

On a similar note, individuals tend to seek, interpret, and remember information in ways that confirm their thoughts and existing beliefs, in an unintentional way that makes them ignore information that is inconsistent. One of the many reasons behind this tendency is the human need to protect their self-esteem, feel good about themselves, and this is especially prominent for positive topics. Confirmation bias is also present in impression formation, and this can be connected with the expectations individuals create when reading their horoscope, i.e., if the message contains information that predicts a certain type of event, individuals will actively look for situations that support that prediction and overlook those that do not (6).

In addition to the mechanisms previously discussed, when and how often we engage with our horoscopes might significantly influence our psychological responses. For instance, reading a horoscope in the morning can act as cognitive priming (7,8), setting expectations that affect our attention, interpretation, and actions throughout the day. As a result, people might unconsciously alter their behavior or focus on experiences that align with the horoscope's insights. Conversely, if someone reads their horoscope after the day's events, it often serves as a tool for retrospective meaning-making (9), leading them to reassess their experiences in a way that aligns with what they read. While these ideas make logical sense, there's been relatively little empirical research that specifically investigates how the timing of horoscope readings impacts expectations, behavior, and the reinterpretation of daily occurrences (10,11).

The present study addresses this gap by exploring whether reading a daily horoscope before or after daily activities makes a difference in expectations, behavioral influence, and the way people understand their everyday experiences. Additionally, it looks into how belief in horoscopes relates to intolerance of uncertainty and these psychological outcomes. By weaving together established cognitive theories with the common practice of horoscope reading, this research aims to provide insight on how the timing of these readings can shape how people interpret their daily lives.

## Study Objectives and Hypotheses

The primary objective of this research study is to explore how the timing of horoscope reading influences individual's expectations, behavior, and reinterpretation of daily experience. More specifically, it explores whether individuals who read horoscope before their day begins or after their day has ended report any

associations with their expectations of the events for the day, how they react and respond to events, and if they reinterpret what has happened to fit with the horoscope's message.

Based on the existing literature and the proposed theoretical framework, the following hypotheses were formulated:

H1: Individuals who read horoscopes before the day has begun will report higher levels of expectations than individuals who read horoscopes after the day has ended.

H2: Individuals who read horoscopes before the day has begun will report higher levels of behavioral changes than individuals who read horoscopes after the day has ended.

H3: Individuals who read horoscopes after the day has ended will report higher levels of reinterpretation of the daily experiences than individuals who read horoscopes before the beginning of the day.

H4: Belief in horoscopes will be positively associated with expectation, behavioral influence, and reinterpretation of daily experiences.

H5: Intolerance of uncertainty will be positively associated with higher belief in horoscopes.

## Method

This research aimed to explore how the timing of horoscope reading influences expectation, behavior, and the reinterpretation of daily experiences. For that reason, the study used a quantitative, primary research method, with a cross-sectional survey design to collect data from participants, and capture participants' current experiences and perceptions of horoscope use without tracking changes over time. The study is reported in accordance with the Strengthening the Reporting of Observational Studies in Epidemiology (STROBE) guidelines (12).

Participants were individuals aged 18 and above, and this age criterion were chosen to ensure that all participants were legally able to provide informed consent and reflect on their own experiences independently. Gender was not a selection criterion; individuals of all gender identities were welcome and invited to take part in the study. An important criterion was that participants report reading horoscopes at least occasionally, and individuals who reported not reading horoscopes were excluded through a screening question at the beginning of the survey. The study used a convenience and voluntary response sampling, the survey was distributed online through various social media platforms, university communication channels, and other networks.

The final sample consisted of 52 participants, including 43 females (82.7%) and 9 males (17.3%). Regarding horoscope-reading habits, 25 participants (48.1%) reported reading their horoscope before beginning their day, whereas 27 participants (51.9%) reported reading it after the day has ended. No formal sample size calculation was performed because the study was conducted as an exploratory cross-sectional survey using con-

venience sampling.

The questionnaire consisted of multiple questions, divided into sections designed specifically for this study: a screening question on the frequency of reading horoscopes; demographic questions regarding age and gender; question focusing on the timing of reading horoscopes; self-developed five-point Likert scale items to measure belief in horoscopes, expectation, behavioral influence, reinterpretation, each using four items; and adapted five item scale from Intolerance of Uncertainty Scale (2), by using five-point Likert scales (1 = Strongly disagree; 5 = Strongly agree).

The data analysis was conducted using SPSS. Descriptive statistics, including frequencies, percentages, means, and standard deviations were used to summarize demographic characteristics and study variables. Inferential analyses included independent samples t-tests to examine the differences in expectation, behavioral influence, and reinterpretation based on the timing of horoscope reading. With Pearson correlation analyses, the study examined the relationships between belief in horoscopes, intolerance of uncertainty, and the main psychological variables. Statistical significance was established at  $p < .05$ .

Internal consistency reliability was evaluated using Cronbach's alpha coefficients. All scales demonstrated good to excellent reliability ( $\alpha = .84-.91$ ).

## Results

**Table 1:** Demographic Characteristics of Participants

Variable	n	%
Gender		
Female	43	82.7
Male	9	17.3
Horoscope Reading Timing		
Morning	25	48.1
Evening/Night	27	51.9

Note. N = 52.

The final sample of this study included 52 participants, out of which 82.7% were female, and 17.3% were male. In terms of the timing of reading horoscopes, 48.1% of the participants reported reading horoscopes in the morning, before starting their day, and 51.9% of the participants reported reading horoscopes after the day had ended.

Descriptive statistics were calculated for the main study variables, and they showed that participants reported only moderate levels of expectation influence ( $M = 2.94$ ,  $SD = 0.92$ ), reinterpretation of daily events ( $M = 2.75$ ,  $SD = 1.01$ ), and belief in horoscope ( $M = 3.10$ ,  $SD = 0.75$ ). A somewhat lower level of influence was shown in behavior ( $M = 2.41$ ,  $SD = 0.87$ ), but the highest mean score among the measured variables was demon-

strated in intolerance of uncertainty ( $M = 3.28$ ,  $SD = 1.02$ ).

**Table 2:** Descriptive Statistics for Main Study Variables

Variable	M	SD
Expectation	2.94	0.92
Behavior	2.41	0.87
Reinterpretation	2.75	1.01
Belief in Horoscopes	3.1	0.75
Intolerance of Uncertainty	3.28	1.02

Note. N = 52.

**Table 3:** Independent Samples t-Test Comparing Morning and Evening Horoscope Readers

Variable	Morning M (SD)	Evening/Night M (SD)	t	p
Expectation	3.29 (0.95)	2.62 (0.77)	2.81	0.007
Behavior	2.67 (0.87)	2.18 (0.81)	2.13	0.039
Reinterpretation	2.90 (1.04)	2.60 (0.98)	1.07	0.291

In order to examine the differences in expectation, behavior, and reinterpretation based on the timing of horoscope reading, independent samples t-tests were conducted, and they showed that participants who reported reading horoscopes before starting their day had significantly higher expectation scores ( $M = 3.29$ ,  $SD = 0.95$ ) compared to the participants who read horoscopes after the day had ended ( $M = 2.62$ ,  $SD = 0.77$ ),  $t(50) = 2.81$ ,  $p = .007$ . Similarly, morning readers reported significantly higher behavioral influence ( $M = 2.67$ ,  $SD = 0.87$ ) than evening readers ( $M = 2.18$ ,  $SD = 0.81$ ),  $t(50) = 2.13$ ,  $p = .039$ . There was no statistically significant difference in reinterpretation scores between morning readers ( $M = 2.90$ ,  $SD = 1.04$ ) and evening readers ( $M = 2.60$ ,  $SD = 0.98$ ),  $t(50) = 1.07$ ,  $p = .291$ .

**Table 4:** Pearson Correlations Between Main Study Variables

Variable	1	2	3	4	5
Belief in Horoscopes	-				
Intolerance of Uncertainty	0.08	-			
Expectation	.61***	0.17	-		
Behavior	.59***	.29*	.62***	-	
Reinterpretation	0.23	.43**	.38**	.51***	-

Note. N = 52. \* $p < .05$ , \*\* $p < .01$ , \*\*\* $p < .001$

To examine the relationships between the study variables – belief in horoscopes, intolerance of uncertainty, expectation, behavior, and reinterpretation, Pearson correlation analyses were conducted. Belief in horoscopes demonstrated a strong positive correlation with expectation ( $r = .609$ ,  $p < .001$ ) and behavior influence ( $r = .586$ ,  $p < .001$ ), which indicates that stronger horoscope belief is associated with higher expectations and

behavioral influences throughout the day. There was no statistically significant association between belief in horoscopes and reinterpretation ( $r = .226, p = .107$ ), as well as between belief in horoscopes and intolerance of uncertainty ( $r = .084, p = .554$ ). However, intolerance of uncertainty is positively correlated with behavior influence ( $r = .293, p = .035$ ) and reinterpretation ( $r = .429, p = .001$ ).

**Table 5:** Reliability Statistics for Main Study Variables

Scale	Cronbach's $\alpha$	Number of Items
Expectation	0.86	4
Behavior	0.91	4
Reinterpretation	0.9	4
Belief in Horoscopes	0.84	4
Intolerance of Uncertainty	0.91	4

*Note.* Cronbach's alpha values indicate internal consistency for all study variables.

Using Cronbach's alpha coefficients, internal consistency reliability was assessed, and the Belief in Horoscopes scale ( $\alpha = .84$ ) and the Expectation scale ( $\alpha = .86$ ) demonstrated good reliability, while the Behavior scale ( $\alpha = .91$ ), the Reinterpretation scale ( $\alpha = .90$ ) and the adapted Intolerance of Uncertainty scale ( $\alpha = .91$ ) demonstrated excellent reliability.

## Discussion

The aim of this present study was to explore whether and how the timing of reading a horoscope (in the morning or in the evening/at night) influences psychological constructs such as expectations, behavioral changes, and reinterpretation of events. The results suggest that the timing of horoscope reading is associated with how individuals cognitively engage with the messages their horoscope offers for the day.

Interestingly, the results showed that the participants who read horoscopes in the morning before their day starts reported significantly higher levels of expectations (H1) and influence on their behavior (H2). A possible explanation for these findings is that for many individuals' astrology and horoscopes serve as a guide for decision-making (1), and thus reading the horoscope in the morning can act as a priming mechanism that sets your expectations for the day (7,8). These findings are consistent with the theory of confirmation bias, which proposes that individuals selectively attend information that confirms pre-existing expectation (6), where individuals establish some expectation and prediction for the day, and they tend to seek out cues in the environment that are connected to their prediction, so they may unintentionally adjust their behavior (even unconsciously) to match the anticipated outcome.

On the contrary, the results did not show any significant difference in reinterpretation scores between morning and evening readers. Although the expectation of this study was that individuals

who read their horoscopes after the day had ended would report higher reinterpretation of the daily events, the findings did not support this assumption. One potential explanation could be that the way people reinterpret their daily experiences is a common cognitive process that happens regardless of when they come across their horoscopes. Instead of being influenced by the timing of horoscope readings, this reinterpretation seems to stem from a broader inclination individuals must find meaning in their everyday lives (9).

Additional insight into the psychological processes behind horoscope engagement was shown through the correlation analyses. The findings demonstrated a strong correlation between belief in horoscopes and expectation and behavior, which means that the more people believe in horoscopes, the more they allow horoscope content and information to shape their expectations and guide their behavior. Literature is clear when suggesting that individuals who perceive horoscopes as meaningful are more likely to apply that information in day-to-day events and situations (1,5). An unexpected finding was the lack of statistically significant correlation between Belief in horoscopes and Intolerance of Uncertainty, as literature suggests that people who turn to astrology, often do it because of anxiety and the need to relieve it (2,3). A possible explanation for this finding may be that Intolerance of Uncertainty might drive behavioral changes and reinterpretation regardless of the belief in astrology and horoscopes, or that individuals might resort to different "comfort places" for reassurance and guidance.

An interesting pattern that can be noticed from the results is the high level of Intolerance of Uncertainty alongside a moderate level of Belief in horoscopes. These findings may also be interpreted considering the Barnum Effect (4,5) here, that explains how individuals tend to accept vague and generalized statements as if they are applicable specifically for them.

There are several limitations of this research study that should be acknowledged. First, the sample size is quite small ( $N = 52$ ), and it is skewed toward female participants (82.7%), which in turn limits the generalizability of the findings across larger populations. Second, all variables were evaluated through self-report measures, which means the results may be influenced by response bias, recall bias, and the desire to present oneself favorably. The cross-sectional design only allows for correlations and not causation, so a longitudinal approach should be considered as an idea for further research, as well as adding the "source" of the horoscope (e.g., social media vs. specialized apps) that could reveal another possible factor for the behavior, expectation, and reinterpretation aspects.

In conclusion, this research study found that the timing of reading a horoscope is a critical variable when it comes to daily expectations and behavioral changes. For those who check their horoscopes before starting their day, these readings can create a mindset that shapes their expectations and influences how they act throughout the day. Conversely, for those who look at horoscopes after their daily experiences, these readings often

become a way to make sense of what has happened and find meaning in those events (9).

## Ethical Considerations

The study was conducted in accordance with the ethical principles outlined in the Declaration of Helsinki. Taking into consideration the fact that this study explores individuals' beliefs, behaviors, and interpretations of daily experiences, anonymity and voluntary participation were a top priority. Before proceeding with the survey, participants were informed of the sole purpose of the research project and the survey as a part of it, as well as their anonymity and voluntary participation. No personal information was collected, and the obtained information was used only for the purpose of the research study. By making the survey anonymous, the intention was to encourage honest responses from participants, given that personal beliefs and interpretations can be subjective and influenced by individual perspectives. Thus, this ethical approach ensured that participants could share their experiences without concerns about being judged or facing consequences. There were no restrictions on who could participate in the survey and overall research, so convenience and voluntary response sampling were used, meaning that participants were invited and gathered online through open distribution of the survey, and their participation was based on willingness to partake. Participants were allowed to withdraw at any time while taking the survey without any consequences, and there was no need to provide reasons for withdrawing.

Formal institutional review board approval was not required, as the study was conducted as a non-invasive, educational project within an undergraduate psychology curriculum, posing minimal risk to participants. Electronic informed consent was obtained from all participants before participation.

## Declarations

### Conflict of Interest

The author declares that there are no conflicts of interest regarding the publication of this manuscript.

### Funding

This research received no external funding.

### Data Availability Statement

The data supporting the findings of this study are available from the corresponding author upon reasonable request.

### Author Contributions

L.D. conceived the study, designed the methodology, developed the research instrument, collected the data, performed the statistical analyses, interpreted the findings, and drafted the manuscript. Dr. A.M. provided supervision, contributed to the refinement of the study, and critically reviewed and edited the manuscript.

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