

Influential Factors on the Constellation Culture Consumption Behavior of Young and Middle-Aged Adults under New Media Platforms

Xiao Yu

University of Sydney, Sydney, New South Wales, 2000, Australia

ABSTRACT

Against the backdrop of rapid development of digitalization and new media, constellation culture has been revitalized on platforms such as Jitterbug, Shutterbug, Weibo and B-station, and has gradually become an important cultural consumption content for young and middle-aged groups. The interactivity of new media has changed the way users access and participate in constellation culture, but systematic research on its impact on consumption behavior is still limited. This article conducts questionnaire surveys and statistical analyses to explore the influence mechanisms of the characteristics of new media platforms, individual user traits, and psychological factors on the consumption behavior of zodiac culture. This study aims to reveal the influencing factors of astrological culture consumption behavior in the new media environment, to provide empirical support for the understanding of astrological culture consumption characteristics of young and middle-aged people, and to provide references for the content design and dissemination strategies of related platforms.

KEYWORDS

New media platforms; Astrological culture; Consumer behavior; Interactivity; Individual characteristics; Psychological factors; Young and middle-aged groups

1 Introduction

In the era of rapid digitalization, new media platforms have become an important channel for people to obtain information, communicate and interact and entertain. With the advancement of Internet technology and the popularization of social media, lifestyle and consumption behavior have undergone significant changes. Constellation culture, as a unique cultural phenomenon, has been revitalized on the new media platform, and its dissemination and consumption are highly active, especially among young and middle-aged groups.

This study aims to explore the constellation culture consumption behavior of young and middle-aged groups on new media platforms and its influencing factors. By analyzing the qualities of new media platforms, individual characteristics and psychological factors, the study reveals how these factors influence users' astrological cultural consumption behaviors. The study designed a detailed questionnaire to analyze the influence of individual characteristics such as gender, age, education, and income on consumption behavior. The study also explores the influence of the usefulness, interestingness and interactivity of horoscope culture content on users' attitudes and consumption intentions.

Constellation culture is not only a traditional cultural phenomenon, it has gained new vitality in modern society through the new media platform. Constellation culture consumption behavior and its motivation among young and middle-aged groups deserve in-depth study, and analyzing their consumption behavior on new media platforms will help to better understand this cultural phenomenon and provide theoretical support and practical guidance for new media platforms and related cultural industries.

2 Literature review

2.1 Current status of domestic research

Domestic scholars have explored the relationship between new media platforms and the cultural consumption behavior of horoscopes from multiple perspectives.

Firstly, domestic research on the impact of new media platform interactivity on user behavior has achieved rich results. Through empirical analysis, Liu Yang (2019) found that high interactivity platforms significantly enhance user engagement and satisfaction, and Chen Sihan (2020) pointed out that interactivity is positively related to user loyalty. Similarly, Zhou Yuxuan (2018) and Li Yannan (2019) emphasized that the interactivity of different platforms, the way of content generation, and the dissemination channels have a significant impact on the user behavioral patterns, which provides theoretical support in the development of differentiated interaction strategies and optimization of platform design and user experience.

Second, in the study of the dissemination and consumption behavior of constellation culture, Li Yutong (2021) analyzed the consumption of constellation culture among young and middle-aged groups, and found that its popularity and frequency of user interaction on new media platforms had significantly increased, revealing the extensive influence of constellation culture. Zhao Chenxi's (2020) study showed that horoscope culture spreads fast and covers a wide range

of areas on new media platforms, and users' acceptance and trust of the content is high. Zhang Han (2021) further pointed out that the "usefulness" and "fun" of horoscope culture can significantly increase users' willingness to participate.

Third, the relationship between individual characteristics and the willingness to consume horoscope culture. Yang Xinyi (2022) pointed out that factors such as gender, age, education level and income level have an important influence on consumption intention. Prince Han (2019) and Zhou Rui (2022), on the other hand, pointed out that young and middle-aged groups show individualized and diversified characteristics in cultural consumption, and have a higher acceptance of horoscope culture, which plays an important role in social interaction.

Finally, in terms of psychological factors, Xu Mengyao (2020) and Chen Zihao (2022) found that cognitive needs, emotional dependence, and social identification have significant impacts on the consumption of constellation culture. These psychological factors reveal the internal mechanism of constellation culture consumption behavior.

Overall, domestic studies reveal the influence of new media platform qualities, individual characteristics and psychological factors on horoscope cultural consumption behavior from multiple perspectives, which provides a rich theoretical foundation and empirical support for understanding cultural consumption behavior in the new media environment, and an important reference for platforms to optimize the user experience and improve the quality of content.

2.2 Current situation of foreign research

Foreign scholars mostly focus on the dissemination and consumption behavior of constellation culture in the social media environment.

First of all, in terms of the dissemination and influence of constellation culture on new media platforms. Thompson (2021) found that the influence of social media on young people's consumption of constellation content is increasing, and interactivity significantly enhances users' interest and engagement. Mitchell (2019) showed that millennials frequently share and discuss constellation content on social media, and this behavior promotes the constellation culture spread. Evans (2021) noted that the high interactivity of young people on new media platforms, especially on video and live streaming platforms, further strengthened the spread of horoscope content. White (2019) found that horoscope culture is rapidly becoming an important part of youth culture, driven by social media.

Regarding the impact of interactivity on user behavior, Roberts (2020) the key role of liking, commenting and sharing features in enhancing user engagement and satisfaction, Walker (2020) noted the same finding that user engagement is not only limited to browsing, but also includes active interaction and content sharing.

The influence of individual characteristics on consumption behavior is also an important aspect of research. Taylor (2019)[20] noted that horoscope content has a direct impact on the purchase of horoscope-related products and services. Roberts (2021) emphasized the role of psychological needs and emotional attachment on the consumption of horoscope content, with users' psychological factors significantly influencing their consumption behaviors. Nguyen (2020) emphasized that the high level of engagement of young users. Harris (2021), on the other hand, states that young users, especially females, are more active in terms of their interest and interactive behavior towards horoscope content.

Overall, domestic and international studies consistently show that interactivity, individual characteristics and psychological factors play a key role in horoscope culture consumption behavior. These studies, despite differences in research methodology, emphasize the important role of new media in the dissemination of horoscope culture and provide a reference for future cross-cultural research.

3 Questionnaire design and data sources

3.1 Questionnaire design

This study adopts the form of structured scale questionnaire, and the scale questionnaire used mainly refers to domestic and international mature scales and is revised appropriately with the relevant theoretical research on the characteristics of cultural consumption of horoscopes in the new media environment. The questionnaire is divided into four parts, all of which adopt Likert's five-point scale (from "1=strongly disagree" to "5=strongly agree").

(1) Basic Information. Includes a survey of respondents' gender, education level, personal monthly disposable income, frequency of participation in astrological cultural activities, and channels for obtaining information about astrological culture.

(2) Cognition and Attitude. It mainly examines the respondents' perception of the usefulness and interestingness of constellation culture.

(3) Interactivity and Consumption Willingness. This is the core part of the questionnaire, with a total of 16 questions covering the following five variables:

Constellation culture usefulness (3 items, refer to Davis, 1989 for technology acceptance model);

Constellation Culture Interestingness (3 items, referring to Katz et al., 1973's Usage and Satisfaction Theory);

Constellation Culture Interactivity (3 items, referencing McMillan & Hwang, 2002's Interactivity Scale);

Individual Attitudes (3 items, referencing Ajzen, 1991's Theory of Planned Behavior);

Astrological Culture Consumption Intention (3 items, refer to UTAUT model by Venkatesh et al., 2003).

(4) Additional explanations and subjective opinions. Open-ended questions were set to investigate the influence of personal attitudes on astrological culture consumption behavior.

3.2 Research modeling and hypotheses

3.2.1 Model construction

Individuals' consumption behavior of constellation culture under the new media platform is influenced by multiple factors. Cognitive mapping theory states that an individual's cognitive structure and cognitive mode shape their acceptance and understanding level of constellation culture. This includes factors such as personal interests, psychological characteristics and cognitive styles. At the same time, the qualities of new media platforms also have an impact on individuals' cognitive processes, such as the interactivity and user-generated content functions of social media platforms. This further leads to the following model, which contains three main levels of variables:

Predictor variables include the usefulness, fun, and interactivity of horoscope culture, which together influence an individual's perception and acceptance of horoscope culture.

The mediating variable is personal attitude, which is the overall evaluation of constellation culture formed by individuals at the cognitive and emotional levels.

The dependent variable is willingness to consume zodiac-related content and products, which reflects whether individuals are willing to access or consume zodiac-related content and products on new media platforms.

3.2.2 Research hypotheses

(1) In the constellation culture consumption behavior, the following hypothesis can be made: the usefulness of constellation culture is positively correlated with the willingness to consume constellation culture, that is, when young and middle-aged people think that the consumption of constellation culture is useful, the willingness to consume constellation culture will be in a positive state, and vice versa will be in a negative state. The hypotheses are as follows:

H1: Constellation culture usefulness has a significant positive effect on personal attitude.

H2: Constellation culture usefulness has a significant positive effect on constellation culture consumption willingness.

(2) Horoscope culture interactivity means that respondents will actively participate in the interaction when consuming horoscope culture, and the hypotheses are as follows:

H3: Astrological culture interestingness has a significant positive effect on personal attitude.

H4: There is a significant positive effect of horoscope culture interestingness on horoscope culture consumption intention.

(3) The important role of personal attitude in consumer behavioral intention is known from life. Similarly, in terms of constellation culture, if young and middle-aged people think that the content of constellation culture is interesting, they will be interested in it and will have a positive attitude towards the consumption of constellation culture, and if they think that the content is uninteresting, they will have a negative attitude, which is summarized by the fact that there is a significant positive influence of constellation culture interactivity on personal attitude and the willingness to consume constellation culture. Accordingly, the hypotheses of this paper are as follows.

H5: Horoscope culture interactivity has a significant positive effect on personal attitude.

H6: There is a significant positive effect of horoscope culture interactivity on horoscope culture consumption intention.

(4) When young and middle-aged people receive information about astrological culture, the tendency of accepting behavioral intention will be strengthened when they find the content of the information useful and attractive, and the tendency of accepting behavioral intention will be weakened when the young and middle-aged people have negative attitudes toward the information conveyed in it. Therefore, the following hypotheses were formulated.

H7: Individual attitude has a significant positive effect on the constellation's cultural consumption intention.

(5) In this paper, the following hypothesis is proposed based on the research results.

H8a: Personal attitude has a mediating role in the relationship between the usefulness of horoscope culture and the willingness to consume horoscope culture of young and middle-aged people.

H8b: Personal attitude has a mediating role in the relationship between the interaction of horoscope culture and the willingness to consume horoscope culture of young and middle-aged people.

H8c: Individual attitudes mediate the relationship between the fun of horoscope culture and the willingness to consume horoscope culture among young and middle-aged people.

3.2.3 Selection of model variables

Table 1 Model variables

	Variables	Variable Assignment	Average Value
Independent variable	Usefulness of astrological culture		3.76
		1=Strongly Disagree	3.74
		2=Disagree	3.84
		3=Neutral	3.78
	The fun of astrological culture	4=Agree	3.82
		5=Strongly agree	3.89
	Interactivity of constellation culture		3.75
			3.90
			3.78

Table 1 Model Variables

Mediating Variable	Individual attitudes	3.71
		3.82
		3.70
		3.79
Dependent Variable	Constellation Culture Consumption Behavior	3.78
		3.81

3.3 Data collection and processing

A total of 330 questionnaires were distributed in this survey, and 12 invalid questionnaires were eliminated. Finally, 318 valid questionnaires were identified, with an effective recovery rate of 96.36%. All data were entered and analyzed in SPSS 26.0 software, and the scientificity and validity of the scale were subsequently ensured through the reliability and validity test.

4 Survey and data analysis

4.1 Reliability and validity test

4.1.1 Reliability test

Cronbach's Alpha coefficient was used to test the internal consistency of the scale. The Alpha value of the total scale was 0.831 (see Table 2), and the Alpha values of the dimensions ranged from 0.852 to 0.907 (see Table 3), which were all higher than 0.7, indicating that the scale had good internal consistency.

Table 2 Statistical analysis of survey reliability

Cronbach's Alpha	Number of items
0.831	16

Table 3 Reliability test table

Dependent Variable	Number of Question Items	Cronbach's Alpha
Usefulness of astrological culture	3	0.872
Interestingness of Constellation Culture	3	0.881
Interactivity of Constellation Culture	3	0.852
Personal attitude	3	0.891
Willingness to consume astrological culture	3	0.907

4.1.2 Validity tests

Construct validity was assessed by KMO and Bartlett's sphericity test. $KMO = 0.849$ and Bartlett's test was significant ($p < 0.001$), indicating that the scale was suitable for factor analysis (see Table 4). Convergent validity was further tested by average variance extracted (AVE), and the AVE values of each variable were greater than 0.5 (see Table 5), and the square roots were greater than the correlation coefficients between the variables, indicating good convergent and discriminant validity.

Table 4 KMO and bartlett's test

KMO sample adequacy index		0.849
Bartlett's sphericity test	Approximate chi-square	3681.667
	Degree of freedom	546
	Significance	0.000

Table 5 Average variance extracted value test results

Variables	Usefulness	Interestingness	Interactivity	Personal attitudes	Consumer willingness	average variance
Usefulness	(0.774)					0.606
Interestingness	.764**	(0.815)				0.657
Interactivity	.771**	.786**	(0.811)			0.798
Personal attitudes	.751**	.779**	.862**	(0.865)		0.746
Consumer willingness	.755**	.793**	.821**	.840**	(0.815)	0.665

4.2 Descriptive statistical analysis

In this survey, gender distribution was more balanced (44.2% male, 55.8% female). Educational attainment is mainly high school and below (66.07%), university and undergraduate degree accounts for 34.98%, and graduate school and above only accounts for 4.95%. Monthly income is concentrated in the range of RMB 3,000-5,000 (41.40%), followed by RMB 5,000-8,000 (27.83%), with those below RMB 3,000 accounting for 17.48%, and those of RMB 8,000 and above accounting for 13.59%.

The frequency of participation in astrological culture is dominated by “seldom” and “often” (each accounting for about 28%), while the other percentages, in descending order, are occasional (23.36%), not at all (13.43%), and almost every day (6.34%).

In terms of obtaining information access channels, Jieyin (26.56%), Shutterstock (22.78%) and Weibo (22.65%) dominated. The remaining platforms are B station (15.33%), Xiaohongshu (8.96%), WeChat (3.53%), and others (0.19%).

4.3 Descriptive statistical analysis

The mean, standard deviation and correlation coefficient of each variable are shown in Table 6. It is found that there is a significant positive correlation ($p < 0.05$ or $p < 0.01$) between the usefulness, fun, interactivity and consumption intention of constellation culture, which effectively proves the reliability of the research hypothesis.

Table 6 Correlation coefficient analysis

Variables	Constellation Culture Usefulness	Constellation Culture Interestingness	Constellation Culture Interactivity	Constellation Culture Consumption Willingness
Usefulness	1			
Interestingness	.164**	1		
Interactivity	.071	.076	1	
Consumer willingness	.114**	.083*	.184**	1
Mean value	3.7861	3.8412	3.7916	3.8025
Standard Deviation	1.01595	.98147	1.00374	.96737

4.4 Regression analysis

4.4.1 Main effect test

The results of the hierarchical regression show (see Table 9) that the constellation culture usefulness, fun, and interactivity have a significant positive effect on the willingness to consume (Beta values of 0.17, 0.43, and 0.24, respectively, $p < 0.01$), and the hypotheses H2, H4, and H6 are valid.

4.4.2 Mediating effect test

After adding the mediator variable “personal attitude”, the Beta values of the three paths decreased (usefulness: 0.17→0.11; interestingness: 0.43→0.23; interactivity: 0.24→0.19), and personal attitude has a significant effect on consumption intention (Beta=0.34, $p < 0.01$). H7 holds, indicating that personal attitude plays a partially mediating role between the three types of independent variables and consumption intention, and hypotheses H8a, H8b, and H8c hold.

Table 7 Analysis of hierarchical regression results

Variable	Name	Personal Attitude (Mediating Variable)		Astrological Culture Consumption Willingness (Dependent Variable)		
		M1	M2	M3	M4	M5
		Beta		Beta (Before Mediation) Beta (After Mediation)		
Independent Variable	Usefulness	.15**		.17**	.11**	
	Interestingness	.59**		.43**	.23**	
	Interactivity	.15**		.24**	.19**	
Mediating variables	Individual attitudes				.84**	.34**
	R ²	0.18	0.13	0.76	0.71	0.79
	ΔR ²	0.18	0.13	0.63	0.58	0.65
	F	9.98**	6.77**	84.68**	93.83**	87.62**
	ΔF	9.98**	6.77**	175.23**	535.42**	160.56**

N=618; ** $p < 0.01$, * $p < 0.05$, Beta=standardized coefficient

4.5 Results of hypothesis testing

Based on the results of hypothesis testing above, all 10 hypotheses passed the test. It is confirmed that the usefulness, interactivity and fun of horoscope culture not only have a significant positive effect on personal attitude, but also directly enhance consumption intention. In addition, personal attitude also has a significant positive effect on consumption intention and plays a mediating role between all three types of predictor variables and consumption intention.

5 Research conclusion

Through investigation and systematic analysis, this study thoroughly explored the constellation culture consumption behavior of young and middle-aged groups under the new media platform, revealing the multiple influences of new media platform qualities, individual characteristics and psychological factors on consumption behavior. It is found that the interactivity of the new media platform significantly enhances users' participation and satisfaction. Functions such as liking, commenting and sharing enhanced users' sense of participation and stickiness, thus promoting the dissemination and consumption of horoscope culture.

Individual characteristics such as gender, age, education and income level have a significant impact on the consumption of horoscope culture. Female and young people groups show higher interest in horoscope culture; highly educated users tend to analyze horoscope content rationally; and users with higher income have a stronger willingness to consume horoscope culture-related products, which provides a reference for market strategy development.

Psychological factors such as cognitive demand, emotional dependence and social identity also significantly affect users' acceptance of horoscope culture content. Consumption intention significantly increases when users perceive horoscope content as useful, interesting and satisfying emotional needs. Personal attitudes mediated the relationship between the usefulness, interestingness and interactivity of horoscope culture and consumption intention.

The study provides theoretical support for understanding the consumption of horoscope culture in the new media environment and empirical evidence for optimizing the content design and user interaction strategies of new media platforms.

References

- [1] Liu, Y. (2019) The impact of new media platform interactivity on user behavior. *Culture Industry*, 16: 44–177.
- [2] Sihan, C. (2020) The impact of new media platform interactivity on user behavior. *New Media Research*, 11: 66–129.
- [3] Yuxuan, Z. (2018) Analysis of the impact of new media platform traits on user behavior. *Culture Industry*, 27: 27–185.
- [4] Yunnan, L. (2019) Analysis of the impact of new media platform traits on user behavior. *Cultural Research*, 9: 59–121.
- [5] Yutong, L. (2021) Statistical analysis of astrological culture consumption behavior. *Consumer Behavior Research*, 14: 65–163.
- [6] Chenxi, Z. (2020) Analysis of communication and consumption behavior of constellation culture. *Modern Communication*, 12: 91–154.
- [7] Han, Z. (2021) Research on the usefulness and interestingness of constellation culture. In: *Cultural Forum*. pp. 84–99.
- [8] Xinyi, Y. (2022) Relationship between individual characteristics and consumption intention of constellation culture. *Journal of Management*, 23: 89–114.
- [9] Zihan, W. (2019) Cultural consumption behavior characteristics of young and middle-aged groups. In: *Culture and Communication*. pp. 54–77.
- [10] Rui, Z. (2022) Cultural consumption behavior characteristics of middle-aged and young groups. *Social Science Report*, pp. 82–90.
- [11] Mengyao, X. (2020) Research on the psychological factors of astrological cultural consumption behavior. *Psychological Journal*, pp. 58–87.
- [12] Zihao, C. (2022) Research on influencing factors of constellation culture consumption behavior under new media platform. *Consumer Behavior Research*, pp. 22–171.
- [13] Thompson, S. (2021) The influence of social media on astrological content consumption among youth. *J. Digital Cult. Stud.*, 15: 87–104.
- [14] Mitchell, J. (2019) Astrology consumption patterns among millennials on social media. *Social Media Res. J.*, 22: 45–62.
- [15] Evans, M. (2021) Digital consumption of astrological content among young adults. *New Media & Society*, 28: 56–75.
- [16] White, D. (2019) Astrological content and its impact on youth culture. *Youth Stud. J.*, 15: 75–89.
- [17] Roberts, J. (2021) Psychological factors in the consumption of astrological content on social media. *J. Behav. Sci.*, 29: 88–101.
- [18] Walker, J. (2020) Astrological content consumption and social media engagement. *J. Cult. Stud.*, 14: 90–108.
- [19] Rebecca, T. (2019) Astrological content and consumer behavior on social media platforms. *J. Consum. Res.*, 21: 88–105.
- [20] Linda, N. (2020) Astrological content and user engagement on new media platforms. *J. Media Commun.*, 20: 98–112.
- [21] Olivia, H. (2021) Engagement with astrological content among young consumers on social media. *J. Soc. Media Stud.*, 23: 77–95.