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Knowledge, Attitudes, and Practices towards Acceptance of Health Science Information among WeChat Public Account Users: A Cross-Sectional Study*

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Original Research

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Abstract

Objective: This study aimed to assess the knowledge, attitude, and practice (KAP) of WeChat users towards health-related public accounts.

Methods: The study included 567 participants who completed the questionnaire. Pearson correlation analysis was used to evaluate the correlation among the 3 dimensions. Multivariate analysis identified independent factors associated with KAP scores.

Results: The mean scores for knowledge, attitude, and practice were 6.12 ± 2.29 (61.2% of the total), 55.83 ± 7.33 (69.8% of the total), and 14.07 ± 3.72 (70.4% of the total), respectively. Significant positive correlations were observed between knowledge and practice ($r = 0.392$, $P < 0.001$) as well as between attitude and practice ($r = 0.319$, $P < 0.001$). Age [OR = 0.29 (0.09, 0.91), $P = 0.034$], marital status [OR = 2.11 (1.04, 4.29), $P = 0.038$], income [OR = 2.42 (1.23, 4.75), $P = 0.010$], and physical condition [OR = 0.45 (0.24, 0.85), $P = 0.014$] were independent factors associated with KAP scores.

Conclusions: WeChat users in China had relatively adequate knowledge and positive attitudes towards health-related public accounts. The findings highlight the potential of WeChat in enhancing health information dissemination in China.

Social media platforms such as Facebook, Twitter, and YouTube have revolutionized the distribution of health information by facilitating rapid dissemination and extensive outreach to general populations.[1] WeChat, a popular social media platform in China, serves as a significant health information hub for its 1 billion monthly users.[2] It supports diverse content like text, images, and videos and allows sharing through public accounts and group chats for easy access to health-related information.[3] Research indicates that WeChat effectively delivers health information, with 90.6% of users obtaining it through health-related public accounts and group chats.[4] Previous studies have explored the feasibility of using WeChat for educational purposes, such as problem-based learning in dental practical clerkships, and found that it improves students' learning experience and outcomes.[5] However, misinformation is a challenge on WeChat, as false health information can spread rapidly.[6]

Knowledge, Attitude, and Practice (KAP) studies are essential tools for understanding how a population acquires and processes information and how this information influences their behavior. KAP studies provide valuable insights into public health awareness, policy implementation, and the efficacy of health promotion campaigns.[7,8] Several KAP studies have been conducted to assess the impact of WeChat public accounts on health-related knowledge, attitudes, and practices in China and internationally.

For instance, Zhang et al. investigated the utilization of WeChat public accounts for health information acquisition among the general public in China and reported that 74.6% of respondents accessed health information via these accounts.[4] Similarly, Li et al. conducted a KAP study on COVID-19 among Chinese workers and identified WeChat as one of the 3 primary sources of COVID-19-related information.[9] Additionally, a study has demonstrated that a WeChat health education program Significantly enhanced malaria health literacy among Chinese expatriates in Niger.[10] These findings highlight the necessity of conducting comparable KAP assessments in China to elucidate the role of WeChat in disseminating health-related information to the general public.

Existing research on WeChat and health-related information has predominantly addressed its effectiveness and prevalence; however, there is a lack of studies examining the KAP regarding the acceptance of health science information. This study aims to evaluate the KAP of WeChat users concerning health-related public accounts and their receptiveness to health-related information. Additionally, the study seeks to identify factors associated with these dimensions.

Methods

Study Design and Participants

This cross-sectional study was conducted at Shandong Provincial Third Hospital, Jinan, Shandong, China, from April 2022 to November 2022. Participants included WeChat users who were able and willing to complete the survey. Exclusion criteria comprised individuals who were unconscious, unable to communicate effectively, or unwilling to participate. A QR code for the questionnaire was generated using Questionnaire Star.[11] A QR code distribution center was established at Shandong Provincial Third Hospital, where WeChat users could scan the code to access the questionnaire and provide informed consent. The minimum sample size was calculated using the formula for sample size determination: $n = \left(\frac{Z_{1-\alpha/2}}{\delta}\right)^2 \times p \times (1-p)$, with a significance level (α) set at 0.05, a standard normal deviate ($Z_{1\text{-}2/\alpha}$) of 1.96, a margin of error (δ) of 0.05, and an estimated proportion (p) of 0.5.[12] The required minimum sample size was determined to be 384 respondents. Participants completed the questionnaire voluntarily. Data were recorded in an Excel spreadsheet, and a member of the research team verified the completeness, consistency, and validity of all questionnaires. Ethical exemption for this study was obtained from the Medical Ethics Committee of Shandong Provincial Third Hospital, and informed consent was obtained from all participants prior to questionnaire completion.

Questionnaire

The questionnaire was designed based on previous studies.[13,14] A pilot study involving a sample of 51 participants was conducted to test the reliability and validity of the questionnaire. The reliability test demonstrated a high internal consistency among the questions, as evidenced by a Cronbach's α value of 0.892. Additionally, the Kaiser-Meyer-Olkin (KMO) measure of sampling adequacy for factor analysis was 0.636, confirming the suitability of the questionnaire for factor analysis.

The final questionnaire, presented in Chinese, contained 4 dimensions: demographic information (gender, age, marital status, education, monthly household income, occupation type, and physical condition), knowledge, attitude, and practice.

The knowledge dimension comprised 10 questions, scored with 1 point for a correct answer and 0 points for an incorrect or unclear answer. The attitude dimension included 16 questions, each rated on a 5-point Likert scale ranging from strongly agree (5 points) to strongly disagree (1 point), except for questions A5, A6, and A7, which were reverse-scored. The practice dimension consisted of 6 questions, with P1 and P2 scoring from 5 (always) to 1 (never), P3 and P4 scoring from 5 (Yes) to 1 (No and Not Sure), and P5 and P6 being open-ended questions without assigned scores. These scoring differences reflect the diverse assessment objectives of each dimension: knowledge was evaluated based on factual accuracy using a binary scoring system, attitude was measured through opinions with a Likert scale, and practice was assessed based on behaviors using frequency and yes/no response scales. The total raw scores for knowledge (ranged from 0 to 10), attitude (16 to 80), and practice (4 to 20) were converted into percentages. Scores were classified as good (75% and above), moderate (51-74%), and poor (50% or less) for knowledge, attitude, and practice, respectively.[15,16]

Statistical Analysis

Statistical analysis was conducted using Stata 17.0. Descriptive analyses were performed on the demographic information and KAP scores of the respondents. For normally distributed data, the mean and standard deviation were utilized, while the median and range or interquartile range were employed for non-normally distributed data. The count information for each question answer, stratified by different demographic characteristics, was expressed as n (%).

To compare differences in scores on the knowledge, attitude, and practice dimensions among respondents with varying demographic characteristics, continuous variables were first tested for normality. If the data conformed to a normal distribution, *t* tests were used to compare scores between the 2 groups. For data that did not conform to a normal distribution, Wilcoxon-Mann-Whitney tests were employed. For continuous variables with 3 or more groups that met the criteria of normal distribution and homogeneous variances, the Kruskal-Wallis analysis of variance was utilized to compare scores across multiple groups. Data were presented as mean ± standard deviation. Pearson correlation analysis was conducted to evaluate the correlation among the 3 dimensions. Variables with P values <0.05 in univariate regression were included in the multivariate analysis, using a 70% score cutoff and incorporating all baseline informative variables.

Results

Participant Characteristics and Scores on Knowledge, Attitude, and Practice Dimensions

The demographic characteristics and scores of the participants on knowledge, attitude, and practice dimensions are summarized in Table 1. A total of 980 questionnaires were distributed. After excluding responses with conflicting answers to the trap question, 567 questionnaires remained, resulting in a valid response rate of 57.9%. Following data collection, the reliability and validity of the questionnaire were re-examined, yielding a Cronbach's α coefficient of 0.934 and a KMO value of 0.877.

The mean scores for knowledge, attitude, and practice were 6.12 ± 2.29 (61.2% of the total), 55.83 ± 7.33 (69.8% of the total), and 14.07 ± 3.72 (70.4% of the total), respectively. Significant associations were observed between participants' demographic characteristics and their scores on the knowledge and practice dimensions. Specifically, age ($P < 0.001$ for knowledge, $P = 0.003$ for practice), marital status ($P < 0.001$ for knowledge, $P = 0.008$ for practice), education level (both $P < 0.001$), income (both $P < 0.001$), occupation type ($P < 0.001$ for knowledge, $P = 0.019$ for practice), and physical condition (both $P < 0.001$) were significantly associated with knowledge and practice scores.

Participants aged 31-40 years, those with postgraduate education, a monthly household income exceeding 20 001 Chinese Yuan, good physical condition, and those employed as professional and technical personnel demonstrated higher mean scores for knowledge and practice compared to their counterparts (all $P < 0.01$). Moreover, participants with excellent physical conditions exhibited significantly more positive attitudes than other groups ($P < 0.001$).

An Assessment of Participants' Knowledge, Attitude, and Practice Toward Health-Related Public Accounts

As shown in Table S1, participants demonstrated higher knowledge on questions related to the categorization and functions of health-related WeChat public accounts (correct rates = 68.61% and 69.49%, respectively), risk factors for diseases (correct rates = 65.26% and 78.66%, respectively), the definition of "three highs" (correct rate = 76.01%), and the benefits of regular physical examinations (correct

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Table 1. Knowledge, attitude, and practice scores by demographic variables

Variables	N (%)	Knowledge		Attitude		Practice	
		Score	*P*	Score	*P*	Score	*P*
Total	567 (100)	6.12 ± 2.29		55.83 ± 7.33		14.07 ± 3.72	
Gender			0.286		0.823		0.334
Male	254 (44.80)	6.01 ± 2.37		55.55 ± 7.86		13.91 ± 3.72	
Female	313 (55.20)	6.21 ± 2.22		56.06 ± 6.87		14.20 ± 3.72	
Age (years)			< 0.001		0.164		0.003
≤ 30	186 (32.80)	6.38 ± 2.22		57.15 ± 6.02		14.22 ± 3.66	
31–40	164 (28.92)	6.64 ± 2.13		55.85 ± 7.10		14.58 ± 3.46	
41–50	95 (16.75)	6.22 ± 2.22		55.93 ± 6.02		14.16 ± 3.82	
51–60	77 (13.58)	5.32 ± 2.40		53.66 ± 9.59		13.69 ± 3.93	
> 60	45 (7.94)	4.33 ± 1.87		53.80 ± 9.78		12.13 ± 3.82	
Marital status			< 0.001		0.968		0.008
Unmarried	82 (14.46)	6.52 ± 2.14		56.33 ± 6.92		13.50 ± 3.90	
Married	463 (81.66)	6.14 ± 2.28		55.83 ± 7.28		14.26 ± 3.66	
Other	22 (3.88)	4.14 ± 2.10		53.95 ± 9.64		12.23 ± 3.72	
Education			< 0.001		0.323		< 0.001
High School and below	98 (17.28)	4.44 ± 2.08		55.30 ± 9.68		12.53 ± 4.08	
University	409 (72.13)	6.48 ± 2.12		55.93 ± 6.81		14.46 ± 3.56	
Postgraduate and above	60 (10.58)	6.42 ± 2.47		56.05 ± 6.29		13.98 ± 3.61	
Monthly household income (Chinese Yuan)			< 0.001		0.533		< 0.001
≤ 5000	119 (20.99)	4.74 ± 2.17		55.20 ± 9.55		12.71 ± 4.12	
5001–10000	149 (26.28)	6.13 ± 2.17		56.33 ± 6.59		14.28 ± 3.67	
10001–20000	178 (31.39)	6.58 ± 2.25		55.63 ± 6.51		14.48 ± 3.40	
≥ 20001	121 (21.34)	6.79 ± 2.02		56.13 ± 6.84		14.55 ± 3.56	
Occupation type			< 0.001		0.247		0.019
Leaders of party-masses organization of state organs, enterprises, and institutions	72 (12.70)	5.76 ± 2.44		55.89 ± 10.05		14.14 ± 3.64	
Professional and technical personnel	152 (26.81)	6.96 ± 1.97		55.84 ± 6.89		14.72 ± 3.53	
General administrative and support staff	105 (18.52)	6.25 ± 2.29		56.00 ± 7.85		14.30 ± 3.68	
Commercial and service industry workers	99 (17.46)	5.76 ± 2.22		57.20 ± 5.41		13.73 ± 4.01	
Operators of production and transportation equipment and related personnel	45 (7.94)	5.40 ± 2.19		54.04 ± 10.05		13.71 ± 3.50	
Other	94 (16.58)	5.63 ± 2.39		55 ± 6.77		13.27 ± 3.81	
Physical condition			< 0.001		< 0.001		< 0.001
Excellent	101 (17.81)	5.72 ± 2.27		57.07 ± 9.01		14.23 ± 3.64	
Good	270 (47.62)	6.53 ± 2.11		56.19 ± 6.11		14.79 ± 3.49	
Average	140 (24.69)	6.40 ± 2.36		54.30 ± 6.96		13.53 ± 3.81	
Poor	56 (9.88)	4.16 ± 1.80		55.71 ± 9.53		11.73 ± 3.64	

rate = 75.13%). Conversely, participants exhibited lower knowledge on questions concerning the positive effects and drawbacks of health-related public accounts (correct rates = 13.23% and 43.92%, respectively).

The majority of participants expressed a positive attitude towards utilizing medical-related public accounts, as evidenced by their responses of "strongly agree" and "agree" for most positively scored questions (Figure 1). However, several questions raised concerns, such as over 60% of participants agreeing that they had no doubts about the professionalism and authenticity of the content provided by public accounts and a strong desire for timely news updates (questions A5, A6, and A7). Questions A8 to A12 assessed the level of trust respondents had for content provided by government departments, medical institutions, traditional health

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Table 2. Correlation coefficients between knowledge, attitude, and practice scores

Correlation	Coefficient	*P* value
Knowledge, Attitude	0.047	$P = 0.263$
Knowledge, Practice	0.392	$P < 0.001$
Attitude, Practice	0.319	$P < 0.001$

media, internet media, and personal medical accounts, with trust decreasing in order from government departments to personal medical accounts. Personal medical accounts exhibited the lowest level of trust and tended towards neutrality regarding the content they disseminated.

In the practice assessment (Table S2), the majority of WeChat users frequently read health-related articles (87.4% in total) and verify the authenticity of health information released by these accounts (71.61% in total). Additionally, a high percentage of participants were willing to apply health behavior recommended by these accounts to their daily lives (70.19%) and share this information with others (66.14%).

The majority of participants followed and subscribed to medical institution public accounts, with 75.49% (428/567) of responses, followed by government departmental public accounts, with 67.20% (381/567) of responses. Traditional media public accounts had 51.85% (294/567) of responses, certified internet institution public accounts had 45.68% (259/567) of responses, and personal public accounts had the fewest followers, with only 23.63% (134/567) of participants following and subscribing to them. The primary reasons for following and subscribing to health-related public accounts were to gain knowledge (79.01%), followed by finding treatment options for oneself or family members (53.97%). The least common reason was to pass the time (27.51%). Overall, the results suggest that WeChat public account users have a positive attitude towards accepting health science information and are willing to apply it to their daily lives and share it with others.

Correlation Analysis of Knowledge, Attitude, and Practice

As shown in Table 2, the analysis revealed a non-significant positive correlation between knowledge and attitude ($r = 0.047$, $P = 0.263$). However, significant positive correlations were observed between knowledge and practice ($r = 0.392$, $P < 0.001$) and between attitude and practice ($r = 0.319$, $P < 0.001$).

Identification of Independent Factors Related to Knowledge, Attitudes, and Practices

To identify independent factors associated with knowledge, attitudes, and practices, we performed univariate analysis, and variables with a P value < 0.05 were included in a multivariate analysis (Table 3–5). As shown in Table 3, age, marital status, education, income, occupation type, and physical condition were all significantly associated with knowledge scores. Specifically, individuals with a higher level of education [OR = 7.09 (2.30, 21.87), $P = 0.001$] and higher monthly household income were more likely to have higher knowledge scores [OR = 3.30 (1.63, 6.70), $P = 0.001$), while individuals aged over 60 years [OR = 0.07 (0.01, 0.56), $P = 0.012$] or with poor physical condition [OR = 0.20 (0.05, 0.72), $P = 0.014$] were more likely to have lower knowledge scores. Regarding attitudes, participants with good [OR = 0.42 (0.26, 0.68), $P < 0.001$] or average [OR = 0.29 (0.16, 0.51), $P < 0.001$] physical condition were less likely to have positive attitudes compared to those with excellent physical condition (Table 4). In terms of practice scores, participants over 60 years old [OR = 0.29 (0.09, 0.91), $P = 0.034$], married [OR = 2.11 (1.04, 4.29), $P = 0.038$], and with a monthly income exceeding 20,000 yuan [OR = 2.42 (1.23, 4.75), $P = 0.010$] were more likely to have higher practice scores. Physical condition was negatively correlated with practice scores, with individuals in average [OR = 0.45 (0.24, 0.85), $P = 0.014$] or poor [OR = 0.20 (0.07, 0.58), $P = 0.003$] physical condition being less likely to engage in health-related practices (Table 5).

Strengths and Limitations

The strengths of this study lie in its comprehensive assessment of KAP regarding health-related public accounts on WeChat among Chinese users. This study not only provides insights into participants' KAP towards health information dissemination on WeChat but also identifies demographic factors associated with these dimensions. The rigorous data collection methods and statistical analyses, including Cronbach's α coefficient and correlation analysis, ensure the reliability and validity of the findings. Furthermore, the multivariate analysis identifies independent factors influencing participants' KAP, thereby enhancing the robustness of the results.

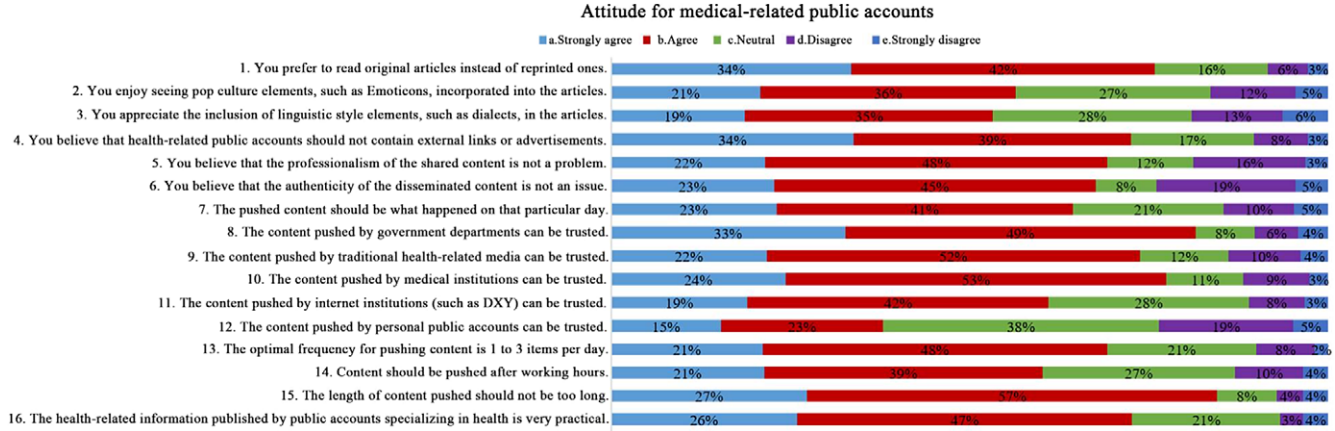

Figure 1. Attitudes of WeChat users towards health-related public accounts.

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Table 3. Univariate and multivariate analysis of knowledge scores

Variables	Univariate OR (95% CI)	*P*	Multivariate OR (95% CI)	*P*
Gender				
Male	Ref.			
Female	0.91 (0.64, 1.29)	0.594		
Age (years)				
≤ 30	Ref.		Ref.	
31–40	1.14 (0.74, 1.76)	0.538	1.13 (0.67, 1.89)	0.653
41–50	0.92 (0.55, 1.54)	0.762	1.33 (0.72, 2.47)	0.367
51–60	0.58 (0.32, 1.05)	0.071	0.98 (0.47, 2.01)	0.947
> 60	0.04 (0.01, 0.28)	0.001	0.07 (0.01, 0.56)	0.012
Marital status				
Unmarried	Ref.		Ref.	
Other	0.07 (0.01,0.58)	0.013	0.06 (0.01, 0.55)	0.012
Married	0.82 (0.50, 1.33)	0.413	0.55 (0.29, 1.04)	0.066
Education				
High School and below	Ref.		Ref.	
University	12.08 (4.81, 30.34)	< 0.001	7.58 (2.85, 20.16)	<0.001
Postgraduate and above	14.22 (5.05, 40.02)	< 0.001	7.09 (2.30, 21.87)	0.001
Monthly household income (Chinese Yuan)				
≤ 5000	Ref.		Ref.	
5001–10000	2.85 (1.54, 5.29)	0.001	2.24 (1.14, 4.40)	0.020
10001–20000	4.47 (2.47, 8.09)	< 0.001	3.27 (1.68, 6.35)	<0.001
≥ 20001	4.37 (2.33, 8.19)	< 0.001	3.30 (1.63, 6.70)	0.001
Occupation type				
Leaders of party-masses organization of state organs, enterprises, and institutions	Ref.		Ref.	
Professional and technical personnel	0.46 (0.26,0.56)	0.011	0.68 (0.34, 1.33)	0.258
General administrative and support staff	0.62 (0.37, 1.03)	0.068	0.69 (0.39, 1.20)	0.191
Commercial and service industry workers	0.32 (0.18, 0.56)	< 0.001	0.44 (0.24, 0.83)	0.011
Operators of production and transportation equipment and related personnel	0.19 (0.08, 0.46)	< 0.001	0.29 (0.11, 0.75)	0.010
Other	0.42 (0.25, 0.74)	0.002	0.65 (0.34, 1.25)	0.193
Physical condition				
Excellent	Ref.		Ref.	
Good	1.48 (0.91, 2.43)	0.117	1.07 (0.61, 1.86)	0.816
Average	1.53 (0.89, 2.64)	0.125	1.31 (0.71, 2.43)	0.392
Poor	0.13 (0.04, 0.46)	0.001	0.20 (0.05, 0.72)	0.014

However, several limitations should be acknowledged. Firstly, the study was conducted in Shandong province, China, and the results may not be generalizable to other regions or countries. Future studies should aim to increase the sample size and include participants from multiple regions and diverse backgrounds to improve the generalizability of the results. Secondly, the study relied on self-reported measures, which may be subject to response bias. Future research should consider using more objective measures to assess participants' knowledge, attitudes, and practices. Thirdly, as a cross-sectional, and thus, causality cannot be inferred. Longitudinal designs should be employed in future studies to examine the causal relationships between exposure to health-related public accounts and health outcomes.

Discussion

Statement of Principal Findings

In this study, we analyzed 567 valid questionnaires to assess WeChat users' KAP towards health-related public accounts. The

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Table 4. Univariate and multivariate analyses of attitude scores

Variables	Univariate OR (95% CI)	*P*	Multivariate OR (95% CI)	*P*
Knowledge				
[0, 70%]	Ref.		Ref.	
[70%, 100]	0.53 (0.35, 0.78)	0.002	0.67 (0.43, 1.02)	0.062
Gender				
Male	Ref.			
Female	1.06 (0.74, 1.52)	0.737		
Age (years)				
≤ 30	Ref.			
31–40	0.76 (0.48, 1.20)	0.241		
41–50	0.86 (0.50, 1.46)	0.572		
51–60	1.00 (0.57, 1.75)	0.987		
> 60	0.71 (0.34, 1.47)	0.356		
Marital status				
Unmarried	Ref.			
Other	1.38 (0.51, 3.72)	0.523		
Married	1.09 (0.65, 1.83)	0.740		
Education				
High School and below	Ref.		Ref.	
University	0.56 (0.35, 0.88)	0.012	0.68 (0.41, 1.10)	0.118
Postgraduate and above	0.60 (0.30, 1.18)	0.137	0.75 (0.36, 1.54)	0.427
Monthly household income (Chinese Yuan)				
≤ 5000	Ref.		Ref.	
5001–10000	0.75 (0.46, 1.25)	0.273	0.95 (0.56, 1.61)	0.835
10001–20000	0.60 (0.37, 0.99)	0.045	0.79 (0.47, 1.35)	0.392
≥ 20001	0.60 (0.35, 1.03)	0.062	0.75 (0.42, 1.33)	0.319
Occupation type				
Leaders of party-masses organization of state organs, enterprises, and institutions	Ref.			
Professional and technical personnel	1.77 (0.98, 3.19)	0.059		
General administrative and support staff	1.31 (0.76, 2.25)	0.327		
Commercial and service industry workers	1.43 (0.83, 2.47)	0.196		
Operators of production and transportation equipment and related personnel	1.44 (0.71, 2.93)	0.307		
Other	0.66 (0.36, 1.23)	0.192		
Physical condition				
Excellent	Ref.		Ref.	
Good	0.39 (0.24, 0.63)	< 0.001	0.42 (0.26, 0.68)	<0.001
Average	0.29 (0.17, 0.51)	< 0.001	0.29 (0.16, 0.51)	<0.001
Poor	0.80 (0.41, 1.54)	0.496	0.67 (0.34, 1.32)	0.252

mean scores for knowledge, attitude, and practice were 61.2%, 69.8%, and 70.4%, respectively. Significant positive correlations were observed between knowledge and practice, and between between attitude and practice. Independent factors associated with KAP scores included age, marital status, education, income, occupation type, and physical condition. These findings corroborate previous research, suggesting that sociodemographic and physical health factors significantly influence eHealth engagement.[17]

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Table 5. Univariate and multivariate analyses of practice scores

Variables	Univariate OR (95% CI)	*P*	Multivariate OR (95% CI)	*P*
Knowledge				
[0, 70%]	Ref.		Ref.	
[70%, 100]	2.41 (1.67, 3.49)	< 0.001	1.75 (1.14, 2.69)	0.010
Attitude				
[0, 70%)	Ref.		Ref.	
[70%, 100]	1.37 (0.94, 2.01)	0.102	1.58 (1.02, 2.45)	0.041
Age (years)				
≤ 30	Ref.		Ref.	
31–40	1.14 (0.73, 1.79)	0.555	1.00 (0.59, 1.68)	0.986
41–50	1.17 (0.70, 1.98)	0.547	1.25 (0.68, 2.31)	0.470
51–60	0.88 (0.49, 1.58)	0.675	1.08 (0.54, 2.16)	0.822
> 60	0.22 (0.07, 0.63)	0.005	0.29 (0.09, 0.91)	0.034
Marital status				
Unmarried	Ref.		Ref.	
Other	0.21 (0.03, 1.71)	0.145	0.24 (0.03, 2.05)	0.191
Married	2.29 (1.27, 4.14)	0.006	2.11 (1.04, 4.29)	0.038
Education				
High School and below	Ref.		Ref.	
University	2.67 (1.50, 4.73)	0.001	1.38 (0.71, 2.68)	0.342
Postgraduate and above	2.03 (0.93, 4.40)	0.075	1.02 (0.42, 2.47)	0.970
Monthly household income (Chinese Yuan)				
≤ 5000	Ref.		Ref.	
5001–10000	2.21 (1.22, 4.00)	0.009	1.83 (0.96, 3.48)	0.066
10001–20000	2.39 (1.35, 4.25)	0.003	1.54 (0.81, 2.93)	0.184
≥ 20001	3.37 (1.84, 6.15)	< 0.001	2.42 (1.23, 4.75)	0.010
Occupation type				
Leaders of party-masses organization of state organs, enterprises, and institutions	Ref.		Ref.	
Professional and technical personnel	0.71 (0.39, 1.30)	0.268	0.90 (0.46, 1.77)	0.767
General administrative and support staff	0.92 (0.55, 1.54)	0.749	0.99 (0.57, 1.74)	0.984
Commercial and service industry workers	0.64 (0.37, 1.10)	0.108	0.88 (0.48, 1.61)	0.673
Operators of production and transportation equipment and related personnel	0.52 (0.25, 1.12)	0.094	0.78 (0.34, 1.80)	0.565
Other	0.33 (0.17, 0.62)	0.001	0.53 (0.26, 1.07)	0.077
Physical condition				
Excellent	Ref.		Ref.	
Good	1.08 (0.67, 1.74)	0.754	0.96 (0.56, 1.63)	0.877
Average	0.51 (0.29, 0.91)	0.022	0.45 (0.24, 0.85)	0.014
Poor	0.18 (0.06, 0.48)	0.001	0.20 (0.07, 0.58)	0.003

Interpretation Within the Context of the Wider Literature

Our findings align with the concept of eHealth, which involves the use of information and communication technologies for health-related purposes.[18] Social media platforms, such as Twitter, Facebook, and WeChat, can serve as eHealth tools for various health-related objectives.[19] Our results demonstrated that higher education, increased monthly household income, better physical condition, and professional or technical occupations were associated with higher knowledge and practice scores

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regarding health-related public accounts. Consistent with our findings, previous studies have identified positive associations between higher education, income, and better self-reported health with eHealth usage.[20] Higher education and better self-rated health have also been linked to online health information-seeking behavior.[21] However, one study noted that while higher income was positively associated with eHealth literacy, education level did not show a significant relationship among baby boomers and older adults.[22] These variations suggest that the relationship between these factors and social media usage may vary across different demographics.

Our study demonstrated a positive association between good physical condition and higher knowledge and practice scores. Similarly, a study focused on Chinese college students found that female students in good health, who spent more time browsing social media and frequently used official and public social media, were more likely to exhibit high levels of knowledge, attitudes, and practices regarding COVID-19 vaccination.[23] Both studies indicated that good physical condition is an important factor associated with health-related knowledge and behaviors, highlighting the importance of considering physical health status when designing health promotion programs and interventions.

The majority of participants in this study exhibited a preference for following and subscribing to medical institutions and government departmental public accounts, suggesting that social media users tend to trust and seek health-related content from authoritative sources. This inclination may stem from an awareness of the potential for misinformation.[24] Consistent with our findings, a systematic review revealed that users generally prefer obtaining health information from reliable sources such as health professionals, government health departments, and reputable organizations.[1] Additionally, Kalyanam et al. have found that Twitter users engaged with health-related content from credible sources, such as health organizations, government agencies, and individual experts.[25] These results collectively suggest a general preference for credible sources among social media users.[26]

However, a study on the spread of news on Twitter discovered that false information tended to spread more quickly and widely than true information, implying that users sometimes prioritize sensational or engaging content over the credibility of the source.[27] Additionally, another study found that medical fake news was widely shared and engaged with on social media, indicating that users may not consistently consider the credibility of the source when interacting with health information.[28] Our study revealed that most WeChat users frequently read health-related articles and verify the authenticity of health information. However, over 60% of participants agreed that they had no doubts about the professionalism and authenticity of the content pushed by public accounts. While these findings may appear contradictory, they reflect the complexity of user behavior, trust, and health information verification on social media. Users may be proactive in seeking accurate health information, but their trust in reputable sources could lead to less scrutiny of the content they follow.[29] A study by Park et al. examined Reddit users' engagement with health-related content and found that users preferred to receive health information from reputable sources and frequently verified the accuracy of the information by fact-checking and questioning dubious claims.[30] These findings highlight the importance of disseminating reliable health information through trustworthy WeChat health-related public accounts while encouraging users to critically evaluate content, thereby ensuring the reliability and usefulness of information shared and consumed on the platform.

Implications for Policy, Practice, and Research

In our study, the main reasons for following and subscribing to health-related public accounts were to acquire knowledge and to find treatment options for oneself or family members. Similar studies have demonstrated that health information-seeking is a primary motivation for social media use, with users frequently searching for information for themselves or others.[31] Additionally, users engage with social media for various health-related purposes, such as obtaining knowledge, sharing experiences, and providing support to others.[32] Both patients and health professionals use social media primarily for health-related purposes like gaining knowledge, exchanging experiences, and accessing emotional and practical support.[33] These findings suggest that users primarily follow health-related public accounts on social media to acquire health knowledge and seek treatment options. This highlights the importance of accessing credible sources and accurate information to prevent the spread of misinformation.

Conclusions

In conclusion, the study suggests that WeChat public account users in China exhibit a positive attitude towards accepting health science information and are willing to apply it to their daily lives and share it with others. While highlighting the effectiveness of WeChat as a health communication platform in China, the study emphasizes the need for strategies tailored to demographic characteristics to enhance engagement and trust. By focusing on the quality and interactivity of content, these strategies can improve the dissemination and application of health information among users. Future research plans should aim to expand the demographic scope to ensure broader generalizability.

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Data availability statement. The data presented in this study are available in the article.

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