The Correlation Between the Linguistic Features of Social Media in New Media and Psychological Anxiety Among College Students: An Empirical Analysis Based on the Context of Networked Communication

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Abstract: To explore the correlation between the linguistic features of social media in new media and psychological anxiety among college students within the context of networked communication, this study surveyed college students from various academic tiers nationwide using a questionnaire. The survey employed scales to measure three key linguistic features of social media in new media—symbolic fragmentation, emotional polarization and catharsis, and performative persona-based stratification (independent variables)—as well as psychological anxiety among college students (dependent variable), mediating variables such as cognitive dissonance, and moderating variables such as the duration of new media use. Empirical research was conducted using descriptive statistics, Pearson correlation analysis, hierarchical regression analysis, and interaction effect analysis.

Keywords: social media language in new media; psychological anxiety among college students; context of networked communication; linguistic features of social media

1. Introduction

As the primary medium for online social interaction among college students, does the symbolic fragmentation, emotional polarization, and performative, stratified interaction of social media language in new media affect psychological anxiety through cognitive, emotional, and social pathways? Do factors such as cognitive dissonance and the echo chamber effect play mediating roles in this relationship? Do variables such as the duration of new media use and the depth of participation in social circles moderate this correlation? Answering these questions

is of great significance for improving the theory of mental health education for college students in the context of new media and optimizing strategies for guiding social language. Based on this, the study is grounded in the context of networked communication, targeting college students as the research subjects. It collects data through questionnaire surveys, employs statistical methods to empirically analyze the correlation between the three core characteristics of new media social language and psychological anxiety among college students, clarifies the mechanisms of mediating and moderating variables, and reveals the specific pathways through which social language influences psychological anxiety in college students.

2. Characteristic dimensions of new media social language in the context of networked communication

2.1. Variation in language forms

In the era of new media, communication between individuals has shifted from offline to online. One characteristic of online communication is the absence of physical presence, which results in the lack of body language for conveying attitudes and emotions. Consequently, people place particular emphasis on the use of written language and emojis to express feelings and attitudes [1]. The demand for immediacy and convenience in networked communication drives new media social language to break free from traditional grammatical norms, forming two core characteristics: symbolization and fragmentation [2]. Symbolization is manifested in the tendency towards non-textual expression in language, with emojis, internet abbreviations, and homophonic puns becoming mainstream elements. Their integration with text constructs a unique social coding system that simplifies communication, conveys emotions, yet also compresses the emotional depth of language. For example, college students often use emojis to express meaning and terms like "jue jue zi" to intensify their tone [3]. Fragmentation stems from the length limitations of new media platforms. Short videos, Moments (on WeChat), and other media have made social language exhibit characteristics of being "short, simple, and fast." Complete sentence structures are fragmented, and logical coherence is weakened. This form of expression suits the fast-paced lives of college students but also leads to superficial language use, fosters expression laziness, and weakens individuals' ability to organize complete language.

2.2. Emotional expression in language

The anonymity and lack of constraints on new media platforms prompt college students' social language expression to exhibit dual tendencies of emotional polarization and catharsis [4]. Emotional polarization manifests as extreme language expression, lacking neutrality and objectivity in stance. College students often use terms like "collapse" or "deification" to intensify emotional tension, easily falling into a "black-and-white" confrontational mode in social debates. Catharsis, on the other hand, is expressed through social language becoming a vehicle for releasing academic and interpersonal pressures. Expressions like "giving up" or "mental exhaustion" not only achieve immediate emotional release and form group resonance but also suffer from shallow output and lack rational analysis. Moreover, negative emotions can easily spread, triggering group emotional fluctuations.

2.3. Performative nature of language interaction

The theatrical nature of new media social interactions endows college students' language interactions with a strong performative quality, primarily manifested in two aspects: persona construction and compartmentalized interaction [5]. The former refers to the way college students construct their online personas using distinctive

linguistic styles, such as the rigorous expressions of "straight-A students," the humorous rhetoric of "comedians," and the lyrical prose of "literary types," with language serving as a core tool for persona creation. This type of language is a deliberate packaging based on social needs, requiring individuals to consistently maintain a congruence between their linguistic style and their persona, thereby creating psychological burdens [6]. The latter represents a phenomenon of group aggregation among college students, formed through reliance on specific linguistic symbols and vocabulary systems, such as fan club support rhetoric, gaming community jargon, and academic circle's rigorous expressions, all reflecting linguistic identity within their respective circles. This identity not only strengthens group belonging but also constructs barriers between circles; individuals who deviate from the circle's linguistic system are prone to exclusion, necessitating deliberate learning of relevant language to integrate into the circle, further intensifying the performative nature of language interactions.

3. Research design and implementation

3.1. Research hypotheses

Based on theoretical review and literature analysis, the study proposes the following research hypotheses: The three characteristics of new media social language—symbolic fragmentation, emotional polarization and catharsis, and performative persona and circle stratification—are all significantly positively correlated with psychological anxiety among college students. Cognitive dissonance caused by linguistic inflation and aphasia, the echo chamber effect of negative emotional labels, the fear of misalignment in performative social interactions, and the sense of group loneliness brought about by symbolic interactions all mediate the relationship between the characteristics of new media social language and psychological anxiety among college students. Additionally, the duration of new media use and the depth of participation in social circles among college students have moderating effects on the aforementioned associations.

3.2. Variable definition and measurement

The core variables of the study include independent variables, dependent variables, mediating variables, and moderating variables, all of which are measured using established scales revised to fit the research context. The reliability and validity of these scales meet statistical standards (Cronbach's $\alpha > 0.7$). The independent variable is the characteristics of social language on new media, encompassing three dimensions: symbolic and fragmented language (5 items), emotional and polarized cathartic language (6 items), and performative and persona-based stratified language (5 items). Scores are assigned using a 5-point Likert scale (1 = completely disagree, 5 = completely agree), with higher scores indicating more pronounced language characteristics. The dependent variable is psychological anxiety among college students, measured through 10 core items from the revised Self-Rating Anxiety Scale (SAS), also scored on a 5-point Likert scale, with higher total scores indicating higher levels of anxiety. Mediating variables include cognitive dissonance, echo chamber effect, fear of misalignment, and group loneliness, each dimension consisting of 4-5 items and scored on a 5-point scale. The moderating variables are the duration of new media use (a continuous variable measured in hours of daily use) and the depth of engagement in social circles (4 items), with the latter scored on a 5-point scale.

3.3. Data collection

Data were collected through a questionnaire survey targeting college students from various universities across the country, spanning freshmen to seniors and covering multiple disciplines such as liberal arts, sciences, engineering,

and arts. The questionnaires were distributed via an online survey platform (Wenjuanxing), with a total of 450 questionnaires issued and 386 valid responses received, resulting in an effective response rate of 85.78%. The demographic characteristics of the sample are as follows: In terms of gender, there are 172 male students (44.6%) and 214 female students (55.4%). Regarding grade level, there are 98 freshmen (25.4%), 112 sophomores (29.0%), 105 juniors (27.2%), and 71 seniors (18.4%). As for the type of school, 143 students (37.0%) are from Double First-Class universities, 201 students (52.1%) are from regular undergraduate universities, and 42 students (10.9%) are from junior colleges. The data collection process strictly adhered to the principles of informed consent and anonymous completion to ensure the authenticity and reliability of the data.

4. Empirical analysis results

4.1. Descriptive statistical analysis

Descriptive statistics were conducted on the mean, standard deviation, and distribution characteristics of the core variables. The results showed that the total mean score on the college student psychological anxiety scale was 3.21 (SD=0.87), with 23.3% of college students scoring 4 or higher on the anxiety scale, indicating moderate to severe anxiety levels. This suggests that some college students have significant psychological anxiety issues. The mean scores for the various dimensions of new media social language characteristics were as follows: symbolic and fragmented language 3.62 (SD=0.91), emotional and polarized cathartic language 3.15 (SD=0.89), and performative and persona-based stratified language 3.37 (SD=0.93). These findings indicate that college students generally exhibit these three types of language characteristics in new media social interactions, with symbolic and fragmented language being the most prominent. The distributions of mediating and moderating variables were within reasonable ranges without extreme outliers, making them suitable for further correlation and regression analysis.

4.2. Correlation analysis

Pearson correlation analysis was employed to examine the degree of association among variables. The results indicated that the three dimensions of new media social language features were all significantly positively correlated with psychological anxiety among college students (r = 0.28-0.41, p < 0.001). Among them, emotional polarized cathartic language had the highest correlation with anxiety, followed by performative persona-based stratified language [7]. The mediating variables, including cognitive dissonance, echo chamber effect, fear of misalignment, and group loneliness, were all significantly positively correlated with psychological anxiety among college students (r = 0.35-0.48, p < 0.001). They also showed significant positive correlations with each dimension of new media social language features (r = 0.24-0.39, p < 0.001), providing prerequisites for subsequent mediation effect tests. Among the moderating variables, the duration of new media use was significantly positively correlated with psychological anxiety (r = 0.22, p < 0.01), and the depth of participation in social circles was also significantly positively correlated with psychological anxiety (r = 0.26, p < 0.001).

4.3. Regression analysis

Hierarchical regression analysis was used to examine the predictive effect of new media social language features on psychological anxiety among college students. After controlling for demographic variables such as gender, grade, and school type, independent variables and mediating variables were sequentially included [8]. The results indicate that after controlling for the control variables, the combined features of new media social language

explained 22.3% of the variance in college students' psychological anxiety (F=18.76, p<0.001). Among them, emotional polarized cathartic language (β=0.32, p<0.001) and performative persona-based segmented language (β=0.25, p<0.001) had significant positive predictive effects on psychological anxiety, while the predictive effect of symbolic fragmented language was not significant (β=0.08, p>0.05). After incorporating mediating variables, the explanatory power of the model increased to 38.6% (F=23.41, p<0.001). Cognitive dissonance (β=0.21, p<0.001), echo chamber effect (β=0.24, p<0.001), fear of misalignment (β=0.19, p<0.01), and group loneliness (β=0.20, p<0.001) all had significant positive predictive effects on psychological anxiety, and the predictive coefficients of the independent variables decreased, indicating the presence of a mediating effect.

5. Interaction effect analysis

The PROCESS plugin was used to test the moderating effect, and the results revealed a significant moderating effect of the depth of social circle involvement on the relationship between symbolic fragmented language and college students' psychological anxiety (β=0.14, p<0.05). Simple slope analysis indicated that in the group with high depth of social circle involvement (M+1SD), symbolic fragmented language had a significant positive predictive effect on psychological anxiety (β=0.23, p<0.01); in the group with low depth of social circle involvement (M-1SD), the predictive effect of symbolic fragmented language on psychological anxiety was not significant (β=0.06, p>0.05). The moderating effect of the duration of new media use on the relationship between emotional polarization venting language and psychological anxiety is not significant (β = 0.09, p > 0.05), nor is it significant on the relationship between performative persona stratification language and psychological anxiety (β = 0.10, p > 0.05).

6. How does new media language influence psychological anxiety
6.1. Cognitive dissonance triggered by language "inflation" and "aphasia"

The excessive symbolization and fragmentation of social language on new media platforms have led to a dual dilemma of language inflation and offline aphasia, thereby causing cognitive dissonance and exacerbating psychological anxiety. Language inflation is manifested in the abuse of symbols and extreme vocabulary such as "yyds" and "awesome in the extreme," whose emotional intensity and expressive value gradually diminish, leaving individuals in a state of redundant expression but emotional deficiency, making it difficult to accurately convey their inner feelings [9]. Long-term reliance on such expressions can lead to the degradation of offline language organization skills, making it challenging to communicate with complete and rigorous language in real-life social scenarios, thus creating a conflict between self-perception and social needs. This cognitive dissonance stems from the disconnection between simple online symbolic interactions and complex offline expressive needs, leading individuals to experience frustration and self-doubt due to their inadequate expressive abilities. At the same time, the ambiguity of expression caused by language inflation can easily trigger social misunderstandings, exacerbating individuals' tendency to avoid social interactions and further intensifying anxiety.

6.2. The "echo chamber effect" of negative emotion labels

The emotional polarization of social language on new media platforms has led to the widespread popularity of negative emotion labels such as "emo," "overwhelmed," and "giving up." Such labels give rise to the "echo chamber effect" in compartmentalized social interactions. Through the sharing of similar emotional tendencies

within compartments and the repeated reinforcement of negative labels, a closed emotional loop is formed. This not only amplifies the mild feelings of depression among college students but also exposes them to group emotions, leading them into a vortex of negative cognition and triggering or exacerbating psychological anxiety [10]. Meanwhile, the generalized use of negative emotional labels leads to cognitive biases in individuals' perception of their emotions, causing them to simply categorize normal emotional fluctuations as "emo." Due to a lack of rational analysis and regulation, being constantly influenced by negative labels over the long term can easily result in a negative self-perception. Additionally, unrestrained emotional venting under anonymity prompts some individuals to attract attention using extreme negative language, polluting the social language environment, intensifying the atmosphere of group negativity, and indirectly raising anxiety levels among college students.

7. Conclusion

This study takes the context of networked communication as its starting point and systematically explores the correlation and mechanisms of action between the characteristics of social language in new media and psychological anxiety among college students through empirical analysis. It clarifies the positive predictive effects of emotional polarization venting and performative persona compartmentalized language on psychological anxiety among college students, verifies the mediating roles of cognitive dissonance, the echo chamber effect, and other intermediary variables, as well as the moderating effect of the depth of participation in social compartments. This forms a complete cognitive framework for understanding the intrinsic relationship between the two, addressing the core questions posed at the beginning of the study. The correlation between social language in new media and psychological anxiety among college students is an important issue that cannot be overlooked in the networked era. As new media forms continue to evolve, the mechanisms of action between the two will also constantly change. In the future, it is necessary to continuously monitor dynamic changes in this field and deepen understanding through interdisciplinary and multi-method research approaches, providing more comprehensive support for safeguarding the mental health of college students and guiding young people to participate in new media social interactions in a healthy manner.

Disclosure statement

The author declares no conflict of interest.

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