



The Impact of Deletion and Recall Behaviors in Social Media Use on Users' Mental Health

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Abstract. The negative interactions in social features and their impact on mental health have increasingly become a research focus. This study focuses on how negative interactions in social media use influence mental health and the mediating role of users' deletion and recall behaviors. The research background includes a comparison of core functionalities between domestic and foreign software, examining factors such as psychological pressure and privacy concerns on anxiety and depression. The research topics cover: Firstly, the correlation between negative social interactions and mental health; Secondly, the positive and negative effects of deleting and recalling behaviors on mood and stress. Methodologically, the study employs case analysis and scenario-based experiments to test the immediate emotional effects of deleting/recalling behaviors. In the study cases, results show that frequent negative interactions and a lower sense of social support are significantly associated with higher levels of anxiety and depression. Deleting and recalling behaviors can alleviate immediate negative emotions to some extent, but the long-term effects are influenced by users' self-regulation abilities and privacy concerns. The study concludes that supporting users with moderate deleting/recalling strategies during emotional fluctuations, and avoiding over-reliance on social features, helps to mitigate the negative impact of social functionalities on mental health.

Keywords: Delete friends, recalling messages, social media, mental health, teenagers

1 Introduction

The analysis considers a worldwide user base of around five billion individuals, with each individual using WeChat about 2.5 hours per day. This context shows that social media has become a key platform for sharing information and exchanging opinions; it has a profound impact on social behavior and psychological experience. The study is of great significance for exploring psychological emotional needs and dynamics of the chat relationships between interlocutors. In the digital era, personal emotions may influence user-generated content, environmental changes, and even negative interactions. To deal with these situations, social media platforms typically offer two main functions: Delete and Recall. Although both are intended to cancel published content, they differ

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significantly in platform user experience, function, and technical implementation. This research concentrates on the most prominent functions—Delete and Recall—and it also examines the psychological consequences for users after sending messages, and these actions are executed. When these buttons are pressed by the user, the flow of information in the digital space is altered, and the emotional states and trust between individuals change accordingly. This article employs literature analysis to locate and read relevant sources; the advantage of the method lies in effectively applying case analysis to assist the research. The ultimate result is to determine whether these issues affect ordinary life, and to realize this, the investigation will be conducted using surveys via new media.

2 Critical Literature Review

According to Lutz and M Buttner, removing messages in order to reduce information may cause negative impacts on individuals' psychological health. The key is that the ignoring of deleted information leads to decreased social participation and information quantity, which in conversely, could trigger even worse emotions, a sense of belonging, dignity being harmed, and an increased need for control. Systematic evaluations and experimental results show that when the deletion behavior is triggered by others rather than occurring randomly, the detrimental impact is more pronounced; the information loss is interpreted as a menace to one's social status, not just a decline in information quantity. Under those circumstances, deletion behavior may be more likely to trigger feelings of rejection and emotional harm in group chats, thereby impairing the quality of group interaction and members' sense of psychological security [1].

The evidence from prior studies suggests that lying it is a morally violated behavior in a long history, because it is a violation of the recipient's right to information and self-selection. Liars often pay a psychological price, such as shame, regret, or the stress of apologizing, and these psychological burdens may prompt them to take remedial measures to alleviate risks. For example, on social media, deleting relevant posts or comments has become a common practice to lessen any adverse effects nowadays. The decision to remove an item typically reflects a cost-benefit trade-off: when the uploaded content may cause psychological discomfort or do damage to others, the likelihood and urgency of deletion are both heightened. This also reveals the liar's concerns about their social status, own images, and interpersonal relationships [2,3]. There is a relationship between false self-presentation and indicators of emotional adaptation, such as depression, stress, and loneliness. The study shows that authentic self-expression can alleviate depressive moods by decreasing emotional labor; In contrast, deceptive self-presentation enhances the burden of emotional labor, which may intensify symptoms of depression and anxiety.

The evidence presented supports this conclusion in multiple platform research and shows consistency across theoretical and empirical levels [4-6]. The connection between emotional labor and mental health centers on expressing one's true self without artifice. Viewing this issue through a different lens, authentic self-expression has a more positive impact on emotion regulation, which in turn helps improve emotional

health and social adaptation. In the meantime, mental health outcomes can be shaped by deletion behaviors and lying, operating through mediators such as emotional labor, anxiety, and depression. The perception of deletion behaviors involves not only information loss but also threats to social belonging and perceived social status, thus affecting emotional health and psychological safety in online group interactions. Thus, allowing self-expression that is authentic and true improves emotional regulation and helps adaptation in society, as it mediates emotional labour. In comparison, deletion behaviors should be reduced because of their relation to depression and anxiety, causing a lack of belonging. This, in turn, creates reduced online emotional well-being and a lack of psychological safety. Together, these processes collectively shape an individual's mental health and the quality of their social interactions.

Relevant research theories and references:

Cognitive Behavioral Therapy (CBT): CBT predicts that an individual's emotions and behaviors are influenced by cognitions. Deletion and withdrawal behaviors are intricately linked to the individual's perceptions of self-identity, social interaction, and information control, as well as the cognitive processing of social feedback [7].

Social Comparison Theory: Individuals participate in social comparison on social media, attending to others' evaluations of them. Delete and recall may be influenced by this social comparison, as users endeavor to sustain a favorable self-presentation by removing or retracting content [8].

Psychological Research: Empirical studies on social media use and mental health outcomes—such as anxiety, depression, and self-esteem—offer key insights for understanding the effects of deletion and withdrawal on psychological well-being [9].

3 Case Analysis

3.1 Basic Functions of Domestic Social Media Software

From the "Recall" function of basic domestic social software features, one can determine the effectiveness of an expression of intent based on Article 137, paragraph 2 of the Civil Code, and delve into the nature of an expression of intent conveyed through WeChat messages as a non-dialogical expression of intent. The statement that a WeChat message can be withdrawn within two minutes does not constitute an alternative agreed-upon time of effectiveness under the law. In other words, a "Recall" of an expression of will by the actor within two minutes of dispatching a WeChat message does not, under the applicable law, constitute a withdrawal of the expression of will; Instead, the moment of effectiveness of the already sent message should be determined by the arrival principle or the knowledge principle as defined earlier [10]. The recall feature is technically complex to implement. For example, the platform needs to track both the sending and reading statuses of messages. When a user chooses to recall, the platform must remove the message from the recipient's device (if it has not been read) or mark it (if it has been read). This involves real-time communication technologies, message push, and user data management. Server load and message synchronization efficiency also need to be considered.

Since 2014, WeChat has introduced a new message recall function, allowing users to recall the last message sent within two minutes. Human cognition follows a progressive, step-by-step process, and language communication does as well. To prevent the speaker from uttering unpolished thoughts or saying something that diverges from their internal expectations, there must be repeated trials in choosing and ordering language during the encoding process. When a mistake is detected, the only option is to press the “withdraw/undo” key to recall. In other words, the recall function in WeChat arose due to the constraints of human cognition and represents a hallmark of user-centric and individualized intelligent services. Looking at usage patterns since its launch, nearly every user treats it as a form of conversation correction, including fixes for typographical errors, inaccurate expressions, and remarks that are no longer appropriate.

The recall setting for WeChat messages is two minutes. The core idea is to preserve contextual integrity: within less than two minutes, the sender may not have noticed an error, so recalling the message would fail; After more than two minutes, the recipient has already read it, and recalling would be pointless and awkward. If there were no time limit, it would disrupt the harmony of communication, so this setting is reasonable [11].

Delete and recall features in China’s mainstream apps like WeChat and QQ are crucial for information management and user experience, reflecting platform priorities in information handling, privacy, and design. Since WeChat is central to daily communication, understanding these functions helps analyze user behavior and psychology, and informs platform design. Therefore, a deeper grasp of these features clarifies how social media shapes individual and social interactions. From the “Delete” function of basic domestic social software features, like WeChat, deletion mainly means removing message history. It involves database operations and requires ensuring that deleted data is removed from both the client and server sides. Considerations include data storage, privacy protection, and data security. Deletion can target a single message, all chats with a specific contact, or an entire contact. Typically, deletion is permanent; recovery is only possible if backups exist. Deletion serves to clean up unwanted chat records, prevent information leakage, or, to some extent, erase past behavior. Some users delete messages for privacy, sensitive content, or inappropriate expression.

3.2 Basic Functions of Foreign Social Media Software

The widely used social apps WhatsApp and Facebook from abroad offer several fundamental features, such as message deletion and recall. These functions are crucial to the user communication experience because they enhance individuals’ control over privacy and facilitate information management through improved organization and accountability. The feature to retract a message within seven minutes after sending is available on WhatsApp. This capability applies not only to one-on-one chats but also to group chats and is designed to mitigate the negative consequences of accidentally sent or inappropriate content by allowing timely retraction. The recipient will receive a notification after the sender retracts the message, indicating that the message has been recalled, thereby providing an additional layer of privacy protection for the sender. Recalled messages appear in the chat as “This message has been recalled,” but the recipient may still receive a notification containing the message content. This feature applies

to a variety of file types, including text messages, images, videos, voice messages, and documents, and is supported on both Android and iOS devices. However, Facebook's message retraction feature is similar to WhatsApp, allowing users to delete messages after sending. Users can choose "Delete Conversation" or "Delete for All," the latter enabling the sender to retract already dispatched messages so that recipients can no longer view them. This function is useful for promptly correcting errors and serves as an important tool to prevent misunderstandings in social settings. The retraction and deletion feature primarily applies to Facebook Messenger. Users can retract messages within ten minutes after sending by long-pressing the message and selecting the "Delete" option. For posts on Facebook public pages, deleted content can be recovered within thirty days.

Some theories can explain the relationship between message deletability and user privacy in social media use. For example, recent work on messaging affordances in social platforms argues that users strategically manage how they appear to others in computer-mediated interactions. By allowing message deletion and retraction, WhatsApp and Facebook provide affordances that help users curate their communication traces, manage impression formation, and reduce social awkwardness caused by inaccurate or inappropriate messages [12]. In addition, Bai and Wang investigate the psychological effects of information management in social applications, highlighting users' need for information controllability when using instant messaging software. By employing features such as deletion and recall, users can achieve psychological satisfaction, thereby increasing usage fidelity or stickiness [13].

All in all, the delete and recall features on WhatsApp and Facebook are not only a technical design issue but also a deep understanding of user needs and social psychology. Firstly, these features, to some extent, enhance user satisfaction because they give users the chance to correct erroneous information and exercise control over conversations. Secondly, they help manage information risks in social interactions, reducing the likelihood of negative consequences from sending messages by mistake. Furthermore, as social app functionalities continue to evolve, ongoing optimization in this area will be a key direction for improving user experience. Thus, the delete and recall mechanisms reflect respect for user behavioral traits and a proactive response to changes in the information dissemination environment.

4 Discussion

The popularity of social media provides people with new platforms to express themselves and interact with others. However, this interaction does not come without costs. Deleting and recalling, as common features on social media, to some extent reflect users' desire to control their published content and the online environment, but their impact on users' mental health deserves in-depth exploration.

4.1 The Impact of Deletion on Mental Health

Deleting can help users avoid embarrassment and reduce negative emotions. When users realize they have posted inappropriate remarks or express remorse, the delete function provides a remedy and helps alleviate anxiety, shame, and other negative feelings caused by posting inappropriate content. From another perspective, frequent deletion of past negative information, to some extent, helps users improve their self-image perception and reduce the ongoing burden of past mistakes. However, such deletions often indicate heightened insecurity and anxiety about self-expression, which can undermine self-worth and subsequently erode self-confidence. At the same time, deletion behavior can heighten attention to one's social media image, increasing the risk of falling into a perfectionist trap and further amplifying dependence on external evaluations. If the deleted content has already been seen or disseminated by others, the user may experience greater anxiety, panic, or frustration, creating a vicious cycle. Overall, frequent deletion is not simply a self-corrective act; it is a psychological and behavioral process that requires careful weighing. It should be integrated with self-acceptance, emotional regulation, and healthier modes of expression to optimize one's self-image.

4.2 The Impact of Recall on Mental Health

The recall feature provides users with a chance to correct mistakes and avoid embarrassment, effectively alleviating concerns after posting information and reducing the stress associated with social media use. At the same time, it helps users better manage their personal image and avoid negative impacts caused by the spread of inaccurate information. The recall feature may reinforce users' fixation on controlling information. If a recall fails—such as when the other party has read or screenshot the message—users may feel frustrated, anxious, or even more worried about their interpersonal relationships. Overreliance on recall could also lead users to be less careful when posting, thereby increasing the risk of errors. More importantly, recall does not address the root problem; it often merely postpones the exposure of an issue and thus adds to users' psychological burden. Therefore, in designing and using recall features, attention should also be given to information transparency, communication education, and emotional regulation, so as not to attribute all communication difficulties solely to the presence of a “recall” function.

5 Conclusion

The results of this study show that deletion and withdrawal features have a complex impact on mental health and can be considered a double-edged sword. The conclusions further indicate that these features can alleviate the negative emotions and psychological burden brought about by information dissemination to some extent, but excessive use may exacerbate users' anxiety, insecurity, and concerns about their self-image, thereby affecting overall well-being. Therefore, while providing these features, social media platforms should also pay attention to their potential side effects and incorporate considerations for users' mental health into design and usage guidelines. At the same

time, the study furnishes valuable directions for the years ahead, emphasizing that users should use these features more rationally and reasonably, avoiding over-reliance to maintain a positive mental health state. Regarding the relationship between social media functions and mental health, future research should place more focus on deeply exploring the specific experiences of different groups when using these features and examining the long-term direction of their impact.

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