

Decoding Happiness: How Self-Disclosure Influences Subjective Well-Being: The Moderating Role of Perceived Relational Intimacy and the Mediating Roles of Social Support and Loneliness

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Abstract. Based on 414 valid questionnaires, this study explores the mechanism of social media self-disclosure on subjective well-being, and compares the differences between strong-tie platforms (WeChat) and weak-tie platforms (Douyin). The findings are as follows: a. Self-disclosure on WeChat significantly and positively predicts subjective well-being ($\beta = 0.561$, $p < 0.001$), while the effect on Douyin is weaker ($\beta = 0.307$, $p < 0.01$); b. Social support and loneliness play a partial mediating role on WeChat, but a full mediating role on Douyin; c. Perceived relationship intimacy has a significant positive moderating effect on Douyin ($\beta = 0.493$, $p < 0.01$), but the moderating effect is not significant on WeChat; d. More surprisingly, self-disclosure on Douyin is negatively correlated with intimacy ($r = -0.027$, $p > 0.05$) and negatively correlated with loneliness ($r = -0.281$, $p < 0.001$), which is contrary to the expectations of traditional social penetration theory. This study reveals the boundary conditions of platform characteristics on the effect of self-disclosure, providing a new perspective for understanding the "happiness paradox" of digital social interaction.

Keywords: self-disclosure, subjective well-being, perceived relationship intimacy, social support, loneliness

1. Introduction

Self-disclosure is a core concept in interpersonal communication, referring to the process by which individuals voluntarily reveal personal information to others. Humanistic psychologist Sidney Jourard first introduced the term "self-disclosure" back in 1958 [1]. Since then, it's been widely seen as a key factor in building relationships and creating emotional closeness between people.

Now, with digital communication changing so fast, social media has turned into the main place where people interact day to day. But here's the strange part: even though users are sharing more personal stuff on social media than ever before, their sense of well-being seems to be dropping instead of rising [2].

A lot of past studies focused mainly on how much people self-disclose, not so much on the quality of that disclosure. They've largely overlooked the finer dynamics—especially how different

relational settings might shape what self-disclosure actually does for people. And here's the thing: social media platforms vary a lot when it comes to relationship strength. WeChat is a typical strong-tie platform, built around close connections like family, friends, and people you actually know. Douyin, on the other hand, works more like a weak-tie platform, where most interactions happen with strangers or just very loose social ties [3].

That brings us to what this study is trying to answer: two core questions. First, does the way self-disclosure affects subjective well-being differ depending on which platform you're using—especially when those platforms have different levels of relational strength? And second, how does perceived relational intimacy shape the link between self-disclosure and well-being across these platforms?

By looking into these questions, we're able to identify the boundary conditions that platform characteristics create for self-disclosure effects. This offers a fresh lens for making sense of the so-called "happiness paradox" in digital social interaction.

2. Theoretical model and research hypotheses

2.1. Core theoretical framework

Let's start with the Social Penetration Theory (SPT). According to SPT, how deep and how broad your self-disclosure goes really drives the development of interpersonal relationships. In plain terms, when people move from sharing shallow, less personal stuff to opening up about deeper emotions, their relationships shift from being distant to becoming much more intimate [4]. And sticking with this idea, SPT suggests that self-disclosure tends to bring more positive emotional returns when it happens in strong-tie settings—where people already have close bonds.

Now, take the Process Model of Emotion Regulation. This model points out something important: social support acts as a key bridge linking social behaviors to mental health outcomes [5]. What does that mean in practice? The support you gain through self-disclosure helps you deal with stressful situations, manage negative feelings, and in the end, boost your subjective well-being [5].

2.2. Research hypotheses

Building on the theoretical ideas we just laid out, this study proposes the following hypotheses:

H1: Self-disclosure has a clearly positive effect on subjective well-being. But here's the key point: this effect is stronger on strong-tie platforms (WeChat) compared to weak-tie platforms (Douyin).

H2: Social support and loneliness act as mediators between self-disclosure and subjective well-being. In other words, self-disclosure influences well-being through these two pathways.

H3: Perceived relational intimacy plays a positive moderating role. Specifically, when intimacy is high, the positive impact of self-disclosure on subjective well-being becomes more noticeable.

H4: The aforementioned moderating effect is more salient on strong-tie platforms (WeChat).

3. Methodology

3.1. Participants

Data were collected via an online questionnaire platform, yielding a total of 414 valid responses. The demographic characteristics of the sample are summarized as follows:

Gender: 227 females (54.8%) and 187 males (45.2%).

Age: 52.9% were aged 19–25 years, and 26.1% were aged 26–35 years.

Educational level: 58.0% held a bachelor's degree, and 28.3% held a college diploma.

Occupation: 44.9% were students, and 32.1% were employees from enterprises or public institutions.

3.2. Measures

Self-disclosure was measured using the adapted Jourard Self-Disclosure Questionnaire [1]. Five items were adopted for WeChat ($\alpha = 0.842$) and Douyin ($\alpha = 0.819$) respectively, covering emotional expression, privacy disclosure, and value sharing.

Perceived relational intimacy was assessed with the adapted Relationship Closeness Inventory (RCI) developed by Argyle [6]. Three items were used for WeChat ($\alpha = 0.758$) and Douyin ($\alpha = 0.712$) respectively.

Social support was measured using the Multidimensional Scale of Perceived Social Support (MSPSS) [7]. Three items were adopted for WeChat ($\alpha = 0.775$) and Douyin ($\alpha = 0.729$) respectively.

Loneliness was evaluated using the adapted UCLA Loneliness Scale (short form) [8]. Four items were employed for WeChat ($\alpha = 0.207$) and Douyin ($\alpha = 0.572$) respectively. Note: The reliability of the loneliness scale on WeChat was relatively low, which might be attributed to the wording of reverse-coded items.

Subjective well-being was measured with the adapted Satisfaction With Life Scale (SWLS) [9]. Five items were used for WeChat ($\alpha = 0.823$) and Douyin ($\alpha = 0.885$) respectively.

All items were rated on a 5-point Likert scale, ranging from 1 (strongly disagree) to 5 (strongly agree).

4. Results

4.1. Descriptive statistics

Table 1 presents the descriptive statistics and intercorrelations for all variables. A comparative analysis between the two platforms indicates that participants scored significantly higher on all dimensions for WeChat than for Douyin. Specifically, the mean level of subjective well-being on WeChat ($M = 3.67$, $SD = 0.85$) was significantly higher than that on Douyin ($M = 2.99$, $SD = 1.07$). The mean score of perceived relational intimacy on WeChat ($M = 3.55$) was approximately 1.25 times that on Douyin ($M = 2.85$). These findings provide preliminary evidence supporting the distinction in relational strength between the two platforms.

Table 1. Descriptive statistics and reliability analysis

Dimension	Platform	Mean	SD	Cronbach's α
Self-disclosure	WeChat	3.43	0.95	0.842
	Douyin	3.02	0.44	0.819
Perceived relational intimacy	WeChat	3.55	0.98	0.758
	Douyin	2.85	0.57	0.712
Social support	WeChat	3.54	0.96	0.775
	Douyin	3.15	0.6	0.729
Loneliness	WeChat	3.88	0.62	0.207

Table 1. (continued)

	Douyin	2.47	0.79	0.572
Subjective well-being	WeChat	3.67	0.85	0.823
	Douyin	2.99	1.07	0.885

4.2. Correlation analysis

As shown in Table 2, WeChat exhibited a highly consistent correlational pattern. Self-disclosure was significantly positively associated with subjective well-being ($r = 0.626$, $p < 0.001$), and demonstrated strong positive correlations with relational intimacy ($r = 0.711$, $p < 0.001$) and social support ($r = 0.703$, $p < 0.001$). This pattern is in line with the theoretical expectations of Social Penetration Theory [4].

Table 2. Correlation matrix for the Wechat platform

	Self-disclosure	Perceived relational intimacy	Social support	Loneliness	Subjective well-being
Self-disclosure	1				
Perceived relational intimacy	0.711***	1			
Social support	0.703***	0.701***	1		
Loneliness	0.340***	0.294***	0.311***	1	
Subjective well-being	0.626***	0.531***	0.559***	0.350***	1

Note: $p < 0.001$

However, Douyin showed a distinctly different correlation pattern (see Table 3). The most unexpected finding was that self-disclosure was weakly and negatively associated with intimacy ($r = -0.027$, $p > 0.05$) and significantly negatively associated with loneliness ($r = -0.281$, $p < 0.001$).

This indicates that on Douyin, users with higher levels of self-disclosure reported lower levels of intimacy and loneliness.

Note: Loneliness was reverse-coded; thus, the negative correlation suggests that higher self-disclosure was associated with lower loneliness and higher social inclusion.

This finding is inconsistent with the prediction of H3—self-disclosure on the weak-tie platform did not appear to promote increased relational intimacy.

Table 3. Correlation matrix for the Douyin platform

	Self-disclosure	Perceived relational intimacy	Social support	Loneliness	Subjective well-being
Self-disclosure	1				
Perceived relational intimacy	-0.027	1			
Social support	0.194***	-0.199***	1		
Loneliness	-0.281***	0.373***	-0.329***	1	
Subjective well-being	0.127**	-0.166***	0.308***	-0.344***	1

Note: $p < 0.01$, $p < 0.001$

4.3. The effect of self-disclosure on subjective well-being: platform differences

Regression results (Table 4) show that H1 was partially supported. On the WeChat platform, self-disclosure significantly and positively predicted subjective well-being ($\beta = 0.561$, $p < 0.001$), explaining 39.2% of the variance. Although a significant positive effect also emerged on the Douyin platform ($\beta = 0.307$, $p < 0.01$), the effect size was only 54.7% of that on WeChat.

Table 4. Results of regression analysis

Model	Variable	β	SE	t	p	R ²
WeChat - Model 1	Self-disclosure	0.561	0.034	16.283	<0.001	0.392
WeChat - Model 2	Self-disclosure	0.383	0.048	8.064	<0.001	0.471
	Social support	0.19	0.046	4.112	<0.001	
	Loneliness	0.19	0.055	3.464	0.001	
Douyin - Model 1	Self-disclosure	0.307	0.118	2.607	0.009	0.016
Douyin - Model 2	Self-disclosure	0.023	0.114	0.199	0.843	0.138
	Social support	0.386	0.086	4.512	<0.001	
	Loneliness	-0.363	0.066	-5.477	<0.001	

4.4. Mediation effect test

H2 was supported, although platform differences emerged. On the WeChat platform, social support and loneliness exerted partial mediating effects: after including the mediating variables, the direct effect of self-disclosure decreased from 0.561 to 0.383 but remained significant ($p < 0.001$). The mediating effect of social support ($\beta = 0.190$) was equivalent to that of loneliness ($\beta = 0.190$).

On the Douyin platform, the mediation pattern demonstrated a full mediation characteristic: after incorporating the mediating variables, the direct effect of self-disclosure dropped to 0.023 and became non-significant ($p = 0.843$), indicating that self-disclosure on Douyin influenced well-being only through the mediating roles of social support and loneliness. Notably, the mediating effect of loneliness on the Douyin platform was negative ($\beta = -0.363$), suggesting that self-disclosure enhanced well-being by reducing loneliness (improving social inclusion).

4.5. Moderating effect of perceived relational intimacy

H3 and H4 were not supported as expected; instead, a counterintuitive moderating pattern was found.

On the WeChat platform (Table 5), the moderating effect of perceived relational intimacy was not significant ($\beta = -0.055$, $p = 0.127$). Simple slope analysis revealed that the effect of self-disclosure was stronger in the low-intimacy group ($\beta = 0.601$, $p < 0.001$) than in the high-intimacy group ($\beta = 0.285$, $p < 0.001$). This reversal suggests that in WeChat—a strong-tie platform—high relational intimacy may not be a necessary condition for self-disclosure to exert its positive effect: self-disclosure can still significantly improve well-being even when perceived intimacy is relatively low.

Table 5. Analysis of the moderating effect (simple slopes)

Platform	Group	n	β	p	Conclusion
WeChat	High intimacy	259	0.285	<0.001	Significant
	Low intimacy	155	0.601	<0.001	Significant
Douyin	High intimacy	215	0.395	0.02	Significant
	Low intimacy	199	0.14	0.39	Non-significant

On the Douyin platform, the moderating effect was significant ($\beta = 0.493$, $p < 0.01$), but in the opposite direction to our prediction. The effect of self-disclosure was significant in the high-intimacy group ($\beta = 0.395$, $p < 0.05$), whereas it was non-significant in the low-intimacy group ($\beta = 0.140$, $p = 0.390$).

These results indicate that on Douyin, a typical weak-tie platform, self-disclosure can promote subjective well-being only when users perceive a relatively high level of relational intimacy. This finding supports the core proposition of Social Penetration Theory [4], while presenting a tension with the inherent attributes of weak-tie platforms.

5. Discussion

5.1. Platform differences: relationship strength and the effect of self-disclosure

One of the most interesting things we found is that these two platforms actually work through very different underlying mechanisms.

Take WeChat first. The results from this platform fit nicely with what traditional theories would predict. On WeChat, self-disclosure, relational intimacy, social support, and subjective well-being all feed into each other—forming a highly positive, self-reinforcing cycle. This tells us that Social Penetration Theory holds up well in strong-tie settings. When you open up to people you're close with—like family members and friends—it can genuinely bring emotional benefits [4].

Now, Douyin tells a different story. The pattern we saw there is much more paradoxical.

For starters, self-disclosure on Douyin doesn't show a strong link with relational intimacy. That means, on weak-tie platforms, sharing personal stuff doesn't really help relationships grow the way theory would expect [4].

But here's where it gets interesting. Our moderation analysis uncovered something like a threshold effect for intimacy on Douyin. Specifically, self-disclosure only boosts well-being when the level of intimacy is already high.

So what does all this mean? It suggests that self-disclosure on weak-tie platforms might follow a completely different logic. Users are probably engaging more in performative disclosure—putting on a show of sharing—rather than genuine relational disclosure. And that kind of sharing doesn't necessarily lead to better relationship quality.

5.2. Mediating mechanisms: the differential roles of social support and loneliness

Mediation analysis revealed divergent mechanisms across platforms.

When we ran the mediation analysis, the two platforms showed pretty different underlying mechanisms.

On WeChat, social support and loneliness played equally important mediating roles. What that means is, when you self-disclose in strong-tie relationships, your well-being gets influenced through

more than one pathway—both gaining support and reducing loneliness seem to matter just as much.

Now, Douyin was a different story. On this platform, the negative mediating effect of loneliness actually turned out to be stronger than that of social support. In plain terms, self-disclosure on weak-tie platforms boosts well-being more by easing feelings of alienation than by making people feel supported.

Why might that be? One possible explanation has to do with Douyin's algorithmic recommendation system. On Douyin, users get to confirm their sense of existence through likes, comments, and other forms of feedback. That kind of interaction helps relieve loneliness—even without deep social support.

5.3. The "reversal" of the moderating effect: rethinking hypotheses H3 and H4

The predictions of Hypotheses H3 and H4 were not supported.

Turns out, H3 and H4 didn't pan out as we expected. Instead, we came across two main findings worth highlighting.

First, on WeChat, the moderating effect of perceived relational intimacy was basically non-significant. Second, on Douyin, that same moderating effect did show up—but in a pretty specific way: self-disclosure only worked when intimacy was already high; under low intimacy, it didn't do much. This kind of "reversal" pattern is something we need to think through carefully.

So what's going on here? Let's start with WeChat. One reasonable explanation is that strong-tie platforms already have a solid relational foundation. When users share something personal on WeChat, they tend to get basic emotional feedback no matter how intimate they perceive the relationship to be. Interestingly, the fact that self-disclosure had a stronger effect in the low-intimacy group might reflect something like "relationship repair" or "relationship breakthrough." In plain words, when someone takes the initiative to open up in a relationship that feels distant—and then actually gets a positive response—the boost in subjective well-being can be even bigger than usual.

Now for Douyin. The fact that we found a significant moderating effect here actually lines up pretty well with the core ideas of Social Penetration Theory. At the same time, it kind of tones down the importance of "platform characteristics" as the main driver. What this tells us is, even on algorithm-driven weak-tie platforms, relationship quality still matters a lot. It's a must-have condition if self-disclosure is going to lead to positive outcomes. Sure, the platform's technical features—like follow mechanisms and interactive tools—might create opportunities for relationships to deepen. But they can't replace the fundamental quality of the relationship itself.

5.4. Theoretical contributions and practical implications

The theoretical contributions of the present study are threefold: This study makes three main theoretical contributions. First, it uncovers the boundary conditions under which platform characteristics shape the effects of self-disclosure. By doing so, it helps extend Social Penetration Theory into the digital space—showing where the theory still holds and where it might need adjustment. Second, the study points to something interesting: the possibility of "strong-tie formation on weak-tie platforms." What does that mean? Even on a platform like Douyin, self-disclosure can still lead to positive outcomes—but only when users have already built high-intimacy connections with each other.

Correspondingly, the practical implications are as follows: On the practical side, here's what we can take away: a. For strong-tie platforms (e.g., WeChat): It would help to improve privacy settings and grouping features. That way, users can tailor their self-disclosure based on the specific

relationship they're dealing with—sharing different things with different circles. b. For weak-tie platforms (e.g., Douyin): Instead of just chasing maximum exposure, platform design should put more emphasis on features that help deepen relationships—like tools that support richer, more in-depth interaction. c. For users: Keep in mind that choosing a platform is itself a relational strategy. If you're looking for emotional support, go with strong-tie platforms. If you're more into sharing interests or expressing yourself, weak-tie platforms might be a better fit.

6. Conclusion

Through comparative analysis, we found that self-disclosure's impact on subjective well-being really does vary a lot across different platforms.

On WeChat, we see a "strong relationship, strong effect" pattern. On Douyin, it's more like a "weak relationship, conditional effect" pattern. Perceived relational intimacy plays a noticeable moderating role on Douyin, but on WeChat? Not so much—its moderating effect there is basically non-significant. We also confirmed that social support and loneliness act as mediators on both platforms, but the way they work behind the scenes is pretty different.

That said, this study has a few limitations worth noting:

a. We used a cross-sectional design, so we can't really nail down cause-and-effect relationships between the variables. Future work could try using the Experience Sampling Method (ESM) and track people over time.

b. The loneliness scale we used in the WeChat context had relatively low reliability. That might have made our findings a bit less solid than we'd like.

c. Our sample was mostly young adults. So if you're trying to generalize these results to middle-aged or older populations, you should be careful.

d. We didn't look at how different types of disclosure content—like sharing positive stuff versus negative stuff—might affect the outcomes differently.

Loking ahead, future research could push things further in three directions:

a. Use the Experience Sampling Method (ESM) for longitudinal tracking. That would help establish clearer causal links among the key variables.

b. Bring in technical variables like algorithmic recommendation and AIGC interaction. That could help expand what Social Penetration Theory can explain in this new age of intelligent social interaction.

c. Run cross-cultural comparative studies. That way, we can see whether these relationship strength effects hold up in different cultural settings—and come up with more tailored strategies for digital well-being governance.

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