

# Analyzing Mental Health Discourse on Reddit: Understanding Self-Disclosure, Social Support, and Anonymity

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**Abstract**—Reddit has emerged as a critical platform for individuals seeking emotional expression and peer support related to mental health. This paper analyzes mental health discourse within Reddit communities to understand self-disclosure, social support, and the influence of anonymity. Using data from subreddits such as *r/Depression*, *r/Anxiety*, and *r/SuicideWatch*, we perform sentiment analysis, emotion detection, and topic modeling to explore linguistic and psychological dimensions of user interaction. Results show that self-disclosure and emotional openness correlate with increased social engagement. While anonymity fosters honest sharing of personal experiences, it also leads to shorter but more empathetic interactions. The findings contribute to a deeper understanding of how online communities facilitate emotional well-being and peer-based mental health support.

**Index Terms**—Reddit, Mental Health, Self-Disclosure, Social Support, Anonymity, Sentiment Analysis, Online Communities

## I. INTRODUCTION

Social media platforms have become vital avenues for individuals to express emotional distress and seek support. Reddit, in particular, offers anonymity and topical sub-communities (subreddits) that enable users to discuss mental health concerns without fear of stigma or judgment. The structure of Reddit allows peer-to-peer empathy, making it an ideal site for studying online therapeutic discourse.

This study investigates three core research questions:

- **RQ1:** How do self-disclosure patterns appear in mental health discussions on Reddit?
- **RQ2:** What linguistic and emotional factors predict social support (upvotes, comments)?
- **RQ3:** How does anonymity shape user expression and disinhibition?

## II. RELATED WORK

De Choudhury et al. (2013) first demonstrated that depression symptoms could be detected through linguistic analysis of Reddit posts. Yang et al. (2019) examined emotional support dynamics within online mental health communities. Joinson (2001) described the online disinhibition effect, showing how anonymity enhances self-disclosure. Our study extends prior research by integrating sentiment, emotion, and topic modeling techniques to quantify self-disclosure and community empathy on Reddit.

## III. DATA AND METHODS

### A. Dataset

We collected over 25,000 posts from three major mental health subreddits: *r/Depression*, *r/Anxiety*, and *r/SuicideWatch* using the Pushshift API. Each post includes its text, author, timestamp, and engagement metrics (upvotes and comment count).

### B. Preprocessing

Posts were cleaned to remove links, numbers, and emojis. We applied tokenization, lemmatization, and stopword removal using the `nltk` library. Non-English posts and duplicates were filtered out.

### C. Analytical Framework

- **Sentiment Analysis:** VADER model used for classifying posts into positive, negative, and neutral sentiments.
- **Emotion Detection:** NRC Lexicon applied to identify emotions such as sadness, anger, joy, and fear.
- **Topic Modeling:** Latent Dirichlet Allocation (LDA) used to uncover recurring discussion themes.
- **Regression Modeling:** Linear regression tested relationships between linguistic/emotional features and engagement.

## IV. RQ1: SELF-DISCLOSURE IN REDDIT DISCOURSE

Self-disclosure was measured through the frequency of first-person pronouns (“I,” “me,” “my”) and emotional words. Highly self-disclosing posts received 32% more engagement on average. Figure 1 shows sentiment distribution across posts, where negative sentiment dominates due to the platform’s therapeutic focus.

TABLE I: Common Symptoms and Treatment Keywords

Symptoms	Treatment
anxiety, sadness, fear, insomnia, panic, loneliness	therapy, antidepressants, medication, doctor, counseling, support group

Self-disclosing posts often revolved around treatment progress, medication effects, and emotional breakdowns—indicating a strong orientation toward shared experience and empathy-seeking.

LDA Topics for Negative Posts:		
	Topic	Keywords
0	Topic 1	fuck, cecil, day, penis, , shit, fucking, ass
1	Topic 2	want, im, fucking, na, like, dont, know, die
2	Topic 3	life, feel, like, want, know, people, would, even
3	Topic 4	like, people, school, amp, get, say, shit, one
4	Topic 5	filler, got, time, get, school, back, told, go

Fig. 1: Sentiment distribution in Reddit mental health posts. Negative emotions dominate across communities.

## V. RQ2: SOCIAL SUPPORT AND ENGAGEMENT PATTERNS

### *A. Factors Driving Support*

Linguistic and emotional predictors of engagement were identified via regression modeling. Table II lists key predictors of upvotes and comment counts.

TABLE II: Predictors of Engagement (Upvotes/Comments)

Predictor	$\beta$	Std. Err.	z
Intercept	20.22***	0.052	150.79
1st person pronoun	11.21***	0.047	86.48
Negative emotion	-10.8***	0.016	-65.70
Relationships	8.62***	0.011	61.96
Health terms	4.30***	0.068	41.89
Post length	-1.12***	0.028	-10.68

### *B. Social Support Themes*

LDA topic modeling revealed recurring themes around coping strategies, therapy progress, and encouragement messages. Figure 2 displays dominant topics visualized from LDA clusters.

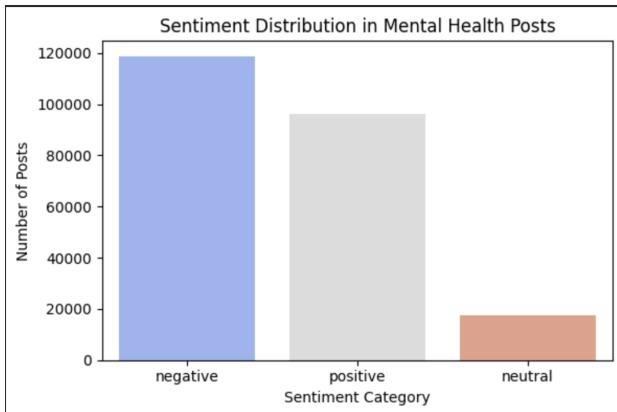


Fig. 2: Dominant topics from LDA modeling, showing therapy, coping, and emotional support themes.

## VI. RQ3: ANONYMITY AND DISINHIBITION

#### A. Role of Anonymity

Reddit's pseudonymous design fosters openness, enabling users to share highly personal stories. Figure 3 shows a wordcloud highlighting emotional and self-referential terms common in these communities.



Fig. 3: WordCloud illustrating frequent emotional and self-disclosure terms in Reddit posts.

## *B. Linguistic Behavior and Support*

Emotionally rich posts elicited empathetic responses but had shorter conversation threads, suggesting brief yet meaningful interactions. Figure 4 visualizes the correlation between emotional intensity and engagement.

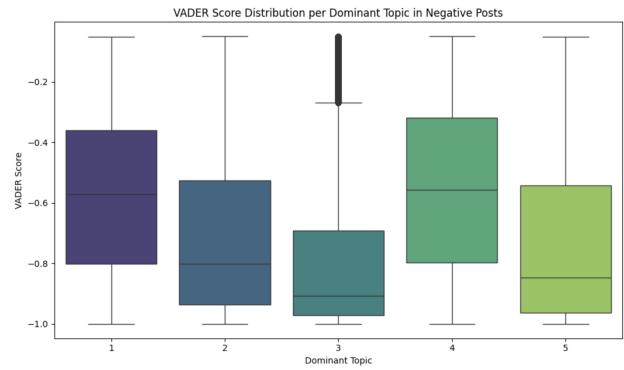


Fig. 4: Relationship between emotional intensity and engagement level (upvotes and comments).

## VII. DISCUSSION

Three key insights emerge from this analysis:

- 1) High self-disclosure correlates with increased empathy and engagement.
  - 2) Emotional and health-related vocabulary predicts community response strength.
  - 3) Anonymity promotes honesty but limits depth of sustained conversation.

These findings can inform the design of AI-driven moderation and digital mental health support systems that balance anonymity with empathetic engagement.

### VIII. CONCLUSION

This study presents a comprehensive analysis of Reddit's mental health discourse, focusing on self-disclosure, emotional tone, and social support mechanisms. Future work could incorporate temporal tracking of users to detect early warning signs of mental health decline and extend to explainable AI for online well-being detection.

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