(RESEARCH ARTICLE)

Role of social-media in Emotion Regulation and Interpersonal Reactivity - Comparative analysis between Millennials and Generation Z

Mehak Mehreen [1, *] and Soumya Simon [2]

[1] Department of Psychology, Student, Currently in final semester MSc Counselling Psychology, Kristu Jayanti College (Autonomous), Bengaluru, Karnataka, India.
[2] Department of Psychology, Assistant Professor, Kristu Jayanti College (Autonomous), Bengaluru, Karnataka, India

Abstract

This comparative study's purpose investigates social media's impact on emotion regulation and interpersonal reactivity (personal distress, empathic concern, perspective taking and fantasy) among Millennials (1981-1996) and Generation Z (1997-2012) in India with 195 participants, 98 being Generation Z, 97 being Millennials. This study uses a quantitative approach, and the data collection was through google forms. The results show social media has an impact on emotion regulation, even though other interpersonal reactivity traits remain unaffected. Furthermore, Millennials have stronger emotion regulation difficulties, and Gen Z may engage more in imaginative thinking (fantasy). The results also indicate that emotion regulation is associated with personal distress, empathic concern, perspective-taking, social media engagement and fantasy— in different directions (some positive, some negative).

Keywords: Social Media; Emotion Regulation; Interpersonal Reactivity; Millennials and Gen Z

1. Introduction

The rise of social media has changed how individuals interact, communicate, and control their emotions, and the effects of social-media are varied for each person. This includes Generation Z, who were born during 1997 and 2012, and Millennials, who were born during 1981 and 1996. Both groups have altogether distinct social media utilization behaviours that influence their emotion regulation and communication. This comparative study attempts to analyse and compare the behavioural and psychological implications of social media engagement for both generations with emphasis on how these two distinct experiences with technology create their different and unique views about emotions and relations.

Interpersonal reactivity entails a person's ability to sympathize with others, covering the whole array of emotion and cognitive responses to others' feelings and experiences. Developed by Mark H. Davis and made up of four subscales, including Perspective Taking, Empathic Concern, Personal Distress, and Fantasy. Emotion regulation is the capability to attain a balance in emotions during stress or and entails the strategies individuals use in order to govern as well as respond to their feelings properly. Social media is a type of communication that is transmitted through computers, it gives users a platform to form connections and have interactions online. Positive interactions on these platforms can reinforce empathetic behaviours, such as sharing supportive messages or participating in community solidarity (Sharma. et al 2020c) [8].

Theories like The Social Comparison Theory by Leon Festinge (1954) suggests that individuals possess a tendency to assess their attributes, and then evaluate themselves by comparing these attributes, directly to those of another person.

---

* Corresponding author: Mehak Mehreen

Additionally, emotion regulation theory by Gross (1998), talked about the ability to impact which emotions one experiences and how they are expressed can have dramatic consequences on interpersonal relationships. Furthermore, uses and gratifications theory presents that individuals actively seek out media to satisfy specific needs, including social interaction, and entertainment. This comparative analysis seeks to study impact of social-media on the two generations.

Gen Z are known to use social-media more than Millennials, so it is important to look at how this huge involvement affects their capacity to make an emotion contact with others. While social media creates a sense of community and a sense of belonging it also may cause some negative emotion experiences such as social comparison and validation seeking. By recognizing these factors, more suitable support systems and resources can be created to accommodate the individual needs of each generation. Another aspect that needs to be examined more is the correlation between interpersonal reactivity and emotion regulation. The knowledge of the social media impact on emotion regulation and interpersonal reactivity across generations may inform the implementation of more effective interventions that may promote mental health and well-being.

Existing research has disproportionately focused on American adults and European youth, with limited exploration of how different age groups. The effects of time spent on social media on empathy and emotion regulation remain underexplored.

2. Review of literature

Previous research on emotion regulation difficulties and interpersonal reactivity show mixed results as there is high associations with emotion regulation difficulties and social media but little or no substantial relationship with social-media and interpersonal reactivity (empathic factors).

Regarding interpersonal reactivity a study by Sharma et al. (2020c) [8] on impact of social-media on the trait of empathy which examined the relationship between social networking sites and interpersonal reactivity (N=100) found no significant relationship; participants were emotionally indifferent to social media interactions.

For emotion regulation difficulties a study by Gioia et al. (2021c) [4] on "Problematic Internet Use and Emotion Dysregulation Among Young People: A Literature Review" reviewed 23 studies (2010–2020) on emotion dysregulation and problematic internet/social-media use. Identified a strong positive correlation between emotion dysregulation and problematic social media use. Furthermore, another study by Chow and Wan (2017) [1] on "Facebook and Depressive Symptoms" (N=282) Amazon Mechanical Turk. Found that time spent on Facebook was linked to depressive symptoms in individuals who scored high in neuroticism, social comparison, or envy, but not in those with low levels of these traits.

For the comparative study across generations a study by Ghiron, M. (2017) [5] "Internet and Social-Media Across Generations" explored social-media and internet usage across different age groups. There was no generational differences found in perspective-taking and empathic concern but noted Millennials scored higher on personal distress and fantasy. Social media use was negatively correlated with empathic concern and fantasy. Additionally, a study by Vibha Sharma et al. (2023) [9] on "Emotion Regulation and Social Media in Gen Z" found that 29.4% of Gen Z respondents viewed social media as beneficial for well-being, while 8.7% linked it to mental health issues. Highlighted both positive and negative effects of social media on Gen Z. Furthermore, research by Gull et al. (2018) [4] on "Social Media and Emotion States in Saudi Female Millennials" investigated social media's impact on Saudi female Millennials. Found both positive and negative effects on emotion states and social behavior.

Exploring multiple studies, we can see the mixed results from various parts of the world. The main goal of my research was to find effects of social media on emotion regulation difficulties and interpersonal reactivity across generations Millennials and Generation Z in the Indian context.

3. Method

3.1. Objectives

- To examine if there is a relationship between social media, emotion regulation, empathic concern, perspective taking, personal distress, fantasy
- To see if social media has an impact on emotion regulation and fantasy, personal distress, empathic concern, perspective taking

- To determine whether there are any generational differences in Emotion regulation and fantasy, empathic concern, personal distress, perspective taking.

3.2. Hypothesis:

- H_01: There is no correlation between social media, emotion regulation and personal distress, empathic concern, perspective taking
- H_02: High social-media use does not impact personal distress, empathic concern, perspective taking, fantasy and emotion regulation
- H_03: Gen Z and Millennials exhibit the same levels of personal distress, empathic concern, perspective taking, fantasy, and emotion regulation.

3.3. Research design

A comparative study using a quantitative approach with a correlational cross sectional research design with analysis done through regression, correlation and T-Tests.

3.4. Participants

Participants were Millennials (1981–1996) and Gen Z (1997–2006), with data collection limited to individuals above 18 years. The data was collected in Bengaluru city, Karnataka, and all participants were of Indian nationality. Informed consent was obtained from all individual participants included in the study.

3.5. Sample

Sample size was 195, 98 being Generation Z, 97 being Millennials and were all of Indian nationality. Convenience sampling was used.

Inclusion Criteria: Participants must belong to millennials born during 1981–1996 or Generation Z born during 1997–2006, use social-media, and have regular access to internet-enabled devices.

Exclusion Criteria: Individuals with diagnosed severe mental health conditions (e.g., severe depression, bipolar disorder) are excluded to avoid confounding results related to empathic distress and emotion regulation.

3.6. Tool description

PERCI: Perth Emotion Regulation Inventory is a 32 item self-report tool measuring emotion-regulation skills with high reliability (Cronbach's alpha > 0.70) and validated eight-factor structure. It aids in understanding and addressing emotion dysregulation.

IRI: Interpersonal Reactivity Index is a 28-item measure of empathy across four subscales (PT, EC, PD, FS), with strong reliability (Cronbach's alpha > 0.70) and validated multidimensional structure.

SMEQ: Social media engagement questionnaire is a 5-item scale assessing social media engagement, showing high reliability (Cronbach's alpha > 0.70) and validated by factor analyses.

3.7. Procedure

A Google Form was used to collect and score data for the quantitative research, measuring social media use, interpersonal reactivity, and emotion regulation in Gen Z and Millennials. The results were then compared to analyze generational differences.

3.8. Data Analysis

Descriptive statistics: For the collected data the sum, mean, and standard deviation was measured. Inferential Statistics: Correlation, Regression, Mann Whitney U and independent T test was used.

3.9. Variables

The dependent variable here is interpersonal reactivity (fantasy, personal distress, empathic concern, perspective taking) and emotion regulation and the independent variable is social media usage.

4. Results and Discussion

The objective of this study is to see if there is a relationship between social-media with emotion regulation difficulties, fantasy, personal distress, empathic concern, and perspective taking. The Perth Emotional Regulation Inventory revealed higher emotional regulation difficulties in the population.

Table 1 Correlation Matrix of Social Media usage, Emotion Regulation, Personal Distress, Empathic Concern, Perspective taking and Fantasy

Variables	M	SD	1	2	3	4	5	6
Social Media Usage	19.7	9.74	—					
Emotion Regulation	110.1	31.69	0.277***	—				
Personal Distress	14.7	4.08	0.073	0.269***	—			
Empathic Concern	17.8	4.71	-0.169*	-0.28***	0.205**	—		
Perspective taking	17	4.12	-0.146*	-0.256***	0.092	0.573***	—	
Fantasy	15.7	4.77	0.03	0.168*	0.343***	0.307***	0.261***	—
Note. * p < .05, ** p < .01, *** p < .001								

Table 1 displays the correlation matrix. The results found social-media use is positively correlated with emotion regulation (difficulties), indicating that greater emotion regulation difficulties are linked to increased social media engagement. However, social media usage shows weak, non-significant correlations with personal distress, fantasy. The null hypothesis is rejected. The result is supported by a study by Sharma et al. (2020c) [8] (N=100) ages 16-45 examined the relationship between the interpersonal reactivity index and the amount of time spent on social media. There was a negative correlation between all the subscales and empathy with the amount of time spent on social media. And it partially supports the results found. For emotion regulation (difficulties), a literature review by Gioia et al., 2021 [3], searched words like problematic Internet usage, social media addiction, and emotion regulation (difficulties) from 2010 to 2020. The reviewed research discovered a high correlation between problematic internet use and poor social networking and emotion regulation (difficulties). These findings support the hypothesis that increased social media usage and emotion regulation (difficulties) have a positive correlation which strongly supports the results.

Table 2 Regression Analysis of Emotion regulation, Personal distress, Empathic concern, perspective taking and Fantasy

					Sig.	95.0% CI	
Variables	B	SE	β	t		LL	UL
Emotion Regulation	0.09	0.025	0.291	3.604	0.008	0.041	0.14
Personal Distress	-0.003	0.19	-0.001	-0.017	0.987	-0.377	0.371
Empathic Concern	-0.12	0.189	-0.061	-0.671	0.503	-0.499	0.246
Perspective taking	0	0.202	0	-0.001	0.999	-0.399	0.399
Fantasy	-0.018	0.165	-0.009	-0.109	0.914	-0.344	0.308
R²				0.1			
R				0.317			
a. Dependent Variable: Social-Media usage							

Table 2 shows the regression model. Emotion regulation (difficulties) has a significant positive relationship with social-media usage, indicating that higher emotion regulation (difficulties) is associated with higher social media engagement. Fantasy, personal distress, empathic concern, perspective-taking do not show statistically significant relationships with social media usage. The hypothesis is partially rejected. A study by Chow and Wan (2017) [1] on Amazon Mechanical Turk (N= 282), found social comparison/envy is associated with depressive symptoms. Fantasy,

personal-distress, empathic concern, and perspective-taking, and do not show statistically significant relationships with social media usage. And the study by Sharma et al. (2020c) [8], on social media's impact on empathy (N = 100). Age ranged from 16-45. The study checked the significant difference between the empathic traits of people and the number of hours invested on social-media. The result came out to be non-significant, and both the studies back the results found.

Table 3 Independent Samples T-Test, U test and Compare Means between Gen Z and Millennials

Variables		Gen Z		Millennials		Statistic	df	p
		M	Sd	M	SD			
Social Media Usage	T value	20.3	9.97	19	9.51	0.953	193	0.342
	U Test					4514		0.543
Emotion Regulation	T value	106.4	29.26	113.8	33.67	-1.625	193	0.106
	U Test					3895		0.029
Personal Distress	T value	15.1	3.77	14.3	4.35	1.367	193	0.173
	U Test					4512		0.54
Empathic Concern	T value	18.3	5.13	17.3	4.22	1.508	193	0.133
	U Test					4160		0.131
Perspective Taking	T value	17.4	4.25	16.5	3.95	1.465	193	0.145
	U Test					4192		0.153
Fantasy	T value	16.5	5.26	14.9	4.1	2.379	193	0.018
	U Test					4013		0.06
Note. H_a µ Gen Z (1997-2006) ≠ µ Millennial (1981-1996)								
[a] Levene's test is significant (p < .05)								

Table 3 demonstrates T Test (Mann Whitney U test as U test), for most variables there are no significant differences between Gen Z and Millennials, as both the tests yielded non-significant results. However, emotion regulation (difficulties) test suggests a significant difference, with Millennials scoring higher and the fantasy scale shows a significant difference based on the t-test for Gen Z. The null hypothesis is partially rejected. Supporting this result a study by Ghiron, M. (2017) [5] done on different age groups saw that across all generations, there was no observable difference in perspective taking and empathic concern when compared to Baby Boomers, Millennials scored much higher on Personal Distress and Fantasy.

For emotion regulation (difficulties) a study by Vibha Sharma et al. (2023) [9], Generation Z responders give their positive response to social media for well-being while 8.7.% responders believe excess social media led to other mental health issues mentioning both positive and negative impacts of social media on Gen Z, it relates to Gen Z's emotional regulation & social media but doesn't directly compare Gen Z to Millennials. A study by H. Gull et al., (2018) [4] results give a thematic support that Saudi female millennials' emotion states and social behaviour are impacted by social media use in both good and negative ways which partially supports the result found.

All three-hypotheses showed that higher social media engagement has a positive relationship with emotion regulation (difficulties) but differ in empathic traits across the two generations- Gen Z and Millennials.

5. Conclusion

This research aimed to examine if there is a relationship and impact of time spent on social media on emotion regulation and empathic traits like fantasy, perspective-taking, personal distress, empathic concern, and to determine whether there are any generational differences between Millennials and Gen Z regarding the variables. These results indicate that emotion regulation is associated with personal distress, empathic concern, perspective-taking, fantasy in different directions (some positive, some negative) but not strongly associated with social media usage.

Additionally, social media shows a significant relationship with emotion regulation. The evidence shows an impact on emotion regulation, even though other variables remain unaffected. Furthermore, emotion regulation and fantasy engagement results suggest Millennials have stronger emotion regulation, and Gen Z may engage more in imaginative thinking. And retain the hypothesis for personal distress, empathic concern, perspective-taking, and social media usage (no significant generational differences).

5.1. Implications

- Cognitive and Emotion Processing: The research shows the importance of understanding the cognitive-emotion interplay involved in social media influence.
- Generational Behavior Models: The study supports the refinement of generational behavior theories by contrasting the distinct responses of Millennials and Gen Z.
- Mental Health Interventions: The correlation between social media engagement and difficulties in emotion regulation suggests a potential area for intervention.

5.2. Limitations

- The sample of the study was not able to reflect the greater populations of the Gen Z and Millennials
- The data collection was conducted over a short period of time
- The collection of data was based on self-reported measures such as social media engagement and emotion regulation

5.3. Recommendations for Future Research

- Expanding the sample to include participants from various geographic regions, socio-economic backgrounds, and ethnicities, as well as a broader representation of Gen Z and Millennials, would improve the generalizability of the findings.
- Different aspects of emotion regulation, like impulse control, emotion awareness, and cognitive reappraisal, may interact uniquely with social media use

---

Compliance with ethical standards

Disclosure of conflict of interest

The research was done in order of fulfilment for the award of Master degree (M. Sc.) in Counselling Psychology of Kristu Jayanti College (Autonomous) affiliated to Bengaluru North University, the results of the research were not affected by the organization.

Statement of informed consent

The participants are informed about the purpose of research and the procedures in detail before the provision of a questionnaire. They were also informed of their right to say no or withdraw from the research even if started already. They were given a clear understanding of the limits of confidentiality and any foreseeable risk is informed well in advance. The participants are also given the contact details of the person to whom they can reach out in case of any queries.

References

[1] Chow, T. S., & Wan, H. Y. (2017). Is there any 'Facebook Depression'? Exploring the moderating roles of neuroticism, Facebook social comparison and envy. *Personality and Individual Differences, 119,* 277–282. https://doi.org/10.1016/j.paid.2017.07.032

[2] City Research Online - Internet and Social Media Age: What is the difference in Empathy across Generations of Therapists in the UK? (n.d.). https://openaccess.city.ac.uk/id/eprint/19832/

[3] Davis, M. H. (1980). A multidimensional approach to individual differences in empathy. JSAS Catalog of Selected Documents in Psychology, 10, 85.

[4] Gioia, F., Rega, V., & Boursier, V. (2021). Problematic Internet Use and Emotion Dysregulation Among Young People: A Literature Review. PubMed, 18(1), 41–54. https://doi.org/10.36131/cnfioritieditore20210104

[5] Gull, H., Farooqui, M., Ilyas, M., Iqbal, S. Z., Khan, M. A., Krishna, G., & Shaique, U. A. (2018). Impact of Social Media on Emotion State of Saudi Female Millennials in Eastern Province of Saudi Arabia. 2018 International Conference on Computational Science and Computational Intelligence (CSCI), 1260–1265.

[6] Preece, David & Becerra, Rodrigo & Robinson, Ken & Dandy, Justine & Allan, Alfred. (2018). Perth Emotion Regulation Competency Inventory (PERCI): Copy of questionnaire and scoring instructions.

[7] Przybylski, A. K., Murayama, K., DeHaan, C. R., & Gladwell, V. (2013). Motivational, emotional, and behavioral correlates of fear of missing out. Computers in Human Behavior, 29, 1814-1848.

[8] Sharma, N., Gupta, S., & Seth, S. (2020). Impact of social media on the trait of empathy. International Journal of Indian Psychology, 8(1). https://doi.org/10.25215/0801.121

[9] Sharma, V., & Singh, K. V. (2024). The influence of Generation Z's addiction to social media on their Emotion well-being. Educational Administration: Theory and Practice. https://doi.org/10.53555/kuey.v30i4.2549