

# Who is Really Happier? Re-Examining the Portrayal of Happiness on Social Media and the Persistence of Misperception

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**Abstract.** Growing concerns have been raised regarding the potential influence of social media on mental health and well-being, specifically focusing on the phenomenon of social comparison. Prior research has shown that individuals tend to overestimate the happiness portrayed in others' social media posts, resulting in negative outcomes such as low mood, reduced self-esteem, and diminished life satisfaction. However, given the nearly two-decade surge of social media, we question whether this trend persists. This study aims to investigate whether individuals still perceive others' happy posts as happier than their own happy posts on social media, while also exploring potential age and gender differences. Self-reported happiness is a person's perception of their own level of happiness, while perceived happiness is the level of happiness, they believe other people are experiencing. Data was collected via an online survey completed by 314 participants. A mixed ANOVA revealed a significant misperception of happiness, indicating, against the current literature, that individuals tend to overestimate their own happiness compared to the happiness expressed by others in social media posts. Gender emerged as a significant factor influencing happiness misperception, with males reporting higher levels of self-reporting happiness than their happiness. A significant difference between the age groups was found and indicated that the older age group (25-64 years) demonstrated a significantly higher happiness misperception than the emerging adult group (15-24 years). The study reveals new insights on happiness misperception in social media, impacting well-being and social bonding, particularly among males and adults, and altering perceptions of online emotional expressions.

**Keywords:** Happiness, Perceived happiness, Social media, Misperception, Gender differences.

## 1. Introduction

The pervasive influence of social media in modern society has elicited growing concerns about its effects on mental health and overall well-being [1]. Social media may trigger negative emotions mainly attributable to factors such as peer pressure [2], fear of missing out [3], and low self-esteem [4]. These negative experiences often stem from the fundamental aspect of social comparisons [5], which refer to the tendency of

individuals to compare themselves to others. Within the realm of social media, such social comparisons have consistently been associated with various adverse psychological outcomes, including feelings of envy, jealousy, reduced self-image, and poor self-esteem [6].

Social media encourages social comparisons as users are exposed to an abundance of peer-shared images and content. It has been observed that individuals often perceive others' posts on social media as a representative depiction of their actual life, including their level of happiness [7]. However, it is imperative to acknowledge that these perceptions may not accurately reflect reality. The tendency to compare oneself to others on social media can engender feelings of inadequacy and dissatisfaction, as individuals may perceive a discrepancy between their own happiness and the happiness of others portrayed by their social media posts [8]. This highlights the intricate interplay between social media, social comparisons, and the perception of happiness.

Active engagement with social media not only involves the sharing of experiences, but also encompasses the perception and interpretation of others' posts, particularly in terms of happiness. The desire for belongingness and trust in social information influence the enjoyment and happiness derived from these shared experiences [9]. However, the perception of happiness on social media is not solely influenced by external factors, but also by individual characteristics and differences [9].

In the context of social media, there is a distinction between self-reported happiness, which refers to individuals own perceived level of happiness, and perceived happiness, which pertains to the happiness they attribute to others [10]. The filtered and curated nature of social media content can create a distorted reality, where individuals may perceive others as happier than they truly are, contributing to the development of social comparisons [11]. As a result, social media users often believe that others are living happier and more fulfilling lives compared to their own, a phenomenon known as happiness misperception [5]. Happiness misperception in social media posts may play a role in the development of social media addiction or disorder, where individuals excessively use social media for self-validation and continuous comparison with their peers, potentially leading to interference with daily activities and emotional distress [12].

Misperception of happiness lies on how we perceive others' happiness compared to our happiness. Therefore, in order to get a deeper understanding of this concept we need to explore factors involved in social media engagement but also factors affecting perceptions of happiness on social media. The perception of happiness of social media posts is affected by various demographics and personality factors. For instance, individuals with a higher inclination towards fantasy are more likely to emotionally invest in others' lives, including the happiness portrayed in online posts [13]. This heightened emotional involvement can lead to an augmented perception of happiness when exposed to positive content on social media [14].

Among demographics factors influencing happiness misperception, gender-related differences have been observed in their engagement with social media. For instance, some studies have reported that women tend to engage in more frequent social comparisons and experience higher levels of envy on social media platforms as compared to men [15], [16]. Additionally, research has shown that females tend to use social media more than males and are more likely to report negative experiences [17]. Further,

women tend to engage in upward social comparison, comparing themselves to those who are better off, while men tend to engage in downward social comparison, comparing themselves to those who are worse off [8]. Consequently, these gender-related tendencies may result in women feeling inferior and experiencing negative emotions when perceiving others as being happier or more successful than themselves.

Of importance, age-related differences also exist in relation to perceptions of happiness and the way individuals engage with social media [18]. In particular, research has demonstrated that younger individuals tend to use social media more frequently and are more inclined to report its negative effects on their mental health [19]. Age-related differences in social media engagement can be attributed to various factors. According to Valkenburg et al. [20], younger individuals tend to possess a stronger need for social validation and acceptance, with social media platforms serving as a means to fulfil these needs. As a result, younger individuals may be more susceptible to the pressures and influences inherent in social media, leading them to engage in more frequent social comparisons. Furthermore, age may also influence the types of content shared on social media and subsequently the perception of happiness. This may contribute to the perception that younger individuals are happier, as they may be more prone to share content that elicits positive emotions [21].

In previous studies conducted on social media, the primary emphasis revolved around how individuals compare themselves to those who are more [9], [10] prosperous. Recent studies have begun to challenge this perspective by proposing that people are also capable of imitating and adopting the positive emotions displayed by others [22], [23]. The concept of “positive contagion” effect posits that individuals are susceptible to being influenced positively by the emotions and positive experiences depicted in others’ social media posts [22], [23]. Moreover, the duration of social media’s prevalence for almost two decades warrants a re-evaluation of whether people have become more discerning in assessing the authenticity and reflective nature of others’ posts [24].

The current study’s goal is to revisit the prevailing assumption that individuals tend to overestimate others’ happiness when viewing their seemingly happy posts on social media. In other words, this study aims to explore the current landscape, and examine whether there is a shift in people’s perception of happiness on social media. Specifically, our study investigates whether individuals still perceive others’ happy posts as happier compared to their own happiness as depicted in their own happy posts. Furthermore, this research explores the relation of the perception and misperception of happiness, on one hand, and age, and gender, on the other. Understanding misperception of happiness on social media, as well as how it is influenced by demographic factors, may provide meaningful suggestions on how social media users should share content online to increase their social capital, promote bonding and encourage social support, consequently improving well-being.

This study, therefore, aims to answer the following research questions:

RQ1: Do happiness in one’s own posts and perceived happiness in others’ posts on social media vary across gender and age groups?

RQ2: Do users tend to misperceive the happiness portrayed by others in their posts on social media?? Does this misperception apply across different age groups and genders?

We note here that the misperception studied in RQ2 is meant at collective level. A misperception occurs when the majority of users perceive their posts to be happier than others or vice versa.

## 2. Methodology

### 2.1 Participants and Procedure

Data were collected via an online survey administered to those who had installed a dedicated application on Google Play, between December 2022 and March 2023. The application is used as a tool to assist users monitor and manage their smartphone usage more effectively. The survey was completed by users who installed the application. The invitation to take part was sent soon after they started using the application. A total of 640 users from various countries responded to the survey and agreed to participate in our study.

Participants who were younger than 15 years old, those who reported not posting on social media and those who reported not viewing others' posts on social media were excluded from the sample. Additionally, participants who failed to correctly answer two attention check questions integrated within the survey were also omitted from the sample. Consequently, only 314 participants met the inclusion criteria and were included in the analytical sample of this study.

Prior to data collection, informed consent was obtained from participants. The study received approval from the Institutional Review Board (IRB) of the first author's institution.

### 2.2 Measures

**Demographic measures.** The participants reported demographic information, including gender and age. Our sample included participants aged between 15 and 64 years.

**Happiness about social media posts.** Participants' self-reported happiness in their social media posts was measured through the question "Thinking of a relatively happy post about yourself that you recently posted (e.g., achievement you made or a new place you visited), how happy were you in reality?". Their perception of the level of happiness others portray in their social media posts was measured through the question "Thinking of a relatively happy post that your peers recently posted (e.g., achievement they made or a new place they visited), how happy do you think they were in reality?". Responses to these questions were assessed using a ten-point Likert scale, ranging from 1 to 10, with higher scores indicating higher levels of happiness. We have added "I do not post" and "I do not view others posts" as further options.

**Data Analysis.** The dataset was pre-processed, and the subsequent analysis was conducted using JASP version 0.16.3 [25]. The pre-processing procedure included removing duplicates, handling missing values, removing outliers and creating variables

as needed. The data was also transformed and encoded to convert categorical data into numerical form. For this study, participants were divided into two ages groups: emerging adults, defined by the United Nations as individuals aged 15-24 and adults, comprising those aged 25 and above [26]. Discrepancy of happiness variable was calculated by subtracting perceived happiness levels from self-reported happiness levels.

Prior to conducting any test, assumption checks were met, including normality using Q-Q plot and homogeneity of variables as assessed by Levene's test ( $p > .05$ ). Therefore, parametric tests were employed.

Pearson's correlation analysis was conducted to examine the relationship between variables. A mixed ANOVA test was performed to examine happiness misperception and investigate whether this misperception varies across gender and age. For statistically significant findings, a post-hoc analysis was conducted using Bonferroni's correction. In instances where the results were not statistically significant, a simple main effect analysis was performed to further explore the observed effects. The dataset used in this work can be found in the Open Science Framework<sup>1</sup>.

### 3. RESULTS

#### 3.1 Descriptive Statistics

Descriptive statistics of the participants are presented in Table 1. Of 314 participants, 163 (51.91%) were identified as females and 151 (48.08%) as males. In terms of age group, most participants were aged between 25 and 64 (62.42%), with the remaining participants aged between 15 and 24 (37.58%). Most of the participants reported their country as being the USA (41%) and the UK (22%), followed by France (7%), India and Canada (5% each). The remaining participants were spread in small numbers across the countries.

**Table 1.** Participants Demographic

Variables	N (314)	%
<b>Gender</b>		
Female	163	51.91
Male	151	48.09
<b>Age</b>		
Emerging Adults (15–24)	118	37.58
Adults (25–64)	196	62.42
<b>Country</b>		
USA	133	42
UK	68	22
France	21	7
Canada	15	5
India	15	5

<sup>1</sup> [https://osf.io/gxdzm/?view\\_only=a5b423f2d9564de4811ed94dc7c37a36](https://osf.io/gxdzm/?view_only=a5b423f2d9564de4811ed94dc7c37a36)

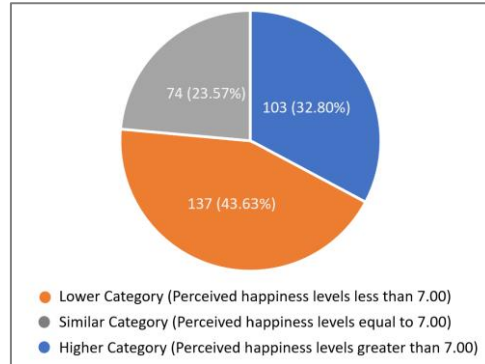
Australia	14	4
Germany	13	4
Netherlands	11	4
Others	24	8

Table 2 presents the mean values of self-reported and perceived happiness for different gender and age groups. In general, older females reported slightly higher levels of self-reported happiness compared to younger females, but they reported lower levels of perceived happiness. A similar trend was reported by males, with older males reporting higher levels of self-reported happiness compared to younger males. However, the levels of perceived happiness were almost the same for both age groups among males.

We further examined the participants' perceived happiness levels in relation to the actual happiness level. The actual happiness level was determined by calculating the mean value of participants' self-reported happiness levels, yielding an approximate value of 7. Based on the calculated mean value, the perceived happiness levels of participants were divided into three groups: Lower (comprising perceived happiness values less than 7), Similar (categorized perceived happiness values equal to 7), and Higher (categorized perceived happiness values greater than 7). The results are shown in Fig. 1.

**Table 2.** Descriptive Statistics of Self-reported Happiness and Perceived Happiness with Gender Differences

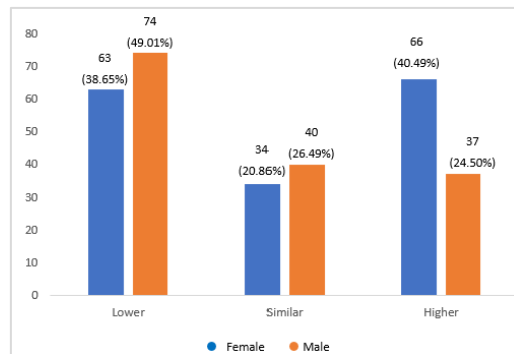
Happiness	Gender	Age	N	M	SD
Self-reported happiness	Female	15-24	48	7.06	1.82
		25-64	115	7.28	1.88
	Male	15-24	70	6.86	2.05
		25-64	81	7.40	1.51
Perceived happi- ness	Female	15-24	48	7.02	1.95
		25-64	115	6.86	1.80
	Male	15-24	70	6.37	1.83
		25-64	81	6.38	1.69
Discrepancy of happiness	Female	15-24	48	-0.04	1.83
		25-64	115	-0.42	2.18
	Male	15-24	70	-0.49	2.17
		25-64	81	-1.01	1.79



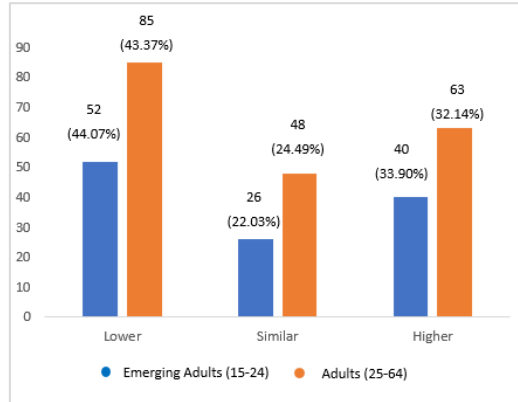
**Fig. 1.** Perceived Happiness Vs Actual Happiness

Furthermore, we examined the perceived happiness levels in relation to the actual happiness level across gender and age groups, as depicted in Fig. 2 and 3, respectively. The results revealed that majority of males reported perceived happiness levels lower than the actual happiness (49.01%). In contrast, females exhibited a more balanced distribution between the Lower and Higher categories, with 40.49% reporting perceived happiness levels higher than the actual happiness and 38.65% reporting levels lower than the actual happiness.

Regarding age groups, among those aged 15-24, the majority reported perceived happiness levels lower than the actual happiness (44.07%). Similarly, within the 25-64 age group, the majority of participants reported perceived happiness levels lower than the actual happiness level (43.37%).



**Fig. 2.** Perceived Happiness Vs. Actual Happiness Across Gender Groups



**Fig. 3.** Perceived Happiness Vs. Actual Happiness Across Age Groups

### 3.2 Correlations amongst Self-reported Happiness, Perceived Happiness, Discrepancy of Happiness, Gender and Age

Pearson's correlation was conducted to examine the relationships between all study variables. The results are presented in Table 3. Self-reported happiness was significantly and positively correlated with perceived happiness ( $r = .37, p < .001$ ), suggesting that an increase in self-reported happiness is typically associated with an increase in perceived happiness. Gender showed a significant positive correlation with perceived happiness ( $r = .15, p = .009$ ), suggesting the females are more likely to have a higher perceived happiness than males. Similarly, the discrepancy of happiness was significantly correlated with gender ( $r = -.57, p < .001$ ).

**Table 3.** Pearson's correlations between Self-reported happiness, Perceived happiness, Discrepancy of happiness, and Age

Variable	1	2	3	4	5
1. Self-reported happiness	—				
2. Perceived happiness	.37***	—			
3. Age (Emerging adult)	.10	.01	—		
4. Gender (Male)	.02	.15**	.17**	—	
5. Discrepancy of happiness	-.57***	.56***	-.09	.11*	—

\*  $p < .05$ , \*\*  $p < .01$ , \*\*\*  $p < .001$

### 3.3 Gender and Age Variations in Self-reported and Perceived Happiness

Results from the mixed ANOVA revealed a significant interaction between gender and the discrepancy of happiness [ $F(1, 310) = 4.65, p = .032, \eta^2p = .015$ ]. However,



subsequent post hoc analysis indicated no significant difference between females and males in self-reported happiness. Similarly, there was no significant difference in perceived happiness between females and males.

In relation to age groups, the mixed ANOVA revealed no significant interactions between age groups and both self-reported happiness and perceived happiness. These findings imply that no difference was found between age and individuals' self-reported or perceived levels of happiness.

### 3.4 Happiness Misperception in the Sample as a Whole

The mixed ANOVA results revealed a significant within-subject main effect for happiness misperception, [ $F(1, 310) = 16.51, p < .001, \eta^2p = .05$ ], with  $\eta^2p$  indicating small to moderate effect size. The same results were confirmed when conducting the post hoc analysis, which indicated that self-reported happiness ( $M = 7.18, SD = 1.82$ ) was significantly higher than perceived happiness ( $M = 6.65, SD = 1.81$ ) in the total sample.

### 3.5 Happiness Misperception across Gender Groups

The mixed ANOVA results also revealed a significant interaction effect between happiness misperception and gender. The follow-up post hoc analysis indicated no significant difference when comparing females' self-reported happiness ( $M = 7.22, SD = 1.86$ ) to their perceived happiness ( $M = 6.91, SD = 1.84$ ), suggesting no evidence of misperception among the female group. In contrast, a significant difference emerged when comparing males' self-reported happiness ( $M = 7.15, SD = 1.79$ ) to their perceived happiness ( $M = 6.38, SD = 1.75$ ). This finding suggests misperception of happiness among males who reported higher levels of self-reported happiness than perceived happiness of others' social media posts with small effect size of 0.41 (Table 4).

**Table 4.** Post hoc analysis for the happiness Misperception and Gender

		<i>M</i>	<i>SE</i>	<i>t</i>	Cohen's <i>d</i>	<i>p</i> bonf
		Difference				
Self-reported	Perceived	.49	.12	4.06	.27	< .001***
Female, Self-reported	Male, Self-reported	.04	.22	0.21	.02	1.000
	Female, Percived	.23	.18	1.31	.13	1.000
	Male, Percived	.79	.22	3.70	.44	.001**
Male, Self-reported	Female, Percived	.19	.22	0.87	.10	1.000
	Male, Percived	.75	.17	4.52	.41	< .001***
Female, Percived	Male, Percived	.56	.22	2.63	.31	.053

\*  $p < .05$ , \*\*  $p < .01$ , \*\*\*  $p < .001$

### 3.6 Happiness Misperception across Age Groups

In relation to age groups, the mixed ANOVA demonstrated no significant interaction between happiness misperception and age, [ $F(1, 310) = 3.51, p = .062, \eta^2p = .01$ ], indicating no significant difference in happiness misperception across age groups. The subsequent simple main effect analysis showed a significant difference in the age groups, specifically within the adult group (25-64).

### 3.7 Happiness Misperception across Age and Gender

The mixed ANOVA also demonstrated no significant interaction between happiness misperception, age, and gender ( $F = .10, p = .75$ ). The subsequent simple main effect showed that for the 15-24 age group, there was no significant happiness misperception among females ( $F = .03, p = .876$ ) or amongst the male group ( $F = 3.52, p = .065$ ). These findings indicate that within this age group, gender did not significantly influence happiness misperception. However, in the 25-64 age group, a significant happiness misperception was found among females ( $F = 4.21, p = .042$ ) and also amongst males ( $F = 25.84, p < .001$ ).

## 4. Discussion

This study contributes to the literature by exploring the relationship between self-reported happiness and perceived happiness in social media posts, considering the impact of demographic factors like age and gender. Contrary to previous research [5], [10], [11], participants did not overestimate happiness in others' social media posts compared to their own. This finding challenges the common notion that exposure to happy social media content leads to envy and poor psychological well-being [1], [6]. The study suggests a shift in perception, possibly because individuals may engage in a more critical processing of information on social media, actively questioning the accuracy and authenticity of the content they encounter [27]. Also, skepticism towards online portrayals of happiness [28], and emotion regulation in digital contexts [29].

In relation to happiness misperception across gender differences, the findings of this study showed that female participants did not perceive their own posts as significantly happier than their self-reported happiness. This is surprising as it contrasts previous findings from literature showing that women tend to engage more in self-presentation and selective sharing of positive aspects of their lives on social media [30], [31]. Based on existing evidence, we would expect women to perceive others' happier than them, however this was not the case. While women have been shown to emphasize positive aspects in their online self-presentation, various factors can influence the perception of happiness in their posts. These factors include the content consumed, the range of individuals followed, and the dynamics of social comparison processes [30], [31] and poor psychological well-being [1].

Males were found to report themselves happier than others on social media posts. Males' focus on communication and pragmatic use of social media may elucidate these results. Previous studies have highlighted men's tendency to view social media as a mean of practical communication rather than self-presentation [30], [31]. Therefore,

men's self-reported happiness in their social media posts may indicate a willingness to conform to prevailing social norms and establish a positive online image.

Additionally, this study's findings showed that no difference in misperception across different age groups. However, in the 25-64 age group, a significant happiness misperception was found among females and amongst males as well. This may reflect how generational aspects and societal expectations may shape the perception of happiness on social media among older individuals.

The study's findings underline the disparity between self-reported and perceived happiness on social media, highlighting the need for authenticity in online interactions [21]. It encourages genuine self-expression and sharing a broader range of emotions to foster healthier online relationships and reduce the impact of negative social comparisons [9], [21]. Misperceptions of happiness also affect the concept of positive contagion in social networks, emphasizing the importance of accurate perception for positive emotional communication [32], [33].

Despite the above important implications, the current investigation presented some limitations. We should note that the sample may not represent the broader population as the majority of the participants were from the US, followed by UK. Also, data collection was restricted to individuals who had installed an app on Google play introducing selection bias. A further limitation arises from the reliance on self-reported measures and thus the possibility of common sources bias must be acknowledged. Exploring the mechanisms underlying this shift in misperception of happiness as depicted on social media posts would provide us with more meaningful suggestions in the future about the use of social media posts for the promotion of well-being.

In spite of these limitations, it is important not to lose sight of this study's strengths as it offers new insights into the changing trend of misperceiving happiness on social media. While previous studies have highlighted the tendency for individuals to overestimate others' lives online [34] the current study reveals a shift in this pattern. It proposes that individuals are becoming more discerning in their evaluations and no longer perceive others as happier than themselves solely based on the positive content they encounter. Therefore, the misperception of happiness on social media raises ethical concerns, emphasizing the need for social media platforms to prioritize user well-being over engagement metrics. Implementing transparency measures, such as labelling or content moderation strategies, can help users distinguish between genuine expressions of happiness and overly idealized portrayals [23]. Promoting authenticity and reducing the pressure to constantly present a facade of happiness can contribute to a healthier online environment.

## 5. Conclusion

This study underscores the importance on reflecting on happiness misperception in social media and actively promoting authenticity in content creation and sharing. By prioritizing genuine self-expressions and reducing pressure to present a façade of constant happiness can lead to a healthier and more supportive online environment. Further research is needed to explore additional factors that may influence the perception of happiness in social media posts, such as personality traits, cultural differences, and the

authenticity of content. Understanding these factors can contribute to the development of interventions and strategies to promote authentic and healthy social media use.

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