

Influence of Social Media and Fear of Missing Out (FoMO) on Body Image and Exercise Behaviour in Young Adults

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ABSTRACT

Background: A great deal has been written about social media's effect on young people's mental health, yet few studies place social media use, Fear of Missing Out (FoMO), body image and exercise behaviour side by side in the same sample to see how they actually relate to one another. **Aim:** To evaluate the influence of social media use and FoMO on body image perception and exercise behaviour in young adults. **Methods:** In this observational, questionnaire-based cross-sectional study, 108 young adults (87 female, 21 male; aged 18–25 years) completed the Bergen Social Media Addiction Scale (BSMAS), the Fear of Missing Out Scale (FoMOS), the Body Shape Questionnaire-16 (BSQ-16) and the Behavioural Regulation in Exercise Questionnaire-3 (BREQ-3). BREQ-3 subscale scores were combined into a Relative Autonomy Index (RAI). Because several variables departed from a normal distribution, Spearman's rank correlation and linear regression were used for the analysis. **Results:** BSMAS correlated positively with FoMO ($\rho = .375$, $p < .001$) and with BSQ-16 ($\rho = .270$, $p = .005$), but showed no meaningful relationship with RAI ($\rho = -.036$, $p = .715$). FoMO and BSQ-16, on the other hand, were each negatively correlated with RAI ($\rho = -.211$, $p = .028$ for both). When all three variables were entered together in a regression model, the model as a whole reached significance ($R^2 = .078$, $F(3,104) = 2.922$, $p = .037$), though none of the individual predictors stood out on its own. **Conclusion:** Heavier social media use goes hand in hand with higher FoMO and greater body dissatisfaction, but it is these two downstream feelings — not the screen time itself — that appear to shape how autonomously young adults approach exercise.

Keywords: Social media addiction; Fear of missing out; Body image; Exercise behaviour; Self-determination theory; Young adults

1. INTRODUCTION

For most young adults today, social media is not an occasional pastime but something closer to a constant backdrop to daily life — used for staying in touch, for entertainment, and, perhaps more than anything, for presenting a version of oneself to others [1]. Used in moderation, it offers real benefits: a sense of connection, belonging, and easy access to information. Used compulsively, though, it has been tied to a

cluster of problems that start to resemble behavioural addiction [1,3], and this darker side of social media use is what motivated the present study.

One construct that keeps surfacing in this literature is Fear of Missing Out, or FoMO — the nagging sense that other people are having better, more rewarding experiences somewhere else [4]. Several studies, across groups as different as student-athletes, university students, and adults navigating enforced social isolation during the COVID-19 pandemic, have found that FoMO tracks closely with how much time and emotional energy a person pours into social media [1,2,4,5].

Body image is the third piece of this picture. Social media platforms are, almost by design, built around comparison — filtered photographs, curated highlights, bodies presented at their most flattering angle — and repeated exposure to this kind of content has been linked to greater dissatisfaction with one's own appearance [1,2]. The fourth construct, exercise behaviour, is a little different in kind: rather than measuring how much someone exercises, it captures why they do it, ranging from motivation that is externally imposed to motivation that is fully autonomous and self-chosen, a distinction drawn from Self-Determination Theory [6].

Despite all four of these constructs being individually well studied, surprisingly few papers bring them together in one sample to see how they interact — and almost none have done so among young adults in India. That gap is what this study set out to address: to evaluate how social media use and FoMO relate to body image perception and exercise behaviour in a sample of young adults.

2. MATERIALS AND METHODS

2.1 Study Design and Setting

This was an observational, questionnaire-based, cross-sectional study. Participants were recruited from physiotherapy colleges affiliated to Tilak Maharashtra Vidyapeeth, Pune, over a period of 6 months, following approval from the Institutional Ethics Committee of the Department of Physiotherapy, Tilak Maharashtra Vidyapeeth, Pune.

2.2 Sampling and Participants

A convenience sampling method was used. The target population was young adults aged 18–25 years, who were active social media users for more than 6 months and used social media for a minimum of 2 hours per day. Individuals with a known psychiatric illness, a diagnosed eating disorder, or those not actively using social media were excluded. Of the participants approached, 108 provided complete responses and were included in the final analysis (87 female, 80.6%; 21 male, 19.4%; mean age 21.81 ± 1.47 years).

2.3 Outcome Measures

Four standardised, previously validated questionnaires were administered via a Google Forms survey, alongside a demographic data sheet: the Bergen Social Media Addiction Scale (BSMAS; 6 items, scored 6–30) [7]; the Fear of Missing Out Scale (FoMOS; 10 items, scored 10–50) [4]; the Body Shape Questionnaire-16 (BSQ-16; 16 items, scored 16–96) [8]; and the Behavioural Regulation in Exercise Questionnaire-3 (BREQ-3; 24 items across six regulation styles) [9,10]. BREQ-3 subscale scores were combined into a Relative Autonomy Index (RAI) using the formula: $RAI = (-3 \times \text{Amotivation}) + (-2 \times \text{External Regulation}) + (-1 \times \text{Introjected Regulation}) + (1 \times \text{Identified Regulation}) + (2 \times \text{Integrated Regulation}) + (3 \times \text{Intrinsic Regulation})$, with higher RAI reflecting more autonomous, self-determined exercise motivation.

2.4 Procedure

Informed consent was obtained electronically prior to participation. Participants completed the demographic sheet followed by the four questionnaires. Incomplete responses were excluded from the final analysis.

2.5 Statistical Analysis

Data were analysed using SPSS (version 26). Descriptive statistics (mean, SD, median, range) were computed for all variables. The Shapiro–Wilk test was used to assess normality; as several variables departed from normality, Spearman's rank-order correlation (with 95% bootstrap confidence intervals, 2,000 replications) was used for the primary association analyses. Simple and multivariable linear regression were used to quantify predictive relationships, with multicollinearity assessed using variance inflation factors. Statistical significance was set at $p < .05$.

3. RESULTS

Table 1 presents descriptive statistics for all study variables ($N = 108$). Table 2 presents Spearman correlation coefficients among the key variables.

Table 1: Descriptive Statistics

Measure	N	Mean	SD	Range
Age (years)	108	21.81	1.47	19–25
BSMAS (6–30)	108	14.56	4.53	6–29
FoMO Scale (1–5)	108	1.95	0.69	1–4
BSQ-16 (16–96)	108	35.89	15.58	17–77
BREQ-3 RAI	108	4.95	7.32	–10–19.75

Table 2: Correlations Among Study Variables

Variables	Spearman ρ	95% CI	p-value
BSMAS – FoMO	.375	[.209, .522]	< .001
BSMAS – BSQ-16	.270	[.068, .442]	.005
BSMAS – BREQ-3 RAI	–.036	[–.235, .161]	.715
FoMO – BREQ-3 RAI	–.211	[–.389, –.005]	.028
BSQ-16 – BREQ-3 RAI	–.211	[–.386, –.033]	.028

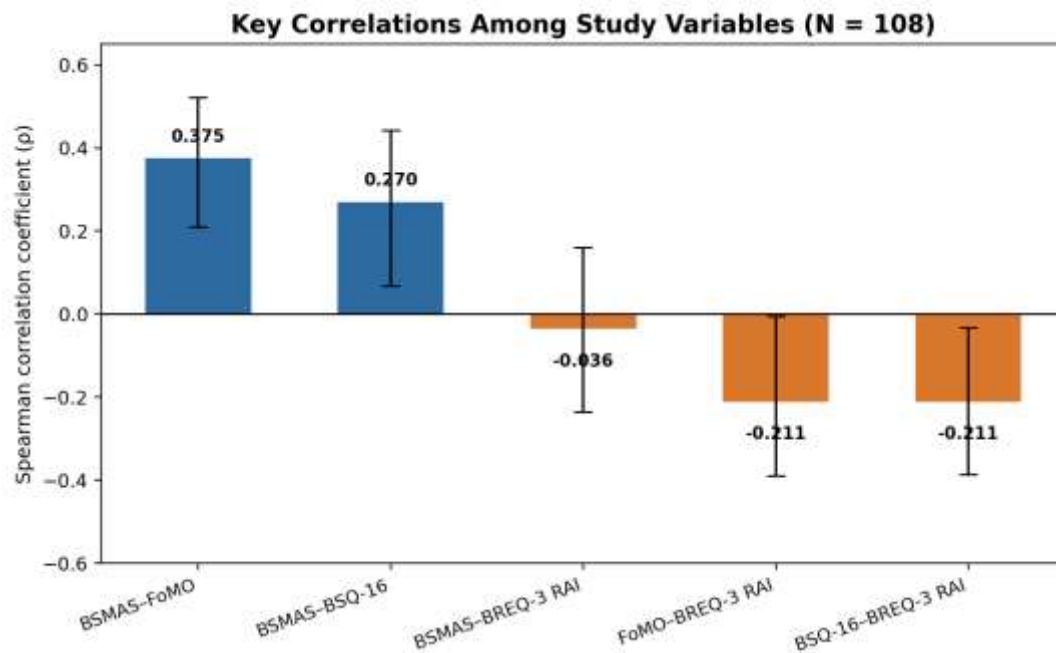


Figure 1: Spearman correlation coefficients (with 95% bootstrap confidence intervals) among BSMAS, FoMO, BSQ-16 and BREQ-3 RAI.

Two things stood out in these results. First, BSMAS tracked positively with both FoMO ($\rho = .375$, $p < .001$; simple regression $R^2 = .148$) and BSQ-16 ($\rho = .270$, $p = .005$; $R^2 = .093$) — heavier social media use went along with higher FoMO and more body dissatisfaction. Second, and somewhat unexpectedly, BSMAS itself showed almost no relationship with BREQ-3 RAI ($\rho = -.036$, $p = .715$). It was FoMO and BSQ-16, not social media use directly, that correlated negatively with RAI (both $\rho = -.211$, $p = .028$). When all three were entered together in a multivariable regression predicting RAI, the overall model held up, $F(3,104) = 2.922$, $p = .037$, $R^2 = .078$, adjusted $R^2 = .051$ — but none of the three predictors was independently significant once the others were accounted for (BSMAS: $\beta = .129$, $p = .215$; FoMO: $\beta = -.212$, $p = .060$; BSQ-16: $\beta = -.141$, $p = .196$). Multicollinearity was checked and ruled out as an explanation (VIF range 1.201–1.406).

4. DISCUSSION

Taken as a whole, these results tell a more layered story than a simple headline like “social media harms exercise motivation” would suggest. Social media use was clearly tied to both FoMO and body dissatisfaction, which fits comfortably with earlier work pointing to social comparison as the mechanism linking the two [1,2]: the more a person scrolls through other people's curated lives, the more opportunities they have to measure their own life and body against a highlight reel.

What did not fit the simple story was exercise behaviour. If social media use were the real driver of exercise motivation, one would expect BSMAS to correlate with RAI directly — it did not. Instead, it was FoMO and body dissatisfaction, the downstream feelings rather than the screen-time habit itself, that were linked to less autonomous exercise motivation. Put differently, scrolling through Instagram does not appear to change why someone exercises; feeling anxious about missing out, or unhappy with one's body, seems to do that instead. This lines up with earlier observations that social media's effect on exercise-related outcomes usually runs through other psychological factors rather than acting on its own [3].

Self-Determination Theory [6] offers a reasonably intuitive explanation for why this pattern would show up. A person who exercises because they feel guilty about their appearance, or because they are anxious about keeping pace with friends, is exercising for reasons that sit toward the controlled end of the motivation spectrum — reasons that tend to be less enjoyable and, in the longer run, less sustainable than exercising simply because one wants to. It is worth adding a caveat here: in the combined regression model, FoMO and body dissatisfaction each lost statistical significance once considered together, even though the overall model held up. The most plausible reading is that the two overlap substantially — someone anxious about missing out is often also anxious about their appearance — so neither variable can claim sole credit once the other is in the picture.

4.1 Clinical Implications

- Exercise prescription for young adults might benefit from asking about FoMO and body image alongside the usual physical assessment, rather than treating exercise motivation as a purely physical matter.
- Reducing screen time on its own may do little for exercise motivation; addressing the FoMO and body-image concerns that sit underneath it is likely to matter more.

4.2 Limitations

- Being cross-sectional, the study cannot establish cause and effect — it cannot say whether social media use leads to these feelings or whether people who already feel this way simply use social media more.
- The sample came from one college and was mostly female, so these findings may not generalise cleanly to other settings or to men.
- All data were self-reported, which always carries some risk of participants answering in a more favourable way than is strictly accurate.

5. CONCLUSION

In this sample of young adults, heavier social media use went hand in hand with greater Fear of Missing Out and greater body dissatisfaction, but not with how autonomously participants exercised. It was FoMO and body dissatisfaction themselves, rather than social media use as such, that related to weaker, less self-driven exercise motivation. Practically, this points toward addressing FoMO and body-image concerns directly as a more promising route to improving exercise motivation than simply asking young adults to spend less time on social media.

ACKNOWLEDGEMENT

The authors thank all participants who volunteered for this study, and the Institutional Ethics Committee, Department of Physiotherapy, Tilak Maharashtra Vidyapeeth, Pune, for approving the study.

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