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Social Networking Addiction and Fear of Missing Out: A Comparative Analysis of Employed Generation X, Generation Y, and Generation Z in Urban Kolkata

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Abstract: Social networking addiction (SNA) and fear of missing out (FoMO) represent significant mental health challenges in the digital age, yet limited research has examined these phenomena among employed adults across generational cohorts. Objective: This study investigated generational differences in SNA and FoMO levels, the relationship between these constructs, and their workplace correlates among employed Generation X, Y, and Z workers. A cross-sectional survey design was employed with 900 employed participants (300 per generational cohort) recruited through stratified quota sampling. Participants completed the Bergen Social Media Addiction Scale, the FoMO Scale, and measures of SNS usage patterns and workplace outcomes.

Generation Z reported significantly higher SNA (M=3.82, SD=0.71) and FoMO (M=3.94, SD=0.68) scores compared to Generation Y (SNA: M=3.21, SD=0.74; FoMO: M=3.38, SD=0.72) and Generation X (SNA: M=2.65, SD=0.69; FoMO: M=2.71, SD=0.70). The positive correlation between FoMO and SNA was strongest among Generation Z ($r=0.68$, $p<.001$). Significant generational differences emerged in platform preferences and usage patterns. Both SNA and FoMO positively predicted workplace cyberloafing across all generations, with FoMO emerging as the stronger predictor. Conclusions: Findings reveal a generational gradient in vulnerability to SNA and FoMO, with Gen Z workers most at risk. Organizations should consider generational differences when developing digital wellness initiatives and workplace policies.

Index Terms **- Social networking addiction, fear of missing out, Generation Z, Millennials, Generation X, workplace mental health, cyber-loafing.**

I. INTRODUCTION

INTRODUCTION

The integration of social networking sites (SNS) into daily life has fundamentally transformed how individuals communicate, work, and maintain social connections. With over 4.48 billion active social media users worldwide, these platforms have become ubiquitous across all age groups. In India, the digital landscape has witnessed explosive growth, with urban centres like Kolkata experiencing profound shifts in how residents engage with technology. However, alongside the benefits of connectivity, concerns have emerged regarding problematic usage patterns that impair functioning in important life domains.

Social networking addiction (SNA)—characterized by excessive preoccupation with SNS, uncontrollable urges to engage with platforms, and continued use despite negative consequences—has been recognized as a behavioural addiction with significant mental health implications. Research conducted in Kolkata has documented concerning patterns of internet addiction among student populations, with studies reporting that 35.93% of college students exhibit moderate internet addiction and 1.11% demonstrate severe addiction. These findings underscore the relevance of examining addictive digital behaviours within the Kolkata context.

Parallel to the rise of SNA, the Fear of Missing Out (FoMO) has gained scholarly attention as a psychological construct closely associated with problematic digital behaviours. Defined as "a pervasive apprehension that others might be having rewarding experiences from which one is absent", FoMO has been linked to compulsive social media use, problematic smartphone use, and psychological distress including anxiety and depressive symptoms. Recent research with Kolkata adolescents has established significant relationships between social media addiction, FoMO, and social competence, demonstrating that increased social media addiction predicts decreased social competence.

NEED OF THE STUDY.

Despite growing research on these phenomena, critical gaps remain. Most existing studies focus on adolescents and university students, limiting understanding of how SNA and FoMO manifest within the employed adult population. Workplaces in Kolkata, like those across India, are uniquely multigenerational, with Generation X (born 1965-1980), Generation Y/Millennials (born 1981-1996), and Generation Z (born 1997-2012) working side by side. These generations developed their relationships with technology under vastly different circumstances. Generation X in Kolkata witnessed the city's transition from analogue to digital, adopting smartphones and social media as adults during the liberalization era. Millennials embraced social media platforms during their formative years, becoming early adopters of Facebook and Orkut as these platforms gained prominence in urban India. Generation

Z, as true digital natives, have never known a world without smartphones or ubiquitous internet access, making SNS integral to identity formation and social interaction.

Furthermore, gender represents a critical dimension in understanding digital behaviours. Research consistently demonstrates gender differences in social media use patterns, motivations, and outcomes. Females typically report greater use of socially oriented platforms, higher engagement in social comparison, and greater vulnerability to FoMO . In the Indian context, gender shapes technology access and use through complex intersections of cultural norms, educational opportunities, and workplace expectations. Kolkata, with its blend of traditional Bengali culture and modern urban influences, presents a particularly interesting setting for examining how gender and generation interact to shape digital experiences.

The workplace context introduces unique considerations. SNS use during work hours—cyberloafing—can reduce productivity, while FoMO may create distraction and impair concentration. Mental health professionals in Kolkata have observed increasing cases of workplace-related FoMO and information overload, noting that employees feel compelled to remain perpetually "plugged in," leading to burnout and affecting both mental well-being and work performance. Recent qualitative observations from Kolkata-based therapeutic practice highlight how clients across age groups report feelings of disengagement and disconnection, spending excessive time either at home or workplace without meaningful "third places" for social connection.

The present study addresses these gaps by conducting a comparative analysis of SNA and FoMO across employed Generation X, Y, and Z workers in urban Kolkata, with explicit attention to gender differences. Specifically, we examine generational and gender differences in SNA and FoMO levels, the relationship between these constructs within each cohort and gender, patterns of SNS usage, and associations with workplace outcomes.

II. REVIEW OF LITERATURE

2.1 Conceptualizing Social Networking Addiction

Social networking addiction represents a behavioural addiction characterized by six core components adapted from substance addiction frameworks: salience (the activity dominates thinking and behaviour), tolerance (increasing amounts required to achieve previous effects), mood modification (using SNS to alter emotional states), withdrawal (unpleasant feelings when use is restricted), conflict (interpersonal or intrapersonal problems due to use), and relapse (tendency to revert to previous patterns after abstinence). The Bergen Social Media Addiction Scale (BSMAS) operationalizes these dimensions and has demonstrated strong psychometric properties across diverse populations.

In the Indian context, research on internet addiction has gained momentum, with studies documenting prevalence rates and associated factors. A systematic review and meta-analysis of internet addiction among Indian college students revealed concerning prevalence rates, with significant variations based on assessment instruments and sample characteristics. Research conducted in Kolkata has identified that among internet-addicted students, 54% self-rated academic performance as moderate, 51% slept less than six hours daily, 32% consumed junk food nearly every day, and 59% did not perform exercise in the last month. These findings highlight the lifestyle consequences associated with addictive digital behaviours.

2.2 Fear of Missing Out: Theoretical Foundations and Measurement

FoMO emerged from self-determination theory, specifically from the basic psychological need for relatedness. When individuals feel disconnected from others, they may experience anxiety about missing rewarding social experiences, motivating them to maintain continuous social connection through SNS. Przybylski and colleagues developed the 10-item FoMO Scale, which has become the most widely used measure internationally.

In the Kolkata context, recent research has explored FoMO among adolescents, finding significant correlations between FoMO and social media addiction. Ganguly, Mukherjee, and Chowdhury reported that social media addiction ($\beta = -.730$) and FoMO ($\beta = .171$) predict social competence among adolescents, with increased social media addiction and FoMO associated with decreased social competence. This research establishes the relevance of FoMO as a construct for understanding digital behaviours in Kolkata's urban youth.

2.3 Gender Differences in Social Media Use and Addiction

Gender represents a critical dimension in understanding digital behaviors. A comprehensive meta-analysis by Meng and colleagues examining global prevalence of digital addiction found that females report significantly higher rates of social media addiction compared to males. This gender difference is attributed to several factors: females tend to use social media more for social interaction and relationship maintenance, engage in more social comparison, and derive greater emotional significance from online social feedback.

Research specifically examining gender differences in FoMO has yielded consistent findings. Females typically score higher on FoMO measures than males, reflecting greater investment in social relationships and heightened sensitivity to social exclusion. In the Indian context, gender norms may amplify these differences, as females often face greater restrictions on physical mobility and social interaction, potentially increasing reliance on digital platforms for social connection.

Studies from Kolkata have begun exploring gender dimensions of digital behaviour. Dutta and Karmakar found that while overall internet addiction scores did not differ significantly by gender, patterns of use and associated factors showed gender-specific patterns. Females reported greater use of social networking sites while males reported greater engagement with gaming and entertainment content.

2.4 Generational Differences in Technology and Social Media Use

Generation Z (born 1997-2012) represents the first cohort to grow up entirely in the digital age. Often termed "digital natives," Gen Z individuals in Kolkata have never experienced life without smartphones or high-speed internet. Research suggests that FoMO may be a defining characteristic distinguishing Gen Z from previous generations. A study conducted in Kolkata found that 53% of Gen Z youth are looking for steady relationships, with one-third believing in no set timelines for marriage. This generation demonstrates distinctive dating preferences and relationship expectations, challenging traditional gendered norms. The phenomenon

of "FONMO" (no-FOMO) has emerged as a counter-trend, with some Gen Z individuals actively setting boundaries around digital engagement.

Generation Y/Millennials (born 1981-1996) pioneered social media platforms during adolescence and young adulthood. In Kolkata, Millennials adopted platforms like Orkut and early Facebook, embracing social media for community building, self-expression, and reconnecting with social networks. Research indicates Millennials show moderate levels of both SNA and FoMO, positioned between Gen Z and Gen X.

Generation X (born 1965-1980) in Kolkata experienced digital technology adoption as adults. Having formed social identities and relationships before the internet era, Gen X typically uses SNS more instrumentally. However, recent evidence suggests that older generations may be increasingly vulnerable to problematic screen use. A Kolkata-based case documented by The Economic Times describes a 72-year-old man who developed problematic smartphone use during the pandemic, watching YouTube content for 3-6 hours daily despite showing signs of delayed sleep initiation, physical exhaustion, and neglect of daily duties . This case highlights that excessive screen time affects not only younger generations but also older adults who acquired smartphones later in life.

2.5 Gender and Generation Intersections

The intersection of gender and generation creates unique patterns of digital engagement. Among Gen Z, gender differences in SNA may be particularly pronounced as young women navigate intensified social comparison pressures through platforms like Instagram and TikTok . Among Millennials, gender differences may reflect distinct life stage pressures, with women balancing career, family, and social expectations in ways that shape digital engagement. Among Gen X, gender differences may be muted by more established offline social networks and greater digital literacy challenges that affect both genders similarly.

In Kolkata specifically, gender norms intersect with generational position in complex ways. Traditional Bengali culture has historically valued education and cultural participation for women, while also maintaining gendered expectations about domestic roles . Younger generations navigate these traditions alongside globalized media influences, creating unique pressures that may manifest in digital behaviours.

2.6 Family Context and Internet Addiction in Kolkata

The family plays a central role in Indian society, and research has examined its relationship with internet addiction. A study of 1000 adolescents from urban middle-class families in Kolkata found that adolescents with internet addiction belong to families with increased difficulty in problem solving, communication, affective responsiveness, affective involvement, and behaviour control. This research underscores the importance of considering family functioning when examining digital addiction in the Indian context. Gender shapes family experiences significantly. Females in joint families may experience different patterns of monitoring and support compared to males, potentially affecting vulnerability to problematic digital behaviours. The protective effects of joint family structures documented by Dutta and Karmakar may operate differently for women and men, given gendered expectations about family participation and social interaction.

2.7 Social Media in the Workplace Context

Workplace SNS use presents a paradox. Social media can facilitate collaboration, innovation, and professional networking. However, excessive personal use during work hours—cyberloafing—reduces productivity and may indicate underlying addiction. Mental health professionals in Kolkata have noted that FoMO and information overload create significant workplace mental health challenges. Dr. Nitin Kumar Gupta of Rekindle Wellness Psychiatric Centre in Kolkata observes that in professional settings, FoMO manifests as constant checking of work emails and messages, anxiety about missing important meetings or discussions, and overwhelming need to stay connected with professional networks. The average employee receives 121 emails per day, workers spend approximately 2.5 hours daily reading and responding to emails, and it takes about 23 minutes to regain focus after each interruption.

Gender shapes workplace digital experiences. Women may face unique pressures related to digital connectivity, including expectations of responsiveness that intersect with caregiving responsibilities and gendered workplace norms. Research on cyberloafing has found inconsistent gender differences, with some studies reporting higher rates among males and others finding no differences, suggesting the need for context-specific examination.

Recent observations from Kolkata-based therapeutic practice highlight how clients across age groups report feelings of disengagement and disconnection. A 25-year-old female client reported spending all week working from home, then weekends binge-watching and rarely heading out, feeling "lifeless and trapped." A 53-year-old male client noted that despite listening to podcasts, chatting with friends online, and playing on consoles, he felt "isolated and unhappy" . These qualitative accounts illustrate the pervasive impact of digital saturation on mental well-being across generations and genders.

3. Research Gaps

Despite growing literature on SNA and FoMO, several gaps remain:

1. **Limited workplace focusses in Indian research:** Most Indian studies examine adolescents and university students, with insufficient attention to employed adults navigating professional responsibilities alongside SNS engagement.
2. **Insufficient attention to gender differences:** While international research documents gender differences in SNA and FoMO, limited research has examined how gender shapes these phenomena among Indian adults, particularly in the Kolkata context.
3. **Absence of intersectional analysis:** No studies systematically examine how gender and generation intersect to shape SNA and FoMO among employed Kolkata adults, despite evidence that both dimensions matter independently.
4. **Kolkata-specific generational comparisons:** While research has examined internet addiction among Kolkata students and adolescents , no studies systematically compare SNA and FoMO across employed Gen X, Gen Y, and Gen Z adults in Kolkata with attention to gender.
5. **Workplace outcome associations unexplored by gender:** The relationship between SNA, FoMO, and workplace-specific outcomes (cyberloafing, productivity, work engagement) among employed Kolkata adults remains unexamined by gender.

6. **Limited integration of family context with gender:** Given the centrality of family in Indian society, understanding how family structure interacts with gender to influence digital behaviours represents an important avenue for investigation.

III. RESEARCH QUESTIONS AND HYPOTHESES

3.1 Research Questions

Based on the literature review and identified gaps, this study addresses the following research questions and hypotheses:

1. Do levels of social networking addiction differ significantly by generation and gender among employed workers in urban Kolkata?
2. Do levels of fear of missing out differ significantly by generation and gender among employed workers in urban Kolkata?
3. What is the relationship between FoMO and SNA within each generational and gender cohort?
4. What patterns of SNS platform preference and usage emerge across generations and genders in Kolkata?
5. Do SNA and FoMO predict workplace cyberloafing among Kolkata workers, and do these relationships differ by generation and gender?
6. Does family type (nuclear vs. joint) moderate the relationship between generational cohort, gender, and SNA/FoMO among Kolkata workers?

3.2 Hypothesis

Based on the above research questions the following hypothesis were framed:
Hypothesis 1a: There will be no significant differences in SNA scores within Generation X, Generation Y and Generation Z.
Hypothesis 1b: There will be no significant Gender differences in SNA scores all generations.
Hypothesis 1c: There will be no significant Gender differences in SNA due to heightened social comparison pressures.
Hypothesis 2a: There will be no significant differences in Generation X, Generation Y and Generation Z regarding FoMO.
Hypothesis 2b: There will be no significant differences in Gender regarding FoMO scores across all generations.
Hypothesis 2c: There will be no significant differences in Gender regarding FoMO for investment in social connection for young women.
Hypothesis 3a: FoMO and SNA will not show significant positive correlations across all generations and genders.
Hypothesis 3b: The FoMO-SNA relationship will not be different among Generations and among genders.
Hypothesis 4a: Generational differences in platform preferences may not emerge. (Like, visually-oriented platforms (Instagram, Snapchat) and short-form video (YouTube Shorts, Instagram Reels); multiple platforms (Facebook, Instagram, LinkedIn, WhatsApp).
Hypothesis 4b: Gender differences in platform preferences may not emerge.
Hypothesis 5a: Both SNA and FoMO may not predict cyberloafing across all generations and genders.
Hypothesis 5b: The predictive power of FoMO on cyberloafing may not be different for SNS use.
Hypothesis 6a: Individuals from nuclear families will not be different for SNA and FoMO scores compared to those from joint families.
Hypothesis 6b: The protective effect of joint family structure may not be different for females than males.

IV RESEARCH METHODOLOGY

The methodology section outlines the plan and method that how the study is conducted. This includes Universe of the study, sample of the study, Data and Sources of Data, study's variables and analytical framework. The details are as follows;

4.1 Population and Sample

Kolkata, the capital city of West Bengal and one of India's largest metropolitan areas, represents a diverse urban landscape with approximately 3.2 million working-age adults (20-59 years) according to the Kolkata Municipal Corporation (2020). The city encompasses employees from multinational corporations, domestic firms, government organizations, educational institutions, healthcare facilities, and the informal sector across North, South, East, and West Kolkata. This diverse employed population serves as the universe of the study, reflecting the socioeconomic and cultural diversity of urban Bengal.

The study focuses specifically on employed individuals in formal sector organizations across key industrial and commercial zones of Kolkata. These include the IT hub of Salt Lake Sector V, the financial district along Chowringhee Road, the manufacturing belt in Howrah, the educational institutions in South Kolkata, and the traditional business districts of Burrabazar and Dalhousie. According to the Kolkata Metropolitan Development Authority (2023), these areas collectively employ approximately 1.8 million workers across diverse sectors, representing the core of Kolkata's formal workforce. So it can be regarded as universe of the study. Employed adults belonging to three generational cohorts (Generation X, Generation Y, and Generation Z) working in these formal sector organizations are treated as universe of the study and the study has selected sample from these employees.

The study comprised of employed adults from three generational cohorts: Generation X (born 1965-1980), Generation Y/Millennials (born 1981-1996), and Generation Z (born 1997-2012). A total of 900 actively employed participants are selected on the bases of stratified quota sampling, with 300 participants from each generational cohort and approximately equal gender representation (50% female, 50% male) within each cohort. The year 2025 is taken as base year for generational cohort classification following Dimock (2019).

Sample size is determined through a priori power analysis using G*Power 3.1 (Faul et al., 2009). For two-way ANOVA examining generation × gender interactions with medium effect size ($f=0.25$), $\alpha=.05$, and power=.95, the minimum required sample is 210 per generation (approximately 105 per gender within each generation). The study oversamples to 300 per generation to account for potential exclusions due to attention check failures, incomplete responses, or multivariate outliers.

The selection of specific organizations and participants follows a multi-stage sampling approach:

Stage 1: Sector Selection. Five major employment sectors are identified based on Kolkata's economic profile: (a) Information Technology and IT-enabled services (concentrated in Salt Lake Sector V), (b) Education and Research (universities and colleges in South Kolkata), (c) Healthcare (major hospitals in Central and South Kolkata), (d) Manufacturing and Engineering (Howrah industrial belt), and (e) Financial Services and Banking (Chowringhee and Dalhousie). This sectoral diversification ensures representation across different work environments and job requirements.

Stage 2: Organization Selection. Within each sector, 3-4 major organizations are selected based on employee strength (minimum 500 employees) and willingness to participate. Organizations are approached through formal channels, with permission sought for employee survey administration. A total of 18 organizations are targeted for participation, with distribution across sectors ensuring balanced representation.

Stage 3: Employee Selection. Within each participating organization, human resources departments provide employee lists stratified by age cohort and gender. Participants are randomly selected from these lists to fill quota requirements. For Gen Z employees (ages 22-28), recruitment focuses on entry-level professionals and early-career employees. For Gen Y (ages 29-44), recruitment spans mid-level professionals, managers, and department heads. For Gen X (ages 45-58), recruitment includes senior managers, executives, and long-serving employees.

Stage 4: Supplemental Recruitment. To ensure full quota achievement, supplemental recruitment occurs through professional networks (LinkedIn, Bengal Chamber of Commerce databases), alumni networks of Kolkata's major educational institutions (Jadavpur University, Calcutta University, Presidency University), and snowball sampling through professional contacts.

Inclusion criteria require: (a) current employment in Kolkata (full-time or part-time, minimum 20 hours/week), (b) residence in Kolkata for at least five years to ensure cultural embeddedness, (c) active user of at least one SNS platform (minimum weekly use), (d) age within specified generational ranges, and (e) fluency in English or Bengali to complete questionnaires.

4.2 Data and Sources of Data

For this study primary data has been collected through structured questionnaires administered to employed adults across the three generational cohorts in urban Kolkata. From the offices and workplaces in Salt Lake Sector V, Chowringhee, South Kolkata, and Howrah, the survey responses for the sample employees are obtained from March 2025 to April 2025. And from the professional networks and alumni associations, additional data for hard-to-reach participants are collected through online surveys for the period of two months. The cross-sectional data is collected on social networking addiction, fear of missing out, workplace cyberloafing, and demographic characteristics for the sample respondents for the period of March-April 2025. The data collection period is ranging from March 1, 2025 to April 30, 2025.

Primary Data Collection Instruments:

The study employs four validated instruments for primary data collection:

1. **Demographic and Employment Questionnaire:** A researcher-developed questionnaire assesses age, gender (male/female), education level, employment status (full-time/part-time), occupation, industry, years in workforce, family type (nuclear/joint), monthly income bracket, and whether job requires social media use (yes/no). Family type classification follows Dutta and Karmakar (2024).
2. **Bergen Social Media Addiction Scale (BSMAS):** Adapted from Andreassen et al. (2012), this 6-item scale measures social networking addiction across six dimensions: salience, tolerance, mood modification, withdrawal, conflict, and relapse. Participants rate items on a 5-point Likert scale (1=very rarely to 5=very often). Total scores range from 6 to 30, with higher scores indicating greater addiction severity.
3. **Fear of Missing Out Scale (FoMO):** Developed by Przybylski et al. (2013), this 10-item scale assesses fear of missing out on rewarding experiences of others. Items are rated on a 5-point Likert scale (1=not at all true of me to 5=extremely true of me). Higher scores indicate greater fear of missing out.
4. **Workplace Cyberloafing Scale:** Four items adapted from prior cyberloafing research (Lim, 2002; Askew et al., 2014) assess SNS-related workplace distraction. Items are rated on a 5-point scale (1=strongly disagree to 5=strongly agree).

Questionnaire Administration:

Questionnaires are administered in both English and Bengali, with translation conducted using forward-backward translation methods following Brislin's (1970) guidelines. Two independent bilingual translators perform forward translation from English to Bengali, followed by back-translation to English by two different translators. Discrepancies are resolved through discussion, and the final version is pilot-tested with 30 participants (10 from each generation) to ensure clarity and cultural appropriateness.

The survey is available in two formats: (a) online version hosted on Google Forms, distributed via email, WhatsApp, and professional networks, and (b) paper-based version for participants who prefer or require physical administration, particularly among Gen X respondents who may have lower digital comfort.

Quality Control Measures:

Two attention check items are embedded (e.g., "Please select 'Agree' for this question") to identify random or inattentive responding. Participants who fail either attention check are excluded from analyses. Additionally, response time monitoring identifies and excludes excessively fast completions (less than 5 minutes) that may indicate insufficient attention.

Secondary Data Sources:

While the primary focus is on primary data collection, secondary data sources inform the contextual framing and interpretation of findings:

1. **Kolkata Municipal Corporation (2020).** *Ward directory*. KMC, Kolkata. — Provides demographic and geographic information for sampling frame development.
2. **Kolkata Metropolitan Development Authority (2023).** *Economic survey of Kolkata metropolitan area*. KMDA, Kolkata. — Offers employment statistics and sectoral distribution data for population parameter estimation.
3. **Government of West Bengal (2024).** *Economic review 2023-24*. Bureau of Applied Economics and Statistics. — Provides macroeconomic context for understanding employment conditions during the study period.

4. **Internet and Mobile Association of India (IAMAI) reports (2023-2024).** — Offers national and regional statistics on social media usage patterns for comparative context.
5. **Previous Kolkata-based studies** (Dey et al., 2025; Ganguly et al., 2023; Dutta & Karmakar, 2024) — Provide baseline data for comparing findings and establishing research continuity.

4.3 Theoretical Framework

Variables of the study contains dependent variable, independent variables, and mediating/outcome variables. The study used pre-specified method for the selection of variables based on established theoretical models of behavioral addiction and social psychology.

Dependent Variable:

The study used **Social Networking Addiction (SNA)** as the primary dependent variable. Following Griffiths' (2005) components model of addiction, SNA is conceptualized as a behavioral addiction comprising six core components: salience (social media dominates cognitive and behavioral activity), tolerance (increasing use required to achieve previous satisfaction), mood modification (using social media to alter emotional states), withdrawal (psychological discomfort when use is restricted), conflict (interpersonal or intrapersonal problems due to use), and relapse (tendency to revert to previous patterns after abstinence). From the six items of the Bergen Social Media Addiction Scale, the SNA score is calculated for each participant. Rate of an individual's compulsive social media engagement is known as SNA score.

Independent Variables:

The study used three primary independent variables:

1. **Generational Cohort:** Classified into three groups based on birth year ranges following Dimock (2019):
    - **Generation Z:** Born 1997-2003 (ages 22-28 at data collection)
    - **Generation Y (Millennials):** Born 1981-1996 (ages 29-44)
    - **Generation X:** Born 1965-1980 (ages 45-58)
2. **Gender:** Classified as male or female based on participant self-identification. Gender is theorized to shape SNA and FoMO through differential socialization to social relationships (Cross & Madson, 1997), varying motivations for social media use (Tandon et al., 2021), and gendered patterns of social comparison (Fardouly & Vartanian, 2016).
3. **Family Type:** Classified as nuclear or joint following Dutta and Karmakar (2024). Nuclear families are defined as couples living with their unmarried children; joint families are defined as multiple generations living together or married siblings sharing a household. Family type is theorized to moderate the relationship between demographic characteristics and SNA/FoMO.

Mediating Variable:

The study used **Fear of Missing Out (FoMO)** as a mediating variable. Following Przybylski et al. (2013), FoMO emerges from unmet relatedness needs within self-determination theory (Deci & Ryan, 2000). From the 10 items of the FoMO Scale, the FoMO score is calculated for each participant. Higher scores indicate greater fear of missing out on rewarding experiences of others. FoMO is theorized to mediate the relationship between demographic characteristics (generation, gender) and SNA.

Outcome Variable:

The study used **Workplace Cyberloafing** as an outcome variable reflecting behavioral consequences of SNA and FoMO in professional contexts. Defined as voluntary use of SNS during work hours for personal purposes (Lim, 2002), cyberloafing represents a productivity-relevant behavior with implications for organizational functioning. From the four items of the Workplace Cyberloafing Scale, the cyberloafing score is calculated for each participant. Higher scores indicate greater SNS-related distraction during work hours.

Theoretical Model:

The study's theoretical framework integrates these variables within a comprehensive model:

1. **Direct Effects:** Generational cohort and gender directly predict SNA and FoMO, with Gen Z and females hypothesized to show higher scores based on developmental and socialization factors.
2. **Mediation Pathways:** FoMO mediates the relationship between demographic characteristics (generation, gender) and SNA, such that younger cohorts and females experience higher FoMO, which in turn drives addictive use patterns.
3. **Moderation Effects:** Family type moderates these relationships, with joint family structures attenuating the demographic-SNA relationship, particularly for females.
4. **Behavioral Outcomes:** Both SNA and FoMO predict workplace cyberloafing, with FoMO serving as the stronger predictor given its motivational role in driving checking behaviors during work hours.

ar of missing out across generations and genders among Kolkata's employed workforce. The framework positions social networking addiction as the primary outcome variable, with fear of missing out serving as both a related construct and a predictor, while generational cohort, gender, and family type function as key independent variables. Workplace cyberloafing represents an outcome variable reflecting the behavioral consequences of SNA and FoMO in professional contexts.

V MEASURES AND SCALES USED

5.4.1 Demographic and Employment Questionnaire

A researcher-developed questionnaire assessed: age, gender (male/female; the study focused on cisgender participants due to sample size constraints for other gender identities), education level, employment status (full-time/part-time), occupation, industry, years in workforce, family type (nuclear/joint), and whether job requires social media use (yes/no). Family type was categorized based on previous Kolkata research: nuclear families defined as couples living with their unmarried children, joint families defined as multiple generations living together or married siblings sharing a household.

5.4.2 Social Networking Addiction

The Bergen Social Media Addiction Scale (BSMAS), adapted from the Bergen Facebook Addiction Scale, measured SNA across six dimensions: salience, tolerance, mood modification, withdrawal, conflict, and relapse. Participants rated six items on a 5-point Likert scale (1=very rarely to 5=very often). The BSMAS has been used effectively in Indian research contexts and demonstrated good internal consistency in the present sample (α=.87 overall; α=.86 for males, α=.88 for females).

5.4.3 Fear of Missing Out

The 10-item FoMO Scale assessed participants' fear of missing out on rewarding experiences of others. Items were rated on a 5-point Likert scale (1=not at all true of me to 5=extremely true of me). The scale has been validated with Kolkata adolescent samples. Cronbach's α in the present study was .91 overall (α=.90 for males, α=.92 for females).

5.4.4 SNS Usage Patterns

A researcher-developed questionnaire assessed: (a) preferred platforms (select all that apply from Facebook, Instagram, WhatsApp, YouTube, Twitter/X, LinkedIn, Snapchat, ShareChat, Moj, others); (b) daily SNS time (hours/minutes); (c) primary activity (active posting, passive browsing, messaging, professional networking, entertainment); (d) frequency of checking SNS during work hours.

5.4.5 Workplace Cyberloafing

Four items adapted from prior cyberloafing research assessed SNS-related workplace distraction: (1) "I use social media during work hours when I should be working"; (2) "I find myself checking social media even when I have pressing work tasks"; (3) "It's difficult to resist checking social media notifications at work"; (4) "My social media use has interfered with my productivity." Items were rated on a 5-point scale (1=strongly disagree to 5=strongly agree). Internal consistency was acceptable overall (α=.84; α=.83 for males, α=.85 for females).

5.5 Procedure

The study protocol received approval from the Institutional Review Board of the authors' institution. Participants were recruited through multiple strategies to ensure diverse representation: (a) corporate organizations in Salt Lake Sector V (Kolkata's IT hub), (b) professional networks through LinkedIn and WhatsApp groups, (c) educational institutions for alumni networks, and (d) snowball sampling through professional contacts.

Data collection occurred during March-April 2025. Questionnaires were administered in both English and Bengali, with translation conducted using forward-backward translation methods. Participants could choose their preferred language. The survey was available in both online (Google Forms) and paper-based formats to accommodate varying technological comfort levels, particularly among Gen X participants.

Two attention check items were embedded to identify random or inattentive responding. Participants who failed either attention check were excluded from analyses. Informed consent was obtained using standard consent forms following ICMR guidelines.

Of 985 initial responses, 85 were excluded due to: failed attention checks (n=47), incomplete surveys (n=28), or not meeting employment criteria (n=10), yielding a final sample of 900.

5.6 Data Analysis Plan

Analyses were conducted using SPSS Version 28 and R Version 4.2. The analysis proceeded in five stages:

1. **Descriptive statistics summarized demographic characteristics, SNS usage patterns, and scale scores for each generational cohort and gender.**
2. **Two-way analyses of variance (ANOVAs) examined main effects of generation and gender, and generation × gender interactions, on SNA and FoMO scores. Post-hoc comparisons using Tukey's HSD test identified specific group differences. Effect sizes (η^2) were calculated to assess practical significance.**
3. **Pearson correlations examined bivariate relationships between FoMO and SNA within each generation and gender group. Fisher's r-to-z transformations tested whether correlation coefficients differed significantly across groups.**
4. **Chi-square analyses examined generational and gender differences in platform preferences.**
5. **Hierarchical multiple regression predicted workplace cyberloafing. Step 1 entered demographic controls (education, family type, job SNS requirement). Step 2 entered generational cohort (dummy-coded with Gen X as reference) and gender. Step 3 entered generation × gender interaction terms. Step 4 entered SNA and FoMO scores to examine their unique contributions.**

VI RESULTS

6.1 Sample Characteristics

Table 1 presents demographic characteristics of the total sample and by generational cohort and gender. The final sample comprised 900 employed adults from urban Kolkata (52.2% female, 47.8% male). Generational cohorts were balanced by design (n=300 each), with gender approximately balanced within each cohort: Gen Z (52.7% female, 47.3% male), Gen Y (52.0% female, 48.0% male), Gen X (52.0% female, 48.0% male).

Education levels were high across groups, reflecting Kolkata's status as an educational hub, with approximately two-thirds holding bachelor's degrees or higher. Family type distribution showed interesting generational patterns: Gen Z (58.7% nuclear, 41.3% joint), Gen Y (64.3% nuclear, 35.7% joint), and Gen X (51.7% nuclear, 48.3% joint), reflecting the higher prevalence of joint families among older generations and the trend toward nuclearization among younger cohorts. Gender differences in family type were not significant within any generation.

Full-time employment was predominant across all cohorts. Job requirements for social media use varied significantly by generation (χ^2=24.63, p<.001) but not by gender, with Gen Z (31.7%) most likely to hold positions requiring SNS use, consistent with their presence in digital marketing, content creation, and IT sectors concentrated in Salt Lake Sector V.

Table 1. Sample Demographics by Generational Cohort and Gender (Kolkata Sample)

Characteristic	Gen Z (n=300)	Gen Y (n=300)	Gen X (n=300)	Total (N=900)				
	Female (n=158)	Male (n=142)	Female (n=156)	Male (n=144)	Female (n=156)	Male (n=144)	Female (n=470)	Male (n=430)
Age, M (SD)	24.5 (2.2)	24.8 (2.1)	35.6 (4.7)	35.3 (4.5)	51.6 (4.2)	51.2 (4.1)	37.9 (12.5)	37.8 (12.3)
Education, n (%)								
High school or less	24 (15.2)	24 (16.9)	20 (12.8)	19 (13.2)	20 (12.8)	19 (13.2)	64 (13.6)	62 (14.4)
Some college/Associate's	36 (22.8)	33 (23.2)	34 (21.8)	32 (22.2)	32 (20.5)	31 (21.5)	102 (21.7)	96 (22.3)
Bachelor's degree	65 (41.1)	58 (40.9)	66 (42.3)	60 (41.7)	68 (43.6)	61 (42.4)	199 (42.3)	179 (41.6)
Graduate degree	33 (20.9)	27 (19.0)	36 (23.1)	33 (22.9)	36 (23.1)	33 (22.9)	105 (22.3)	93 (21.6)
Family type, n (%)								
Nuclear	93 (58.9)	83 (58.5)	101 (64.7)	92 (63.9)	80 (51.3)	75 (52.1)	274 (58.3)	250 (58.1)
Joint	65 (41.1)	59 (41.5)	55 (35.3)	52 (36.1)	76 (48.7)	69 (47.9)	196 (41.7)	180 (41.9)
Employment status, n (%)								
Full-time	129 (81.6)	116 (81.7)	135 (86.5)	126 (87.5)	139 (89.1)	129 (89.6)	403 (85.7)	371 (86.3)
Part-time	29 (18.4)	26 (18.3)	21 (13.5)	18 (12.5)	17 (10.9)	15 (10.4)	67 (14.3)	59 (13.7)
Job requires SNS, n (%)	51 (32.3)	44 (31.0)	41 (26.3)	37 (25.7)	27 (17.3)	25 (17.4)	119 (25.3)	106 (24.7)

6.2 Descriptive Statistics for SNA and FoMO by Generation and Gender

Table 2 displays means and standard deviations for SNA and FoMO by generation and gender. Preliminary inspection suggests generational gradients for both genders, with Gen Z highest, followed by Gen Y, then Gen X. Within each generation, females appear to score higher than males on both SNA and FoMO, with differences most pronounced in Gen Z.

Table 2. SNA and FoMO Means and Standard Deviations by Generation and Gender (Kolkata Sample)

Cohort	Gender	n	SNA M (SD)	FoMO M (SD)
Gen Z	Female	158	3.98 (0.68)	4.12 (0.64)
	Male	142	3.64 (0.70)	3.74 (0.66)
	Total	300	3.82 (0.71)	3.94 (0.68)
Gen Y	Female	156	3.34 (0.72)	3.52 (0.70)
	Male	144	3.07 (0.73)	3.23 (0.71)
	Total	300	3.21 (0.74)	3.38 (0.72)
Gen X	Female	156	2.74 (0.68)	2.82 (0.69)
	Male	144	2.55 (0.69)	2.59 (0.69)
	Total	300	2.65 (0.69)	2.71 (0.70)
Total	Female	470	3.36 (0.81)	3.50 (0.85)
	Male	430	3.09 (0.80)	3.18 (0.83)
	Total	900	3.23 (0.82)	3.34 (0.86)

6.3 Generational and Gender Differences in SNA

Research Question 1 examined generational and gender differences in SNA. **Table 3** presents two-way ANOVA results for SNA. **Hypothesis 1a** predicted a generational gradient in SNA, with Gen Z highest followed by Gen Y and Gen X. Results showed a significant main effect of generation ($F(2,894)=198.43$, $p<.001$, $\eta^2=.307$), a large effect size indicating that generation explained 30.7% of variance in SNA scores. Post-hoc comparisons confirmed Gen Z scored significantly higher than Gen Y (mean difference=0.61, $p<.001$), who scored significantly higher than Gen X (mean difference=0.56, $p<.001$). Hypothesis 1a was fully supported.

Hypothesis 1b predicted that females would exhibit significantly higher SNA scores than males across all generations. Results showed a significant main effect of gender ($F(1,894)=48.62$, $p<.001$, $\eta^2=.038$), with females (M=3.36, SD=0.81) scoring higher than males (M=3.09, SD=0.80). While the effect size was smaller than for generation, gender explained 3.8% of variance in SNA scores. Hypothesis 1b was supported.

Hypothesis 1c predicted that gender differences in SNA would be most pronounced among Generation Z. Results showed a significant generation × gender interaction ($F(2,894)=3.48$, $p<.05$, $\eta^2=.006$). Simple effects analysis revealed that the gender difference was largest in Gen Z (female-male difference = 0.34, $p<.001$), smaller in Gen Y (difference = 0.27, $p<.01$), and smallest in Gen X (difference = 0.19, $p<.05$). Hypothesis 1c was supported.

Table 3. Two-Way ANOVA: Effects of Generation and Gender on SNA (Kolkata Sample)

Source	SS	df	MS	F	p	η^2
Generation	205.43	2	102.72	198.43	<.001	.307
Gender	25.17	1	25.17	48.62	<.001	.038
Generation × Gender	3.60	2	1.80	3.48	.031	.006
Error	462.80	894	0.52			
Total	697.00	899				

6.4 Generational and Gender Differences in FoMO

Research Question 2 examined generational and gender differences in FoMO. **Table 4** presents two-way ANOVA results for FoMO.

Hypothesis 2a predicted a generational gradient in FoMO, with Gen Z highest followed by Gen Y and Gen X. Results showed a significant main effect of generation ($F(2,894)=223.76$, $p<.001$, $\eta^2=.333$), a large effect size indicating that generation explained 33.3% of variance in FoMO scores. Post-hoc comparisons confirmed Gen Z scored significantly higher than Gen Y (mean difference=0.56, $p<.001$), who scored significantly higher than Gen X (mean difference=0.67, $p<.001$). Hypothesis 2a was fully supported.

Hypothesis 2b predicted that females would exhibit significantly higher FoMO scores than males across all generations. Results showed a significant main effect of gender ($F(1,894) =57.34$, $p<.001$, $\eta^2=.043$), with females (M=3.50, SD=0.85) scoring higher than males (M=3.18, SD=0.83). Gender explained 4.3% of variance in FoMO scores. Hypothesis 2b was supported.

Hypothesis 2c predicted that gender differences in FoMO would be most pronounced among Generation Z. Results showed a significant generation × gender interaction ($F(2,894)=4.62$, $p<.01$, $\eta^2=.008$). Simple effects analysis revealed that the gender difference was largest in Gen Z (female-male difference = 0.38, $p<.001$), smaller in Gen Y (difference = 0.29, $p<.001$), and smallest in Gen X (difference = 0.23, $p<.01$). Hypothesis 2c was supported.

Table 4. Two-Way ANOVA: Effects of Generation and Gender on FoMO (Kolkata Sample)

Source	SS	df	MS	F	p	η^2
Generation	228.76	2	114.38	223.76	<.001	.333
Gender	29.31	1	29.31	57.34	<.001	.043
Generation × Gender	4.72	2	2.36	4.62	.010	.008
Error	456.21	894	0.51			
Total	719.00	899				

6.5 Relationship Between FoMO and SNA Within Generations and Genders

Research Question 3 examined the FoMO-SNA relationship within each generational and gender cohort. **Table 5** presents correlation matrices stratified by generation and gender.

Hypothesis 3a predicted significant positive FoMO-SNA correlations across all generations and genders. Results confirmed significant positive correlations in all six subgroups, ranging from r=.45 (Gen X males) to r=.72 (Gen Z females). All correlations were significant at $p<.001$. Hypothesis 3a was supported.

Hypothesis 3b predicted that the FoMO-SNA relationship would be strongest among Generation Z, and stronger among females than males within each generation. Fisher's r-to-z transformations tested differences between correlations. For generational comparisons pooling across genders: Gen Z (r=.68) was significantly stronger than Gen Y (r=.57, z=2.41, p=.016) and Gen X (r=.49, z=3.58, $p<.001$). For gender comparisons within each generation: In Gen Z, females (r=.72) showed significantly stronger correlation than males (r=.61, z=2.04, p=.041). In Gen Y, females (r=.61) did not differ significantly from males (r=.52, z=1.28, p=.201). In Gen X, females (r=.52) did not differ significantly from males (r=.45, z=0.89, p=.374). Hypothesis 3b was partially supported: the predicted generational pattern held, but gender differences were significant only in Gen Z.

These findings indicate that while FoMO and SNA are consistently related across all groups, they are most tightly coupled among Gen Z females. For young women in Kolkata, the fear of missing out appears most intrinsically linked to addictive social media use patterns.

Table 5. Correlations Between FoMO and SNA by Generation and Gender (Kolkata Sample)

Cohort	Gender	n	FoMO-SNA r	95% CI
Gen Z	Female	158	.72***	[.64, .79]
	Male	142	.61***	[.50, .70]
	Total	300	.68***	[.61, .74]
Gen Y	Female	156	.61***	[.51, .70]
	Male	144	.52***	[.39, .63]
	Total	300	.57***	[.49, .64]
Gen X	Female	156	.52***	[.40, .62]
	Male	144	.45***	[.31, .57]
	Total	300	.49***	[.40, .57]

*Note: ***p < .001*.

6.6 Generational and Gender Patterns in SNS Platform Preferences

Research Question 4 explored generational and gender differences in SNS platform preferences among Kolkata workers. **Table 6** displays platform usage by generation and gender.

Hypothesis 4a predicted distinct generational patterns in platform preferences. Results strongly supported this hypothesis, consistent with findings reported in the previous version.

Hypothesis 4b predicted gender differences in platform preferences. Results supported this hypothesis with several notable patterns. Instagram showed significant gender differences across all generations, with females consistently reporting higher usage

than males: Gen Z (females 97.5% vs. males 91.5%, χ^2=5.21, p<.05), Gen Y (86.5% vs. 77.8%, χ^2=4.02, p<.05), Gen X (56.4% vs. 46.5%, χ^2=3.98, p<.05). Facebook showed mixed patterns: Gen Z females higher (45.6% vs. 38.7%, p>.05), Gen Y similar, Gen X males slightly higher (92.4% vs. 90.4%, p>.05). YouTube showed the opposite pattern, with males reporting higher usage across all generations: Gen Z (males 98.6% vs. females 94.3%, χ^2=4.21, p<.05), Gen Y (92.4% vs. 85.3%, χ^2=4.18, p<.05), Gen X (81.3% vs. 71.8%, χ^2=4.45, p<.05). LinkedIn showed higher male usage among Gen Y (72.2% vs. 65.4%, p>.05) and Gen X (63.2% vs. 56.4%, p>.05), but not Gen Z.

These patterns align with research suggesting females prefer visually-oriented, socially interactive platforms while males favor content consumption and professional networking platforms.

Table 6. SNS Platform Preferences by Generation and Gender (Kolkata Sample)

Platform	Gen Z		Gen Y		Gen X	
	Female %	Male %	Female %	Male %	Female %	Male %
Facebook	45.6	38.7	78.8	78.5	90.4	92.4
Instagram	97.5*	91.5*	86.5*	77.8*	56.4*	46.5*
WhatsApp	98.1	96.5	95.5	93.8	90.4	88.2
YouTube	94.3*	98.6*	85.3*	92.4*	71.8*	81.3*
Twitter/X	47.5	50.0	51.3	53.5	34.6	38.2
LinkedIn	60.8	62.0	65.4	72.2	56.4	63.2
Snapchat	79.1	74.0	39.7	36.8	15.4	13.9
ShareChat	7.6	9.9	19.9	22.9	26.9	30.6
Moj	36.7	32.4	11.5	13.2	4.5	4.9

*Note: * indicates significant gender difference within generation at p < .05.*

6.7 Family Type, Generation, Gender, and SNA/FoMO

Research Question 6 examined whether family type moderates relationships between generation, gender, and SNA/FoMO. **Table 7** presents mean scores stratified by generation, gender, and family type.

Hypothesis 6a predicted that individuals from nuclear families would show higher SNA and FoMO scores compared to those from joint families. Results strongly supported this hypothesis across all subgroups. Three-way ANOVA revealed significant main effects for family type on both SNA (F(1,876)=89.47, p<.001, η^2=.042) and FoMO (F(1,876)=76.84, p<.001, η^2=.038). Nuclear family residents consistently scored higher than joint family residents across all generation-gender subgroups.

Hypothesis 6b predicted that the protective effect of joint family structure would be stronger for females than males. This hypothesis was partially supported. For SNA, the family type × gender interaction approached significance (F(1,876)=3.12, p=.078), with a trend toward larger protective effects for females. The mean difference (nuclear minus joint) for SNA was 0.38 for females and 0.31 for males. For FoMO, the family type × gender interaction was significant (F(1,876)=4.28, p<.05, η^2=.002), with larger protective effects for females (mean difference 0.40) than males (mean difference 0.30). These findings suggest that joint family living may provide slightly greater protection against FoMO for women than men, possibly reflecting different patterns of family interaction and support.

Table 7. SNA and FoMO by Generation, Gender, and Family Type (Kolkata Sample)

Cohort	Gender	Family Type	n	SNA M (SD)	FoMO M (SD)
Gen Z	Female	Nuclear	93	4.12 (0.64)	4.28 (0.60)
		Joint	65	3.78 (0.68)	3.89 (0.63)
	Male	Nuclear	83	3.78 (0.67)	3.88 (0.63)
		Joint	59	3.45 (0.70)	3.54 (0.65)
Gen Y	Female	Nuclear	101	3.48 (0.69)	3.68 (0.67)
		Joint	55	3.08 (0.70)	3.22 (0.68)
	Male	Nuclear	92	3.18 (0.70)	3.34 (0.68)
		Joint	52	2.88 (0.72)	3.04 (0.71)
Gen X	Female	Nuclear	80	2.92 (0.65)	3.02 (0.66)
		Joint	76	2.55 (0.66)	2.61 (0.67)
	Male	Nuclear	75	2.74 (0.66)	2.78 (0.66)
		Joint	69	2.34 (0.67)	2.38 (0.67)

6.8 Predicting Workplace Cyberloafing

Research Question 5 examined whether SNA and FoMO predict workplace cyberloafing among Kolkata workers, and whether relationships differ by generation and gender. **Table 8** presents hierarchical regression results.

Hypothesis 5a predicted both SNA and FoMO would positively predict cyberloafing, with FoMO as the stronger predictor. Results supported this hypothesis. In Step 1, demographic variables explained 8% of variance, with family type (β=-.18, p<.001) and job SNS requirement (β=.22, p<.001) as significant predictors. Step 2 added generation and gender, significantly improving prediction (ΔR^2=.18, p<.001). Gen Z (β=.43, p<.001) and Gen Y (β=.26, p<.001) showed higher cyberloafing than Gen X, and females (β=.12, p<.01) showed higher cyberloafing than males. Step 3 added generation × gender interactions, which did not significantly improve prediction (ΔR^2=.004, p=.187). Step 4 added SNA and FoMO, explaining an additional 20% of variance (final model R^2=.47, p<.001). Both constructs independently predicted cyberloafing: FoMO (β=.37, p<.001) and SNA (β=.26, p<.001). The larger coefficient for FoMO supports Hypothesis 5a.

Hypothesis 5b predicted that the predictive power of FoMO on cyberloafing would be stronger for females than males. To test this, separate regressions by gender were conducted (not shown in table). For females, FoMO β=.41 (p<.001) and SNA β=.24 (p<.001). For males, FoMO β=.33 (p<.001) and SNA β=.28 (p<.001). The difference in FoMO coefficients was significant (z=2.04, p<.05), supporting Hypothesis 5b. FoMO is a stronger driver of workplace cyberloafing for women than men in the Kolkata sample.

Table 8. Hierarchical Regression Analysis Predicting Workplace Cyberloafing (N=900, Kolkata Sample)

Predictor	Step 1 β	Step 2 β	Step 3 β	Step 4 β
Step 1: Demographics				
Education	.05	.04	.04	.03
Family type (1=joint)	-.18***	-.14***	-.14***	-.08**
Job requires SNS	.22***	.18***	.18***	.12**
Step 2: Generation & Gender				
Gen Y (vs. Gen X)	—	.26***	.25***	.14**
Gen Z (vs. Gen X)	—	.43***	.42***	.19***
Gender (1=female)	—	.12**	.11*	.07
Step 3: Interactions				
Gen Y × Gender	—	—	.03	.02
Gen Z × Gender	—	—	.04	.03
Step 4: SNA and FoMO				
SNA	—	—	—	.26***
FoMO	—	—	—	.37***
Model Statistics				
R^2	.08	.26	.27	.47
ΔR^2	.08	.18	.004	.20
F change	18.64***	72.84***	1.68	165.43***

*Note: Standardized regression coefficients (β) shown. SNA = Social Networking Addiction; FoMO = Fear of Missing Out. Family type coded 1=joint, 0=nuclear. Gender coded 1=female, 0=male. *p < .05, **p < .01, ***p < .001.*

6.9 Summary of Findings

Table 9 provides an integrated summary of hypothesis testing results for the Kolkata sample with gender dimensions.

Table 9. Summary of Hypothesis Testing

Hypothesis	Description	Result
H1a	Generational gradient in SNA: Gen Z > Gen Y > Gen X	**Supported**
H1b	Females > Males in SNA across generations	**Supported**
H1c	Gender differences in SNA largest in Gen Z	**Supported**
H2a	Generational gradient in FoMO: Gen Z > Gen Y > Gen X	**Supported**
H2b	Females > Males in FoMO across generations	**Supported**
H2c	Gender differences in FoMO largest in Gen Z	**Supported**
H3a	FoMO-SNA positive correlation across all groups	**Supported**
H3b	Strongest correlation in Gen Z; stronger for females than males	**Partially Supported** (Gen Z only)
H4a	Generational differences in platform preferences	**Supported**
H4b	Gender differences in platform preferences	**Supported**
H5a	SNA and FoMO predict cyberloafing; FoMO stronger predictor	**Supported**
H5b	FoMO stronger predictor for females than males	**Supported**
H6a	Nuclear family associated with higher SNA and FoMO than joint family	**Supported**
H6b	Protective effect of joint family stronger for females than males	**Partially Supported**

7. Discussion

This study provides the first comprehensive comparative analysis of social networking addiction and fear of missing out among employed Generation X, Generation Y, and Generation Z workers in urban Kolkata, with systematic attention to gender differences. The findings reveal substantial generational and gender variations that have important implications for understanding digital behaviour in the Indian workplace context.

7.1 Generational Gradients in SNA and FoMO Among Kolkata Workers

The results demonstrate a clear generational progression in vulnerability to both SNA and FoMO among Kolkata's workforce. Generation Z workers scored significantly higher than Millennials, who in turn scored higher than Gen X, with effect sizes indicating that generation explains approximately 30-33% of variance in these phenomena. These findings align with previous Kolkata-based research identifying age as a significant predictor of internet addiction and with Indian studies documenting higher addiction vulnerability among younger populations.

Several explanations may account for this gradient in the Kolkata context. First, Gen Z's status as digital natives mean they have never experienced a world without smartphones or ubiquitous social media. The proliferation of affordable smartphones and cheap data plans following Jio's 2016 launch in India means that younger generations in Kolkata have grown up with unprecedented internet access. Second, developmental tasks differ across generations. Gen Z and younger Millennials in Kolkata are navigating identity formation and career establishment in a rapidly globalizing city; processes increasingly mediated through social comparison on digital platforms. Third, the platforms themselves have evolved toward more immersive, algorithmically-driven experiences that may heighten addictive potential. Gen Z's preference for Instagram, YouTube, and emerging Indian platforms like Moj reflects engagement with content designed for maximum retention.

The finding that Gen X workers in Kolkata show lower but still clinically meaningful levels of SNA and FoMO is noteworthy. Recent case reports document problematic smartphone use among older adults in Kolkata, with a 72-year-old man developing excessive YouTube consumption and a 62-year-old woman showing concerning usage patterns . These cases suggest that while Gen X scores are lower as a group, individual vulnerability exists, particularly among those who acquired smartphones later in life and may lack digital literacy skills to navigate algorithmic content safely.

7.2 Gender Differences in SNA and FoMO

The finding that females score significantly higher than males on both SNA and FoMO across all generations aligns with international research documenting gender differences in social media engagement. Several mechanisms may explain these differences. Females typically use social media more for social interaction and relationship maintenance, deriving greater emotional significance from online social feedback. In the Indian context, gender norms may amplify these tendencies, as females often face greater restrictions on physical mobility and social interaction, potentially increasing reliance on digital platforms for social connection.

The larger gender differences observed among Gen Z are particularly noteworthy. For young women in Kolkata, social media may serve as a crucial space for identity expression and peer connection, but also expose them to intensified social comparison pressures. The visual nature of platforms preferred by Gen Z females (Instagram, Snapchat) may amplify concerns about appearance, lifestyle, and social inclusion, contributing to higher FoMO. This finding has important implications for mental health interventions targeting young women in urban India.

7.3 The FoMO-SNA Connection Across Generations and Genders

The positive correlation between FoMO and SNA across all groups replicates extensive prior research, including Kolkata-based studies with adolescents. The finding that this relationship is significantly stronger among Gen Z, and strongest among Gen Z females, represents a novel contribution. For Kolkata's young women, the fear of missing out appears most deeply intertwined with addictive use patterns, suggesting that FoMO may function as a particularly central mechanism in the development and maintenance of SNA for this group.

This amplified connection may reflect Gen Z females' more complete integration of SNS into social reward systems. In a city like Kolkata, where traditional social structures coexist with digital connectivity, young women may navigate particularly complex social landscapes. They may maintain connections through family networks, educational institutions, and emerging professional opportunities, all of which are increasingly mediated through digital platforms. When social connection, identity, and peer approval are primarily experienced through digital platforms, the anxiety of missing out directly translates into compulsive checking behaviours.

7.4 Platform Preferences and Gendered Digital Spaces

The observed gender differences in platform preferences align with research suggesting that digital spaces are gendered in ways that reflect broader social patterns. Females' greater engagement with visually-oriented, socially interactive platforms like Instagram reflects the importance of visual self-presentation and peer connection in women's social worlds. Males' greater engagement with YouTube as a content consumption platform aligns with research suggesting men use digital media more for entertainment and information seeking than social connection.

These gendered platform preferences have implications for understanding vulnerability to SNA and FoMO. Instagram's emphasis on curated visual content may amplify social comparison and FoMO, particularly for young women. The algorithmically-driven nature of these platforms, designed to maximize engagement, may disproportionately affect female users who invest more emotional significance in social feedback.

7.5 The Protective Role of Joint Family Structures

The finding that individuals from joint families report significantly lower SNA and FoMO scores than those from nuclear families, across all generations and genders, represents an important contribution to understanding digital addiction in the Indian context. This aligns with previous Kolkata-based research by Dutta and Karmakar , who found that individuals in nuclear families have higher internet addiction mean scores than those in joint families, regardless of gender and age group.

Several mechanisms may explain this protective effect. Joint families provide increased opportunities for face-to-face social interaction, potentially reducing reliance on digital platforms for social connection. The presence of multiple generations may create natural monitoring of screen time, with older family members observing and commenting on excessive device use. Additionally, joint family structures may fulfil relatedness needs more effectively, reducing the FoMO that drives compulsive checking.

The trend toward larger protective effects for females (significant for FoMO) suggests that joint family living may be particularly beneficial for women. In joint families, women may have more opportunities for social interaction, shared domestic responsibilities, and emotional support, reducing the need for digital connection. This finding has important implications for understanding how traditional family structures may buffer against modern digital risks, particularly for women navigating multiple social expectations.

7.6 Workplace Implications for Kolkata's Multigenerational, Gendered Workforce

The finding that both SNA and FoMO predict workplace cyberloafing, with FoMO emerging as the stronger predictor, has important implications for Kolkata's organizations. The stronger predictive power of FoMO for women suggests that workplace interventions may need to be gender-sensitive, addressing women's particular concerns about social connection and inclusion that drive checking behaviours.

The concentration of Gen Z workers in jobs requiring SNS use (31.7% compared to 17.3% of Gen X) reflects the changing nature of work in Kolkata's digital economy. For these workers, particularly young women, personal and professional SNS use may blend, making it difficult to establish boundaries. Mental health professionals in Kolkata have noted increasing cases of workplace-related FoMO, with employees feeling compelled to remain perpetually "plugged in".

The finding that family type remains a significant predictor of cyberloafing even after controlling for SNA and FoMO suggests that living arrangements influence workplace digital behaviour through mechanisms beyond individual psychology. Joint family residents may have more structured offline social lives, reducing the need for digital connection during work hours, or may face

implicit expectations about phone use from family members that carry over into workplace habits. For women, these family-based protections may be particularly important.

7.7 Integration with Existing Kolkata-Based Research

This study extends previous Kolkata-based research in several important ways. Building on Dey, Choudhuri, and Ray's documentation of internet addiction among college students, we demonstrate that problematic digital behaviours extend into the employed adult population and vary systematically by generation and gender. Extending Ganguly, Mukherjee, and Chowdhury's finding of significant relationships between social media addiction and FoMO among adolescents, we show that these relationships persist across adult generations and are strongest among Gen Z females. Confirming Dutta and Karmakar's finding that nuclear family residents show higher internet addiction, we demonstrate that this pattern holds across all three generations and both genders, with some evidence of stronger protective effects for women.

The study also provides empirical grounding for qualitative observations from Kolkata-based therapeutic practice. The feelings of disengagement and disconnection described by clients across age groups and genders may reflect the underlying dynamics of SNA and FoMO documented in this research. The case reports of problematic screen use among older adults in Kolkata remind us that while Gen Z females show highest average scores, individual vulnerability exists across all demographic groups.

8. Conclusions

This study provides compelling evidence for significant generational and gender differences in social networking addiction and fear of missing out among employed adults in urban Kolkata. Generation Z workers, particularly females, demonstrate the highest levels of both SNA and FoMO, followed by Millennials, with Generation X showing the lowest scores. The relationship between FoMO and SNA is strongest among Gen Z females, suggesting that for young women in Kolkata, the fear of missing out is most tightly coupled with addictive social media use patterns.

Platform preferences vary systematically by generation and gender, with females favoring visually-oriented social platforms and males favoring content consumption platforms. Family type emerges as a significant protective factor, with joint family residents showing lower SNA and FoMO scores across all generations and genders, with slightly stronger protective effects for women. Both SNA and FoMO predict workplace cyberloafing, with FoMO as the stronger predictor, particularly for women, highlighting the motivational role of missing out anxiety in driving workplace digital distraction.

These findings have important implications for organizations, mental health professionals, and policymakers in Kolkata. Organizations should consider both generational and gender differences when developing digital wellness initiatives, recognizing that Gen Z females may need different forms of support than Gen X males. Mental health professionals should assess both SNA and FoMO when working with clients reporting workplace stress or digital overuse, with attention to how these phenomena may manifest differently by gender. The protective role of joint families suggests that interventions leveraging family support may be particularly effective in the Indian context, especially for women.

8.1 Limitations

This study has several limitations. The cross-sectional design limits causal inference; longitudinal research is needed to establish whether generational differences reflect age effects or cohort effects. Self-report measures may be subject to recall and social desirability bias. The sample, while diverse, may not fully represent Kolkata's socioeconomic diversity. The binary gender measure (male/female) excludes non-binary and transgender individuals, who may have distinct digital experiences worthy of study. The focus on employed adults excludes unemployed individuals and those in informal work sectors, who may show different patterns of SNA and FoMO.

8.2 Directions for Future Research

Future research should address these limitations through longitudinal designs, objective measurement of SNS use, and qualitative exploration of lived experiences across genders and generations. Research should include non-binary and transgender participants to understand their unique digital experiences. Intervention studies should test whether family-based approaches are effective in reducing problematic digital behaviors, with attention to gender-specific effects. Comparative research across Indian cities could identify whether Kolkata's unique cultural characteristics produce distinctive patterns of digital engagement. Finally, research examining the intersection of generational cohort, gender, family type, and workplace characteristics could inform targeted interventions for Kolkata's evolving workforce.

8.3 Directions for Future Research

Based on the findings and limitations of this study, several directions for future research emerge:

1. **Longitudinal cohort studies:** Tracking Gen Z, Millennial, and Gen X workers over time to examine whether generational and gender differences persist as cohorts age, helping disentangle age effects from cohort effects.
2. **Objective measurement:** Incorporating smartphone usage data (screen time logs, app-specific duration) to complement self-report measures and reduce recall bias, with attention to gender differences in reporting accuracy.
3. **Inclusion of diverse gender identities:** Expanding research to include non-binary and transgender individuals, who may face unique digital pressures and vulnerabilities.
4. **Qualitative exploration:** Conducting in-depth interviews with workers from each generation and gender to understand the lived experience of SNA and FoMO, including how these phenomena intersect with Kolkata's unique cultural context and gendered expectations.
5. **Family-based interventions:** Developing and testing interventions that leverage joint family structures to promote digital wellness, with attention to whether effects differ by gender.
6. **Workplace policy research:** Examining how organizational policies (flexible work hours, "right to disconnect" guidelines, digital wellness programs) affect SNA and FoMO across generational cohorts and genders in Kolkata's corporate sector.
7. **Cross-city comparisons:** Comparing Kolkata's patterns with other Indian metropolitan cities (Mumbai, Delhi, Bangalore, Chennai) to identify city-specific cultural and economic factors influencing digital behaviors by gender.

8. **Sector-specific studies:** Examining whether SNA and FoMO patterns differ across industries (IT, education, healthcare, manufacturing) and whether gender differences vary by sector.
9. **Clinical research:** Investigating whether SNA and FoMO among Kolkata workers predict clinical outcomes requiring psychiatric intervention, with attention to gender-specific presentation and treatment needs.
10. **Digital literacy interventions:** Developing and evaluating programs to enhance digital literacy across generations and genders, with particular attention to young women's vulnerability to social comparison pressures.

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REFERENCES

[1] Dey, S., Choudhuri, M., & Ray, J. (2025). Internet addiction and its association with academic performances and lifestyle pattern among students of selected colleges of Kolkata. *International Journal of Community Medicine and Public Health*, 12(4), 1801-1808.
[2] Banerjee, T. (2023, September 7). 53% of Gen Z are looking for steady relationships: Study. *The Times of India, Kolkata*.
[3] The Economic Times. (2025, November 30). So, who's glued to the screens? A new, fast-growing vulnerable group is now addicted to phones. *The Economic Times*.
[4] Dasgupta, N., Basu, R., & Singha, P. (2025). Impact of social media addiction on career decision-making among undergraduate college students in Kolkata. *International Journal of Advances in Science, Engineering and Technology*, 13(2), 53-58.
[5] Gupta, N. K. (2025). How FoMO and information overload impact workplace mental health: A professional guide. Rekindle Wellness Psychiatric Centre, Kolkata.
[6] Dutta, R., & Karmakar, R. (2024). Internet addiction among adults: A cross-sectional study. *Applied Psychology Research*, 3(1), 1365.
[7] Fox, B. (2021). A case study: The deployment of a novel in situ fluorimeter for monitoring biological contamination within the urban surface waters of Kolkata, India. [Conference presentation].
[8] Rathi, M., Guha, P., & Neogi, R. (2022). Internet addiction in adolescents: Role of family, personality and comorbid psychopathology in school children in Eastern India. *Indian Journal of Psychiatry*, 64(4), 408-414.
[9] Ganguly, A., Mukherjee, T., & Chowdhury, S. (2023). Social media addiction, fear of missing out and social competence of adolescents: An exploratory study. *Indian Journal of Clinical Psychology*, 49(3).
[10] Young, K. S. (1996). Internet addiction: The emergence of a new clinical disorder. *CyberPsychology and Behavior*, 1(3), 237-244.
[11] 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(4), 1841-1848.
[12] Andreassen, C. S., Torsheim, T., Brunborg, G. S., & Pallesen, S. (2012). Development of a Facebook addiction scale. *Psychological Reports*, 110(2), 501-517.
[13] Griffiths, M. D. (2005). A components' model of addiction within a biopsychosocial framework. *Journal of Substance Use*, 10(4), 191-197.
[14] Kuss, D. J., & Griffiths, M. D. (2011). Online social networking and addiction—a review of the psychological literature. *International Journal of Environmental Research and Public Health*, 8(9), 3528-3552.
[15]Joseph, J., Varghese, A., Vr, V., Dhandapani, M., Grover, S., Sharma, S., et al. (2021). Prevalence of internet addiction among college students in the Indian setting: A systematic review and meta-analysis. *General Psychiatry*, 34(4), e100496.
[16] Meng, S.-Q., Cheng, J.-L., Li, Y.-Y., Yang, X.-Q., Zheng, J.-W., Chang, X.-W., et al. (2022). Global prevalence of digital addiction in general population: A systematic review and meta-analysis. *Clinical Psychology Review*, 92, 102128.
[17] Tandon, A., Dhir, A., & Mäntymäki, M. (2021). Gender differences in social media usage: A meta-analytic review. *Computers in Human Behavior*, 118, 106678.
[18] Fardouly, J., & Vartanian, L. R. (2016). Social media and body image concerns: Current research and future directions. *Current Opinion in Psychology*, 9, 1-5.
[19] Krasnova, H., Widjaja, T., Buxmann, P., Wenninger, H., & Benbasat, I. (2015). Why following friends can hurt you: An exploratory investigation of the effects of envy on social networking sites among college-age users. *Information Systems Research*, 26(3), 585-605.
[20] Indian Council of Medical Research. (2017). *National ethical guidelines for biomedical and health research involving human participants*. ICMR, New Delhi.
[21] Choudhury, S., & Dutta, A. (2023). Gender and digital divide in urban India: Access, usage, and empowerment. *Indian Journal of Gender Studies*, 30(2), 145-168.
[22] Bhattacharya, S., & Sen, S. (2024). Bengali women and digital spaces: Navigating tradition and modernity in Kolkata. *South Asian Popular Culture*, 22(1), 78-95.