



Exploring the Impact of Remote Working on Social Isolation and Loneliness among its Employees

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ABSTRACT

This study investigates the impact of remote work on loneliness and social isolation of IT employees in Bengaluru, considering the effect of the COVID-19 pandemic on work patterns. Using quantitative cross-sectional methods, a sample of 100 remote workers was assessed with the UCLA Loneliness Scale and a proprietary Social Interaction Scale. Findings show moderate levels of loneliness and low social isolation as indicated by high social interaction. There was a strong negative correlation between loneliness and social interaction. Socially, women were more active and less lonely than men. In this research, the authors observed that meaningful virtual interactions can alleviate loneliness, supporting the argument for better remote work policies within the IT sector.

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INTRODUCTION

There has been large obliteration of life globally due to the COVID-19 pandemic as coping with it involved large hurdles for public health, for the food industry, and for the world's workforce systems. The IT Sector faced issues like other sectors. Remote working transformed from an optional perk into the default setting for many companies, and this was a direct result of the COVID-19 pandemic. Many



companies within India and specifically Karnataka have switched to permanent remote work strategies. Karnataka is home for Bengaluru, which is one of the largest IT Hubs of Asia, going beyond just a pandemic reaction.

Virtual work can cause harm if face-to-face contact is not available. Building strong relationships becomes difficult at an interpersonal level. Contact from an IT remote employee with colleagues may be reduced to very minimal interactions with the absence of an office space for interactions each day, perhaps even leading to disconnection socially. Feelings relating to loneliness along with social isolation on the part of remote employees may additionally increase as a result of the lack of informal social interactions such as team luncheons and coffee breaks.

SOCIAL ISOLATION

Social isolation is defined as when people lack social relationships and withdraw from social institutions. It is a major concern in different fields since it deeply affects mental and physical wellness. Loneliness is a subjective feeling of being alone while social isolation concerns the factual absence of relationships so it is considered like loneliness. Understanding the wider impact upon health and wellbeing that social isolation has makes this distinction important.

Urbanization, technological development, and lifestyle changes in particular create major modern social and psychological problems. One of those problems that are in the world involves people isolating themselves in a social way. Today, people are naturally more social than most of them with less direct contact along with community life involvement. Lacking social bonds in connecting with society may isolate, but such an outcome could greatly impact mental with physical health.

Social isolation has several contributing factors. These factors are many, are linked. These include: Geographical separation from kin can make routine social contact hard for folks in distant regions. The ability for an individual to participate in social activities can be limited by health conditions such as physical disabilities or chronic illnesses in addition to mental health disorders. Technological Dependence – Even though digital communication has quite a few benefits, too much reliance on interactions that are virtual may reduce contact that is face-to-face, and that contributes to isolation. Aging and Life Transitions – Older adults often face retirement, bereavement, or mobility issues, which can result in reduced social engagement. Cultural as well as Language Barriers – Integration can be a battle for immigrants or minority groups, so social withdrawal results. Socioeconomic Challenges – In that finances are unstable and that people are unemployed, they can't access social environments and they feel excluded from it.



Observe behavioral and emotional changes during reduced social interaction to recognize social isolation. Common signs include: Withdrawal away from community activities or from social events. The avoidance of communication with peers or with family. Experiencing continual emptiness or detachment, People fail at self-care or function each day. Anxiety, sadness, and increased irritability. Routines and also hobbies lose appeal. Cognitive decline in older adults. Reliance on coping mechanisms with substance use. Especially for the people who mask all of their feelings or are unaware of just how isolated they are, these symptoms may not be openly expressed at all.

Remote work has risen up, most especially in Information Technology (IT). This increase has altered usual office interactions. Remote work offers flexibility, cost savings, and also improved work-life balance. Unique challenges are presented by it, though also. Isolation that is social is one of the most meaningful of psychosocial challenges. This is a challenge that emerges from this shift. More and more IT professionals work from distributed locations or home. Because they lack physical interaction with colleagues as well as have limited social engagement, feelings of disconnection along with isolation can arise (Wang et al., 2021).

Remote IT professionals experiencing social isolation may exhibit the following signs:

- Withdrawal from team communication
- Reduced participation in virtual meetings or social events
- Decreased productivity or engagement
- Feelings of loneliness, anxiety, or low mood
- Fatigue or burnout due to lack of social stimulation
- Increased reliance on digital distractions or non-work-related internet use

These symptoms not only affect individual well-being but also team cohesion and organizational productivity.

Implications of Social Isolation in Remote IT Work

Social isolation pertaining to remote IT workers has underlying implications which are multifaceted and complex in scope: Medical Health Consequences: Prolonged periods of social isolation contributes to depression, anxiety disorders, and lower psychologically adaptive capabilities (Toscano & Zappalà, 2020). Employing Organization: Isolated employees may lead to high turnover rates and low job satisfaction due to lack of affiliation with the organization. Lack of Collaboration: The absence of a personal relationship can impede the level of personal and professional communication among the team members.

Loneliness



Divorced from social context, loneliness has been constructing multidimensional frameworks striving for single encompassing and meaningful definition, losing attention in psychological and occupational health research. Counseling psychology identifies loneliness as an emotion characterized by the perceived absence of someone close, arising from a social or intimate interaction with another person (Peplau & Perlman, 1982). Such emotions can be experienced irrespective of whether an individual is by themselves or surrounded by people. Cognitive discrepancy model asserts loneliness originates from finding oneself in a situation devoid of any meaningful social interactions, which is at odds with what the individual expects.

Chronic loneliness has been associated with an array of negative mental health consequences such as feeling depressed, anxious, cognitively declining, and even increased stress responses (Cacioppo & Hawkley, 2009). Since humans are social beings (Baumeister & Leary, 1995), the worsened psychological effects from prolonged periods of loneliness may be devastating. Considering current social changes like remote working, extending the understanding of loneliness from merely a social to a psychological phenomenon is necessary for meeting the emotional and social needs of people.

Remote Working IT Employees and Loneliness

Especially during and after the COVID-19 pandemic, remote working has transformed communication dynamics within the IT sector. While digital platforms enable task execution and teamwork, the nuances and immediacy—even the emotional subtleties—of face-to-face interactions are often missing. A number of IT professionals who work from home face a social identity deficit, which may drive them toward becoming disengaged, emotionally depleted, or even leading to burnout (Oakman et al., 2020). Unless there are active measures taken to provide social support, the IT industry's work characteristics—highly individual, deskbound, and screen-based—will increase the risk of social disconnection.

Background and Rationale

The remote work practices undertaken during COVID-19 altered organizational frameworks and employee behavior towards work in the IT industry. Even though remote work is associated with operational flexibility and efficiency, it diminishes in-person interactions, which in turn increases the potential risk for loneliness and social isolation. Research on the psychological and social ramifications of the pandemic-stricken remote work culture is limited although remote work is commonplace in the IT capital of India, Bengaluru. This research explores the effects of remote work transformation on feelings of loneliness and social engagement among IT professionals in Bengaluru.



Research Objective

The focus of this research was the correlation remote working has with loneliness and social interaction for IT workers residing in Bengaluru.

The focus was to:

- Assess the degree of social interaction and loneliness present among remote workers.
- Investigate the relationship between the components of social interaction and the factor of loneliness.
- Study the differences in the variables mentioned above with respect to the gender of respondents.

Methodology

As for this study, a cross-sectional quantitative design was selected. The sample consisted of 100 remote IT employees based in Bengaluru. Data collection was done using standardized instruments: loneliness was evaluated using the UCLA Loneliness Scale (Version 3) while a custom Social Interaction Scale used to gauge perceived social interaction was provided to the respondents. Because of the lack of normal distribution (verified with Shapiro-Wilk tests), non-parametric statistical methods were used. Spearman’s correlation was used to assess the relationship between the variables while the Mann-Whitney U test was used to assess differences between the genders.

RESULT AND ANALYSIS

Descriptive Statistics

To begin with, to understand the basics of the data, descriptive statistics were computed to understand the distribution and central tendencies of Loneliness and Social Interaction scores (Table 1). The mean score for Loneliness was 45.20 (SD = 9.73), with a range of 43. The mean Social Interaction score was 8.07 (SD = 1.87), ranging from 4 to 12.

Table 1: Descriptive statistics

	Mean	SD	Min	Max	Range	IQR
Loneliness	45.2	9.73	27	70	43	12.5
Social Interaction	8.07	1.87	4	12	8	2

Tests of Normality

Next, a Shapiro-Wilk test was conducted to assess the normality of the 2 scales collected, Loneliness and Social Interaction scores (Table 2). The results suggested that Social Interaction deviated significantly from normality ($p = .002$), while Loneliness did not ($p = .106$). However, since one of the two scores is not normally distributed, we must resort to non-parametric tests.

Table 2: Shapiro-Wilk test for normality

	Statistic	df	p-value
Loneliness	0.98	106	0.106
Social Interaction	0.957	106	0.002

Tests of Normality by Gender

Shapiro-Wilk tests were also conducted separately for male and female participants to examine normality across gender groups (Table 3). This is done because to use parametric tests, the data across both groups must be normally distributed. However, both Loneliness and Social Interaction scores significantly deviated from normality among both genders ($p < .05$).

Table 3: Shapiro-Wilk test for normality across genders

	Gender	Statistic	df	p-value
Loneliness	Male	0.931	57	0.003
Loneliness	Female	0.938	49	0.013
Social Interaction	Male	0.936	57	0.005
Social Interaction	Female	0.933	49	0.008



Correlation Analysis

As we have already found that the data was not normally distributed, we must conduct the non-parametric correlation. A Spearman’s Rank Order (rho) correlation was conducted to examine the relationship between Loneliness and Social Interaction (Table 5). The correlation as expected was negative and strong ($r = -.736, p < .001$), indicating that higher levels of Social Interaction were associated with lower levels of Loneliness and vice versa.

Table 4: Spearman correlation between loneliness and social interaction

	1	2
Loneliness	–	.736**
Social Interaction	–	–

Note: $p < .01$ (2-tailed)

Gender-Based Descriptive Statistics

Gender based descriptive statistics would help us get a basic idea of how the score in Loneliness and Social interaction differs across the genders. Descriptive statistics were computed separately by gender for Loneliness and Social Interaction (Table 4). On average, females reported higher Loneliness ($M = 48.71, SD = 7.79$) and lower Social Interaction ($M = 7.31, SD = 1.65$) than males. However, whether these differences of level were significant or not were not determined yet

Table 5:

	Gender	Mean	SD	Min	Max	Range	IQR
Loneliness	Male	42.18	10.26	27	70	43	12
	Female	48.71	7.79	38	64	26	14
Social	Male	8.72	1.81	4	12	8	2



Interaction

Female 7.31 1.65 4 10 6 2

Mann-Whitney U Tests by Gender

To see if the differences were significant or not, a non-parametric test, Mann-Whitney U tests were conducted to assess gender differences in Loneliness and Social Interaction scores (Table 6). Results indicated that females reported significantly higher Loneliness (U = 793.00, Z = -3.829, p < .001) and significantly lower Social Interaction (U = 760.00, Z = -4.104, p < .001) than males.

Table 6

Variable	U	Z	p-value
Loneliness	793	-3.829	< .001
Social Interaction	760	-4.104	< .001

Results and Key Findings

Describing the findings we found that there was moderate level of loneliness and relatively high social interaction. Loneliness was significantly related to social interaction with a significant negative correlation (r = -0. 756, p. 001) so that social engagement is associated with less loneliness. Females reported higher levels of both loneliness and social interaction than males, whereas females experienced lower levels of loneliness despite lower social interaction. It could be that the quality of social connection may be more important than the quantity of social contact.

Implications and Recommendations

The findings suggest that remote work, when supported by meaningful and consistent communication, does not inherently increase loneliness. Organizations are encouraged to enhance virtual engagement, promote emotional bonding among remote teams, and implement gender-sensitive strategies that recognize differing social needs. Initiatives such as regular check-ins, virtual social events, and access to mental health resources can help foster connectedness in digital workspaces.



Conclusion

This study concludes that social interaction plays a crucial role in reducing loneliness among remote-working IT employees. Although remote work reduces physical interaction, it does not necessarily lead to increased loneliness if employees maintain meaningful social connections through virtual means. The research provides valuable insights for organizations in designing more socially supportive remote work environments, particularly within the evolving landscape of the Indian IT sector

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