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Job satisfaction while working from home during the COVID-19 pandemic: do subjective work autonomy, work-family conflict, and anxiety related to the pandemic matter?

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Abstract: The imposed lockdown, due to the COVID-19 outbreak, resulted in the rise to a “new normal” of working from home. This study explores how the lockdown and the sudden shift in the working style affected the job satisfaction of employees in India. We examined the relationship of job satisfaction with work autonomy, and determined whether work-family conflict, and anxiety due to COVID-19 are negatively related to job satisfaction amongst employees working from home in India. Through a correlational research design, a total of 211 participants took part in the study, and only 200 of the data, representing a 95% response rate, were eligible for

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PUBLIC INTEREST STATEMENT

The outbreak of the COVID-19 pandemic has led to significant changes in living, especially, the working life of individuals. As part of the measures to contain the spread of the contagion, several organizations and industries resolve to work remotely. Such a sudden shift to work from home could likely impact lives and job outcomes. This study examines how the lockdown scenario and the sudden shift in the working conditions affected the job satisfaction of employees in India. The results show that: a) Work-Family conflict negatively impacts the job satisfaction of remote employees, b) Anxiety related to the COVID-19 pandemic also negatively impacts the job satisfaction of remote employees, and c) Perceived work autonomy, on the other hand, positively impacts the job satisfaction of employees working from home. Overall, the output of the structural equation modeling (SEM) reveals the latent exogenous constructs significantly predict the latent endogenous construct, and job satisfaction of employees working from home in India. The study added insight regarding organizational redesign, such that work schedules could be structured in ways that it could be done from home. The practical implications of these findings are discussed in the paper.
further analysis. The data were analyzed using Structural Equation Modeling, and the results showed that work-family conflict and anxiety related to COVID-19 have a negative correlation with job satisfaction, while work autonomy had a positive correlation with job satisfaction. Perceived work autonomy, work-family conflict, and anxiety related to the COVID-19 pandemic significantly predicted job satisfaction and accounted for an overall 37.8% of the variance in job satisfaction. The findings of the current study provide valuable insight into the consequences of a pandemic or similar uncontrollable event, and augmented the literature on organizational behavior where most employees are compelled to work remotely, either full-time or part-time. The theoretical and empirical implications of how work-family conflict and anxiety related to the COVID-19 pandemic negatively impact the job satisfaction of employees in India were discussed. Evaluation of the structural relationship (SEM) reveals that the overall exogenous constructs significantly predicted job satisfaction of employees working from home in India during the COVID-19 pandemic.

**Subjects:** Psychological Science; Health Psychology; Work & Organizational Psychology; Economic Psychology; Mental Health; Information Technology

**Keywords:** Work from home; COVID-19; anxiety; work-family conflict; work autonomy; job satisfaction

### 1. Introduction

The declaration of the novel Coronavirus Disease 2019 (COVID-19) as a pandemic on 11 March 2020, by the Director-General of the World Health Organization (WHO, 2020) marked the beginning of a major disruption of normal working life for people around the world. While the infection rate accelerated in multiple countries concurrently (WHO, 2020), many organizations considered working from home a potent option. The vast majority of the studies conducted during the pandemic focus on health workers (Aymerich et al., 2022; Ibar et al., 2021; Shechter et al., 2020; Signore et al., 2020; Sun et al., 2021). Researches on job satisfaction among non-healthcare employees are relatively less though, in the wake of the COVID-19 pandemic, these workers in various sectors have to meet not only the job and family demands, but also cope with the psychosocial impact associated with the pandemic. With the emergence of the COVID-19 pandemic, the majority of the workforce is working from home. Workers and stakeholders might be more concerned, than ever, about how employees’ home life affects their work demands, which could subsequently affect the degree to which they will feel satisfied with their work. It is worth noting that in earlier studies, Work-family conflict (Anafarta, N., 2011), Family-work conflict (Netemeyer et al., 1996), and work-family facilitation are found to correlate with varying job outcomes such as satisfaction and performance (Ajala, 2017) among varying workgroups. In this study, we focus mainly on the impact of Work-family conflict (WFC), as a result of the increased work from home, on job satisfaction. We also probed the relationship between COVID-19 pandemic-related anxiety and job satisfaction among working from home professionals (in the non-health sector) as no such studies have been reported from India. Variables such as family-work conflict have been reported to be contingent on several extraneous factors like the number of children living at home (Kinnunen & Mauno, 1998), however, these are beyond the scope of this study.

Thus, this study explores the impact of perceived work autonomy, work-family conflict, and anxiety related to the COVID-19 pandemic on employees’ job satisfaction. Understanding the direct and indirect relationships could help stakeholders adopt effective and efficient coping styles and flexible work design. Moreover, such knowledge can help organizations and policymakers plan and implement appropriate strategies or interventions.
2. COVID-19 pandemic and working professionals

The World Health Organization (WHO) describes a pandemic as a large-scale epidemic affecting millions of individuals across many countries concurrently, often spreading throughout the globe (World Health Organization, 2005). Infections are categorized as a pandemic when individuals are infected with an organism(s) for which they do not have any (known) pre-existing immunity, and which spreads quickly and easily from one person to another, causing severe pathology and death (Kilbourne, 1977). Historically, there have been several pandemics of different magnitudes of contagions and lethality, such as the Bubonic Plague (1346–1353), Spanish flu, H1N1 influenza strain (1918–1920), HIV/AIDS (1981—present), etc (Hall et al., 2020). While there are several studies on the effect of pandemics on health workers such as the trajectory of psychological distress, coping behaviors, and preferences of New York healthcare workers during COVID-19 (Shechter et al., 2020), research on employees’ job satisfaction, working in non-health sector appears limited. In this study, working professionals are operationalized as all those individuals working in the formalized sectors in India. These include but are not limited to Education, Health, IT, Aerospace/aviation, engineering, and banking.

Apart from the multiple negative health consequences that a pandemic could have on victims, there are several other psychosocial impacts on working professionals. These include frequently reported heightened uncertainty, anxieties, confusion, and a sense of urgency (World Health Organization, 2005, p. 1). Investigators differ on the exact theoretical basis of uncertainties and anxiety during a pandemic. For instance, Kanadiya and Sallar (2011) implicate the increased widespread uncertainty to the possibility of becoming infected, misinformation about prevention, and lack of knowledge about effective management. Similarly, Neria and Sullivan (2011) argue that it is the indirect exposure to trauma, including scary media depiction of fatalities that account for increased distress and anxiety. Other researchers like Jivraj and Butler (2013), Herrera-Valdez et al. (2011) believe that it is the fear that the pandemic could come in waves that cause anxieties and uncertainties. Irrespective of the differences in explanations, pandemics have been found to have a profound negative psychosocial impact on the health of oneself and loved ones (Taylor, 2019). A pandemic has also other impacts such as severe disruptions in individuals’ daily routine, wage loss, social isolation as a result of lockdown, and fear of job loss (Brunier & Dyrsdale, 2020). In the present paper, we focused on the impact of the COVID-19 pandemic vis-a-vis the interplay of work-family conflict, work autonomy, and job satisfaction.

3. COVID-19 Pandemic and working from home

As of December 2020, the COVID-19 pandemic is reported to have accounted for about 1,694,255 deaths and more than 76 million infections worldwide (WHO, 2020), and the figure continues to increase day by day. Countries and establishments across the globe responded quickly to the phenomenon. For instance, many organizations have moved towards working from home to help contain the spread of the virus and ensure business continuity. A survey conducted by a top Chief Information Officer (CIO) in India titled “Business Continuity amid Coronavirus”, estimated that about 96% of organizations rolled out working from home in India (Jayadevan, 2020). Working from home may seem like a sudden event in many countries including India, but the path towards that shift appears to have been building up for years.

The Global Workplace Analytics and FlexJobs (2017) reported that approximately 3.9 million people work remotely worldwide, which accounts for an estimated 115% increase from the number of workers working from home in 2005. A similar report by a Human Resources (HR) service survey conducted in India showed that approximately 53% of the 7500 employees surveyed prefer working from home (Afzal, 2018). It appears that the shift from the conventional working methods to the more flexible ways was a slow-changing process, but due to the COVID-19 pandemic, the process has seen an astronomical acceleration, forcing employers and employees to make significant changes and adjustments in their working styles and work design. It is crucial to recognize that the COVID-19 pandemic has brought about not only challenges but also newer avenues to explore. Virtual
workplaces seem to increasingly replace the traditional office spaces and this might be considered beneficial for the future.

Despite the seemingly apparent potential positive upshots associated with work from home, the majority of the workforce in many countries, such as in India, started working from home for the first time. The combination of working from home for the first time and the unsettling news surrounding the pandemic might be taking a toll not only on the employees' mental health but also on job performance and satisfaction. This paper aims at exploring the dynamics of perceived work autonomy, anxiety related to the COVID-19 pandemic, work-family conflict, and investigate how these could impact the job satisfaction of employees working from home. Given the several unforeseen outcomes associated with the COVID-19 pandemic, it is relevant and timely to explore these phenomena on three counts. Firstly, working from home has the potential of providing more freedom and flexibility for employees, which in turn, may enhance workers' overall job satisfaction. Secondly, it is worth investigating the reverberation of the interaction between work and family demands as more and more people have shifted to working full-time from home. Lastly, it is crucial to recognize the anxiety created due to the COVID-19 pandemic and how it may affect individuals' job satisfaction. This knowledge will go a long way to help organizations and policymakers strategize and plan appropriate interventions.

3.1. Job satisfaction
Job satisfaction is one of the most widely studied topics in organizational psychology, and management science, with varied operational definitions. Higher job satisfaction is associated with better job performance or employees with higher job satisfaction enjoy better overall health which in turn increases productivity and happiness. According to Judge et al. (1998), five key dimensions—autonomy, feedback, identity, significance, and variety constitute intrinsic job characteristics. Employees with positive self-appraisal of job outcomes rated their work experience favorably on these dimensions, denoting higher job satisfaction. However, it remains to be known how employees' job satisfaction could be impacted as a result of the variation of the work environment due to the COVID-19 pandemic, where most employees are likely going to work outside the confines of the work setting.

As a result of the COVID-19 pandemic, many organizations are embracing flexible working solutions such as “work from home” to ensure business continuity though there is no consensus on the efficacy of flexible working arrangements. For instance, some researchers argue that employees who telecommute are more satisfied with their jobs (Fonner & Roloff, 2010), while other investigators reported employees working from home are less satisfied with their jobs because of dwindling relationships with co-workers and feelings of isolation or fear of being replaced (Schall, 2019). Empirical studies conducted to ascertain the impact of ICT-mediated amalgamation of work on the personal life of 26 employees working in three companies in Sweden revealed that work is not only integrated by digital activities but also emotions (Palm et al., 2020).

Recent literature reviews on work environment trends, digitization, and emerging employment forms (Palm et al., 2020) highlight multiple possible changes in the work and health outcomes of the future workforce. For instance, it has been argued that employees may worry about the possibility of losing their jobs due to increased digitization of work, leading to more stress and lower career satisfaction (Brougham et al., 2019). Given these conflicting results, Golden and Veiga (2005) proposed a curvilinear model suggesting that increasing work from home leads to an increase in job satisfaction. However, such a proposition should be interpreted with caution because it was found that the positive relationship is observed only up to a certain point (threshold) beyond which, if work from home increases, job satisfaction declines.

3.2. Perceived work autonomy
Even though job satisfaction is reported to be influenced by several factors, there is a dearth of research investigating how perceived work autonomy influences job satisfaction while working from
home. It has been argued that elevated work autonomy has the propensity to result in innovativeness among workers, as well as overall improved work efficiency and effectiveness (Zhou et al., 2019). Hackman and Oldham’s (1976) description of their Job Characteristics Model (JCM) defines work autonomy as “the extent to which employees have control and discretion for how to conduct their tasks” (p. 250). Building on this explanation, Morgeson and Humphrey (2006) divided the work autonomy construct into three sub-categories: work scheduling autonomy (WSA), decision-making autonomy (DMA), and work-methods autonomy (WMA). These sub-divisions reflect an enhanced employees’ control over their work scheduling, and decision-making, as well as freedom in the method they choose to go about conducting their job respectively. All of these can significantly enhance their positive feelings such that job outcomes will be viewed as emanating from their own efforts and thus, making them intrinsically motivated (Ryan & Deci, 2011). According to the Job Demands-Resources (JD-R) model of Bakker and Demerouti (2007), work autonomy can be recognized as a job resource that can help reduce work stress and lead to increased job satisfaction.

According to Hackman and Oldham (1976) jobs that are composed of motivating characteristics such as work autonomy will ultimately enhance higher levels of job satisfaction. Moreover, it has been argued that individuals who work remotely report the experience of increased autonomy because of the flexibility associated with working outside the confines of conventional office space: such an option allows them to adjust their working needs according to themselves (Scholl, 2019). Considering that this is the first time the majority of the workforce works from home, it is yet to be demonstrated whether employees will feel being in absolute control of the way they carry out their job demands and its subsequent impact on their job satisfaction. Therefore, in this study, we posit that employees with a high sense of autonomy in working from home will experience higher job satisfaction (Hypothesis 1).

3.3. Work-family conflict

The growing debate on work-family conflict (WFC) could be traced back to the classical theorization and arguments about work-life balance (WLB; Clark, 2000). Historically, research in work and family conflict has been unsuccessful due to, for instance, the absence of a realistic basis to adequately characterize women and men on reliable work and family variables (Korabik et al., 2008). Work and family are two equally important parts of an individual’s life, both requiring significant attention and time. Due to their differentiated demands, one may find it hard to manage and balance both concurrently. What remains to be known is whether the increased institutionalization of work from home would be affected, and in what pattern, by the home environment of employees working from home.

Research on Boundary theory assumes the workplace and family domain to be separated physically (Bulger et al., 2007). However, this assumption appears to go contrary to the core mandate of work from home, as workers may be deeply immersed within the family environment. Combining work and family demands into one physical space might intensify individuals’ stress levels because of the increasing disturbance that may arise as to which role to prioritize: family, or work (Eddleston & Mulki, 2017). Such role confusion can lead to several negative outcomes such as higher absenteeism, lower job satisfaction and performance, higher occupational stress, and higher turnover rates (Aboobaker et al., 2017). On the other hand, some researchers reported that the flexibility associated with “work from home” reduces interference (Golden et al., 2006). It is worth exploring the extent to which work-family conflict could impact job satisfaction during the COVID-19 pandemic, as more workers have suddenly started working from home than ever in recent history. We hypothesize that increased work-family conflict may have a significant negative relationship with job satisfaction of employees working from home during the COVID-19 pandemic (Hypothesis 2).

3.4. Anxiety-related to COVID-19

Anxiety refers to an affective state characterized by feelings of worry, tension, apprehension, and nervousness accompanied by physiological arousal (Wheaton et al., 2012). Usually, anxiety is elicited in response to an unknown and ambiguous threat, an example of such a threat is the
COVID-19 pandemic. A recent study conducted among the Indian population, Roy et al. (2020) found that more than 80% of the participants were preoccupied with thoughts about COVID-19, while 36.4% reported feelings of paranoia about contracting the virus. Such prevalent and persistent distress in the population can go a long way to negatively affecting the work performance and job satisfaction of the workforce (Roy et al. 2020; Inguscì et al., 2021). Due to the global deterioration of economic conditions as a result of the COVID-19 pandemic, people might feel insecure about their jobs and future job prospects which can cause occupational stress as well as job-related anxiety (Németh et al., 2021). Therefore, we hypothesize that anxiety related to the COVID-19 pandemic negatively impacts job satisfaction (Hypothesis -3). The summary of the proposed research framework is shown in Figure 1.

4. Methods

4.1. Sample
We conducted the study adhering to the ethical standards of the University’s Institutional Review Board (IRB) and as well per the 1964 Helsinki Declaration of research with human participants. Participants were instructed to respond based on their current and or recent dealings and experiences while working from home during the COVID-19 pandemic as a result of the lockdown. Through a cross-sectional research design, a total of 211 participants consented and took part in the study through the completion of a structured online google form. Out of this number, seven respondents did not meet the eligibility criteria, therefore, their responses were removed. Following preliminary examination and validity checks carried out on the remaining 204 responses, four data sets were identified to be inconsistent and invalid, and as such were excluded from further analysis as described in (Vaerenbergh & Thomas, 2013). Our remaining data of 200 responses meet the minimum sample size and power requirement for structural equation modeling (SEM) as emphasized in Anderson and Gerbing (1988). A sample size of (n) = 200 justifies the criteria for achieving a power of 80 at 05 alpha level, and alternate Root Means-Square Error of Approximation (RMSEA) of 08 (MacCallum et al., 1996). The participants age ranged from 18 to 61 years (M = 38.99; SD = 12). Other demographic data of the respondents are presented in Table 1.

4.2. Procedure
We employed a mixed-method sampling procedure involving snowball and convenience sampling to recruit participants. To be eligible to participate, individuals needed to meet three main inclusion criteria: (1) a respondent must be above the age of 18 years; (2) should be experiencing some sort of lockdown or quarantine or social distancing due to the COVID-19 pandemic, and (3) should be a working professional working from home in India. Apart from consenting to be part of the study, one also needed to be fluent in English to complete the questionnaire. An anonymous self-administered online Google form was used to collect data from respondents. The questionnaire
link was forwarded through emails, WhatsApp, and other social media channels to contacts of the researchers who meet the eligibility criteria and agreed to participate. The average time taken to finish responding to all the tests was around 08 to 10 minutes.

Participation was completely voluntary and participants were free to withdraw at any time from the study without facing any consequences. Even though there were no rewards associated with participation in the study, participants had the option to voluntarily enter their email address to be a part of a raffle where they could win an Amazon voucher worth INR 500 as a token of gratitude. To maintain confidentiality, the collected data were stored in a password-protected system. At the end of the consent form, the contact information of the researchers was provided in case participants needed any extra information. Responses were collected over 16 days, starting from 24 April 2020 to 9 May 2020.

| Table 1. Demographic and characteristics of respondents |
|-------------------------------------------------------|
| **Variables**                                         | **Description** | **Frequency(%)** |
| Gender                                                | Male            | 124(62.0%)       |
|                                                      | Female          | 75(37.5%)        |
|                                                      | Others          | 1(0.5%)          |
| Marital Status                                        | Single          | 63(31.5%)        |
|                                                      | Married         | 135(67.5%)       |
|                                                      | Separated       | 2(1.0%)          |
| Age                                                   | 18–30 years     | 63(31.5%)        |
|                                                      | 31–45 years     | 66(33%)          |
|                                                      | 46–60 years     | 70(35%)          |
|                                                      | 61 years & Above| 1(0.5%)          |
| Work from home                                        | Full-time       | 173(86.5%)       |
|                                                      | Part-time       | 27(13.5%)        |
| Work-load in work from home                           | Almost the same | 68(34%)          |
|                                                      | Has increased   | 78(39%)          |
|                                                      | Has decreased   | 54(27%)          |
| Type of industry                                      | Education       | 34(17%)          |
|                                                      | Health/Medical  | 8(4.0%)          |
|                                                      | Computers/Hardware | 11(5.5%)    |
|                                                      | Marketing/Market research | 8(4.0%)   |
|                                                      | Consulting      | 8(4.0%)          |
|                                                      | Manufacturing   | 51(25%)          |
|                                                      | Finance/Banking | 8(4.0%)          |
|                                                      | Engineering/Architecture | 15(7.5%) |
|                                                      | Aerospace/Aviation | 17(8.5%) |
|                                                      | Others          | 40(20%)          |
| Current Job description                               | Entry-Level     | 17(8.6%)         |
|                                                      | Mid-management  | 85(42.9%)        |
|                                                      | Upper management| 20(10.1%)        |
|                                                      | Executive       | 21(10.6%)        |
|                                                      | Administration  | 12(6.1%)         |
|                                                      | Others          | 45(22.5%)        |

Note: N = 200
5. Measures

5.1. Work-family conflict
The Work-Family Conflict was assessed using a modified version of the scale developed by Netemeyer et al. (1996) to reflect the current and or recent experiences of employees during the COVID-19 pandemic (Table A2). Excerpts of the adapted items on the scale included statements such as, “The demands of my work interfere with my home and family life”; “My job produces strain that makes it difficult to fulfill family duties”. Participants responded on a 7-point Likert-scale ranging from (1 = Strongly disagree, 2 = Disagree, 3 = Somewhat disagree, 4 = Neither agree nor disagree, 5 = Somewhat agree, 6 = Agree, 7 = Strongly agree). The participants’ responses were summed to create an overall work-family conflict score, in which higher scores indicated higher work-family conflict. The scale has a high-reliability coefficient (Cronbach's alpha = 0.95). The work family-conflict scale has been validated in different settings including India (Rastogi et al., 2017) through exploratory and confirmatory factor analysis.

5.2. General anxiety related to COVID-19
The Generalized Anxiety Disorder Assessment (GAD-7), was modified to suit the COVID−19 pandemic context. The modified version (Table A4) was used to assess anxiety symptoms related to the coronavirus pandemic. It is a seven-item scale, developed by Spitzer et al. (2006). Participants responded to the items on a 4-point Likert scale ranging from (0 = Not at all sure, 1 = Several days, 2 = Over half the days, 3 = Nearly every day). Sample of items on the modified scale included; “Due to COVID-19, I am feeling afraid that something awful might happen”, “Due to COVID-19, I have not been able to stop worrying.” The cumulative responses of participants responses were calculated to form a total anxiety score related to COVID-19, with higher scores depicting higher anxiety. Cronbach’s alpha of the scale demonstrates high reliability (α = 0.89). This scale was considered ideal because it has been validated on most primary care patients and people with GAD worldwide (Spitzer et al., 2006).

5.3. Work autonomy
The Work Design Questionnaire developed by Morgeson and Humphrey (2006) was used to measure participants’ perception of work autonomy. The Work Autonomy scale (Table A1) has three sub-scales: work-method autonomy (WMA), decision-making autonomy (DMA), and work scheduling autonomy (WSA). The scale has been adapted to other languages and a study on the Spanish population found that the work design questionnaire can be used in different cultural settings (Bayona et al., 2015). The scale consists of 9 questions (3 from each sub-category) to be responded to on a five-point Likert scale ranging from 1–5; (1 = Strongly disagree, 2 = Disagree, 3 = Neither agree nor disagree, 4 = Agree, 5 = Strongly agree). Excerpt of items included, “While working from home, the job provides me with significant autonomy in making decisions”; “While working from home, the job allows me to make decisions about what methods I use to complete my work”; “While working from home, the job gives me a considerable opportunity for independence and freedom in how I do the work”. Participants’ responses were summed to create a total perceived work autonomy score, where a higher score indicates higher perceived work autonomy. Cronbach’s alpha of the scale demonstrates high reliability (α = 0.93).

Job Satisfaction. Judge et al. (1998) adapted the Brayfield-Rothe Job Satisfaction Index into a five-item version, which was used in this study to measure the employee job satisfaction level of respondents. Participants responded to the items on a 7-point Likert scale (Table A3) ranging from one to seven (1 = Strongly disagree, 2 = Disagree, 3 = Somewhat disagree, 4 = Neither agree nor disagree, 5 = Somewhat agree, 6 = Agree, 7 = Strongly agree). Sample items relating to job satisfaction included, “I feel fairly satisfied with my current job while working from home”; “While working from home, each day of work seems like it will never end”. The participants’ responses were summed to obtain an overall job satisfaction score, with a higher score indicating higher job satisfaction. Two items on this scale that were negatively phrased were reverse coded before analysis. Cronbach's alpha of the scale is (α = 0.84). Sample measures can be found in the appendix.
5.4. Authors’ processing from ADANCO software (version 2.1)

We evaluated the constructs’ reliability and validity using ADANCO software, and the results (Table 2) reveal the reliability coefficient of all the constructs in this study exceeds 0.5, denoting good reliability (Hair et al., 2019). Similar acceptable composite reliabilities were evident: Jöreskog’s rho ($\rho_\alpha$) exceeding 0.7 thresholds and the Dijkstra-Henseler’s rho ($\rho_A$) coefficients exceeding 0.8 thresholds. These were further supported by acceptable reliability estimates: Average Variance Extracted (AVE) of above 0.5 (Dijkstra & Henseler, 2015; Hair et al., 2019). Additionally, the examination of the indicators shows overall satisfactory factor loading (Bagozzi & Yi, 1988; (Table 3).

6. Data analysis and results

We used self-administered questionnaires for the data collection on all the constructs. To rule out any possibility of a common method bias (CMB), as a result of this procedure, Harman’s single factor test, a post hoc statistical procedure, was conducted. The percentage of variance and cumulative variance were 31.95 percent (less than 50% covariance) suggesting that the Common Method Bias factor did not have any effect on our data (Podsakoff et al., 2003).

To determine the significance and strength of the relation of perceived work autonomy, work-family conflict, and anxiety related to COVID-19 with job satisfaction, we applied a two-tailed Pearson’s correlation test. The test revealed that job satisfaction and perceived work autonomy have a moderate positive correlation, $r$ (200) = 0.424, $p < .001$; the correlation between work-family conflict and job satisfaction came out to be moderately negative with $r$ (200) = −0.484, $p < .001$ and anxiety related to COVID-19 pandemic and job satisfaction appeared to have a moderate negative correlation, $r$ (200) = −0.362, $p < .001$.

Table 4 shows the correlation matrix among the exogenous and endogenous variables. As indicated by the results, the Multicollinearity assumption, a situation where there exists a high correlation among the independent variables, was not violated (Tabachnick & Fidell, 2012). Examination of the Tolerance values and Variance inflation factor (VIF) also supports the absence of multicollinearity (see, Table 5).

We used the R Statistical Software (Version 4.0.0) for our analysis. Following the requirement of the fitting function of the “CFA” in SEM, we opted for an ideal estimator due to our sample size (Vandenberg, 2006) and the nature of the data collection procedure. The output of the Mardia test (Mardia, 1970) indicates the multivariate kurtosis and standardized multivariate kurtosis to be approximately normally distributed. Based on these findings, we ran the analysis using the robust estimator (MLR).

In this study, the predictor variables were perceived work autonomy, work-family conflict, and anxiety related to COVID-19 and the criterion variable was Job Satisfaction. We employed a confirmatory factor analysis (CFA) to specify our measurement model. Table 5 depicts the overall

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Table 2. Construct reliability and validity

| Construct | Dijkstra-Henseler’s rho ($\rho_A$) | Jöreskog’s rho ($\rho_\alpha$) | Cronbach’s alpha($\alpha$) | AVE |
|-----------|-----------------------------------|---------------------------------|-----------------------------|-----|
| JBS       | 0.76                              | 0.84                            | 0.77                        | 0.52 |
| WA        | 0.95                              | 0.95                            | 0.94                        | 0.67 |
| WFC       | 0.94                              | 0.95                            | 0.93                        | 0.79 |
| ANC       | 0.9994                            | 0.9218                          | 0.9009                      | 0.628|
goodness-of-fit (GOF) and the local fit values pertinent to this study. The lavaan 0.6–6 ended normally after 54 iterations, resulting in an ideal solution.

The absolute fit indices for the $\chi^2$ Minimum Function Test Statistics of the different estimators differ marginally: $\chi^2_{ML}(7) = 8.963$ while for $\chi^2_{Robust(MLR)}(7) = 9.202 (8.963 / 0.974)$, while the scaling correction factor for the Yuan-Bentler correction (YB$\chi^2$) = 0.974, indicated a moderate level of correction (a value greater than 1.00 would mean a huge deviation from normality). The p-values of the two different $\chi^2(7)$ are not statistically significant (p > 0.05) for both the ML (0.255) and MLR (0.238), denoting an excellent fit between our data and the model. The $\chi^2$ values for the two different estimators: $\chi^2_{ML} = 544.492$; and $\chi^2_{Robust(MLR)} = 473.233$, also support the model fit. Notwithstanding the excellent fitting, we did not rely solely on chi-square ($\chi^2$) for evaluating our model due to its extreme sensitivity to sample size. It is worth noting that the corrected incremental indices (CFI and TLI) were all above 0.95, additionally supporting parsimony (Sharma et al., 2005). Evaluation of RMSEA (robust-RMSEA) = 0.039 (which less than 0.07 critical value), with a 90% CI [0.000–0.100 also suggests a high parsimony in the observed model fitting (Steiger, 2007). In summary, we can conclude that the overall goodness-of-fit (GOF) indices support a very good model fit and excellent harmony.
Table 4. Correlation matrix showing relationship among the exogenous and endogenous constructs

| Construct                          | M    | SD   | 1  | 2  | 3   | 4   | 5  |
|-----------------------------------|------|------|----|----|-----|-----|----|
| 1. Gender                         | -    | -    | 1.00 | | | | |
| 2. Work Autonomy                  | 3.83 | .85  | -.147* | 1.00 | | | |
| 3. Work-Family Conflict           | 3.68 | 1.69 | .041 | -.255** | 1.00 | | |
| 4. Anxiety related to COVID-19    | 1.85 | .77  | .050 | -.097 | .306** | 1.00 | |
| 5. Job Satisfaction               | 3.41 | .83  | -.123 | .424** | -.484** | -.362** | 1.00 |

Note. *p < .05, **p < .01, M = Mean, SD = Standard deviation, N = 200

Table 5. Model Goodness-of-fit and local fit indexes

| Model          | Chi-square Value | Chi-square df | p-value | 90% CI RMSEA | TLI  | CFI   | RMSEA | SRMR |
|----------------|------------------|---------------|---------|--------------|------|-------|-------|------|
| ML (Standard)  | 8.963            | 7             | 0.255   |              | 0.991| 0.996 | 0.039 |      |
| MLR (Robust)   | 9.202            | 7             | 0.238   | 0.000-0.100  | 0.996| 0.044 |       |      |

Note: Estimator (MLR), Robust Comparative Fit Index (CFI), Robust Tucker-Lewis Index (TLI), Confidence interval(CI), Root Mean Square Error of Approximation (RMSEA).

The path coefficients in Table 6; for Work-family conflict ($\beta = -.334$, t(199) = -5.480, p < .001), perceived work autonomy ($\beta = .316$, t(199) = 5.432, p < .001) and anxiety related to COVID-19 ($\beta = -.229$, t(199) = -3.864, p < .001) significantly predicted job satisfaction supporting hypotheses 1, 2, and 3 respectively. Overall, the $R^2$ value, the relative contribution of each variable in the total variance for job satisfaction, accounted for 37.8% of the variance by the predictors in the model.

7. Discussion

This study aimed at examining how job satisfaction is impacted by variables such as work-family conflict, perceived work autonomy, and anxiety related to the COVID-19 pandemic during working from home. The results of the current study reveal that collectively, all the predictors accounted for more than a quarter (37.8%) of the variance in job satisfaction ($R^2 = 0.378$) with work-life conflict showing a greater impact.

The results demonstrate a positive relationship between job satisfaction and perceived work autonomy among the work-from-home respondents. This may suggest that when employees are given the freedom to schedule their tasks or to employ their choice of method: to work from home, they are more likely to feel satisfied with their jobs. These results corroborate with previous findings (Bakker & Demerouti, 2007). According to the Job Demands-Resources (JD-R) model of Bakker and Demerouti (2007), work autonomy can be recognized as a job resource that can help reduce work stress and lead to increased job satisfaction. The work-family conflict was found to have a negative correlation with job satisfaction among the work-from-home respondents (Figure 2). These results exemplify the “Role Stress Theory”, according to which people who attempt to meet the demands of multiple roles are more likely to experience job dissatisfaction (Levinson et al., 1965). Whether gender impacts job satisfaction differentially in the dynamics of work and family (Eddleston & Mulki, 2017) in work from home remains to be explored.
Table 6. Coefficients and results of a multivariable regression analysis

| Model          | Unstandardized Coefficients | Standardized Coefficients | t     | Sig. p | Collinearity Statistics |
|----------------|-----------------------------|---------------------------|-------|--------|-------------------------|
|                | β              | SE  | β       |       | p       | Tolerance | VIF  |
| 1 (Constant)   | 16.504         | 1.416 | 11.658 | .000  | .855   | 1.169      |
| Work-family Conflict | -.163         | .030 | -.334   | -5.480 | .000   | 855        | 1.169 |
| Work Autonomy  | .171           | .031 | .316    | 5.432  | .000   | .935       | 1.070 |
| Sum (anxiety)  | -.173          | .045 | -.229   | -3.864 | .000   | .906       | 1.104 |

(a) Dependent Variable: Job satisfaction
Note: Standard Error (SE), Variance Inflation factor (VIF)
We expected to find a strong negative correlation between the anxiety caused due to Covid 19 and Job satisfaction, the results demonstrated a statistically significant but moderate negative correlation. A potential reason for this outcome could be that this study was executed one month after the lockdown was imposed and, perhaps, by then the participants had adapted to the changes due to the pandemic, and the associated anxiety had decreased. Another explanation might be that since only one month has passed, the anxiety had not reached higher levels; the more time they remain working from home the more anxiety they would experience.

The COVID-19 pandemic outbreak has brought about a global discussion on whether work from home is a viable option for the future. This study considered some of the factors that could affect employees’ job satisfaction while working from home during the lockdown. In general, the results of our study suggest that perceived work autonomy increases as a result of working from home during the COVID-19 pandemic and allows employees the freedom to adjust their working style and schedules which plausibly increases the employees’ job satisfaction. The practical implication here suggests companies and organizations should strategize work schedules in a manner that allows employees the autonomy to choose how their work schedule should be designed, even from home. However, it should be noted that in some situations, excessive freedom might lead to counterproductive behaviors and a reduction in work efficiency (Zhou, 2020). The results also highlight that an increase in anxiety due to COVID-19 could lead to a decrease in job satisfaction. Therefore, it is clinically important for companies to put in place policies and practices that can help improve their employees’ well-being in such situations. On an individual level, working professionals should monitor the source of news they consume and share because information overload and fake news are the major causes of anxiety among individuals (Roy et al., 2020).

Research has shown that working from home can cause employees to work in addition to regular working hours and spill over their work into family time (Eddleston & Mulki, 2017). This can potentially hinder work-family interactions. Therefore, it is important to plan creative strategies that can help employees reduce their work-family conflict. For example, it has been reported that nudging employees to schedule meetings during core-working hours can help reduce work-family conflict: by
assigning designated time for work as well as for the family (Moovala, 2020). Although balancing work and family demands can be challenging, employees should be motivated to reach out to their close ones and professionals for help as studies have highlighted that factors like family and partner support can substantially lessen the repercussions of work-family conflict (Love et al., 2010).

The data for this study came from a wide demographics including various age brackets, gender, diverse employment sectors, job positions, and industries, which may improve external validity. This study may also provide insight regarding work from home as a viable option for future studies.

Despite the aforementioned strengths, the study is not devoid of some limitations. The conclusions drawn are based only on self-reported data collected at one point in time. The sample size was relatively small though it met all the criteria for the statistical analyses we used. We did not ask for the participants’ location. This information could be valuable in understanding how people in different states of the nation, within India, are psychologically affected compared to others as the COVID-19 pandemic has impacted some Indian states more than others.

Moreover, in some studies, it was found that items on the job satisfaction scale are not interpreted in the same way by non-native English speakers and native English speakers (Thompson & Phua, 2012). For example, the item Each day of work seems as if it will never end was taken quite literally by non-native speakers (Thompson & Phua, 2012). Such discrepancies can hamper the cross-cultural reliability of the scale. Also, two items on the scale used the word “job” and three used “work” assuming that it could be used interchangeably. But, it should be noted that one could feel differently about their specific job and their work in general (Thompson & Phua, 2012).

Additionally, we did not have baseline information about the remote work of respondents prior to the pandemic, which should be recognized while interpreting the results. We did not also have a comparison group who were not working from home during the pandemic. This study also did not have comparison data for people’s experiences before, during, and after the COVID-19 lockdown. Due to the prevailing condition, a cross-sectional study was considered the most feasible one. Future studies may look at the comparison of employees’ job satisfaction while working from home during the pandemic and while working from home otherwise to ascertain the effects of the pandemic and also gain an in-depth understanding of how job satisfaction differs during the two periods. There is also scope to include work productivity as a dependent variable in such studies. The majority of the participants in this study reported that their workload had increased while working from home. It would be interesting to examine why this is so in future studies.

We conclude that the present study, despite some limitations, has successfully and empirically explored the relationship between job satisfaction while working from home as well as anxiety related to the COVID-19 pandemic, work-family conflict, and work autonomy. Given that this is the first cross-sectional study examining the job satisfaction of employees working from home in India during the COVID-19 pandemic, future studies should consider controlling for data sources from the study inception to allow for multilevel modeling, which could allow for the control of variations of job satisfaction between the organizations from where employees are recruited.

8. Conclusion
Based on the results of the study, the following conclusions could be drawn:

1. Job satisfaction and perceived work autonomy have a moderate positive correlation
2. Work-family conflict and job satisfaction were moderately negative correlated
3. Anxiety related to the COVID-19 pandemic and job satisfaction appeared to have a moderate negative correlation.

4. The path coefficients of work-family conflict, perceived work autonomy, and anxiety related to COVID-19 significantly predicted job satisfaction.

Unavoidable life events such as the COVID-19 pandemic could significantly affect the lives of individuals at personal and professional levels. In this study, we examined how the COVID-19 pandemic impacted the job satisfaction of employees working from home, in the non-health sector, along with other relevant work variables: work autonomy, work-family conflict, and anxiety related to the COVID-19 pandemic. Work autonomy proved as an efficient work design for sustaining positive job outcomes even in uncertain events such as the COVID-19 pandemic. However, it is worth noting that several factors such as the ability and professional competency of the employee, the nature of the organization’s work outlook may determine the success and utility of such job design, and the extent to which work could be done from home.

The findings of this study may well suggest that organizations and or industries should design their work in such a way that it could be done from home to facilitate easy work transition in the event of unforeseen circumstances. Hence, work from home should be implemented with extreme caution. Moreover, considering the curvilinear model: the plausible threshold of positive relationship beyond which, if work from home increases, job satisfaction declines, as argued by Goldenand Veiga (2005), care should be taken during implementation.

Overall, the findings, among other things, highlighted work-family conflict and anxiety related to the COVID-19 pandemic negatively impact the job satisfaction of employees, with work autonomy boosting job outcome: job satisfaction during the COVID-19 pandemic Evaluation of the structural relationship (SEM) reveals that the overall exogenous constructs significantly predicted job satisfaction. The results of the study provided useful practical and theoretical contributions to the field of organizational psychology, human resource management, and labor/employee policymaking about job design.

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All procedures performed in this study, involving human participants, were per the ethical standards of our institution and conforms with the 1964 Helsinki Declaration and its later amendments. The study was approved by the university’s Institutional Review Board.

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Appendices

Table A1. Work autonomy

| Statement                                                                 | 1 | 2 | 3 | 4 | 5 |
|---------------------------------------------------------------------------|---|---|---|---|---|
| While working remotely, the job allows me to make my own decisions about how to schedule my work. | 1 | 2 | 3 | 4 | 5 |
| While working remotely, the job allows me to decide on the order in which things are done on the job. | 1 | 2 | 3 | 4 | 5 |
| While working remotely, the job allows me to plan how I do my work.      | 1 | 2 | 3 | 4 | 5 |
| While working remotely, the job gives me a chance to use my initiative or judgment in carrying out the work. | 1 | 2 | 3 | 4 | 5 |
| While working remotely, the job allows me to make a lot of decisions on my own. | 1 | 2 | 3 | 4 | 5 |
| While working remotely, the job provides me with significant autonomy in making decisions. | 1 | 2 | 3 | 4 | 5 |
| While working remotely, the job allows me to make decisions about what methods I use to complete my work. | 1 | 2 | 3 | 4 | 5 |
| Statement                                                                 | 1   | 2   | 3   | 4   | 5   |
|--------------------------------------------------------------------------|-----|-----|-----|-----|-----|
| While working remotely, the job gives me a considerable opportunity for independence and freedom in how I do the work. | 1   | 2   | 3   | 4   | 5   |
| While working remotely, the job allows me to decide on my own how to go about doing my work. | 1   | 2   | 3   | 4   | 5   |

Note: 1 = Strongly disagree, 2 = Disagree, 3 = Neither agree nor disagree, 4 = Agree, 5 = Strongly agree

**Table A2. Work-family conflict**

| Statement                                                                 | 1   | 2   | 3   | 4   | 5   | 6   | 7   |
|--------------------------------------------------------------------------|-----|-----|-----|-----|-----|-----|-----|
| While working remotely, the demands of my work interfere with my home and family life. | 1   | 2   | 3   | 4   | 5   | 6   | 7   |
| While working remotely, the amount of time my job takes up makes it difficult to fulfill family responsibilities | 1   | 2   | 3   | 4   | 5   | 6   | 7   |
| While working remotely, things I want to do at home do not get done because of the demands my job puts on me. | 1   | 2   | 3   | 4   | 5   | 6   | 7   |
| While working remotely, my job produces strain that makes it difficult to fulfill family duties. | 1   | 2   | 3   | 4   | 5   | 6   | 7   |
| While working remotely, due to work-related duties, I have to make changes to my plans for family activities. | 1   | 2   | 3   | 4   | 5   | 6   | 7   |

Note: 1 = Strongly disagree, 2 = Disagree, 3 = Somewhat disagree, 4 = Neither agree nor disagree, 5 = Somewhat agree, 6 = Agree, 7 = Strongly agree
### Table A3. Job satisfaction

| Statements                                                                 | 1 | 2 | 3 | 4 | 5 | 6 | 7 |
|---------------------------------------------------------------------------|---|---|---|---|---|---|---|
| I feel fairly satisfied with my current job while working remotely.       |   |   |   |   |   |   |   |
| Most days I am enthusiastic about my work while working remotely.         |   |   |   |   |   |   |   |
| While working remotely, each day of work seems like it will never end.   |   |   |   |   |   |   |   |
| I find real enjoyment in my work while working remotely.                  |   |   |   |   |   |   |   |
| While working remotely, I consider my job rather unpleasant.              |   |   |   |   |   |   |   |

Note: 1 = Strongly disagree, 2 = Disagree, 3 = Somewhat disagree, 4 = Neither agree nor disagree, 5 = Somewhat agree, 6 = Agree, 7 = Strongly agree

### Table A4. General anxiety related to COVID-19

| Statements                                                                 | 0 | 1 | 2 | 3 |
|---------------------------------------------------------------------------|---|---|---|---|
| Over the last few weeks, I have been feeling anxious, nervous, or on the edge due to COVID-19 |   |   |   |   |
| Due to COVID-19, I have not been able to stop worrying.                    |   |   |   |   |
| Due to COVID-19, I am worrying too much about different things.           |   |   |   |   |
| Due to COVID-19, I have trouble relaxing.                                 |   |   |   |   |
| Due to COVID-19, I am so restless that it is hard to sit still.           |   |   |   |   |
| Due to COVID-19, I am easily becoming annoyed or irritable.               |   |   |   |   |
| Due to COVID-19, I am feeling afraid that something awful might happen.   |   |   |   |   |

Note: 0 = Not at all sure, 1 = Several days, 2 = Over half the days, 3 = Nearly every day
