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SCREEN EXPOSURE, TECHNO STRESS, GRATITUDE AND SUBJECTIVE WELL-BEING AMONG PROFESSIONALS

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ABSTRACT

In the contemporary digital era, professionals are increasingly exposed to prolonged screen time due to the widespread use of computers, smartphones and other digital devices. While these technologies enhance efficiency and connectivity, they also contribute to psychological strain, often referred to as technostress. At the same time, positive psychological constructs such as gratitude may play a protective role in maintaining subjective well-being. Therefore, the present study examined the relationship between screen exposure, technostress, gratitude and subjective well-being among professionals, with a particular focus on the buffering role of gratitude.

The study was conducted on a sample of 123 professionals, including doctors, physiotherapists, lawyers and other working individuals from Darbhanga and Madhubani districts of Bihar. Participants were selected using purposive sampling. Screen exposure was measured through self-reported daily screen time, technostress using the Technostress Scale (Tarafdar et al., 2007), gratitude using the Gratitude Questionnaire (GQ-6), and subjective well-being using the Satisfaction with Life Scale (SWLS).

The results indicated that screen exposure was positively related to technostress ($r = .48$, $p < .001$) and negatively related to subjective well-being ($r = -.41$, $p < .001$). Gratitude was positively associated with subjective well-being ($r = .46$, $p < .001$) and negatively related to technostress ($r = -.36$, $p < .01$). Regression and moderation analyses suggested that gratitude significantly reduced the negative effect of technostress on well-being. The findings highlight the importance of managing digital exposure and promoting gratitude for enhancing well-being among professionals.

KEYWORDS: *Screen Exposure, Technostress, Gratitude And Subjective Well-Being.*

INTRODUCTION

The rapid advancement of digital technologies has significantly transformed the nature of professional work. In recent years, professionals across various fields such as healthcare, law and education have become increasingly dependent on digital devices for communication,

documentation and service delivery. As a result, screen exposure has become an unavoidable part of daily life.

Screen exposure refers to the amount of time individuals spend interacting with digital screens such as computers, smartphones and tablets. While moderate use of digital devices can improve efficiency and accessibility, excessive screen exposure has been associated with negative psychological and physical outcomes. Research suggests that prolonged screen time may lead to mental fatigue, reduced concentration, sleep disturbances and increased stress levels (OECD, 2024).

One of the key psychological outcomes associated with excessive screen exposure is techno stress. The term technostress was introduced to describe the stress experienced by individuals due to their inability to cope with technological demands. According to Tarafdar et al. (2007), technostress includes multiple dimensions such as techno-overload (feeling overwhelmed by technology), techno-invasion (feeling constantly connected) and techno-complexity (difficulty in understanding technology).

Technostress has been found to negatively affect both professional performance and personal well-being. Studies indicate that individuals experiencing high levels of technostress are more likely to report burnout, job dissatisfaction and emotional exhaustion. Continuous digital connectivity, frequent notifications and increasing expectations for rapid responses may create pressure and reduce work-life balance.

At the same time, the field of positive psychology has emphasized the importance of personal strengths and positive emotions in maintaining well-being. One such construct is **gratitude**, which refers to the tendency to recognize and appreciate positive aspects of life. Gratitude has been found to enhance psychological well-being by promoting positive emotions and reducing negative affect (Emmons & McCullough, 2003).

Research suggests that gratitude is strongly associated with subjective well-being. Individuals with higher levels of gratitude tend to experience greater life satisfaction, happiness and emotional stability (Wood et al., 2010). Gratitude also encourages individuals to focus on positive experiences rather than negative ones, which may help in coping with stress.

Subjective well-being refers to an individual's overall evaluation of their life, including both cognitive judgments (life satisfaction) and emotional experiences (positive and negative affect) (Diener et al., 1985). It is influenced by various factors including work conditions, stress levels and personal coping mechanisms.

The relationship between screen exposure, technostress and subjective well-being can be understood through the **stress-buffering model**, which suggests that positive psychological resources may reduce the negative effects of stress on well-being. In this context, gratitude may act as a protective factor that reduces the impact of technostress on subjective well-being.

Despite the growing importance of these variables, relatively limited research has examined their combined relationship among professionals in semi-urban regions such as Darbhanga and Madhubani. Therefore, the present study aimed to explore the relationship between screen exposure, technostress, gratitude and subjective well-being among professionals.

Objectives

1. To assess levels of screen exposure among professionals

2. To examine the relationship between screen exposure and technostress
3. To examine the relationship between technostress and subjective well-being
4. To examine the relationship between gratitude and subjective well-being
5. To examine whether gratitude moderates the relationship between technostress and well-being

Hypotheses

H1:Screen exposure will be positively related to technostress

H2: Technostress will be negatively related to subjective well-being

H3: Gratitude will be positively related to subjective well-being

H4: Gratitude will be negatively related to technostress

H5: Gratitude will moderate the relationship between technostress and subjective well-being

Method

Sample

The sample consisted of **123 professionals**, including doctors, physiotherapists, lawyers and other working individuals from Darbhanga and Madhubani districts of Bihar. Participants were selected using purposive sampling. The age of participants ranged from 26 to 55 years (M = 36.8, SD = 7.4).

Tools

1. Screen Exposure Measure

Screen exposure was assessed using a self-report measure of average daily screen time. Participants were asked to estimate the number of hours they spend interacting with digital devices such as smartphones, computers, laptops and tablets for both professional and personal purposes.

In addition to total screen time, participants were also asked to indicate the primary purpose of screen usage, such as work-related activities, communication or entertainment. This helped in understanding the nature of screen engagement.

For the purpose of analysis, total daily screen time (in hours) was used as a continuous variable. Higher values indicated greater screen exposure. Self-report measures of screen time have been widely used in psychological research and have shown acceptable validity for estimating digital engagement patterns.

2. Technostress Scale

Technostress was measured using the Technostress Scale developed by Tarafdar et al. (2007). The scale is widely used to assess stress arising from the use of information and communication technologies.

The scale consists of items measuring different dimensions of technostress, including:

- Techno-overload (feeling overwhelmed by excessive information and workload)

- Techno-invasion (feeling constantly connected and unable to disconnect)
- Techno-complexity (difficulty in understanding and using technology)

3. Gratitude Questionnaire (GQ-6)

Gratitude was assessed using the Gratitude Questionnaire–Six Item Form (GQ-6) developed by McCullough et al. (2002). This scale measures the dispositional tendency to experience gratitude in daily life.

The GQ-6 consists of 6 items designed to assess appreciation, thankfulness and recognition of positive aspects of life. Sample items include:

- "I have so much in life to be thankful for."
- "I am grateful to a wide variety of people."

4. Satisfaction with Life Scale (SWLS)

Subjective well-being was measured using the Satisfaction with Life Scale (SWLS) developed by Diener et al. (1985). The SWLS is one of the most widely used measures of life satisfaction.

The scale consists of 5 items that assess individuals' overall evaluation of their life. Sample items include:

- "In most ways my life is close to my ideal."
- "I am satisfied with my life."

Data Collection

Data were collected using structured questionnaires administered individually. Participants were informed about the purpose of the study and confidentiality was maintained.

Statistical Analysis

- Descriptive statistics
- Pearson correlation
- Multiple regression
- Moderation analysis

Results

Table 1: Descriptive Statistics

Variable	Mean	SD
Screen Exposure	6.82	1.94
Technostress	58.34	10.21
Gratitude	28.45	5.67
Subjective Well-Being	21.78	6.12

Table 2: Correlation Matrix

Variable	1	2	3	4
Screen Exposure	—			
Technostress	.48**	—		
Gratitude	−.22*	−.36**	—	
Well-Being	−.41**	−.52**	.46**	—

Table 3: Regression Analysis

$R^2 = .38$, $F(2,120) = 36.84$, $p < .001$

Predictor	β	t	p
Technostress	−.44	−5.21	<.001
Gratitude	.39	4.63	<.001

Table 4: Moderation Analysis

Interaction term (Technostress × Gratitude): $\beta = .18$, $p = .021$

Discussion

The present study aimed to examine the relationship between screen exposure, technostress, gratitude and subjective well-being among professionals. The findings of the study indicated that screen exposure was significantly positively related to technostress and negatively related to subjective well-being. Additionally, gratitude was found to be positively associated with subjective well-being and negatively related to technostress. The moderation analysis further suggested that gratitude reduced the negative impact of technostress on subjective well-being.

The positive relationship between screen exposure and technostress suggests that increased use of digital devices may contribute to higher levels of psychological strain among professionals. This finding is consistent with earlier research which has shown that excessive interaction with technology can lead to information overload, constant connectivity and pressure to respond quickly (Tarafdar et al., 2007). In professional settings, individuals are often required to remain available through digital platforms, which may create a sense of continuous engagement and reduce opportunities for psychological recovery.

Another possible explanation for this relationship is that prolonged screen exposure may reduce physical activity and increase cognitive fatigue, which in turn may contribute to stress. Continuous engagement with digital screens may also interfere with sleep patterns, further increasing stress levels. Therefore, the findings suggest that screen exposure is not only a behavioral factor but also a psychological risk factor for technostress.

The study also found a significant negative relationship between technostress and subjective well-being. Professionals experiencing higher levels of technostress reported lower levels of life satisfaction. This finding is supported by previous research indicating that technostress is associated with burnout, emotional exhaustion and reduced job satisfaction. When individuals feel overwhelmed by technological demands, their ability to experience positive emotions and satisfaction may be reduced.

The positive relationship between gratitude and subjective well-being observed in the study is consistent with the findings of Robert Emmons and Michael McCullough (2003), who suggested that gratitude enhances well-being by promoting positive emotions and reducing negative affect. Individuals with higher levels of gratitude tend to focus on positive aspects of life, which may increase their sense of satisfaction and happiness.

The negative relationship between gratitude and technostress suggests that gratitude may help individuals cope with stress more effectively. One possible explanation is that gratitude promotes positive cognitive appraisal, allowing individuals to reinterpret stressful situations in a less threatening manner. This aligns with the broaden-and-build theory of positive emotions, which suggests that positive emotions broaden individuals' thought–action repertoires and help them build psychological resources.

The most important finding of the study is the moderating role of gratitude in the relationship between technostress and subjective well-being. The results indicated that gratitude reduced the negative impact of technostress on well-being. This finding supports the **stress-buffering model**, which suggests that personal resources such as positive emotions and coping strategies can reduce the adverse effects of stress.

In practical terms, this means that even when professionals experience high levels of technostress, those with higher levels of gratitude are less likely to experience a decline in well-being. Gratitude may help individuals maintain emotional balance, improve resilience and cope more effectively with stress.

Another important aspect to consider is the socio-cultural context of the study. The participants were drawn from semi-urban regions such as Darbhanga and Madhubani, where rapid technological changes may create additional challenges for professionals who may not have received formal training in digital adaptation. This may further increase technostress levels. At the same time, cultural values emphasizing social support and appreciation may enhance gratitude, which may help in coping with stress.

Overall, the findings of the study highlight the dual nature of technology. While digital tools provide numerous benefits, excessive use may create psychological challenges. At the same time, positive psychological factors such as gratitude can play a significant role in maintaining well-being.

Future research may explore additional variables such as emotional intelligence, coping strategies and work-life balance in order to better understand the relationship between technology use and well-being. Longitudinal studies may also provide deeper insights into how these relationships evolve over time.

CONCLUSION

The present study provides important insights into the relationship between screen exposure, technostress, gratitude and subjective well-being among professionals. The findings indicate that increased screen exposure is associated with higher levels of technostress and lower levels of subjective well-being. Technostress, in turn, negatively affects life satisfaction, highlighting the psychological cost of excessive digital engagement.

At the same time, the study demonstrates that gratitude plays a significant role in enhancing subjective well-being and reducing technostress. More importantly, gratitude was found to buffer

the negative effects of technostress on well-being, suggesting that it serves as an important protective psychological resource.

These findings have important practical implications. Professionals need to be aware of the potential negative effects of excessive screen exposure and adopt strategies to manage their digital usage. Organizations may also consider implementing interventions such as digital detox programs, time management strategies and training programs to reduce technostress.

Furthermore, promoting gratitude through simple interventions such as gratitude journaling, reflection exercises and positive communication may help individuals improve their well-being and cope more effectively with stress.

In conclusion, while technology is an essential part of modern professional life, maintaining a balance between digital engagement and psychological well-being is crucial. Developing positive psychological resources such as gratitude may help individuals navigate the challenges of the digital age and lead to a more satisfying and balanced life.

Limitations

The study used self-report measures and a limited sample size, which may affect generalizability. Future research may include larger samples and longitudinal designs.

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