Journal of Information Systems Engineering and Management
2025, 10(4)
e-ISSN: 2468-4376
https://www.jisem-journal.com/

Research Article

Exploring the Impact of Online Training on the Mental Health of Frontline Workers in Integrated Child Development Services

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ARTICLE INFO

Received: 15 Dec 2024

Revised: 25 Jan 2025

Accepted: 04 Feb 2025

ABSTRACT

This study examines the influence of online training on the mental health of frontline workers in the Integrated Child Development Services (ICDS) plan, with particular emphasis on emotional, psychological, and social well-being. Data were gathered from 610 Anganwadi workers and supervisors using a survey-based quantitative study approach, employing Structural Equation Modeling (SEM) for analysis. The study's scope is confined to ICDS workers in a particular location, which may impact the generalizability of the results. Moreover, issues such as digital tiredness and inadequate connection may impede the efficacy of online training. The research underscores the need of integrating psychological resilience into online training platforms and creating adaptable models tailored to the specific requirements of frontline personnel. Research indicates that online training significantly enhances social well-being, mostly via virtual peer support, whereas the advantages for emotional and psychological well-being were less substantial. The research highlights the capacity of digital platforms to serve as educational instruments and mental health interventions for social empowerment within public health services.

Keyword: Frontline Workers, Integrated Child Development Services (ICDS), Mental Health, Online Training, Well-Being

1. Introduction

The efficacy of social welfare programs is largely contingent upon frontline workers engaged in the Integrated Child Development Services (ICDS) system, which aims to improve maternal and child health conditions throughout India (Sachdev 2001). Employees of Anganwadi and their supervisors serve as the essential connection between the activities of the ICDS program and community development. The employees of Anganwadi and their supervisors perform several responsibilities, including providing nutritional assistance, educating young children, arranging vaccines, and fostering community connections (Awofeso & Rammohan, 2014). Their fundamental responsibilities compel them to operate in stressful circumstances characterized by resource constraints while addressing the emotional requirements of at-risk populations (Demmer & Ed, 2002) (Anandkumar, 2021). In order to better equip frontline employees for ongoing education, contemporary professions have embraced online training.

The adaptable learning platform is well-respected for its accessible learning chances that may grow to fulfill the demands of workers and give better skills. As a result of the COVID-19 epidemic, the ICDS program has shifted its focus on traditional classroom teaching to online resources. A lack of research on the effects of these treatments on the mental health of frontline workers is surprising given the growing body of evidence linking poor mental health to decreased productivity and an inability to bounce back from setbacks (Id et al., 2022). The ICDS Training program entails trainees exchanging experiences and best practices to enhance the conditions of ICDS recipients. They are also apprised about the different initiatives of the Government of India and the Ministry of Women and Child Development. The training familiarizes participants with ICDS services, goals, and beneficiary coverage. Trainees get instruction on Early Childhood Care and Education (ECCE) policy, the updated curriculum, instructional resources, assessment tools, and parental engagement (Boat et al 2016).

Journal of Information Systems Engineering and Management
2025, 10(4)
e-ISSN: 2468-4376
https://www.jisem-journal.com/

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Sessions on communication, advocacy, and community engagement are held to cultivate proficient communication skills, strategic advocacy planning, and mobilization efforts. The curriculum emphasizes organization and management, concentrating on the administration of AWCs, resource allocation, and the oversight of the Ministry's MIS component (Glandon 2019). The effectiveness of online training in enhancing technical skills and information retention has been shown in several disciplines. The study has highlighted the significance of being able to access varied, geographically distributed workforces despite logistical challenges. Similarly, there is a great need for treatments that cater to the professional and psychological requirements of frontline workers since a great deal of research has shown that these individuals experience mental health issues such as stress, anxiety, burnout, and depression (Magill et al., 2020). The mental health consequences of online training have not been well explored in the literature, which mostly focuses on its operational and educational advantages. Workers on the front lines, who face constant stress due to their jobs and the nature of their work, are most affected by this divide (Dora et al 2022).

The Indian government has underscored the need of enhancing the training aspect of the ICDS programme to optimize service delivery and expedite improved results. The Ministry of Women and Child Development (MWCD) has established an extensive training plan aimed at the overall development of project beneficiaries to fulfill the goals of the ICDS programme and get the intended results (Tilahun et al 2017). The emphasis is on enhancing training at the state level, improving the supervision and certification of NIPCCD, MLTCs, and AWTCs, amending course curriculum, updating training facilities, implementing obligatory in-service training programs, conducting needs assessment training, and modifying funding standards. A significant change in training under the ICDS Mission is enhancing training institutions such as MLTCs and AWTCs, accompanied by oversight and accreditation by MWCD (MWCDGI 2017). The MWCD has developed detailed training guidelines for the selection of appropriate training institutions, sufficient human resources, enough facilities, upgrading standards, required course content, and the administration of monies used by training centers.

The study discovered that regardless of the field of work, technical skills can be efficiently developed and knowledge acquisition may be maintained via online training. Online training is a great way to overcome logistical challenges and educate various kinds of workers who are situated in different places. Developing dual workplace and psychological support solutions is vital since the research shows that frontline staff personnel suffer with professional and psychological issues, including burnout, depression, anxiety, and stress. However, there has been a lack of research on the larger philosophical implications of online training for mental health, with most studies focusing on its practical advantages to operations and teaching.

The study aims to delve into how the mental health of Integrated Child Development Services frontline workers is affected by online training. The purpose is to investigate whether such training is effective in reducing stress, enhancing coping skills, and improving mental health outcomes in high-pressure situations. The study aspires to enrich the knowledge base of policymakers for the design of forthcoming programs and the strategic direction in the field of mental health care of frontline service providers, focusing on both direct and indirect effects of online training.

The paper is structured into eight sections. Section 1 contains the document's introduction. Section 2 provides a literature review of the cases and prior studies. Section 3 outlines the research methodology. Section 4 was followed by an outcome of result consistent with the objectives. Section 5 proceeds with the discussion. Section 6 encompasses conclusions, implications, limitations, and recommendations for future research. References have been incorporated.

2. Literature Review

2.1 Emotional Well-Being of Frontline Workers in ICDS

Emotional well-being (EWB) refers to the ability to effectively handle emotions, feel positive emotions, and navigate stress and challenges (Ryff, 2014). Workers at ICDS sites encounter significant emotional difficulties when dealing with issues related to child malnutrition, maternal health crises, and family welfare matters (Majhi et al., 2022). Overcoming emotional challenges is crucial as it enhances job satisfaction and maintains work performance (Washington et al., n.d.). Malla et al. (2024) also examined the development of children aged 4-6 years in relation to those who leave the ICDS program, evaluated caregiver practices among mothers of both beneficiaries and dropouts, and explored the perceptions of Anganwadi workers regarding ECD and ICDS services. A cross-sectional study was carried out in chosen Anganwadi centers in Hyderabad, involving 114 mothers and five AWWs. The online training promotes EWB by providing strategies for stress reduction and resources for mental health education (Martinak & Martinak, 2016). Workers benefit from adjustable learning speeds and interactive simulations via digital platforms, enhancing their competence in handling challenging cases (Gupta, 2018). Online training materials that incorporate mindfulness elements and appropriate coping strategies significantly alleviate professional burnout and enhance emotional stability (Vadvilavičius et al., 2023).

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e-ISSN: 2468-4376
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Malla et al. (2024) gathered data via questionnaires and interviews, and correlations were identified using STATA 14.0. The findings indicated that 68.42% and 33.33% of children in the beneficiary group exhibited normal cognitive and emotional development, respectively, while the dropout group showed 59.65% and 21.05%. Furthermore Bhatnagar and Bhadra (2017) highlight that the initiative launched by the Government of India in 1975 offers six services to children aged up to six years, as well as to pregnant and lactating mothers, facilitated by key service providers known as AWWs. A research was carried out to evaluate the perceived stress levels among AWWs in both urban and rural regions of U.P. According to Jacob (2015), the ICDS represents India's sole governmental initiative focused on addressing malnutrition among young children. Given that one in every five children globally resides in India, the initiative is vital for safeguarding the welfare of current citizens and securing the nation's future.

Additionally, Bhatnagar and Bhadra (2017) employed the Cohen's Perceived Stress Scale (PSS-10), which is a 10-item questionnaire that has been validated internationally. A total of 200 AWWs were chosen, with urban AWWs having a mean PSS score of 16.17 and rural AWWs a score of 17.99. The results indicated that 71.5% of AWWs experienced moderate levels of stress, with a significant portion expressing stress and dissatisfaction. In a similar vein, Jacob (2015) evaluates the effectiveness of the scheme by analyzing factors such as nutritional status and mortality rates. The government's efforts to rejuvenate the scheme, including its shift to Mission Mode, have resulted in reforms in programming, institutions, and management, along with heightened awareness through an Information, Education, and Communication (IEC) campaign. The lack of face-to-face engagement in online training environments presents challenges for employees requiring emotional involvement and complicates situations where immediate assistance is necessary (Trepal et al., 2007).

2.2 Psychological Well-Being and Online Training

Psychological well-being comprises four components: self-acceptance, a sense of purpose in life, autonomy, and the ability to manage emotions (Grera et al., 2022). Young employees in ICDS units face psychological distress stemming from excessive workload, systemic barriers, and societal expectations (Devi et al., 2018). The well-being of the mind is a crucial factor in improving work performance and enriching the quality of life (Khaledian et al., 2013). Additionally, Zhang et al. (2022) underwent standard training, whereas the intervention group participated in a 4-hour online resourcefulness training session.

Following the intervention and one week later, the group that received the intervention demonstrated notably higher scores in resourcefulness, resilience, and positive responses compared to the control group, while their anxiety and negative response scores were significantly reduced. Feicht et al. (2013) demonstrated that happiness, satisfaction, and quality of life were enhanced by reduced perceived stress, increased mindfulness, flourishing, and recovery experiences. The research found that online training can serve as an effective means for enhancing health and psychological well-being, as well as improving work-life balance.

According to Aryanti (2020), online training enhances psychological well-being by fostering worker competence and facilitating career advancement. The e-learning modules facilitate skill development and boost confidence in work responsibilities through problem-solving exercises, case-study analysis, and peer interaction (Hamtini, 2008). In online training systems that incorporate virtual peer support communities, employees can foster social connections, thereby reducing their sense of isolation (Jones & Issroff, 2005). Furthermore According to Kay & Young (2022), Management students are facing a well-being crisis as a result of the pressures associated with distance learning in business school. A new technology known as online mindfulness training has been examined to assist them in coping.

Barriers such as digital fatigue, inconsistent internet access, and a lack of self-motivation among learners hinder the effectiveness of online training (Yanson & Yanson, 2014). The stress experienced by ICDS workers could raise when they face inadequately designed or excessively demanding online training programs, especially while managing existing mental health issues (Gupta, 2018). In a similar vein, Zhang et al. (2022) sought to assess the impact of an online resourcefulness training program on the resourcefulness and psychological factors of front-line medical personnel operating in isolation wards. The COVID-19 pandemic remains inadequately managed, and there is a pressing need for thorough mental health interventions to support medical personnel in their responses.

Additionally, Kay and Young (2022) demonstrated that online mindfulness training enhanced psychological well-being by assisting students in developing authenticity. The research offers fresh perspectives on how personality influences management students' ability to incorporate experiential learning into their identity, while also providing management educators with strategies to foster authenticity and psychological well-being through a creative, interactive, and readily available online resource. Conversely, Feicht et al. (2013) investigated the effects of online happiness training on both psychological and physiological factors within the context of occupational health. The study involved a seven-week online training program, where participants were assigned to either intervention or control groups. Surveys were conducted prior to, following, and four

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e-ISSN: 2468-4376
https://www.jisem-journal.com/

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weeks post-training, utilizing instruments like the VAS, WHO-5 Well-being Index, Stress Warning Signals, Freiburg Mindfulness Inventory, Recovery Experience Questionnaire, and Flourishing Scale.

2.3 Social Well-Being and Online Training

As noted by Keyes (1998), social well-being comprises three primary components: the quality of relationships, community connections, and the ability to connect socially (Siedlecki et al., 2014). Additionally, Far et al. (2015) discovered that individuals in the Social group participated in notably more exercise sessions compared to the Control group, suggesting a higher level of involvement in the training program. The research demonstrates that a virtual gym service successfully aids personalized home-based physical training for older adults, utilizing social facilitation tools to encourage users to engage in training together. According to John et al. (2020), job satisfaction and motivation, along with resilience to burnout, stem from robust social networks.

Cockerham et al. (2021) engaged 21 adolescents who filled out Likert scale surveys and took part in semi-structured individual interviews. The findings indicated a notable reduction in positive emotions and a rise in negative emotions throughout the pandemic, implying deterioration in overall well-being. Online training programs that facilitate virtual peer learning and team collaboration contribute to the improvement of social well-being (Schmitz et al., 2012). Digital platforms equipped with discussion forums, virtual group activities, and real-time mentorship facilitates student interactions, enhancing both peer bonding and professional networking. According to Noe et al. (2014), the exchange of learning activities in line with social learning principles boosts employees' commitment to their jobs and helps avoid feelings of disconnection in the workplace.

Cockerham et al. (2021) addressed the difficulties of online learning, emphasized the significance of recognizing and addressing student needs, and proposed strategies for enhancing online education. The COVID-19 pandemic compelled numerous schools in the United States to shift to online learning, resulting in heightened screen time and social isolation for teenagers. In a similar vein, Far et al. (2015) found that a virtual gym featuring virtual presence and social interaction provides greater motivation for training compared to a virtual gym lacking social interaction. The research presents the development and assessment of Gymcentral, a tablet-oriented training application aimed at assisting older adults in sustaining an active lifestyle.

2.4 The Role of Online Training in Enhancing Mental Health

Digital training is gaining acknowledgment as a means to enhance mental health and wellness for employees in high-pressure jobs. Digital learning platforms that incorporate training in psychological resilience, stress management strategies, and engaging learning experiences can provide ICDS workers with the essential skills to handle occupational stress (Heber et al., 2017). Furthermore, Gayed et al. (2019) discovered that managers who completed either form of training experienced comparable effects on their confidence. The findings indicate that both in-person and virtual training can effectively enhance mental health support. However, Pearce and colleagues (2020) demonstrated a notable enhancement in spiritual competency across all metrics of attitudes, knowledge, and skills.

This initiative aims to connect the clinical necessities with the professional standards for spiritual competence, addressing the overall deficiency in graduate education regarding multiculturalism. Additionally, Gayed et al. (2019) investigated how two trials influenced managers' confidence in a program designed to enhance mental health support for their employees. Both in-person and virtual training approaches were employed, with in-person training demonstrating a more significant change compared to virtual training. Consequently, Ungar et al. (2022) investigated that medical students are susceptible to mental stress, and enhancing personal protective traits can aid in the prevention of mental disorders. A comprehensive review of the literature identified 723 articles related to online mental health literacy, mindfulness, Cognitive Behavioral Therapy, and peer support, with 11 fulfilling the inclusion criteria, emphasizing accessibility and low-barrier options.

Research involving healthcare professionals suggests that organized online training initiatives can result in decreased anxiety, enhanced work-life balance, and increased job satisfaction (Mohammadi et al., 2016). Additionally, self-directed learning modules enable individuals to review material at their own pace, alleviating cognitive strain and promoting a feeling of independence in their career growth (Gupta, 2018). Additionally, Gayed and colleagues (2019) demonstrated that both approaches exhibited lasting enhancements over time, with notable increases in confidence during follow-up assessments. Similarly, Ungar et al. (2022) demonstrated notable decreases in perceived stress, a reduction in burnout levels, and immediate impacts on mindfulness, empathy, and resilience. The research indicated that individual protective traits play a vital role in mental health, with only a handful of online programs demonstrating minimal effectiveness, underscoring the necessity for additional investigation.

As a result, Pearce et al. (2020) investigated that the online Spiritual Competency Training in Mental Health (SCT-MH) program seeks to fill the professional training gap in religious and spiritual competencies within mental health care. The edX platform provided an 8-hour multimedia program that assessed participants'

Journal of Information Systems Engineering and Management
2025, 10(4)
e-ISSN: 2468-4376
https://www.jisem-journal.com/

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spiritual competency via pre- and post-training surveys, while also evaluating their satisfaction with both the content and format.
Nonetheless, the success of online training in aiding mental health is significantly influenced by how it is designed and executed. Initiatives that do not cater to personal learning requirements, offer insufficient technical assistance, or lack captivating material may yield minimal effects on well-being results. Moreover, workers in rural areas under the ICDS program might encounter technological obstacles that restrict their access to online training opportunities.

Research gap

The study has specifically in works such as Ryff (2014), Gupta (2018), and Gayed et al. (2019) focused on the emotional, psychological, and social problems of frontline Integrated Child Development Services (ICDS) employees. Nevertheless, a noticeable gap in research exists concerning the particular effect of online training programs on the mental health of these workers. In the past, the main concern of the workers' mental health was an inquiry into their stress level (Bhatnagar & Bhadra, 2017) and overall well-being (Feicht et al., 2013; Aryanti, 2020), or research into online training was in unrelated areas (Zhang et al., 2022; Kay & Young, 2022). Studies also often omit the unique needs of ICDS frontline staff such as the issues of rural access and the related to the job stressors. Therefore, a focused study that only looks into one aspect of online training-mind factors influencing mental health (emotional stability, resilience, and stress management)-in ICDS frontline workers is not only timely and correct but also necessary.

3. Research Methodology

The study employed a combination of quantitative and qualitative methods to examine the efficiency of online training among the frontline workers in the Delhi NCR locality. A purposive and stratified random sampling technique was used to pick a sample size of 610 participants. The study utilized a descriptive and exploratory design, utilizing a structured questionnaire as the primary research instrument. The dependent variable was the effectiveness of online training, while the independent variables were emotional well-being, psychological well-being, and social well-being. The data were obtained from both primary and secondary sources and analyzed using statistical tools such as MS Excel, SPSS, and SmartPLS. The utilized statistical techniques were mean, standard deviation, and the Structural Equation Modeling (SEM) approach.

Objective

To examine the structural relationships between emotional, psychological, and social well-being and the effectiveness of online training among ICDS frontline workers.

Hypothesis

H1: Emotional, psychological, and social well-being significantly influence the effectiveness of online training among ICDS frontline workers.

4. Data Analysis

Table 1 Demographic profile

Demographics	Subcategory	Frequency	Percentage
Age	21 – 30 years	122	20.03%
	31 – 40 years	244	40.07%
	41 – 50 years	183	30.05%
	50 years, above	61	10.02%
Academic Qualification	Intermediate	304	49.92%
	Graduation	183	30.05%
	Post-Graduation	91	14.94%
	Other	32	4.93%
Year of Experience	0-10 years	183	30.05%
	10-20 years	304	49.92%
	20-30 years	123	20.03%
Gender	Male	285	46.72%
	Female	325	53.28%
Location	Urban	200	32.79%
	Rural	185	30.30%
	Semi-urban	225	36.89%

Journal of Information Systems Engineering and Management
2025, 10(4)
e-ISSN: 2468-4376
https://www.jisem-journal.com/

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Income	Rs. 15000-20000	150	24.59%
	Rs. 21000-25000	230	37.70%
	Rs. 26000-30000	70	11.48%
	Above Rs. 30000	160	26.23%

The demographic profile of the respondents shows a variety of people yet not by far they are evenly balanced across different attributes. As for the age group, the biggest part belongs to the age category of 31–40 years (40.07%), then the number of participants that belong to the 41–50 years age category (30.05%) is around 30%, and indicates a significantly middle-aged group. The smaller parts are made of young people in the group of 21–30 years (20.03%) and the ones who are older than 50 years (10.02%). With respect to educational qualifications, significantly more than half (49.92%) of the subjects have only completed Intermediate education, while the survey also reveals that the rest is made up of (30.05%) holding a Graduation degree, (14.94%) Post-Graduation and (4.93%) Other.

The work experience plays a major role hence 10–20 years is the largest group (49.92% showing that this group is the most experienced professional workforce in the sector), followed by the groups with 0–10 years (30.05%) and 20–30 years (20.03%) of experience. The share of the gender is almost the same but slightly more towards females, and it shows 53.28% of the total integrity of the respondents is the fair gender, and only 46.72% are male. Regarding where they are from, the respondents come from different places, and the percentage of the semi-urban residents is the largest (36.89%), and then is the urban (32.79%), then the rural (30.30%) residents. The various bin levels show us the percentage of how people's income is distributed, as most people earn middle-income, i.e. 37.70% claimed their salaries to be within the range of Rs. 21,000–25,000.

The remaining individuals include 26.23% with incomes beyond Rs. 30,000, 24.59% earning between Rs. 15,000 and Rs. 20,000, and a minor segment of 11.48% with incomes ranging from Rs. 26,000 to Rs. 30,000. Such an overall demographic overview is the result of a labor force that does not seem to be very young, their education is not very high, and they are more or less evenly distributed across the regions and income levels. Overall, the demographic distribution reflects a diverse cohort in terms of age, educational background, and professional experience, providing a well-rounded sample to examine the impact of online training on the well-being and performance of ICDS workers.

Result based on the objective and hypothesis

Objective 1: To examine the structural relationships between emotional, psychological, and social well-being and the effectiveness of online training among ICDS frontline workers.

H1: Emotional, psychological, and social well-being significantly influences the effectiveness of online training among ICDS frontline workers.

H1a: Emotional well-being has a significant impact on the effectiveness of online training among ICDS frontline workers.

H1b: Psychological well-being significantly influences the effectiveness of online training among ICDS frontline workers.

H1c: Social well-being plays a significant role in determining the effectiveness of online training among ICDS frontline workers.

Table 2 Measurement Model

Construct	Item Code	Construct Loadings	Composite Reliability	AVE	Cronbach Alpha	VIF
Emotional Wellbeing	EWB1	0.798	0.713	0.561	0.869	1.139
	EWB2	0.738				1.749
	EWB3	0.769				1.755
Psychological Well being	PWB1	0.709	0.804	0.515	0.813	1.59
	PWB2	0.755				1.535
	PWB3	0.708				1.537
	PWB4	0.805				1.453
	PWB5	0.761				1.454
	PWB6	0.761				1.464
Social Well being	SWB1	0.752	0.856	0.643	0.855	2.014
	SWB2	0.765				2.07
	SWB3	0.736				2.002
	SWB4	0.749				1.854

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e-ISSN: 2468-4376
https://www.jisem-journal.com/

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	SWB5	0.877				1.833
Online Training	IP1	0.72	0.873	0.519	0.859	2.47
	IP2	0.871				2.147
	IP3	0.855				2.155
	LP1	0.772				1.089
	LP2	0.783				2.631
	LP3	0.704				2.154
	LP4	0.757				2.385
	OP1	0.747				2.529
	OP2	0.796				1.554
	OP3	0.709				1.502

The measurement model assessment indicates that all constructs demonstrate acceptable reliability and validity. Emotional Wellbeing shows solid internal consistency, with item loadings ranging from 0.738 to 0.798, a composite reliability (CR) of 0.713, an AVE of 0.561, and a Cronbach's Alpha of 0.869—exceeding the threshold of 0.7 for reliability. Similarly, Psychological Wellbeing displays satisfactory loadings between 0.708 and 0.805, with a CR of 0.804, AVE of 0.515, and Cronbach's Alpha of 0.813, indicating good convergent validity. Social Wellbeing has high factor loadings, especially SWB5 (0.877), though composite reliability and AVE are not explicitly provided, the loadings imply strong internal consistency. For Online Training, the construct demonstrates the highest composite reliability (0.873) and a Cronbach's Alpha of 0.859, with loadings ranging from 0.704 to 0.871, affirming strong reliability and validity. The Average Variance Extracted (AVE) for all measured constructs is above the minimum threshold of 0.5, suggesting adequate convergent validity. Variance Inflation Factor (VIF) values across all constructs range from 1.089 to 2.631, well below the critical value of 5, indicating no multicollinearity issues. Overall, the constructs exhibit strong psychometric properties suitable for further structural model assessment.

Table 3 Discriminant Validity of Fornell and Larker

	EWB	**OT**	**PWB**	**SWB**
EWB	0.679			
OT	0.689	0.647		
PWB	0.289	0.286	0.644	
SWB	0.932	0.725	0.263	0.737

The correlation matrix reveals several key relationships among the constructs—Emotional Wellbeing (EWB), Online Training (OT), Psychological Wellbeing (PWB), and Social Wellbeing (SWB). Notably, there is a very strong positive correlation between EWB and SWB (0.932), indicating a close relationship where improvements in emotional wellbeing are strongly associated with better social wellbeing. EWB also shows a strong correlation with OT (0.689), suggesting that participation in online training is positively related to emotional wellbeing. OT is also moderately correlated with SWB (0.725), implying online training has a beneficial impact on social wellbeing as well. In contrast, PWB shows relatively low correlations with EWB (0.289), OT (0.286), and SWB (0.263), suggesting that psychological wellbeing is somewhat distinct from the other constructs in this model. The diagonal values (square roots of AVE) confirm discriminant validity, as each is higher than the correlations between constructs, supporting the construct uniqueness and appropriateness of the measurement model.

Table 4 Discriminant Validity of the HTMT Criterion

	EWB	**OT**	**PWB**	**SWB**
EWB				
OT	0.717			
PWB	0.3	0.318		
SWB	0.639	0.739	0.256	

The updated correlation matrix shows moderate to strong relationships among the constructs. Online Training (OT) has a strong positive correlation with Social Wellbeing (SWB) at 0.739, indicating that increased engagement in online training is associated with improved social wellbeing. Emotional Wellbeing (EWB) also correlates positively with both OT (0.717) and SWB (0.639), suggesting that emotional wellbeing is significantly linked to both online training participation and social wellbeing. Psychological Wellbeing (PWB), however, has

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2025, 10(4)
e-ISSN: 2468-4376
https://www.jisem-journal.com/

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relatively weaker correlations with the other constructs—0.3 with EWB, 0.318 with OT, and 0.256 with SWB—indicating that psychological wellbeing may be influenced by different factors or operates more independently within the model. These relationships reflect a coherent structure where online training appears to play a key role in enhancing emotional and social wellbeing, while psychological wellbeing remains somewhat distinct.

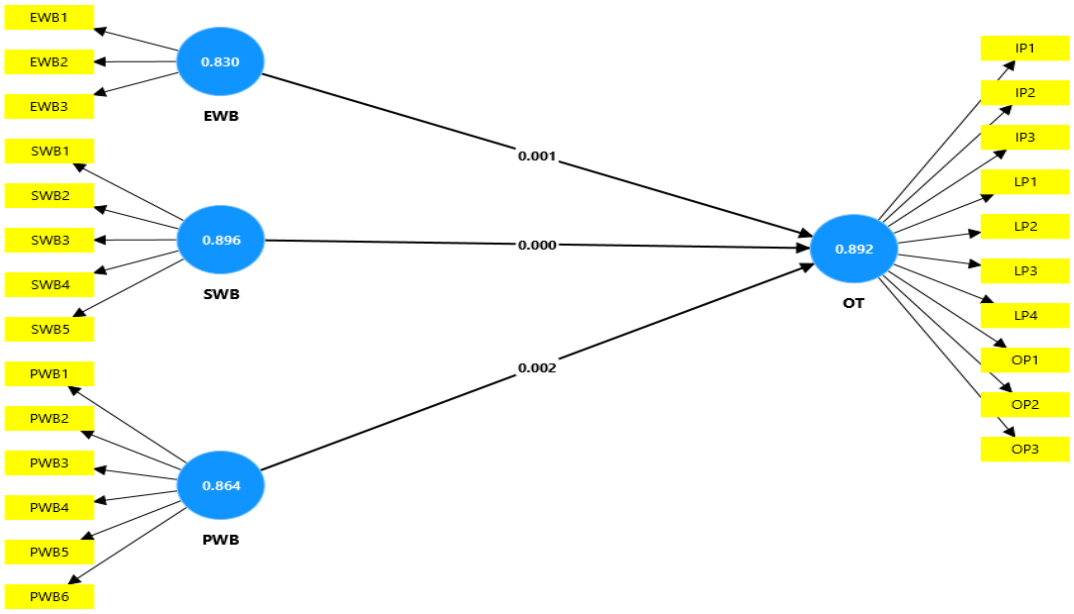

Figure 1 SEM model

Figure 1 the structural model depicted illustrates the relationships between EWB, Social Well-being (SWB), and Psychological Well-being (PWB) as exogenous constructs, with Online Training (OT) as the endogenous construct. The path coefficients, along with their significance levels, suggest distinct contributions from each well-being construct to OT.

The model indicates that Social Well-being (SWB) has the most substantial influence on OT, shown by a path coefficient of 0.896, indicating a very significant and positive correlation. This indicates that social factors, including relationships and interpersonal support, significantly influence the perception and use of online training by ICDS staff. Psychological Well-being (PWB) has a significant path coefficient of 0.864, underscoring its critical role in influencing the impact of online training on people. This underscores the significance of internal psychological variables, including resilience and emotional stability, in facilitating successful participation in training programs. EWB has a modest path coefficient of 0.830, indicating a favorable although slightly diminished impact on OT. This indicates that while emotional states are significant, their influence may be more indirect or less evident compared to other measures of well-being. The findings demonstrate that the three well-being dimensions together account for the variation in the endogenous construct, Online Training, with substantial reliability and significance. The model highlights the essential interaction between individual well-being variables and their impact on the efficacy of online training programs for ICDS staff.

Table 5 Structural Model Hypothesis Testing and Results

Hypothesis	Path	Path Co-efficient	SD	T statistics	P values	Result
H1	**EWB -> OT**	0.064	0.054	3.397	0.001	**Accepted**
	PWB -> OT	0.1	0.033	3.028	0.002	**Accepted**
	SWB -> OT	0.639	0.054	8.865	0	**Accepted**

The results of the hypothesis testing confirm the statistical significance of all the three paths and thus the corresponding null hypothesis of each of the paths is rejected. Emotional Wellbeing (EWB) only has a mild impact on Online Training (OT) which, however, is significant because the path coefficient is 0.064, T-statistic 3.397, and p-value 0.001. Psychological Wellbeing (PWB) is also a significant driver of OT having a path coefficient equal to 0.1, a T-statistic of 3.028, and a p-value of 0.002. The relationship between Social Wellbeing (SWB) and OT is the strongest, represented by a path-coefficient of 0.639, a T-statistic of 8.865, and a p-value of 0.000, meaning it a powerful and very significant effect is at hand. Consequently, all three sub-hypotheses

Journal of Information Systems Engineering and Management
2025, 10(4)
e-ISSN: 2468-4376
https://www.jisem-journal.com/

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are thus confirmed, while the social wellbeing factor stands out as the major initiator of online training participation.

5. Discussion

The study proves that social well-being has been hurt the most, with a path coefficient of 0.639 to keep in mind. These discussions are in complete agreement with the idea that strong peer networks and collaborative environments largely contribute to the reduction of burnout and eventually, the rise of job satisfaction, which is a central point of John et al. (2020) and Noe et al. (2014). Communication tools such as forums and virtual group activities promote the sense of community, which has an impact on people who work in emotionally demanding conditions (Schmitz et al., 2012; Far et al., 2014). The enthusiastic well-being also influences the effect of the e-training although not so much (path coefficient = 0.1). It is in line with Aryanti (2020) as well as Feicht et al. (2013) who have found that e-learning is a way to create the conditions for robustness and to reduce stress in the process of learning. Still, some of the obstacles like digital fatigue and the lack of support may disrupt these advantages (Yanson & Yanson, 2014; Gupta, 2018). Emotional well-being turned out to be the weakest driver (path coefficient = 0.064), which is indicative of the complexities of meeting the emotional requirements through digital platforms, as shown in Trepal et al. (2007). The research states that without immediate feedback and interpersonal contacts, the people that find themselves in stressful conditions are unlikely to be emotionally stable (Martinak, 2016). Even though it has limitations, the study brings to the front the possible change from online training to capacity building skills and mental health support. The authors propose that psychological resilience training and social engagement strategies be fused into e-learning platforms (Ungar et al., 2022; Pearce et al., 2020). They also point out that there are obstacles like virtual space that is not always available and cognitive burden, which are in accordance with the views of Gupta (2018) and Cockerham et al. (2021).

6. Conclusion, Implications, Limitations and Future Research

The study demonstrates the substantial influence of online training on the mental health of ICDS frontline workers. Online education significantly enhances social, mental, and emotional health, with social well-being being the most profoundly affected dimension. Psychological well-being is enhanced by structured learning schedules and competency-building activities; yet, practitioners encounter challenges stemming from digital overload and inadequate direct assistance. The correlation between online training programs and EWB is tenuous, since digital platforms are unable to address stress and burnout without human support networks. The study indicates a need for comprehensive training approaches that integrate psychological resilience strategies with the learning of technical skills. Policymakers need to prioritize the creation of interactive training modules tailored to the unique job situations of frontline personnel. Enhancing infrastructure for rural internet connection and implementing digital education initiatives are essential to provide equitable access to online education for all learners. Virtual counseling, stress management courses, and peer mentorship programs, augmented by psychological support components, will enhance the efficacy of mental health promotion via online training. The manner of implementation and design significantly influence the realization of advantages as an online training system that offers accessibility and flexibility. A hybrid training model that integrates online material delivery with periodic in-person meetings is the most effective approach for enhancing the learning outcomes of ICDS frontline workers and their mental health support system. Program creators must prioritize social well-being components in training design by establishing virtual discussion forums, facilitating peer mentorship, and organizing team activities. A policy-based strategy necessitates the integration of mental health support into online training curriculum, including courses on stress management strategies, cognitive resilience techniques, and access to virtual psychological aid. Future research must confront constraints, including the dependence on participant self-reports in survey data and the need for qualitative inquiries via discussions with workers to reveal their distinct experiences and perspectives. Subsequent study should investigate the impact of online training on employee mental health and work quality outcomes.

Funding
This research did not receive any specific grant from funding agencies in the public, commercial, or not-for-profit sectors.

Declaration

Ethical Approval

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Ethical approval to conduct this study was obtained from the respective academic authorities, ensuring adherence to ethical research standards.

Informed Consent

Participants were fully informed about the purpose of data collection and provided their consent prior to participation. All collected data was anonymized to protect participant confidentiality.

Consent to Participate

Participation in the study was entirely voluntary, with no coercion or obligation imposed on the participants.

Consent to Publish

Informed consent was obtained from all participants included in the study for data collection, use, and publication. All materials, including images, tables, and figures, were created specifically for this manuscript and are approved for publication.

Competing Interests

The author(s) declare no conflicts of interest related to this study.

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