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THE IMPACT OF ONLINE WORK MODE ON PERSONAL WELL-BEING: EXPLORING PARADIGM SHIFTS IN THE RELATIONSHIP BETWEEN RESILIENCE, LIFE ORIENTATION, HOPE, AND PURPOSE IN LIFE

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Abstract

The COVID-19 pandemic significantly shifted global work patterns, accelerating the adoption of remote and hybrid work environments. Most theories and studies related to fundamental personal well-being variables have traditionally been grounded in fully offline work modes. This leaves gaps in understanding how these well-established concepts apply to online and hybrid work environments. This study aims to investigate the impact of online work modes on the foundations of personal well-being by exploring the relationships between resilience, life orientation, hope, and purpose in life, across both online and offline work settings. Data were collected from 469 participants, including 348 participants working in online-related roles and 121 in fully offline positions. Findings indicated that hope had the strongest positive influence on purpose in life across both work mode categories (online: β = .667; offline: β = .657). Based on the total effects model, resilience has a stronger effect in online work environments (β = .547), while life orientation has a greater impact in offline work environments (β = .602). Resilience was found to be crucial for managing isolation in online settings, where hope, which included an item reflecting loneliness, fully mediated its effect on purpose in life. In contrast, life orientation was more central in offline environments, with both direct and indirect effects on purpose in life. Hope's partial mediation effect in offline settings suggests additional variables may be needed to fully explain this relationship, particularly regarding interpersonal connections.

Keywords: Well-being, Online-related work, Hope, Resilience, Purpose in Life

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1. INTRODUCTION

The COVID-19 pandemic, which began in late 2019, significantly disrupted global work patterns and accelerated the shift to remote and hybrid work modes (Al-Habaibeh et al., 2021). Many companies and employees worldwide have adapted to these changes, such as by adopting new technologies, marking a major shift in the future of work (Al-Habaibeh et al., 2021). This shift has changed how people work, creating opportunities and challenges for both employees and organizations. While online work offers greater flexibility and reduces commuting, it also presents obstacles requiring adaptation and innovation (George et al., 2022). It has significantly impacted employees' mental health, particularly regarding fundamental personal well-being, which is a key factor in promoting overall well-being (Sarkar et al., 2024).

Fundamental personal well-being in adult workers consists of resilience, life orientation, hope, and purpose in life (WHO, 2022). These factors influence work efficiency and life satisfaction with effects on mental health and work efficiency (Sarkar et al., 2024). The COVID-19 pandemic changed work contexts through the addition of online work modes. These work modes have led to loneliness, a lack of connections or interactions with colleagues, and reduced purpose in life (Vaziri et al., 2020). Furthermore, low purpose in life can also lead to burnout, resignation, and chronic stress including physical illness which creates a higher risk of death (Yukhymenko-Lescroart, 2022).

From previous studies in the fully offline work mode, variables in the areas of resilience, life orientation, and hope, were able to significantly affect purpose in life among working adults (Kuntz et al., 2017). These factors help people to more effectively handle challenges at work (Fatima et al., 2019). Resilience helps people to recover from difficulties, while positive views help to promote optimism toward the future, and hope encourages goal-setting (King et al., 2016). However, studies on variables associated with well-being such as resilience, life orientation, and purpose in life, in the context of the new online and hybrid work environments remain limited. Mokline and Abdallah (2021) found that employees with high resilience were able to manage stress and work demands more effectively during the pandemic, thereby improving work efficiency and mental health. Meanwhile, hope creates expectations of achieving goals in remote work environments such that hopeful employees tend to stay motivated in work, despite challenges (Becker et al., 2022).

Although additional research emphasizes the importance of resilience, life orientation, hope, and purpose in life, clear gaps remain in terms of understanding how these factors interact in online work environments. Previous research has emphasized fully offline work environments, creating a need to survey how the basic variables of well-being act in online working contexts. The present study aims to close the aforementioned gaps by surveying the impacts of online work models on fundamental personal well-being and studying the correlations between resilience, life orientation, hope, and purpose in life, in both fully online and offline-related work environments through an in-depth analysis of how these factors interact in different work models.

2. LITERATURE REVIEW

2.1 Purpose in Life

For working-age people, purpose in life provides a clear direction that can be explained by consistency between personal values and occupational roles, helping to increase satisfaction in life, occupational fulfilment, and resilience (Yukhymenko-Lescoart & Sharma, 2022). Resilience is the ability to manage stress and suffering, including problem-solving, emotional control, positive thinking, and social assistance, which play an important role in reducing stress from work and promoting feelings of purpose in life (Surzykiewicz et al., 2022; Schug et al.,

2021). Furthermore, people who have recovered from defeat are generally found to recognize more value in life, develop stable ideas, and adhere to long-term goals, which helps promote purpose in life (Hartmann et al., 2020).

Life orientation refers to an individual's personal attitude toward life, including their attitudes, beliefs, and coping strategies (Fatima et al., 2019). For working-age people, life orientation influences the development of purpose in life, as optimism helps people to recognize value in life, be committed to meaningful goals, and see future opportunities (Laranjeira & Querido, 2022). In conclusion, purpose in life is associated with a positive worldview and resilience and promotes psychological well-being and satisfaction in life (Uchmanowicz et al., 2019).

Hope refers to the ability to perceive a path toward goals and self-motivation in using those paths (Rand & Touza, 2021). Hope is important to purpose in life among working adults as it encourages individuals to set clear goals, and engage in self-improvement, and continuous growth (Feldman & Snyder, 2005). Hopeful individuals usually have high satisfaction in life and clear life goals (Yukhymenko-Lescroart & Sharma, 2022). The following hypotheses were formulated accordingly:

H_1: Resilience positively affects purpose in life

H_2: Life orientation positively affects purpose in life

H_3: Hope positively affects purpose in life

2.2 Hope

Hope in working adults is a positive psychological state that enables goal-setting, pathway envisioning, and motivation, even in the face of obstacles (Yang et al., 2022). Mouton (2023) highlights hope as crucial in thriving workplaces and as a source of resilience during crises. Resilience fosters hope by helping individuals to manage challenges, recover from stress, and maintain a positive outlook (Hartmann et al., 2020). Research shows that resilience predicts hope, with higher resilience linked to greater hope and better adaptation to stress (Yang et al., 2022). Life orientation fosters hope in working adults by promoting belief in one's ability to achieve personal and professional goals (Narula & Tripathi, 2023). Life orientation helps individuals confront challenges, sustaining long-term hope (Laranjeira & Querido, 2022) and enhancing resilience in managing workplace stress, reinforcing hope for achieving life and career goals (Hartmann et al., 2020). Thus, the following hypotheses were formulated accordingly:

H_4: Resilience positively affects hope

H_5: Life orientation positively affects hope

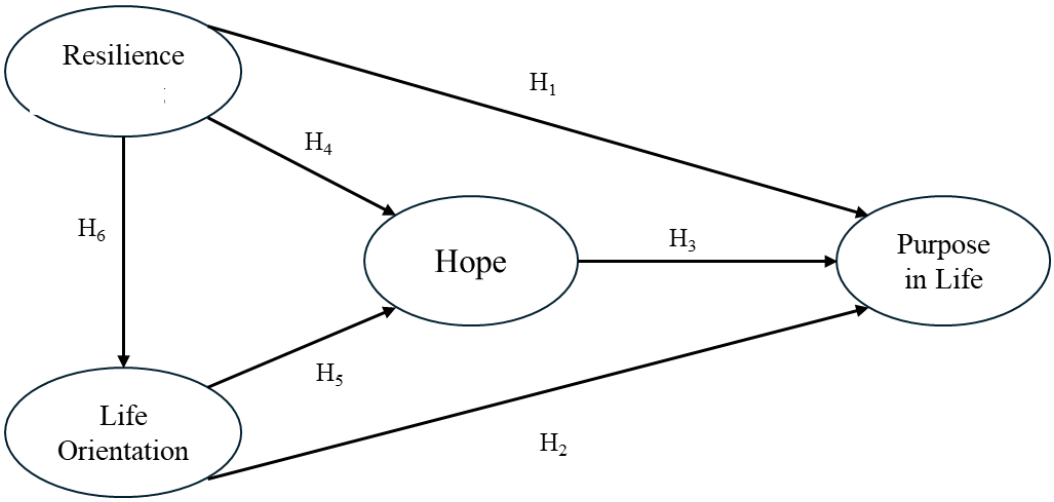
2.3 Resilience and Life Orientation

Resilience and life orientation are key in how working individuals manage stress, especially in challenging work environments (Hartmann et al., 2020). Research shows that these factors are interconnected. Optimists are more likely to develop resilient coping mechanisms, viewing obstacles as temporary (Laranjeira & Querido, 2022). Resilience, in turn, supports optimism by helping individuals recover from stress and see positive outcomes (Yang et al. 2022). Literature indicates that resilience fosters a positive life orientation, particularly optimism, in working-age individuals (Kuntz et al., 2017). Those who effectively manage stress and recover from challenges tend to develop greater optimism, as overcoming obstacles boosts confidence in handling future difficulties. Resilience promotes a positive outlook and strengthens one's belief in a hopeful future (Liang & Cao, 2021). Thus, it is hypothesized that:

H_6: Resilience positively affects life orientation

The conceptual framework illustrating the relationships among foundational well-being variables and the hypotheses is presented in Figure 1.

Figure 1 Conceptual Framework of Relationships Among the Foundational Well-Being Variables and Study Hypotheses.



3. METHODOLOGY

3.1 Data Collection and Sample

This study is part of the project "International and Multidimensional Perspectives on the Impact of COVID-19: Thailand Country Report," conducted through an online survey from July to December 2022 and approved by Thammasat University's Human Research Ethics Committee (COA No. 032/2565). The online questionnaire was distributed via social network applications (e.g., Line and Facebook), targeting individuals aged 18 and older, including students, office workers, and state or government employees across Thailand, engaged in either online-related or fully offline work. The project initially collected data from 1,127 participants. For this study, 658 student responses were excluded, leaving a final sample of 469 working participants (348 in online-related work and 121 in fully offline work) to address the research question.

The research instruments were selected through a systematic literature review and expert consensus in social science, psychology, and health. The research team employed the TRAPD model (translation, review, adjudication, pretesting, documentation), which ensures accurate and culturally appropriate translations through a multi-step process involving translation, expert review, discrepancy resolution, pretesting, and thorough documentation (Harkness, 2010). A five-member committee conducted the translation, which was subsequently evaluated by three experts using the Content Validity Index (CVI). CVI measures the relevance of each item by having experts rate items on a scale from 1 (not relevant) to 4 (highly relevant). The I-CVI for each item is calculated by dividing the number of experts rating the item as 3 or 4 by the total number of experts, and the overall S-CVI score reflects the instrument's content validity. In this study, the CVI score of .89 indicates that 89% of the items were considered relevant and clear by the experts, demonstrating high content validity (Polit & Beck, 2006).

The data for this research is based on 4 specific variables from the project, which were measured using a 5-point Likert scale ranging from 1 ("strongly disagree") to 5 ("strongly agree"). First, resilience was measured using the Brief Resilient Coping Scale (Sinclair & Wallston, 2004), which includes four items (α = .888), such as, "I look for creative ways to alter difficult situations" and "I believe I can grow in positive ways by dealing with difficult situations". Second, life orientation was measured using the Life Orientation Test–Revised (LOT-R) (Schou-Bredal et al., 2017), consisting of four items, after omitting two for improved internal consistency (α = .845); the scale includes items such as, "I am always optimistic about my future" and "I always expect things to go my way". Third, hope was measured using the Herth Hope Index (Soleimani et al., 2019) consisting of thirteen items (α = .964), such as, "I have a positive outlook toward life" and "I do not feel all alone". Finally, purpose in life was measured using the Purpose in Life Scale (Hill et al., 2016) with four items (α = .919), such as, "There is a direction in my life" and "My life is guided by a set of clear commitments".

3.2 Analysis

Maximum Likelihood Structural Equation Modeling (ML-SEM), which is covariance-based or factor-based, relies heavily on the assumption of multivariate normality (Hair et al., 2010). ML-SEM is highly sensitive to violations of this assumption, particularly when dealing with unbalanced sample sizes (Hair Jr et al., 2020). Thus, the imbalance in sample groups (n = 121), could lead to biased parameter estimates and unstable fit measures, which may compromise the validity of the multigroup testing results.

Another widely used estimator for SEM is Partial Least Squares Structural Equation Modeling (PLS-SEM), which is more appropriate for unbalanced groups due to its variance-based or component-based approach (Hair et al., 2011). This characteristic makes the analysis more robust in handling non-normality and unbalanced sample size compared to covariance-based methods such as ML-SEM. However, PLS-SEM focuses on maximizing explained variance or prediction, making it more suitable for exploratory research (Hair et al., 2020). In contrast, this study is based on confirmatory research, with the framework grounded in the concept of fundamental personal well-being, which is strongly supported by the literature. Furthermore, the framework in this study is a factor-based model, which limits the applicability of PLS-SEM.

Given the limitations of both ML-SEM and PLS-SEM, Integrated Generalized Structured Component Analysis (IGSCA) is the most suitable approach for this study. First, IGSCA is component-based, allowing it to benefit from relaxed multivariate normality assumptions, making it more robust in handling unbalanced groups (Hwang et al., 2014; Hwang et al., 2023). Second, it has the capacity to handle both component-based and factor-based models (Hwang et al., 2015), with the latter being relevant to this study. Third, the fit measures provided by IGSCA make it ideal for theory testing or confirmatory model testing (Hwang et al., 2023). Additionally, this study involves multigroup SEM with four latent variables. IGSCA tends to provide better model fit in complex models compared to ML-SEM, which often requires additional model modifications to improve fit, potentially leading to data-driven bias rather than theoretical confirmation (Hwang et al., 2023).

For the overall model fit, the acceptable fit criteria include having a standardized root mean square residual (SRMR) of less than .08 (Hu & Bentler, 1999) and a goodness-of-fit index (GFI) of .90 or higher (Hair et al., 2010). Additionally, for the validity and reliability of the measurement model, the acceptable criteria include an Average Variance Extracted (AVE) value exceeding .50, Cronbach's alpha (α) above .60, and DG-rho (ρ) above .70 (Benitez et al., 2020; Hair Jr et al., 2020). Discriminant validity was assessed using HTMT (heterotrait-monotrait) values, with thresholds below .85 (Henseler et al., 2015) and stricter thresholds

below .90 (Gold et al., 2001; Teo et al., 2008). Additionally, multicollinearity was checked using the Variance Inflation Factor (VIF), with values below 5 considered acceptable (Hair et al., 2015).

For the multigroup study, this study utilized the IGSCA multigroup analysis procedure following Fakfare et al. (2021) and applied it as outlined by Chumwichan et al. (2023). The two fundamental personal well-being comparison groups were "online-related work" and "fully offline work". The main concept of the procedure is that FIT values, or the proportion of variance explained between two models, are compared using bootstrapping. The two models are: 1) a constrained model, where parameters of the two models are constrained to be equal, and 2) an unconstrained model, where the parameters of the two models are freely estimated. The preferred model is selected by bootstrapping, with the model that shows a significantly higher FIT value or a higher proportion of variance explained being more favorable.

4. RESULTS

4.1 Descriptive Analysis

Fourteen cases of missing values (3.08%) for work mode (online-related work vs. fully offline work) were imputed using logistic regression. Significant predictors included age, gender, and mother's education. Other factors, such as job type and number of children, were included to improve predictive power. The model had an R^2 of .133 and an accuracy of .772.

The online-related work group had a mean age of 36.80 years (SD = 13.10), while the fully offline work group was older, with a mean age of 41.81 years (SD = 15.26). gender distribution significantly differed, with 31.3% males and 67.2% females in the online-related work group, compared to 14.0% males and 84.3% females in the fully offline work group. Most participants in both groups were employed full-time (78.7% for online-related work, 90.9% for fully offline work), while part-time work was more common in the online-related work group (18.7% vs. 7.4%). As shown in Table 1, the comparison between online-related work and fully offline work shows significant differences in age, gender, and job type, but no significant differences in education, number of children, or parents' education. However, given the large sample size, p-values are sensitive, and small differences may appear statistically significant. Despite variations, such as the 5-year age difference (effect size, d = -0.37), these differences may not be practically meaningful. The overall similarity in education, number of children, and parents' education suggests the groups are likely equivalent, making it unlikely that the demographic differences will substantially impact the study's key outcomes.

Table 1 Demographic Characteristics of Participants by Work Mode

	Online-Related Work (n = 348)	Fully Offline Work (n = 121)	Effect Size (p-value)
Age*	36.80 ± 13.10	41.81 ± 15.26	-0.37 [a] (<.001)
Number of Children	0.70 ± 0.70	0.77 ± 0.77	-0.10 [a] (.509)
Gender*			.17 [b] (<.001)
Male	109 (31.3%)	17 (14.0%)	
Female	234 (67.2%)	102 (84.3%)	
Other/Non Specified	5 (1.4%)	2 (1.7%)	
Job Type[†]			
Full-time	274 (78.7%)	110 (90.9%)	.13 [c] (.003)
Part-time	65 (18.7%)	9 (7.4%)	.13 [c] (.003)
Self-employed	23 (6.6%)	4 (3.3%)	.05[c] (.179)

Table 1 (Continued)

	Online-Related Work (n = 348)	Fully Offline Work (n = 121)	Effect Size (p-value)
Participants' Education			.02 [b] (.909)
Lower than bachelor	89 (25.6%)	30 (24.8%)	
Bachelor	185 (53.2%)	67 (55.4%)	
Higher than Bachelor	74 (21.3%)	24 (19.8%)	
Father's Education			.08 [b] (.250)
Lower than bachelor	280 (80.5%)	95 (78.5%)	
Bachelor	62 (17.8%)	26 (21.5%)	
Higher than Bachelor	6 (1.7%)	0 (0.0%)	
Mother's Education*			.10 [b] (.092)
Lower than bachelor	257 (73.9%)	85 (70.2%)	
Bachelor	77 (22.1%)	35 (28.9%)	
Higher than Bachelor	14 (4.0%)	1 (0.8%)	

Note. *Significant predictor for work mode; † Job Type percentages may exceed 100% as participants may hold multiple job types concurrently. Table shows Mean ± standard deviation (SD) and p-value as the result of independent t-tests for age and number of children, and frequency (percentage values) with p-values as the result of Chi-square tests; [a] effect size Cohen's d; [b] effect size Cramér's V; [c] effect size Phi.

4.2 Measurement Model

The reliability and validity of the constructs meets the acceptable thresholds, with Cronbach's Alpha (α) values exceeding .6, composite reliability (ρ) values above .7, and Average Variance Extracted (AVE) values surpassing .5 (Benitez et al., 2020; Hair Jr et al., 2020). All constructs, including resilience, life orientation, hope, and purpose in life, demonstrated internal consistency and convergent validity across the total sample, online-related work, and fully offline work groups. The reliability and validity values are illustrated in Table A (shown in Appendix).

In terms of establishing discriminant validity, the HTMT values presented in Table 2 fall within the acceptable range: less than 0.85 according to a strict interpretation (Henseler et al., 2015) and less than 0.90 in an acceptable range (Gold et al., 2001; Teo et al., 2008). All HTMT estimates between constructs were below these thresholds across the total sample, online-related work, and fully offline work groups, indicating that the constructs are distinct from one another. Additionally, the analysis conducted on the components using the Variance Inflation Factor (VIF) yielded values below 5 (Table B shown in Appendix), indicating the absence of significant multicollinearity concerns (Hair et al., 2015). These findings confirm that the measurement model exhibits discriminant validity and that the constructs are measured accurately without multicollinearity issues across different work contexts.

Using the IGSCA measurement model, the indicator weights (w) and loadings (λ) presented in Table C (shown in Appendix) meet the acceptable thresholds for indicator reliability and significance (Hair Jr et al., 2017). Factor loadings greater than .7 indicate adequate indicator reliability, which was observed across most constructs in the total sample, as well as within both online-related work and fully offline work groups. For instance, the resilience items had loading values ranging from .722 to .945 across the different groups, indicating reliable measurement across contexts. In the life orientation construct, item 2 exhibited lower loadings (e.g., .625 in the fully offline group), suggesting some limitations in reliability for that particular indicator. The majority of hope and purpose in life items showed

high loadings, such as Item 7 of the hope construct, which had a loading value of .897 across all work modes, confirming its robustness. The confidence intervals (CIλ) for these loadings do not include zero, confirming their statistical significance.

4.3 Multigroup Analysis and Structural Model

Using the IGSCA, fit indices were calculated to compare the constrained model (Model 1) and the unconstrained model (Model 2) in order to assess the moderating effect of work mode (online-related work versus fully offline work). The constrained model yielded FIT = .861, FITs = .290, FITm = .953, GFI = .978, and SRMR = .055. In comparison, the unconstrained model yielded values of FIT = .864, FITs = .294, FITm = .956, GFI = .983, and SRMR = .071. These results indicate that the overall model explains 87.7% of the variance in Model 1 and 86.4% in Model 2. The structural model accounts for 29.1% and 29.4% of the variance in the constrained and unconstrained models, respectively, while the measurement model explains 97.1% in Model 1 and 95.6% in Model 2. According to the criteria recommended by Cho et al. (2020, 2022c), a Goodness of Fit Index (GFI) of .93 or higher and a Standardized Root Mean Square Residual (SRMR) below .08 are indicative of a good model

Table 2 Parameters in Multigroup Analysis Across Work Mode

	Model 1: Constrained Model		Model 2: Unconstrained Model			
			Online-Related Work (n = 348)		Fully Offline Work (n = 121)	
Relationship	*β*	95% CI	*β*	95% CI	*β*	95% CI
Direct Effect						
RC → LO	.374*	[.266;.473]	.307*	[.087;.526]	.397*	[.271;.504]
RC → PL	.040	[-.067;.182]	.063	[-.213;.266]	.032	[-.093;.185]
RC → Hope	.547*	[.468;.633]	.703*	[.580;.768]	.486*	[.376;.580]
LO → Hope	.309*	[.239;.387]	.205*	[.085;.347]	.346*	[.255;.449]
LO → PL	.297*	[.204;.384]	.147	[-.081;.310]	.341*	[.229;.474]
Hope → PL	.482*	[.381;.575]	.564*	[.348;.725]	.452*	[.322;.573]
Indirect Effect						
RC → LO → Hope → PL	.056*	[.029;.084]	.035*	[.006;.075]	.062*	[.030;.103]
RC → LO → PL	.111*	[.055;.155]	.045	[-.007;.105]	.135*	[.077;.203]
RC → Hope → PL	.264*	[.192;.340]	.396*	[.257;.569]	.220*	[.139;.296]
RC → LO → Hope	.115*	[.068;.171]	.063*	[.013;.133]	.137*	[.065;.022]
LO → Hope → PL	.149*	[.096;.214]	.116*	[.041;.224]	.156*	[.108;.235]
Total Effect to Purpose in Life						
RC	.473*	[.379;.551]	.547*	[.428;.657]	.452*	[.332;.574]
LO	.563*	[.488;.639]	.410*	[.222;.540]	.602*	[.459;.699]
Hope	.662*	[.586;.714]	.667*	[.573;763]	.657*	[.565;.723]
Fit indices						
FIT		.861			.864	
FITs		.290			.294	
FITm		.953			.956	
GFI		.978			.983	
SRMR		.083			.071	
Model comparison	FIT difference = .00258*; SE = 0.00001; 95% CI [.00255; 0.00261] with 100 bootstrap samples					

Note. RC = Resilience; LO = Life Orientation; PL = Purpose in Life; * denotes statistical significance at the .05 level

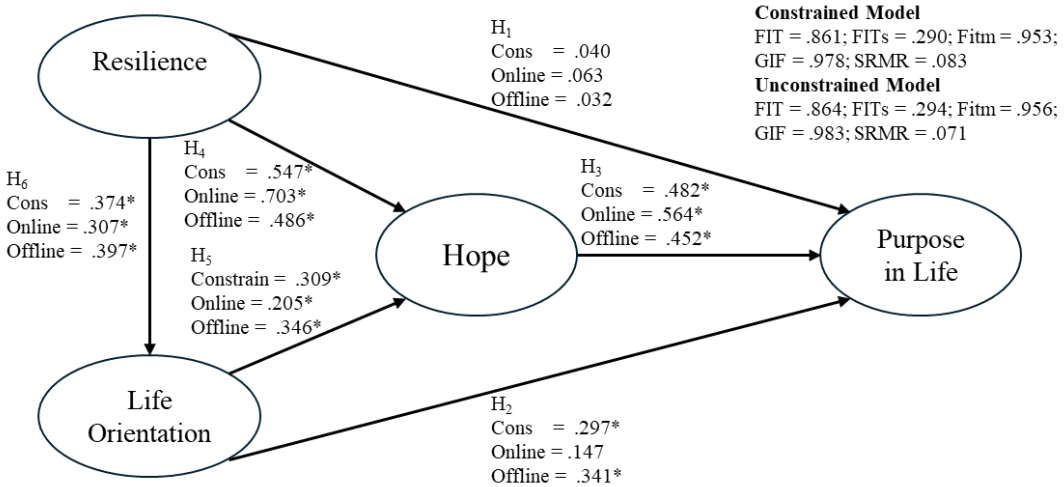
fit. Both models satisfy these criteria, as their GFI values exceed .93 and SRMR values are under .08. However, the model comparison revealed a significant fit difference (FIT difference = .00258, SE = 0.00001, 95% CI [.00255; .00261]) based on 100 bootstrap samples, suggesting that the unconstrained model provides a better fit to the data. This implies that the relationships among the constructs vary between the two work modes, supporting the moderating effect of work mode on the model.

The multigroup analysis provided detailed insights into the relationships across work modes, supporting all six hypotheses. H_1, which posited that resilience positively affects purpose in life, was not directly supported in either work mode (online-related work: β = .063, 95% CI [-.213; .266]; fully offline work: β = .032, 95% CI [-.093; .185]). However, resilience influenced purpose in life indirectly through hope and life orientation, confirming its indirect role. H_2, suggesting that life orientation positively affects purpose in life, was confirmed only in the fully offline work group (β = .341, 95% CI [.229; .474]), but not in the online-related work group (β = .147, 95% CI [-.081; .310]). H_3, which hypothesized that hope positively affects purpose in life, was supported in both work modes, with hope showing a significant direct effect (online-related work: β = .564, 95% CI [.348; .725]; fully offline work: β = .452, 95% CI [.322; .573]).

H_4, predicting that resilience positively affects hope, was supported in both work groups, with a stronger effect in the online-related work group (β = .703, 95% CI [.580; .768]) compared to the fully offline group (β = .486, 95% CI [.376; .580]). H_5, which proposed that life orientation positively affects hope, was also supported in both work modes, though the effect was stronger in the fully offline group (β = .346, 95% CI [.255; .449]) than in the online-related group (β = .205, 95% CI [.085; .347]). Lastly, H_6, hypothesizing that resilience positively affects life orientation, was confirmed in both groups (online-related work: β = .307, 95% CI [.087; .526]; fully offline work: β = .397, 95% CI [.271; .504]) as detailed in Table 2.

The total effects on purpose in life revealed that hope had the strongest effect across both work modes (online-related work: β = .667, 95% CI [.573; .763]; fully offline work: β = .657, 95% CI [.565; .723]), followed by life orientation in the fully offline group (β = .602, 95% CI [.459; .699]) and resilience in the online-related group (β = .547, 95% CI [.428; .657]). These results underscore the critical roles of resilience, life orientation, and hope, in shaping purpose in life, with varying strengths of relationships across different work settings, as presented as Figure 2.

Figure 2 Hypothesis Testing Results



Note. Cons = Constrained model; Online = Online-Related Work (n = 348); Offline = Fully Offline Work (n = 121)

* denotes statistical significance at the .05 level

5. DISCUSSION

This study explored the impact of different work modes, specifically online-related and fully offline, on personal well-being, focusing on the relationships between resilience, life orientation, hope, and purpose in life. The COVID-19 pandemic accelerated the global shift toward remote and hybrid work modes, presenting new challenges for employee well-being, particularly in relation to their sense of purpose, which is essential for mental health, job performance, and life satisfaction (Beckel & Fisher, 2022; Vaziri et al., 2020).

In online-related work, the effect of resilience on purpose in life was fully mediated by life orientation and hope, with only the indirect effect through life orientation being significant. This aligns with prior research indicating that resilience fosters a positive life orientation and supports optimism, especially in challenging environments such as remote work, where isolation and self-management demands are high (Polizzi et al., 2023). On the contrary, for fully offline work, life orientation has direct and indirect effects on purpose in life, indicating partial neutrality. This is consistent with a study showing that personal and cultural interactions in the workplace promote optimism and purpose in life in offline environments (Liang & Cao, 2021). Consistent with Thailand's collectivist work culture, which emphasizes group unity, relationships, and interdependence, employees tend to prefer a collaborative work environment and demonstrate loyalty to their team or organization. In online working environments, employees are required to adapt to using online work tools designed for collaboration, similar to sitting and working together in an offline workplace. In addition, within the workplace context, there is a high-power distance between supervisors and subordinates. Employees may be reluctant to question authority or participate openly in discussions with their supervisors. When having to adjust to working in an online environment, this becomes an even greater obstacle as there is no physical expression between the two parties. This may reduce traditional power signals, causing a feeling of disapproval among supervisors (Buriyameathagul, 2013; Nnroad, 2023). Therefore, the findings from this study indicate that resilience is a basic driver of well-being in online-related work, while resilience and life orientation play significant roles in promoting purpose in life in fully offline environments. The results are partially consistent with the study by Sygit-Kowalkowska et. al. (2022), which collected data in Great Britain, India, Latvia, Lithuania, Norway, Poland, Romania, Serbia, Slovakia, and Vietnam. Their study analyzed the relationship between resilience and working patterns (office-based and telework) and home-work relationships, including whether the relationship was mediated by passion for work. The results found that resilience was revealed to have a positive effect on worker functioning. It can be seen that regardless of the type of work, resilience is important.

According to the findings, resilience and hope are significant predictors of purpose in life in both work environments. However, the effects in online work environments ($\beta = .547$) were slightly higher when compared to fully offline work ($\beta = .453$). Although the gap is not significant, the finding emphasizes the significance of resilience in helping employees manage the significant challenges of remote work, such as loneliness and higher self-management needs (Yang et al., 2022). This shows that resilience is important in both contexts. In fully offline work, life orientation played a more important role ($\beta = .602$) compared to online-related work ($\beta = .410$), highlighting the significance of optimism and goal-directed thinking in environments with greater interpersonal interaction and a stronger workplace culture (Laranjeira & Querido, 2022).

Resilience had a greater effect on hope in the online-related group ($\beta = .703$) compared to the fully offline group ($\beta = .486$), highlighting the reliance on resilience to foster hope in the face of challenges such as isolation and reduced social interaction in online-related work environments (Beckel & Fisher, 2022; Polizzi et al., 2023). In offline environments, structured

support and regular interpersonal interactions may reduce the need for resilience to sustain hope (Becker et al., 2022).

Life orientation, while significantly affecting purpose in life in the fully offline group ($\beta = .341$), had a weaker effect in the online group, where the lack of face-to-face interactions may limit its influence (George et al., 2022). Hope, however, consistently showed a strong positive effect on purpose in life across both work modes, emphasizing its universal importance in driving motivation and long-term goals (Rand & Touza, 2021). Resilience helps in managing isolation and uncertainty, while hope channels this adaptability into goal-setting, particularly in online work settings where it mitigates the isolating effects of online and hybrid work environments (Mokline & Abdallah, 2021).

A notable finding involved hope item 3 ("I do not feel all alone"), where factor loadings differed notably between work modes: .578 for the online-related group and .780 for the fully offline group. This item explained 60.8% ($.780^2 * 100$) of variance in the fully offline group but only 33.4% ($.578^2 * 100$) of variance in the online-related group. This suggests that while loneliness is a key factor in offline settings, where interpersonal interactions are more frequent and important, it may not fully capture hope in online work contexts. Research supports that despite the potential for loneliness, remote workers may maintain high levels of hope through self-management and goal-setting, as resilient coping and optimism help to mitigate feelings of isolation (Yang et al., 2022). This finding highlights that loneliness may not diminish hope as significantly in online environments due to the increased reliance on resilience and self-directed motivation (Becker et al., 2020).

6. CONCLUSION AND RECOMMENDATIONS

The analysis results show that resilience is an important factor in enhancing purpose in life through life orientation and hope as mediators. Work modes significantly influence the relationships among fundamental personal well-being variables. For online-related work, resilience has a stronger effect compared to life orientation. In contrast, in fully offline work, life orientation plays a notable role in enhancing purpose in life. Additionally, in the online-related work group, resilience affects life orientation, and life orientation affects hope, but neither has a direct effect on purpose in life. This indicates a full mediation effect of resilience and life orientation on purpose in life through hope. In the fully offline work group, resilience affects life orientation, and life orientation affects both hope and purpose in life. This indicates that while there is a full mediation effect of resilience on purpose in life via hope, there is only partial mediation for life orientation on purpose in life via hope.

These results suggest that online-related work requires greater attention to resilience due to its strong effect and mediating role. In contrast, fully offline work necessitates concern for both resilience and life orientation, given the stronger effect of life orientation and its partial mediation role. The study further reveals that an item reflecting isolation shows differences in the factor loading for hope between the groups, with notably lower loadings for the online-related work group compared to the fully offline group. This suggests that high isolation in online-related work may not necessarily correspond to lower levels of hope.

6.1 Limitations

One limitation of this study is the imbalance in sample sizes between the online-related work group (n = 348) and the fully offline work group (n = 121). Although Integrated Generalized Structured Component Analysis (IGSCA) accommodates sample imbalance, this imbalance could still influence the robustness of the results for the offline group, given its smaller sample size. The sample imbalance could affect the statistical power and

generalizability of the findings, particularly regarding the interpretation of the results for the fully offline group, such that any generalization should be made with caution. However, the larger online-related work group provides more reliable parameter estimates due to its greater sample size. Since the main objective is to investigate the impact of online work modes on the foundations of personal well-being, the larger sample in the online-related work group is beneficial for addressing the research gap. The results of the parameter estimation for this group remain reliable. The main finding, that resilience plays a vital role in online-related work environments, with full mediation effects of resilience on purpose in life via hope and life orientation, is supported by reliable data.

Another limitation is the time lag in the use of secondary data. While data collection was conducted in December 2022, the data analysis was performed in August 2024. This significant time difference may reduce the relevance of the findings, as the work environment may have rapidly changed during this period. However, to address this, we have integrated recent literature published between 2020 and 2024, ensuring our analysis reflects the latest insights and contextual developments in remote and hybrid work environments. This updated literature helps validate the enduring relevance of our key constructs: resilience, life orientation, hope, and purpose in life, by demonstrating that these well-being factors continue to be significant across various work settings. Furthermore, the data was collected from a broad region across Thailand, targeting individuals from various occupational backgrounds, with careful data collection procedures supported by expert consensus, ensuring high validity and reliability of the data. Additionally, the study carefully controlled for demographic variables such as age, gender, and education level. Moreover, model-based imputation using multiple regression analysis was employed for missing data, offering more accurate estimates than central tendency methods such as mean or median imputation. These approaches reduce the impact of confounding variables and provide more accurate model comparisons in the multigroup analysis results of this study.

Lastly, another limitation is related to the measurement model. Some items had factor loadings lower than the threshold of .70, such as life orientation item 2 (“I always expect things to go my way”) and hope item 6 (“I do not feel scared about my future”). However, the overall psychometric properties of the measurement model were strong. The Average Variance Extracted (AVE), Cronbach’s alpha, and Composite Reliability values all exceeded the threshold values, reflecting internal consistency reliability. Additionally, the HTMT values supported discriminant validity, demonstrating the robustness of the measurement model. The TRAPD model for translation ensured cultural appropriateness. Despite these minor issues, the overall reliability and validity of the constructs were well-maintained, ensuring the quality of the instruments used in the study. Retaining these items allows for a more comprehensive assessment of each construct and aligns with previous studies using the same scales, supporting consistency and comparability across research in this area.

6.2 Practical Implications

The key to promoting purpose in life in online work environments among adults should be promoting resilience. Technology can create supportive online communities to reduce loneliness and provide social support. Meanwhile, team relationships can be strengthened by promoting informal communication through group chats to reduce feelings of isolation, along with the use of virtual team building activities such as online games (Mokline & Abdallah, 2021). The following qualities should be included in building resilience for online work. First, daily virtual check-ins should be scheduled to check in on employee well-being and provide an opportunity for team members to voice their concerns, provide encouragement, and provide emotional support. Second, posting monthly employee accomplishments via email or virtual

shout-outs is a great way to encourage positivity and boost morale. Third, employees can be encouraged to grow in various areas through company-sponsored programs, such as online classes on problem-solving, stress management, time management adaptability, or emotional intelligence, offering access to mindfulness apps or platforms, and meditation. The most effective program format for building resilience is a one-on-one delivery format (e.g., coaching) (Jones et al., 2024; Schug et al., 2021; Vanhove et al., 2016). Finally, organizations should partner with digital mental health services to offer counseling or therapy and provide information on accessing mental health support, while maintaining employee confidentiality.

For a fully offline work environment, promoting learning from failure to build resilience and aligning personal goals to be consistent with occupational goals is a key aspect of having strong purpose in life. Face-to-face activity groups or interactions are important for building resilience and life orientation in fully offline work environments (Surzykiewicz J et al., 2022). First, team meetings and workshops should be used to involve staff in establishing the organization's vision and objectives. Staff members can be encouraged to create their own procedures that support the company's goals and to continuously express how they contribute to the success of the company. Second, the support systems among colleagues and supervisors should be enhanced to aid in stress recovery and foster collective resilience (Hartmann et al., 2020). Third, personalized training in stress management can be offered to encourage coping strategies and a sense of purpose (Liang & Cao, 2021). Additionally, self-reflection activities such as mindfulness practices and journaling should be arranged (Kuntz et al., 2017). Lastly, it is important to encourage involvement in meaningful endeavors, such as CSR initiatives or volunteer opportunities, to boost a sense of purpose by connecting employees' work to a larger societal impact.

6.3 Recommendations for Future Research

For online-related work environments, resilience plays a key role in fundamental personal well-being. Future research should focus on interventions promoting resilience in remote environments. For fully offline work, resilience and optimism are key factors in hope and purpose in life. Future research should focus on creating a culture of learning from failure, with support from colleagues and supervisors. Furthermore, other variables with potential influence over the correlations between these basic factors should be conducted such as social support and work environment. More in-depth information can be provided to help improve guidelines with greater coverage to promote employee well-being.

The value differences in Item 3 on hope ("I don't feel lonely at all") between online and offline work indicate views of loneliness may not fully reflect hope in remote environments. Future research should survey contextual factors with effects on this difference, particularly in the area of self-management roles and online goal setting. Researchers should develop new measuring models that better reflect experiences with hope in online contexts along with surveying how resilience and optimism affect hope in different work contexts in order to develop effective strategies in promoting well-being among employees in remote and offline environments.

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APPENDIX

Table A Reliability and Validity

	Total Sample (n = 469)			Online-Related Work (n = 348)			Fully Offline Work (n = 121)		
Construct	AVE	α	ρ	AVE	α	ρ	AVE	α	ρ
Resilient Coping	.672	.888	.891	.814	.941	.946	.634	.868	.873
Life Orientation	.590	.844	.851	.602	.842	.856	.593	.844	.852
Hope	.691	.966	.967	.730	.970	.972	.687	.965	.966
Purpose in Life	.747	.919	.922	.761	.919	.927	.749	.920	.922

Table B HTMT and VIF

	Total sample (n = 469)		Online-Related Work (n = 348)		Fully Offline Work (n = 121)	
HTMT	Estimate	95% CI	Estimate	95% CI	Estimate	95% CI
RC <-> LO	.374	[.252;.478]	.315	[.081;.501]	.400	[.224;.546]
RC <-> Hope	.670	[.602;.737]	.785	[.651;.874]	.631	[.531;.699]
LO <-> Hope	.475	[.373;.563]	.421	[.213;.557]	.541	[.394;.651]
RC <-> PL	.511	[.423;.590]	.553	[.367;.646]	.455	[.318;.559]
LO <-> PL	.563	[.466;.658]	.414	[.197;.619]	.605	[.503;.690]
Hope <-> PL	.668	[.619;.725]	.691	[.581;.775]	.663	[.579;.724]
VIF						
PL as response variable						
RC	1.787		2.423		1.649	
LO	1.361		1.216		1.421	
Hope	2.087		2.666		1.958	
Hope as response variable						
RC	1.162		1.104		1.187	
LO	1.162		1.104		1.187	

Note. RC = Resilient Coping; LO = Life Orientation; PL = Purpose in Life

Table C Estimates of Weights, Loadings, and Their 95% CI

	Total sample (n = 469)				Online-Related Work (n = 348)				Fully Offline Work (n = 121)			
Indicator	w	CI_w	λ	CI_λ	w	CI_w	λ	CI_λ	w	CI_w	λ	CI_λ
1. Resilient Coping (RC)												
1.1 Item1	.281	[.264;.301]	.760	[.677;.815]	.269	[.255;.288]	.876	[.792;.930]	.285	[.254;.314]	.722	[.631;.813]
1.2 Item2	.304	[.288;.325]	.823	[.788;.856]	.260	[.247;.277]	.847	[.771;.908]	.321	[.298;.350]	.816	[.754;.858]
1.3 Item3	.336	[.308;.347]	.891	[.863;.920]	.287	[.270;.312]	.936	[.903;.974]	.348	[.315;.375]	.879	[.827;.920]
1.3 Item4	.296	[.283;.314]	.800	[.754;.843]	.291	[.274;.317]	.945	[.902;.983]	.299	[.275;.322]	.758	[.686;.828]
2. Life Orientation (LO)												
2.1 Item1	.111	[.057;.149]	.833	[.713;.902]	.388	[.328;.446]	.979	[.865;.967]	.338	[.302;.375]	.800	[.712;.881]
2.2 Item2	.337	[.305;.361]	.630	[.544;.716]	.274	[.216;.321]	.640	[.529;.771]	.263	[.230;.301]	.625	[.505;.710]
2.3 Item3	.265	[.352;.285]	.800	[.735;.852]	.297	[.237;.350]	.714	[.562;.842]	.352	[.321;.395]	.835	[.780;.899]
2.4 Item4	.322	[.295;.352]	.795	[.745;.846]	.317	[.281;.356]	.739	[.631;.871]	.338	[.298;.374]	.803	[.725;.866]
3. Hope												
3.1 Item1	.098	[.084;.093]	.804	[.766;.844]	.094	[.088;.101]	.890	[.823;.934]	.088	[.082;.092]	.784	[.726;.831]
3.2 Item2	.090	[.086;.093]	.809	[.769;.845]	.091	[.085;.099]	.865	[.801;.917]	.089	[.085;.093]	.793	[.734;.839]
3.3 Item3	.081	[.075;.086]	.728	[.663;.786]	.061	[.039;.079]	.578	[.392;.740]	.087	[.081;.092]	.780	[.739;.822]
3.4 Item4	.093	[.088;.097]	.834	[.787;.872]	.095	[.091;.102]	.906	[.867;.946]	.091	[.086;.096]	.813	[.738;.857]
3.5 Item5	.096	[.093;.100]	.862	[.827;.895]	.097	[.091;.103]	.921	[.874;.962]	.095	[.091;.099]	.848	[.738;.857]
3.6 Item6	.072	[.065;.077]	.647	[.569;.712]	.062	[.051;.072]	.589	[.452;.717]	.075	[.065;.082]	.669	[.607;.740]
3.7 Item7	.100	[.096;.104]	.897	[.875;.916]	.095	[.089;.101]	.903	[.858;.948]	.100	[.095;.106]	.897	[.871;.920]
3.8 Item8	.097	[.093;.100]	.870	[.843;.890]	.093	[.087;.101]	.882	[.820;.928]	.098	[.092;.102]	.873	[.844;.904]
3.9 Item9	.094	[.089;.100]	.842	[.801;.876]	.098	[.093;.105]	.930	[.885;.967]	.092	[.085;.097]	.819	[.768;.868]
3.10 Item10	.092	[.087;.096]	.827	[.789;.864]	.100	[.094;.106]	.951	[.922;.975]	.089	[.084;.093]	.792	[.746;.834]
3.11 Item11	.096	[.092;.100]	.859	[.823;.893]	.092	[.085;.099]	.872	[.821;.916]	.096	[.091;.102]	.857	[.814;.890]
3.12 Item12	.100	[.097;.103]	.894	[.878;.916]	.094	[.089;.101]	.891	[.834;.938]	.100	[.096;.107]	.897	[.876;.922]
3.13 Item13	.100	[.096;.104]	.896	[.874;.922]	.087	[.078;.096]	.825	[.719;.912]	.103	[.098;.110]	.919	[.900;.938]
4. Purpose in Life (PL)												
4.1 Item1	.276	[.063;.288]	.826	[.781;.874]	.252	[.216;.278]	.767	[.639;.898]	.281	[.268;.295]	.842	[.810;.878]
4.2 Item2	.285	[.274;.297]	.852	[.811;.893]	.297	[.279;.317]	.904	[.865;.951]	.281	[.268;.294]	.842	[.802;.885]
4.3 Item3	.305	[.292;.323]	.910	[.873;.940]	.293	[.270;.315]	.893	[.829;.938]	.307	[.292;.321]	.917	[.883;.953]
4.3 Item4	.289	[.280;.302]	.866	[.816;.896]	.301	[.277;.324]	.916	[.881;.947]	.286	[.272;.303]	.858	[.786;.898]