

Original Article

Unveiling the Drivers of Work-from-Home Effectiveness: Insights from Lecturers during the COVID-19 Pandemic

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Abstract - This study aims to investigate the determinants of the effectiveness of Work from Home (WfH) during the COVID-19 pandemic, utilizing the Work-family Balance Theory as its theoretical framework. The study encompasses all lecturers employed at two prominent universities in Bali, both being the largest public and private higher education institutions in the province. A total of 150 lecturers were selected for this research using quota sampling. Data collection was conducted through the distribution of questionnaires, and data analysis employed the Structural Equation Model-Partial Least Square (SEM-PLS) technique. The findings demonstrate that personal well-being does not significantly impact work-family conflict, whereas family well-being exhibits a negative and substantial association with work-family conflict. Personal well-being positively influences the effectiveness of WfH, and family well-being similarly positively influences WfH's effectiveness. Furthermore, the effectiveness of WfH is inversely related to work-family conflict. WfH effectiveness fully mediates the relationship between personal well-being and work-family conflict and partially mediates the association between family well-being and work-family conflict. This study sheds light on the complex nature of work-family conflict, which is influenced by various contextual factors. It underscores the significance of personal and family well-being in shaping lecturers' perceptions of WfH effectiveness.

Keywords - Well-being, Work-family balance theory, Work from home, Work-family conflict, Higher education.

1. Introduction

The practice of working from home, commonly abbreviated as WfH, has seen a significant rise in adoption across the global workforce. This trend can be attributed to several key factors. Firstly, the rapid advancement of information technology has led to the development of various long-distance communication applications, including video conferencing, which facilitates remote face-to-face interactions with a considerable number of participants [1]. Hence, it is evident that WfH has become intricately intertwined with modern society [2]. Secondly, workplaces increasingly offer greater flexibility, granting employees the autonomy to manage their work location, whether at home or in the office [3]. Lastly, the outbreak of pandemics or epidemics, exemplified by the global spread of diseases like COVID-19 over the past two years, has further driven the adoption of WfH [4]. In response, organizations and companies worldwide have instituted policies and regulations that limit in-person offline interactions in accordance with the directives of their respective governments.

Pivotal in the teaching-learning process at higher education institutions, Lecturers have found themselves navigating regulations necessitating remote learning due to the COVID-19 pandemic [5]. While distance learning is not new, the pandemic has significantly intensified its prevalence [6]. One response to this challenge has been adopting remote work from home to facilitate various academic tasks. This shift poses considerable challenges in maintaining educational quality and ensuring students achieve predetermined competency targets [7]. One primary challenge in this transition is adapting traditional, in-person teaching methods to online or hybrid formats [8].

Moreover, fostering student engagement and progression within the WfH context presents its own set of hurdles. The absence of face-to-face interactions necessitates innovative approaches to maintain student involvement and provide necessary support. Strategies may encompass offering more detailed feedback, facilitating online consultations, or implementing digital collaboration tools.



The adoption of WfH as a strategy to strike a balance between fulfilling work and family roles has been a subject of discussion among researchers [2], [3], [9]. Empirical evidence suggests that this work arrangement has the potential to alleviate the intensity of work-family conflict, particularly among lecturers in higher education institutions. Findings from empirical studies demonstrate that WfH can facilitate employees in harmonizing their responsibilities in both work and family domains. Engaging in work-related tasks from home allows individuals to concurrently address responsibilities in other facets of life. Nevertheless, it's important to acknowledge the possibility that simultaneous engagement in different roles can potentially lead to conflicts between these two domains.

Individuals inherently possess varying degrees of control over their work and non-work domains [10]. The effectiveness of WfH practices is contingent on individuals perceiving tangible benefits arising from their use. This is because numerous factors contribute to the effectiveness of WfH practices. Past research has established that one of the discernible benefits of WfH is its positive impact on its users' well-being, a critical determinant of its effectiveness. In an era where individuals grapple with intensified work demands and greater challenges in balancing their professional and familial responsibilities, they are more prone to experience heightened role conflicts compared to previous periods [11]. Therefore, there is an imperative requirement to undertake a comprehensive research study that delves into the effectiveness of WfH practices. This investigation should focus primarily on the benefits accrued from WfH, specifically personal well-being and family well-being, and their impact on the phenomenon of work-family conflict.

Numerous studies have delved into the realm of WfH and its various determinants and consequences [3], [12]–[14]. However, research concerning the effectiveness of WfH among lecturers, particularly concerning factors influencing the quality of education, especially in the context of higher education institutions, remains conspicuously scarce. Research focused on the effectiveness of work-from-home (WfH) among lecturers, particularly about its impact on the quality of education within higher education institutions, has been notably deficient. While numerous studies have delved into the broader realm of WfH and its various determinants and consequences, there is a conspicuous gap when it comes to the educational context.

Lecturers play a pivotal role in shaping the academic experiences of students. Their teaching quality and ability to engage and educate students directly influence the learning outcomes [15], [16]. In the context of higher education, where students are often seeking in-depth knowledge and critical thinking skills, the role of lecturers becomes even more pronounced. Furthermore, higher education institutions often compete based on the quality of education they provide. The

ability to attract and retain students, faculty, and research opportunities is intricately tied to the institution's reputation for delivering high-quality education. Effective WfH practices among lecturers can impact their ability to provide quality education, which, in turn, can affect an institution's competitive advantage [15], [17].

It's paramount to recognize that the effectiveness of knowledge transfer, whether conducted remotely from home or in traditional work or campus settings, invariably influences the quality of learning outcomes. This bears significance as the quality of learning plays a pivotal role in ensuring educational quality, a critical determinant of a higher education institution's competitive advantage. This research endeavor aims to make a substantial contribution by informing policies to enhance the effectiveness of WfH and mitigate its potential adverse effects on the work-family life of lecturers. It's crucial to underscore that the practice of WfH is expected to endure and potentially proliferate in the future, serving as a viable alternative to conventional work arrangements with substantial advantages for employees. This trajectory is projected to persist beyond the confines imposed by the pandemic, even when workplace interactions are no longer subject to restrictions.

2. Literature Review

2.1. Theoretical Framework

This study draws upon two foundational theories: Role Theory [18] and Work-Family Balance Theory [19]. Role theory posits that when inconsistent behavior, as a manifestation of role conflict, arises, individuals are inclined to exhibit attitudes and behaviors that are less effective compared to scenarios where their assigned roles do not conflict [20]. Opting for adopting WfH is believed to diminish the intensity of role conflict due to its perceived benefits, particularly in terms of well-being. In this research, well-being is assessed through two dimensions: personal well-being and family well-being.

2.2. Work from Home Effectiveness, Personal Well-being, Family Well-being and Work-Family Conflict

Work from home refers to the practice of conducting work activities outside the traditional workplace, typically periodically, which may involve working from home for one or more days per week [21]. Various metrics are employed to assess WfH, including the relative frequency of working from home over the past 12 months. Working from home represents a facet of workplace flexibility, particularly concerning location and time management. Such work arrangements are acknowledged for their potential to aid employees in effectively navigating and balancing their roles within work and family spheres [10].

Two perspectives on the implications of WfH in an employee's life merit consideration [2], [22]. Firstly, WfH can mitigate work-family conflict by virtue of the control it affords

employees over their work schedules. It enables them to select their preferred work location, thereby conserving time and energy that would typically be expended in a formal workplace or office setting. Work-family conflict manifests as a form of inter-role conflict, where role demands from both work and family domains are at odds with each other [23]. Conversely, the second viewpoint posits that WfH can potentially exacerbate work-family conflict. Engaging in tasks within both work and non-work realms can encroach upon each other, particularly when both roles necessitate the same resources [24].

However, the impact of WfH on work-family conflict is contingent on its perceived effectiveness; when WfH is deemed effective, it tends to alleviate the intensity of work-family conflict. This perception of effectiveness arises when WfH provides flexibility, reduces stress, and enhances overall well-being. In such cases, employees find that WfH allows them to balance work and family commitments more seamlessly, giving them greater control over their work hours and the ability to be present for family needs when necessary [25]. Consequently, the positive perception of WfH contributes to a reduced sense of conflict between work and family responsibilities, making it a valuable tool in achieving work-family balance.

Researchers have highlighted numerous benefits associated with the adoption of WfH. These advantages encompass enhanced work flexibility [3], the cultivation of positive attitudes and workplace behaviors [9], the promotion of a family-friendly organizational culture [20], and the overall well-being of employees [26]. Employee well-being, stemming from implementing WfH, can manifest in various forms. In particular, recent research has concentrated on the well-being of employees induced by WfH and has categorized it into two distinct dimensions: personal well-being and family well-being. The profound impact of technological advancements and progress on work-related well-being is noteworthy, as they afford employees greater access to technology and automation [27].

Rationally, employees who view WfH as highly beneficial are likely to experience higher levels of both personal and family well-being than those who view WfH less favorably. Furthermore, increased perceptions of well-being in personal and family domains are associated with higher perceived effectiveness of WfH. Additionally, individuals experiencing personal well-being and strong family bonds are expected to encounter reduced levels of work-family conflict [2], [10], [22].

The concern surrounding the effectiveness of WfH practices for employees, particularly in relation to their well-being and conflict management, has garnered significant attention in the realm of human resource management research. This heightened focus corresponds with the

increasing prevalence of WfH implementation [28]. Given that personal and family well-being can potentially influence work-family conflict and the expectation that WfH effectiveness can impact work-family conflict, there is a premise that WfH effectiveness may serve as a mediating variable in the relationship between personal and family well-being and work-family conflict. Based on the provided description, the conceptual model and research hypotheses are formulated as follows:

- H₁: personal well-being has a negative and significant effect on work-family conflict.
- H₂: family well-being has a negative and significant effect on work-family conflict.
- H₃: personal well-being has a positive and significant effect on work effectiveness from home.
- H₄: family well-being has a positive and significant effect on the effectiveness of working from home.
- H₅: the effectiveness of working from home has a negative and significant effect on work-family conflict.
- H₆: work from home effectiveness mediates the effect of personal well-being on work-family conflict.
- H₇: work from home effectiveness mediates the effect of family well-being on work-family conflict.

3. Materials and Methods

This research was conducted at two prominent universities in the Province of Bali, specifically Udayana University in Denpasar and Mahasaraswati University in Denpasar. These universities were chosen due to their status as the largest public and private institutions, respectively, based on the number of lecturers. As of April 2021, according to data from LLDikti Region VIII, Udayana University stands as the top-ranking state university in Bali Province with the highest number of lecturers, totaling 1,629 individuals. Conversely, among the 57 private universities in Bali Province, Mahasaraswati University holds the foremost position with the largest number of lecturers, totaling 429 individuals.

In this study, a total of 150 respondents were selected as the sample size. The questionnaire was distributed through Google Forms, resulting in 150 respondents providing answers. Out of these, 88 respondents were affiliated with Udayana University, while 62 were associated with Mahasaraswati University. The selection of the sample was conducted under purposive sampling based on specific criteria: 1) Marital Status: Respondents were required to have been married for at least one year [29], 2) WfH Practice: Respondents were expected to practice work from home once a week at the least [21].

Data collection for this study encompassed the distribution of a structured questionnaire to lecturers at the two designated universities. The questionnaire was designed to align with key research variables, including personal well-being, family well-being, WfH effectiveness, and work-family

conflict. The process began with developing a comprehensive questionnaire intended for 335 targeted respondents. Formal permissions were obtained from university authorities to conduct the research. Five trained enumerators were deployed to each university to ensure consistent and accurate data collection. Their training included a detailed understanding of the questionnaire’s statement items. This systematic, multi-stage data collection approach aimed to gather reliable information for a robust analysis of the research variables. The analytical approach employed in this study is the Structural Equation Model-Partial Least Square (SEM-PLS), facilitated by SmartPLS version 3.2.7 software.

4. Results and Discussion

4.1. Distribution of Respondents

Table 1 displays the descriptive analysis of respondents with respect to their age, gender, job tenure, and work-from-home frequency in this study.

Table 1. Distribution of respondents

Characteristic	Classification	Percentage (%)
Age (in years)	≤29	1.33
	30-34	18.67
	35-39	16.00
	40-44	17.33
	45-49	6.00
	50-54	9.33
	55-59	14.67
	60-64	12.00
	≥65	4.67
Total	150	100.00
Gender	Male	44.67
	Female	55.33
Total	150	100.00
Job Tenure (in a year)	<5	8.67
	5-9	19.33
	10-14	17.33
	15-19	11.34
	20-24	6.00
	25-29	11.34
	30-34	10.00
	35-39	14.66
	≥40	1.33
Total	150	100.00
WfH Frequency (times/week)	1	3.33
	2-3	18.67
	>3	78.00
Total	150	100.00

Table 1 shows that the respondents in this study exhibit diverse characteristics. Regarding age, the age groups of the respondents range from 30 to 34 years old in the majority. Female respondents outnumber male respondents. In terms of work experience, respondents with tenure ranging from five to nine years are dominant. The frequency of working from home

also varies; 78 percent of respondents have worked from home more than three times a week. This variation in respondent characteristics will serve as the foundation for analyzing the impact of certain factors on the research topic under investigation.

4.2. Evaluation of the Measurement Model/Router Model

The measurement model was rigorously evaluated to gauge the validity and reliability of indicators associated with each research variable, including family well-being, personal well-being, WfH effectiveness, work-family conflict, and family-work conflict. This evaluation considered key criteria such as convergent validity, discriminant validity, composite reliability, and Cronbach’s Alpha. Convergent validity analysis revealed that all indicators related to the research variables are valid, as indicated by outer loading coefficients exceeding 0.50. Discriminant validity was ensured by comparing the square root of the variance extracted (\sqrt{AVE}) for each research variable with the correlations between them, with AVE values exceeding 0.5 and the square root of AVE surpassing the inter-variable correlations. Moreover, composite reliability and Cronbach’s Alpha measurements indicated strong inter-block indicator reliability, with values exceeding 0.70 for all research variables. Therefore, based on this comprehensive measurement model evaluation, it is confirmed that each indicator is both valid and reliable.

4.3. Evaluation of the Structural Model/Inner Model

The evaluation of the structural model is conducted to elucidate the overall goodness and feasibility of the research model, starting from the formation of research variables. This evaluation hinges on several key metrics, including the value of R-square (R^2), predictive Q-square (Q^2), and Goodness of Fit (GoF). These metrics collectively provide insights into the robustness and explanatory power of the research model, shedding light on its effectiveness in elucidating the relationships among the variables under investigation.

Table 2. R-Square Variables of Personal well-being, Family well-being, Work-Family Conflict, and Work-Family Conflict

Variable	R-Square	Q-Square	GoF
WfH effectiveness [Z]	0.455	0.621	0.247
Family-work conflict [Y2]	0.822		
General Work-family conflict [Y]	0.305		
Work-family conflict [Y1]	0.851		

Table 2 presents the R-Square (R^2) values for the endogenous variables. The R-square value for work-family conflict is 0.851, indicating that 85.1 percent of the variance in work-family conflict can be attributed to the influence of personal well-being, family well-being, and WfH

effectiveness. The remaining variance is influenced by other unaccounted factors. The Q-square predictive relevance (Q^2) is employed to assess the validity of the predictions generated by the research model, with scores ranging from 0 to 1. The Q^2 calculation yields a value of 0.621, implying that a strong explanatory power, accounting for 62.12 percent, exists within the research model regarding the relationships between the variables. The remaining 37.88 percent of the relationships are influenced by external variables not considered in the research model. In terms of the Goodness of Fit (GoF), which serves as a criterion for gauging the precision of the research model, scores range from 0 to 1. The calculated GoF value of 0.24696 falls within the moderate range, indicating that the research model exhibits a moderate level of accuracy in explaining the relationships among the variables.

4.4. Hypothesis Testing

The hypothesis testing in this study encompassed the examination of five direct effects and two indirect effects.

4.4.1. Direct Effect Testing

The outcomes of the direct effect test are displayed in Table 3.

Table 3. Direct effect of research variables

Relationship of Variables	Direct coefficient	t-statistic	Description
Personal wellbeing→Work-family conflict	-0.087	0.692	Not significant
Family wellbeing→Work-family conflict	-0.289	2.525	Significant
Personal wellbeing→ WfH effectiveness	0.405	4.447	Significant
Family wellbeing→ WfH effectiveness	0.322	3.338	Significant
WfH effectiveness → Work-family conflict	-0.250	2.165	Significant

The direct influence hypothesis test results, as presented in Table 3, reveal that one hypothesis does not exhibit statistical significance out of the five direct influence hypotheses tested. Specifically, the hypothesis asserting that personal well-being has no significant effect on work-family conflict is not supported. Conversely, the other four hypotheses are substantiated. Notably, personal well-being is found to exert a negative and statistically significant impact on work-family conflict, as evidenced by a path coefficient of -0.087 with a t-statistic of 0.692, which is less than the threshold value of 1.96 for statistical significance. Consequently, it can be concluded that the empirical findings

do not support Hypothesis 1, postulating that personal well-being has a negative and significant effect on work-family conflict among lecturers at public and private universities in Bali.

The direct influence hypothesis test results displayed in Table 3 demonstrate that family well-being exerts a significant effect on work-family conflict. This is evident from the path coefficient of -0.289, accompanied by a t-statistic value of 2.525, which surpasses the threshold of 1.96 for statistical significance. Consequently, it can be concluded that Hypothesis 2, which posits that family well-being has a negative and significant impact on work-family conflict among lecturers at public and private universities in Bali, is supported. In essence, the empirical evidence substantiates that family well-being does indeed have a negative and significant influence on work-family conflict for these lecturers.

The direct effect hypothesis test results presented in Table 3 indicate that personal well-being significantly influences the effectiveness of WfH. This is evident from the path coefficient of 0.405, coupled with a t-statistic value of 4.447, which exceeds the threshold of 1.96 for statistical significance. Consequently, it can be affirmed that Hypothesis 3, asserting that personal well-being has a positive and significant effect on the effectiveness of WfH among lecturers at public and private universities in Bali, is supported. This implies that personal well-being indeed contributes positively and significantly to the effectiveness of WfH for these lecturers.

The direct effect hypothesis test results, as presented in Table 3, reveal that family well-being significantly impacts the effectiveness of WfH. This is evident from the path coefficient of 0.322 and a t-statistic value of 3.338, surpassing the threshold of 1.96 for statistical significance. Therefore, it can be affirmed that Hypothesis 4, which posits that family well-being has a positive and significant effect on the effectiveness of WfH among lecturers at public and private universities in Bali, is supported. This implies that family well-being indeed has a positive and significant influence on the effectiveness of WfH for these lecturers.

The direct effect hypothesis test results displayed in Table 3 demonstrate that the effectiveness of WfH significantly influences work-family conflict. This is evident from the path coefficient of -0.250 and a t-statistic value of 2.165, which exceeds the threshold of 1.96 for statistical significance.

Consequently, it can be affirmed that Hypothesis 5, which posits that the effectiveness of WfH has a significant negative effect on work-family conflict among lecturers at public and private universities in Bali, is supported. In essence, the empirical findings confirm that the effectiveness of WfH does indeed have a negative and significant impact on work-family conflict for these lecturers.

4.4.2. Indirect Effect Testing

The analysis outcomes for each mediation role test are presented in Table 4.

Table 4. Indirect effect test results

Relationship of Variables	Direct coef.	t-statistic	Description
Personal well-being → WfH effectiveness → WFC	-0.231	2.165	significant
Family well-being → WfH effectiveness → WFC	-0.266	2.488	significant

The results of testing the indirect effect hypotheses presented in Table 4 indicate that the effectiveness of WfH serves as a full mediator for the effect of personal well-being

on work-family conflict, as evidenced by a path coefficient of -0.101 and a t-statistic value of 2.165, which exceeds the threshold of 1.96. Therefore, Hypothesis 6, which posits that the effectiveness of WfH mediates the relationship between personal well-being and work-family conflict, is supported. The type of mediation is indirect mediation.

Additionally, Table 4 reveals that the effectiveness of WfH partially mediates the effect of family well-being on work-family conflict, with a path coefficient of -0.266 and a t-statistic value of 2.488, surpassing the threshold of 1.96. Thus, Hypothesis 7, which postulates that the effectiveness of WfH mediates the connection between family well-being and work-family conflict, is supported. The type of mediation occurred in competitive mediation. The structural model of the research can be seen in Figure 1 below.

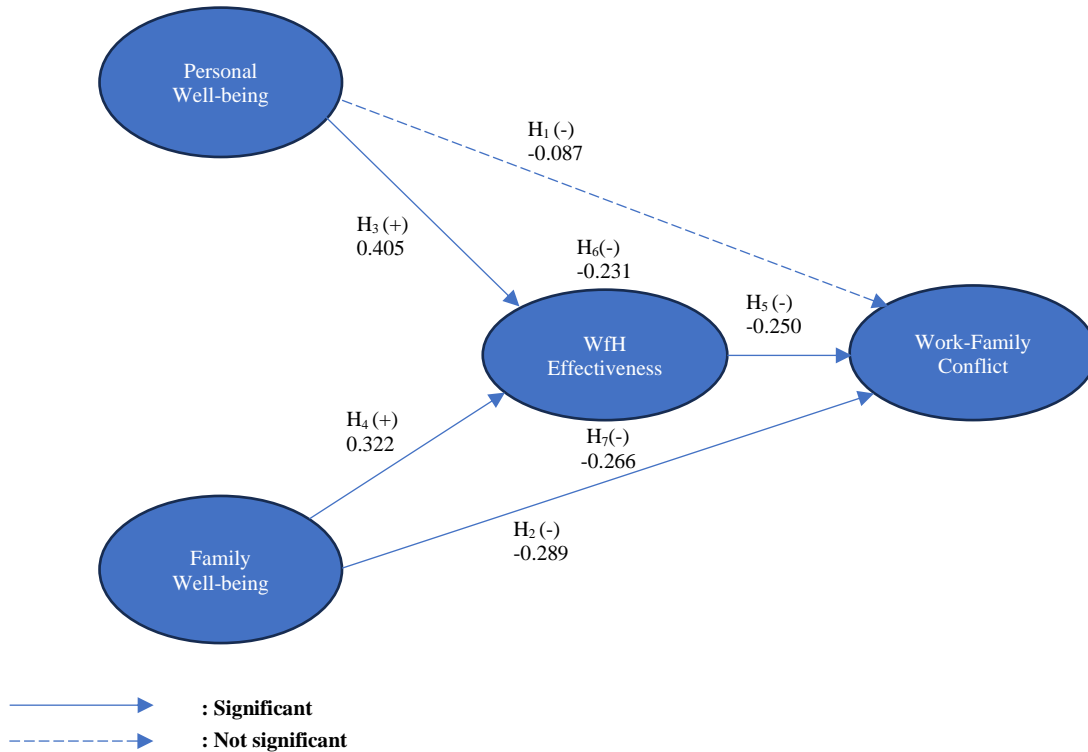


Fig. 1 Research structural model (PLS analysis results)

4.5. Discussion

4.5.1. The Influence of Personal Well-being on Work-Family Conflict

The findings from the hypothesis testing regarding the impact of personal well-being on work-family conflict among lecturers reveal that personal well-being does not exert a significant effect on work-family conflict. In other words, lecturers who report high levels of personal well-being do not encounter significantly greater work-family conflict compared to those with lower levels of personal well-being. These outcomes suggest that the level of personal well-being among lecturers, as reflected in their responses to the survey

statements, is not potent enough to influence the inter-role conflicts they experience. This aligns with the average score for personal well-being, which falls within the 'adequate' category.

It appears that even though activities related to The Three Pillars of Higher Education (TPHE) carried out under the WfH arrangement enable lecturers to reduce stress, allocate more time for rest, and engage in exercise or other pursuits, these conditions do not significantly reduce the intensity of the conflict between their professional and domestic roles experienced by the respondents.

The study's findings reveal that the flexibility offered by online work activities considered a form of workplace flexibility, does not significantly impact balancing the roles associated with work responsibilities and family responsibilities. This outcome contradicts the previous assertion, suggesting that online work would increase personal well-being, allowing individuals to better manage perceived role conflicts [10]. In other words, the implementation of WfH, which was expected to enhance personal well-being, is not supported by the findings of this study.

The level of personal well-being experienced by individuals when conducting online work activities may be highly dependent on each person's stress management methods and their ability to allocate time effectively among various life domains [1], [27]. Consequently, personal well-being resulting from the flexibility in work arrangements does not seem to translate into a reduction in work-family conflict experienced by lecturers in this study [30]. In summary, this study's results concerning the impact of personal well-being on inter-role conflict do not align with the outcomes of previous research.

4.5.2. The effect of family well-being on work-family conflict

The analysis of the impact of family well-being on work-family conflict reveals significant negative results. This implies that lecturers who achieve greater family well-being as a result of engaging in TPHE activities through WfH are more adept at reducing conflicts between their work and domestic roles. In essence, as the level of family well-being achieved increases, the level of conflict between their public and domestic roles decreases. This suggests a strong indication that a higher level of family well-being has a notable impact on reducing role conflicts, underscoring that family well-being, as a result of engaging in TPHE activities via WfH, has a significant effect on managing work-family conflicts.

If the implementation of TPHE activities by lecturers indeed contributes to the reduction of work-family conflict or an improvement in work-family balance, it suggests that the conflict between different roles can be effectively managed. This aligns with the ideas presented in previous research, which propose that when the utilization of activities through WfH is high, individuals gain increased access to information and technology, thereby influencing their behaviors both at work and within their families [9], [27]. The positive impact on family well-being resulting from implementing WfH can be reflected in an enhanced quality of life and improved relationships with family members [13]. Quality of life in the family context is closely related to an individual's perception of inter-role conflict [20]. For example, suppose an individual perceives that clear life goals, well-defined expectations, and specific standards characterize their quality of life. In that case, they are more likely to experience greater closeness with their family.

4.5.3. The Influence of Personal Well-Being on the Effectiveness of Work from Home

The findings from hypothesis testing reveal a statistically significant positive relationship between personal well-being and the effectiveness of WfH. This indicates that lecturers with higher levels of personal well-being tend to perceive WfH as more effective for carrying out TPHE activities. In other words, individuals experiencing greater personal well-being are more inclined to view the implementation of TPHE activities through WfH as an effective approach. These outcomes are consistent with the findings of a prior study, which highlighted that individuals who perceive their work tasks as meaningful are more likely to regard WfH as effective [28].

When lecturers experience a sense of personal well-being due to their involvement in WfH activities, it tends to reduce their stress levels. It enhances their ability to concentrate effectively on their work. This, in turn, leads to increased work efficiency, and they perceive the implementation of WfH as effective. Furthermore, the effectiveness of WfH, particularly the ability to allocate more time for work-related tasks, is significantly influenced by an individual's personal well-being, especially in terms of lower work-related stress levels [31]. Previous research has revealed that the variance in WFH effectiveness can be attributed to three independent variables: personal and family well-being and resource and environmental constraints [3]. Predominantly, the most influential factor on work-from-home effectiveness is personal and family well-being, yielding a significant positive effect. Meanwhile, environmental constraints exert a moderately negative impact, and resource constraints, though relatively smaller, maintain statistical significance.

4.5.4. The Effect of Work from Home Effectiveness on Work-Family Conflict

The results of hypothesis testing concerning the impact of WfH effectiveness on work-family conflict support the proposed hypothesis, showing negative and significant results. Lecturers who perceive their TPHE activities' implementation through WfH as effective tend to experience reduced work-family conflict. The more benefits they perceive from online activities, the lower the conflict between their roles in the work and family domains tends to be. These findings imply that when lecturers perceive their TPHE online responsibilities as manageable, the likelihood of experiencing interference between their work and domestic duties decreases.

Similarly, when the effectiveness of WfH activities is perceived as high, respondents feel that the time allocated for office responsibilities doesn't interfere with their family obligations. Family activities are not neglected when lecturers fulfill their work-related duties through TPHE. These study findings align with previous research that suggested WfH can reduce work-family conflict because employees have greater

control over their work schedule, can choose their work location according to their preferences, and save time and energy compared to working in a traditional office setting [3], [32]. Work-family conflict implies a tension between work responsibilities and the family domain [23]. A different study discovered that employees who work from home experience higher levels of family-work conflict compared to those who work in persistent locations. [33]

4.5.5. The Mediating Role of WfH Effectiveness on the Influence of Personal Well-being and Family Well-being on Work-Family Conflict

The results of hypothesis testing indicate that the effectiveness of WfH significantly mediates the relationship between personal well-being and work-family conflict. This mediation is categorized as full mediation, indicating that personal well-being does not directly impact work-family conflict but rather influences it indirectly through the effectiveness of WfH. When respondents experience a high level of personal well-being due to engaging in TPHE activities via WfH, they tend to perceive these online activities as effective. Consequently, this perception leads to a reduction in their work-family conflict. In other words, improving work-family conflict through personal well-being primarily relies on enhancing the effectiveness of WfH. For instance, if the decrease in work-related stress due to TPHE activities conducted through WfH results in a heightened perception of WfH effectiveness among lecturers, it subsequently contributes to a reduction in the intensity of work-family conflict.

The hypothesis testing results indicate that the effectiveness of WfH significantly mediates the relationship between family well-being and work-family conflict. This mediation is classified as competitive mediation, signifying that family well-being can influence role conflict both directly and indirectly through the effectiveness of WfH. Competitive mediation arises because the direct and indirect effects are significant but exhibit negative associations. Elevated levels of family well-being contribute to increased WfH effectiveness, subsequently resulting in decreased work-family conflict [34], [35]. If respondents experience a high level of family welfare due to implementing TPHE activities through WfH, they will likely perceive these online activities as effective.

Additionally, family well-being can directly impact the levels of work-family conflict. However, the effectiveness of WfH can further contribute to reducing perceived work-family conflict. In this case, the reduction in work-family conflict resulting from family well-being does not necessarily depend on an increase in the effectiveness of WfH.

The improved quality of life and strengthened family relationships resulting from implementing TPHE activities through WfH can lead to an increased perception of WfH's

effectiveness among lecturers. This heightened effectiveness can subsequently contribute to a further reduction in the intensity of work-family conflict [24], [28]. Given that personal and family well-being are factors that can negatively influence work-family conflict and WfH effectiveness is believed to impact work-family conflict, it is reasonable to consider WfH effectiveness as a substantial mediator in the relationship between personal and family well-being and work-family conflict.

The noteworthy findings of this study align with the theoretical framework that underpins it, which includes Role Theory as the primary reference and the theory of Work-Family Balance as a supporting concept. Role Theory posits that conflicting roles can lead to less effective attitudes and behaviors [20]. The implementation of WfH, as supported by this study, reduces role conflict and is associated with increased well-being, encompassing both personal and family well-being [36]. This demonstrates a positive relationship between these theories and the empirical results obtained in the study. The research outcomes align harmoniously with the principles of role theory and work-family balance theory. These findings affirm that achieving a work-family balance can mitigate role conflicts, improve overall well-being, and subsequently enhance job performance [37]. The study underscores the significance of both personal and family well-being in contributing to the effectiveness of working from home. This research makes a valuable addition to the existing body of literature on work-family balance and role theory by proposing empirical support for the benefits of WfH in achieving work-family balance, mitigating role conflicts, and amplifying WfH effectiveness. The WfH arrangement enables seamless transitions between different roles, whether work-related or family-related, enabling individuals to fulfill role-related expectations more efficiently compared to traditional office work. This ease of role-switching not only enhances personal and family well-being but also positively impacts WfH effectiveness, as observed in this study.

5. Conclusion

The findings of this study have aligned with the constructed research model, providing valuable insights into the complex dynamics of work-family conflict. This study's theoretical implications are noteworthy, highlighting the multifaceted nature of work-family conflict and introducing a novel model incorporating work-from-home effectiveness. Furthermore, this research represents an integration of previous models, adapting them to the unique context of the COVID-19 pandemic. In essence, this study offers a fresh perspective on the intricate interplay between personal well-being, family well-being, WfH effectiveness, and work-family conflict, making it a pertinent contribution to the evolving field of work-family study.

The study's findings reveal that personal well-being, resulting from implementing online TPHE activities, has no

significant effect on the perceived intensity of work-family conflict among lecturers at public and private universities in Bali. In other words, lecturers who experience a high level of personal well-being due to online TPHE activities do not necessarily encounter lower levels of work-family conflict. This insight suggests that other factors or dynamics might be more influential in shaping the work-family conflict experienced by these lecturers, highlighting the complexity of this relationship in the context of online teaching and responsibilities.

The study's results demonstrate that family well-being significantly impacts work-family conflict among lecturers at public and private universities in Bali. When lecturers perceive that working from home activities enhances their work-family balance and quality of life or strengthens their family relationships, the intensity of work-family conflict decreases. In essence, this suggests that fostering family well-being through effective implementation of WfH practices can be an effective strategy for reducing work-family conflict among lecturers in this context.

The study reveals that personal well-being has a positive and significant impact on the effectiveness of working from home among lecturers at public and private universities in Bali. When lecturers perceive that work-from-home activities reduce work stress, provide more relaxation time, or allow for other activities, they are more likely to consider the online implementation of TPHE duties and responsibilities as effective. This suggests that promoting personal well-being can enhance the perceived effectiveness of WfH practices in this context.

The study demonstrates that family well-being positively and significantly influences the effectiveness of working from home among lecturers at public and private universities in Bali. When lecturers perceive that work-from-home activities improve work-family balance, enhance their quality of life, or facilitate better relationships with family members, they are more likely to consider the effective online implementation of TPHE duties and responsibilities. This highlights the importance of family well-being in enhancing the perceived effectiveness of WfH practices in this context.

The study reveals that WfH effectiveness fully mediates the relationship between personal well-being and work-family conflict among lecturers at public and private universities in Bali. In other words, personal well-being alone does not directly impact the reduction of work-family conflict in this context. Instead, its influence on reducing work-family

conflict occurs through the perceived effectiveness of WfH practices. Lecturers who experience high personal well-being are more likely to view WfH as effective, and this effectiveness, in turn, leads to a reduction in their perceived work-family conflict.

The study indicates that the effectiveness of WfH partially mediates the relationship between family welfare and work-family conflict among public and private university lecturers in Bali. This suggests that family welfare influences work-family conflict both directly and indirectly through the perceived effectiveness of WfH. In other words, lecturers who experience higher family welfare may have lower work-family conflict. Part of this effect is channeled through their perception of WfH as an effective way to manage their work and family responsibilities.

Based on the analysis and discussion findings, the following recommendations are offered to lecturers in both public and private higher education institutions. Lecturers should focus on stress management when conducting TPHE activities online to enhance the effectiveness of these tasks carried out via WfH. Additionally, they should strive to enhance their quality of life, which can be achieved through increased social interactions and physical activities. The findings of this study suggest that the effectiveness of WfH statistically mediates the impact of both personal well-being and family well-being on work-family conflict. However, these results lack robust support, underscoring the need for further research. Future investigations could benefit from incorporating focus-group discussions or employing a qualitative approach to uncover additional factors contributing to the effectiveness of WfH.

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References

- [1] Maria Charalampous et al., "Systematically Reviewing Remote e-Workers' Well-Being at Work: A Multidimensional Approach," *European Journal of Work and Organizational Psychology*, vol. 28, no. 1, pp. 51–73, 2019. [[CrossRef](#)] [[Google Scholar](#)] [[Publisher Link](#)]

- [2] Tanja van der Lippe, and Zoltán Lippényi, “Beyond Formal Access: Organizational Context, Working from Home, and Work–Family Conflict of Men and Women in European Workplaces,” *Social Indicators Research*, vol. 151, no. 2, pp. 383–402, 2020. [[CrossRef](#)] [[Google Scholar](#)] [[Publisher Link](#)]
- [3] Ada Hiu Kan Wong, Joyce Oiwan Cheung, and Ziguang Chen, “Promoting effectiveness of ‘Working from Home’: Findings from Hong Kong Working Population under COVID-19,” *Asian Education and Development Studies*, vol. 10, no. 2, pp. 210–228, 2021. [[CrossRef](#)] [[Google Scholar](#)] [[Publisher Link](#)]
- [4] Amit Kramer, and Karen Z. Kramer, “The Potential Impact of the Covid-19 Pandemic on Occupational Status, Work from Home, and Occupational Mobility,” *Journal of Vocational Behavior*, vol. 119, 2020. [[CrossRef](#)] [[Google Scholar](#)] [[Publisher Link](#)]
- [5] Deirdre Anderson, and Clare Kelliher, “Enforced Remote Working and the Work-Life Interface during Lockdown,” *Gend Manag*, vol. 35, no. 7–8, pp. 677–683, 2020. [[CrossRef](#)] [[Google Scholar](#)] [[Publisher Link](#)]
- [6] Samantha L. Schneider, and Martha Laurin Council, “Distance Learning in the Era of COVID-19,” *Archives of Dermatological Research*, vol. 313, no. 5, pp. 389–390, 2021. [[CrossRef](#)] [[Google Scholar](#)] [[Publisher Link](#)]
- [7] Nguyen Vinh Luan, and Nguyen Minh Ha, “The Impact of Employer Attractiveness on Employee Engagement: A Study in Vietnam,” *International Journal of Economics and Management*, vol. 17, no. 1, pp. 61–76, 2023. [[CrossRef](#)] [[Google Scholar](#)] [[Publisher Link](#)]
- [8] Sarika Sharma, Jatinderkumar R. Saini, and Shreya Virani, “Technology-Enabled Work from Home During COVID-19 Pandemic: A Qualitative Study of Employee Experiences and Effectiveness,” *Journal of Workplace Behavioral Health*, vol. 37, no. 4, pp. 229–252, 2022. [[CrossRef](#)] [[Google Scholar](#)] [[Publisher Link](#)]
- [9] Tri Wulida Afrianty, I. Gusti Lanang Suta Artatanaya, and John Burgess, “Working from Home Effectiveness during Covid-19: Evidence from University Staff in Indonesia,” *Asia Pacific Management Review*, vol. 27, no. 1, pp. 50–57, 2022. [[CrossRef](#)] [[Google Scholar](#)] [[Publisher Link](#)]
- [10] Tammy D. Allen et al., “Work-Family Conflict and Flexible Work Arrangements: Deconstructing Flexibility,” *Personnel Psychology*, vol. 66, no. 2, pp. 345–376, 2013. [[CrossRef](#)] [[Google Scholar](#)] [[Publisher Link](#)]
- [11] Bernice Kotey, and Bishnu Sharma, “Predictors of Flexible Working Arrangement Provision in Small and Medium Enterprises (SMEs),” *International Journal of Human Resource Management*, vol. 27, no. 22, pp. 2753–2770, 2016. [[CrossRef](#)] [[Google Scholar](#)] [[Publisher Link](#)]
- [12] Godfred Anakpo, Zanele Nqwayibana, and Syden Mishi, “The Impact of Work-from-Home on Employee Performance and Productivity: A Systematic Review,” *Sustainability*, vol. 15, no. 5, pp. 1-18, 2023. [[CrossRef](#)] [[Google Scholar](#)] [[Publisher Link](#)]
- [13] Rocco Palumbo, “Let Me Go to the Office! An Investigation Into the Side Effects of Working from Home on Work-Life Balance,” *International Journal of Public Sector Management*, vol. 33, no. 6–7, pp. 771–790, 2020. [[CrossRef](#)] [[Google Scholar](#)] [[Publisher Link](#)]
- [14] Tanja van der Lippe, and Zoltán Lippényi, “Co-Workers Working from Home and Individual and Team Performance,” *New Technol Work Employ*, vol. 35, no. 1, pp. 60–79, 2020. [[CrossRef](#)] [[Google Scholar](#)] [[Publisher Link](#)]
- [15] Bokolo Anthony Jr et al., “Exploring the Role of Blended Learning for Teaching and Learning Effectiveness in Institutions of Higher Learning: An Empirical Investigation,” *Education and Information Technologies*, vol. 24, no. 6, pp. 3433–3466, 2019. [[CrossRef](#)] [[Google Scholar](#)] [[Publisher Link](#)]
- [16] Som Naidu, “Building Resilience in Education Systems Post-COVID-19,” *Distance Education*, vol. 42, no. 1, pp. 1–4, 2021. [[CrossRef](#)] [[Google Scholar](#)] [[Publisher Link](#)]
- [17] Samreen Mahmood, “Instructional Strategies for Online Teaching in COVID-19 Pandemic,” *Human Behavior and Emerging Technologies*, vol. 3, no. 1, pp. 199–203, 2021. [[CrossRef](#)] [[Google Scholar](#)] [[Publisher Link](#)]
- [18] Joseph G. Grzywacz, and Dawn S. Carlson, “Conceptualizing Work–Family Balance: Implications for Practice and Research,” *Advances in Developing Human Resources*, vol. 9, no. 4, pp. 455–471, 2007. [[CrossRef](#)] [[Google Scholar](#)] [[Publisher Link](#)]
- [19] Dawn S. Carlson, Joseph G. Grzywacz, and Suzanne Zivnuska, “Is Work-Family Balance More than Conflict and Enrichment?,” *Human Relations*, vol. 62, no. 10, pp. 1459–1486, 2009. [[CrossRef](#)] [[Google Scholar](#)] [[Publisher Link](#)]
- [20] Z. Erden Bayazit and M. Bayazit, “How Do Flexible Work Arrangements Alleviate Work-Family-Conflict? The Roles of Flexibility i-Deals and Family-Supportive Cultures,” *International Journal of Human Resource Management*, vol. 30, no. 3, pp. 405–435, 2019. [[CrossRef](#)] [[Google Scholar](#)] [[Publisher Link](#)]
- [21] E. Jeffrey Hill, Maria Ferris, and Vjollca Mårtinson, “Does It Matter Where You Work? A Comparison of How Three Work Venues (Traditional Office, Virtual Office, and Home Office) Influence Aspects of Work and Personal/Family Life,” *Journal of Vocational Behavior*, vol. 63, no. 2, pp. 220–241, 2003. [[CrossRef](#)] [[Google Scholar](#)] [[Publisher Link](#)]
- [22] Lutz Bellmann, and Olaf Hübler, “Working From Home, Job Satisfaction and Work–Life Balance–Robust or Heterogeneous Links?,” *International Journal of Manpower*, vol. 42, no. 3, pp. 424–441, 2020. [[CrossRef](#)] [[Google Scholar](#)] [[Publisher Link](#)]
- [23] Suzie Drummond et al., “The Relationship of Social Support with Well-Being Outcomes via Work–Family Conflict: Moderating Effects of Gender, Dependants and Nationality,” *Human Relations*, vol. 70, no. 5, pp. 544–565, 2017. [[CrossRef](#)] [[Google Scholar](#)] [[Publisher Link](#)]

- [24] Zaidan Mohammed et al., “Job Satisfaction While Working from Home During the COVID-19 Pandemic: Do Subjective Work Autonomy, Work-Family Conflict, and Anxiety Related to the Pandemic Matter?,” *Cogent Psychology*, vol. 9, no. 1, 2022. [[CrossRef](#)] [[Google Scholar](#)] [[Publisher Link](#)]
- [25] Heejung Chung, and Tanja van der Lippe, “Flexible Working, Work–Life Balance, and Gender Equality: Introduction,” *Social Indicators Research*, vol. 151, no. 2, pp. 365–381, 2020. [[CrossRef](#)] [[Google Scholar](#)] [[Publisher Link](#)]
- [26] Heather Prime, Mark Wade, and Dillon T. Browne, “Risk and Resilience in Family Well-Being during the COVID-19 Pandemic,” *American Psychologist*, vol. 75, no. 5, pp. 631–643, 2020. [[CrossRef](#)] [[Google Scholar](#)] [[Publisher Link](#)]
- [27] David E. Guest, “Human Resource Management and Employee Well-Being: Towards a New Analytic Framework,” *Human Resource Management Journal*, vol. 27, no. 1, pp. 22–38, 2017. [[CrossRef](#)] [[Google Scholar](#)] [[Publisher Link](#)]
- [28] Maral Darouei, and Helen Pluut, “Work from Home Today for a Better Tomorrow! How Working from Home Influences Work-Family Conflict and Employees’ Start of the Next Workday,” *Stress and Health*, vol. 37, no. 5, pp. 986–999, 2021. [[CrossRef](#)] [[Google Scholar](#)] [[Publisher Link](#)]
- [29] Patricia Voydanoff, “Toward a Conceptualization of Perceived Work-Family Fit and Balance: A Demands and Resources Approach,” *Journal of Marriage and Family*, vol. 67, no. 4, pp. 822–836, 2005. [[CrossRef](#)] [[Google Scholar](#)] [[Publisher Link](#)]
- [30] Dodi Wirawan Irawanto, Khusnul Rofida Novianti, and Kenny Roz, “Work from Home: Measuring Satisfaction between Work–Life Balance and Work Stress during the Covid-19 Pandemic in Indonesia,” *Economies*, vol. 9, no. 3, pp. 1-13, 2021. [[CrossRef](#)] [[Google Scholar](#)] [[Publisher Link](#)]
- [31] Robert R. Sinclair et al., “Occupational Health Science in the Time of COVID-19: Now More than Ever,” *Occupational Health Science*, vol. 4, no. 1–2, pp. 1–22, 2020. [[CrossRef](#)] [[Google Scholar](#)] [[Publisher Link](#)]
- [32] Chow Mei Min, and Audrey Cheak Poh Choo, “Determinants of Job Satisfaction among Work-From-Home Malaysians during Pandemic: Application of Job Demands-Resources Model,” *International Journal of Economics and Management Journal*, vol. 17, no. 2, pp. 151–163, 2023. [[CrossRef](#)] [[Google Scholar](#)] [[Publisher Link](#)]
- [33] Deniz Yucel, and Heejung Chung, “Working from Home, Work–Family Conflict, and the Role of Gender and Gender Role Attitudes,” *Community, Work & Family*, vol. 26, no. 2, pp. 190–221, 2023. [[CrossRef](#)] [[Google Scholar](#)] [[Publisher Link](#)]
- [34] Toyin Ajibade Adisa et al., “Exploring the Impact of COVID-19 on Employees’ Boundary Management and Work–Life Balance,” *British Journal of Management*, vol. 33, no. 4, pp. 1694–1709, 2022. [[CrossRef](#)] [[Google Scholar](#)] [[Publisher Link](#)]
- [35] Hoda Vaziri et al., “Changes to the Work–Family Interface During the COVID-19 Pandemic: Examining Predictors and Implications Using Latent Transition Analysis,” *Journal of Applied Psychology*, vol. 105, no. 10, pp. 1073–1087, 2020. [[CrossRef](#)] [[Google Scholar](#)] [[Publisher Link](#)]
- [36] Joel B. Carnevale, and Isabella Hatak, “Employee Adjustment and Well-Being in the Era of COVID-19: Implications for Human Resource Management,” *Journal of Business Research*, vol. 116, pp. 183–187, 2020. [[CrossRef](#)] [[Google Scholar](#)] [[Publisher Link](#)]
- [37] Mohammad Reyad Hossain, and M. A. Zariyawati, “Uncertainty in Working Capital Management and Firm Performance: A COVID-19 Perspective,” *International Journal of Economics and Management*, vol. 16, no. S1, pp. 117–130, 2022. [[CrossRef](#)] [[Google Scholar](#)] [[Publisher Link](#)]
- [38] Soumyajit Koley, “Exploring Social Value Prospects of Australia’s Construction Industry Towards the Aboriginal Communities, Under COVID-19 Recovery Efforts,” *International Journal of Engineering Trends and Technology*, vol. 70, no. 12, pp. 227-251, 2022. [[CrossRef](#)] [[Google Scholar](#)] [[Publisher Link](#)]