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The Effect of After-Hours Mobile Connectivity on Work-Family Conflict and Psychological Detachment: A Meta-Analysis Study

Ecehan Kazancı Yabanova

Abstract

Background/purpose. Mobile technologies have brought about significant changes in human life over the past quarter-century. The greatest advantages offered by these technologies, which have had a profound impact across a wide range of areas from work life to private life, are connectivity and mobility. This advantage, which allows individuals to stay connected anytime, anywhere, eliminating time and space constraints, also brings with it certain problems. Particularly during the quarantine period of the pandemic, working life around the world was attempted to be carried out through mobile technologies, and these technologies made a significant contribution to ensuring that working life could continue without interruption. After the pandemic, employers began to increasingly demand that their employees deal with work-related issues after-hours, using the capabilities of mobile technologies. This situation creates an increased workload for employees even during their rest hours, seriously affecting the concepts of work-family conflict and psychological detachment, which are extremely important for working life.

Materials/methods. The aim of this study is to reveal the effects of after-hours work-related mobile connectivity on work-family conflict and psychological detachment through a meta-analysis. Studies conducted between 2020 and 2025 in Web of Science and Scopus were screened, and 24 articles suitable for analysis were selected from the 138 identified articles.

Results. The results of the study show that as after-hours mobile connectivity (AHMC) significantly increases work-family conflict (WFC) and significantly decreases psychological detachment (PD). The meta-analysis of studies conducted by researchers from different countries after the pandemic reveals that mobile connectivity demands outside working hours have emerged as a significant problem area.

Conclusion. The research findings provide important insights for developing mobile connectivity within work-life balance to maximise the benefits offered by mobile technologies.

1. Introduction

Mobile technologies have emerged as the most important tools of our age. They connect individuals across all areas of life—from social life to education, and from professional life to personal life—without any constraints of time or place. Developments in information and communication technologies in the global world have led to the removal of physical boundaries and the emergence of flexible working arrangements regarding when, how, and where employees work. This situation has given rise to the concept of digital work connection, manifesting itself as a form of remote work outside the boundaries of the workplace and outside working hours. Various definitions of this concept are found in the relevant literature. These concepts include home use of communication technology and after-hours Smartphone use (Macijauskiene & Stankeviciute, 2022; Xiangzhi & Submahachok, 2025). After-hours work connection refers to the use of mobile communication devices outside working hours, such as before work, during lunch breaks, and after work, and in any location, for the purpose of participating in work activities or connecting with work-related individuals (Lihualei & Arshad, 2024). It is a product of a new work situation that has emerged due to developments in work-related after-hours communication technologies (Chen & Zhang, 2025). WCBA is the most commonly used concept in academic literature to describe the concept of work-related after-hours communication. It is a concept used particularly in organisational behaviour, work psychology, digitalisation, and work-life balance research. It is defined as employees' behaviour of communicating about work or accessing work-related information via digital tools outside of official working hours. These behaviours include reading and responding to work-related messages via email, WhatsApp, Slack, Teams or Zoom, communicating with customers, colleagues and managers about work during non-working hours, and continuing to follow up on work using corporate systems. At this point, WCBA represents a behaviourally measurable sub-dimension of the concept of mobile connectivity (AHMC) (Boswell & Olson-Buchanan, 2007; Karakose et al., 2025).

Post-working hours mobile connectivity encompasses the use of email, messaging, and application platforms for work-related purposes outside of regular working hours. The flexibility that information technologies bring to working practices inevitably leads to employees being constantly connected to work, making it difficult to leave work behind. According to research conducted by Dery et al. (2014), mobile phones, as a means of communication, offer advantages such as flexibility and advanced connectivity, but they can also create difficulties in managing work connections. Their study shows that the constant connectivity brought about by information technologies takes work-related communication beyond the boundaries of the workplace, indicating that this expectation may increase even after working hours. In this regard, employees see their mobile phones as an integral part of their daily lives and feel the need to carry them with them at all times. However, the flexibility afforded by mobile phones blurs the boundaries of time, allowing work life to encroach on employees' private lives, which in turn has negative consequences for work-life balance (Aljabr, 2025; Dery et al., 2014). The continuation of mobile connectivity after working hours extends beyond normal working hours, making employees' connection to their work constant (Boswell & Olson-Buchanan, 2007).

2. Literature Review

The flexibility brought about by innovations in information technology, which keeps employees constantly connected to work, creates pressure on employees. This pressure paves the way for work-life imbalance. The continuation of mobile connectivity after working hours negatively affects employees' stress levels, burnout, personal life, and well-being. These negative outcomes also lead to an increase in the intention to leave the job (Cousins & Robey, 2015; Karakose & Tulubas, 2025; Rasulova & Tanova, 2025). According to research conducted by González-Fernandez et al. (2025), particularly with the COVID-19 pandemic, flexible working has led to frequent voluntary or compulsory work outside the workplace. This study, conducted during the pandemic, found that employees performed additional technology-supported tasks after working hours without any additional pay outside normal working hours and without a formal agreement with their employers.

Subjective workplace pressure and technology dependency prevent employees from psychologically disconnecting from work as a result of increased additional tasks, thereby increasing work-family conflict and leading to more psychological problems. There are multiple findings regarding the impact of smartphone use outside working hours. The point emphasised here is that smartphone use has both functional and non-functional aspects. In terms of its functional aspects, employees' use of smartphones after working hours allows them to multitask without disturbing others, respond to messages instantly, and gain the freedom to work from anywhere without geographical constraints, thereby increasing their productivity. The non-functional aspects include patterns of use that are antisocial, distracting, and dangerous, as well as violating work-family boundaries due to the continuation of mobile connectivity via smartphones during non-working hours (Middleton & Cukier, 2006).

The unexpected emergence of the COVID-19 pandemic has brought unprecedented challenges to various aspects of society, particularly education and working life. It has been demonstrated that the use of mobile internet for work-related purposes during non-working hours has significantly negatively impacted employees' quality of life during the pandemic. However, it has been observed that when employees have a higher sense of control over their non-working hours, they demonstrate a better quality of life despite the difficulties brought about by mobile internet usage. In such circumstances, employers and policymakers must prioritise policies that encourage control over non-working hours, enabling employees to effectively distance themselves from work-related demands during non-working hours (Elshaer et al., 2024). The concept of telepressure refers to the pressure on employees to respond immediately to digital messages and work demands, regardless of time or place (Barber & Santuzzi, 2015). The concept of telepressure, defined as the feeling of excessive focus on work-related messages, has had proportional effects with the increase in work flexibility in working life. At this point, studies show that work flexibility increases telepressure. It has been found that an increase in the feeling of telepressure among employees increases both fatigue and the interference of work in family life (Smit et al., 2025). According to research conducted by Sun et al. (2024), working after hours using technology produces different results depending on the different work motivations of employees. Individuals with intrinsic motivation, i.e., workaholics who are willing to voluntarily extend their working hours and who devote more time to technology-mediated work after hours, are observed to be able to achieve their personal goals better, enjoy their work more, and have higher organisational commitment. However, employees with higher external motivation who spend less time on technology-mediated work after hours perceive this type of work as a work-life conflict or segmentation. In such a situation, this type of work leads to increased time, stress, anxiety, fatigue, and dissatisfaction due to the increased workload. As a result, employees experience dissatisfaction with their work life, and their intention to leave their jobs increases.

One of the fundamental pillars of the concept of mobile connectivity after working hours is boundary theory (van Zoonen et al., 2020). Boundary theory argues that work and family life create two distinct yet interdependent spheres. People strive to maintain balance and achieve satisfaction in both spheres by making daily transitions between them (Clark, 2000). Boundary theory explains how time, space and mental boundaries between work and private life are established and maintained, and how these boundaries are violated; it describes situations where existing boundaries become blurred (van Zoonen et al., 2020). Smartphone use after work hours allows work-related issues to enter the family environment, causing role interruptions. This blurs the boundaries between work and family, making employees available for work in the evenings, on weekends, or during holidays. These boundary violations also lead to increased work-family conflict (Derks et al., 2016).

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One of the most significant problems employees experience when boundaries become blurred is confusion about which role is or should be more important, resulting in conflict (Ashforth et al., 2000).

One of the foundations of mobile connectivity after working hours is the resource conservation theory. Resource conservation theory refers to the tendency of people to protect their valuable resources, such as rest, mental space, and personal time (van Zoonen et al., 2023). According to resource conservation theory, employees who are psychologically highly disconnected avoid performing tasks such as checking emails and responding to social messages from home, and these employees even avoid thinking about work-related issues such as how to deal with a work-related problem (Elshaer et al., 2024). This situation is explained by psychological detachment.

Psychological detachment from work refers to individuals mentally detaching from work-related thoughts and demands during non-working hours, thereby enabling them to recover and recharge (Sandoval-Reyes et al., 2021). This allows individuals to shake off the physical and mental fatigue of work and engage more effectively in their professional lives the following day. However, the increasing state of mobile connectivity has made the concept of working hours accessible at all times beyond legal boundaries, and this situation has had negative effects on psychological detachment. The aim of this study is to analyse the effects of mobile connectivity, one of the greatest advantages provided by mobile technologies, on work-family conflict and psychological detachment as a result of work demands after-hours.

3. Methodology

This study was conducted using the meta-analysis method, which systematically reviews the findings of previous studies, quantitatively synthesises them, and produces a new synthesis (Cooper, 2017; Glass, 1976; Lehrer et al., 2023). Meta-analysis aims to numerically synthesise study results and examine the consistency of results obtained from different samples (Borensteim et al., 2021). In this context, studies in Web of Science and Scopus were screened using specific search criteria. The PRISMA 2020 statement was used as a reference to comply with systematic review and reporting standards (Page et al., 2021). The study consists of the following stages in accordance with the meta-analysis methodology: a) research question, b) search and eligibility criteria, and c) data analysis.

3.1. Research Question

The study examined the effects of after-hours mobile connectivity on two concepts that are crucial to working life: work-family conflict and psychological detachment. The research questions of the study are as follows:

RQ1. What are the effects of after-hours mobile connectivity on work-family conflict?

RQ2. What are the effects of after-hours mobile connectivity on psychological detachment?

3.2. Search and eligibility criteria

The study involved a search of the Scopus and Web of Science databases. The search terms used were (('after hours' OR 'off hours' OR 'work-related smartphone use' OR 'work-related mobile use' OR 'work connectivity outside work' OR "WCBA" OR 'work-connected after hours' OR 'after hours connectivity') AND ('work-family conflict' OR 'work-family conflict' OR 'work-life conflict' OR 'work-home interference' OR 'work home interference')) OR ('psychological detachment' AND ('after hours' OR 'work connectivity outside work' OR 'work-related smartphone use')) was used for the search. The initial search was conducted via Scopus, followed by a search using the same search pattern via Web of Science. The article search and elimination process is illustrated using the PRISMA Flow Diagram.

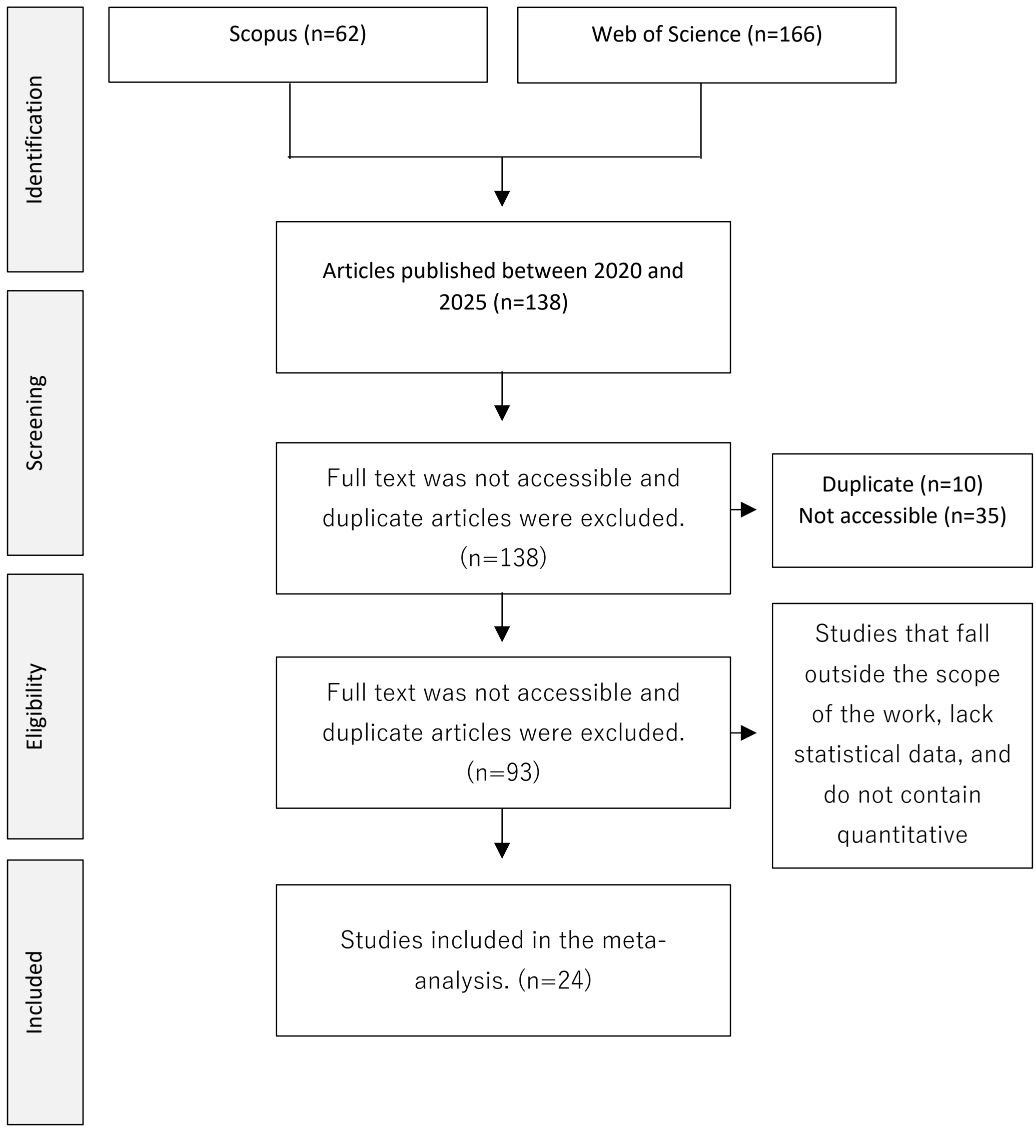

Figure 1. PRISMA flow diagram

In the first stage, the search query was scanned in both indexes. Only studies containing the article type were found in Scopus (n=62) and Web of Science (n=166). Within the scope of the research, it was observed that these studies intensified particularly during and after the COVID-19 pandemic, and for this reason, studies between 2020 and 2025 were examined. Studies outside this time frame (n=90) were excluded. In the second stage, the 138 identified articles were matched by title, and studies found in both indexes (n=10) and studies for which the full text file could not be accessed (n=35) were excluded. In the third stage, the 93 identified article titles were reviewed, and those not compatible with the research (n=69) were excluded after a preliminary full-text review. The full-text review of the compatible articles was also conducted, and 24 articles were selected for inclusion in the meta-analysis. Three of these studies included both work-family conflict and psychological detachment dimensions. In the meta-analysis, data from 27 studies were analyzed, comprising the work-family conflict dimension (n=14) and the psychological detachment dimension (n=13).

3.3. Data Analysis

The data to be used in the meta-analysis process of the identified articles were reported using the MS Excel application. The statistical information of the studies was determined, and it was found that the effect sizes were calculated as r, β, and γ types. The β and γ type effect sizes were first converted to an r effect size. The Fisher z formula was applied to the effect sizes to normalise their distribution and stabilise their variance. It has been stated that if the Fisher z transformation is not used in meta-analysis studies, bias may occur in heterogeneity analyses (Q and I^2 values) (Schmidt & Hunter, 2015). This formula, developed by Fisher (1915), ensures that parametric statistical assumptions are met in meta-analysis processes. The following two formulas were applied in the Fisher z transformation.

$$z = 0.5 \times \ln\left(\frac{1+r}{1-r}\right)$$

The variance formula aims to calculate weighted averages more accurately between studies with different sample sizes (Cooper et al., 2019).

$$Var(z) = \frac{1}{N-3}$$

The standard error of the effect sizes was also calculated. The standard error calculation was performed using the sample size. As the sample size increases, the standard error decreases. Therefore, studies with large samples have a higher weight in meta-analysis (Hedges & Olkin, 1985). Within the scope of the analysis, the standard error was calculated using the following formula.

$$SE_z = \frac{1}{\sqrt{N-3}}$$

The studies, author, title, journal, DOI, country, sample size, scale, type of effect size, effect size, standard error, p-value, calculated r-value, Fisher z, standard error, and sub-dimension have been reported in MS Excel.

4. Results

The articles used in the meta-analysis were searched in the Scopus and Web of Science indexes. The analysis was conducted using 24 articles selected based on the screening criteria from among 138 articles that met the specified search criteria. The articles aimed to reveal the effects of after-hours mobile connectivity (AHMC) on the dimensions of work-family conflict (WFC) and psychological detachment (PD). In this context, AHMC → WFC and AHMC → PD were analysed separately. Three of the articles contained data on both WFC and PD dimensions, so they were evaluated as 27 studies across two dimensions.

Table 1. Characteristic features of studies

	Study	N	Country	Effect Type	Effect Value	p	Fisher z	Var_z	SE_z
AHMC → WFC	Agarwal, P.	133	India	β	0.515	.001	0,5695	0,0077	0,0877
	Andrade, C.	238	Portugal	β	0.300	.012	0,3095	0,0043	0,0652
	Dong, M.	211	China	β	0.901	.001	1,4775	0,0048	0,0693
	Elshaer, I. A.	341	Egypt	β	0.556	.001	0,6270	0,0030	0,0544

	González-Fernández, C.	577	Spain	β	0.480	.001	0,5230	0,0017	0,0417
	Kao, K.-Y.	185	Taiwan	β	0.400	.001	0,4236	0,0055	0,0741
	van Zoonen, W.	367	Finland	β	–0.004	.986	-0,0040	0,0027	0,0524
	Wang, F.	423	China	β	0.484	.001	0,5282	0,0024	0,0488
	Yang, Y.	257	China	β	0.205	.01	0,2079	0,0039	0,0627
	Yue, C. A.	815	USA	β	0.290	.001	0,2986	0,0012	0,0351
	Yue, C. A.	815	USA	β	0.340	.001	0,3541	0,0012	0,0351
	Cho S.	98	USA	γ	0.700	.028	0,8959	0,0105	0,1026
	Gadeyne, N.	186	Belgium	γ	0.280	.001	0,3253	0,0055	0,0739
	Wang, H.	380	China	γ	0.360	.01	0,4124	0,0027	0,0515
AHMC → PD	Belkin, L.Y.	563	USA	β	–0.45	.001	–0.472	0.0046	0.0675
	Chen, A.	498	USA	β	–0.46	.001	–0.472	0.0018	0.0423
	Eichberger, C.	100	Germany	γ	–0.64	.001	–0.486	0.0020	0.0450
	Gadeyne, N.	186	Belgium	γ	–0.24	.001	–0.402	0.0018	0.0419
	González-Fernández, C.	577	Spain	β	–0.39	.001	–0.450	0.0043	0.0658
	Heissler, C.	235	Germany	β	–0.43	.001	–0.684	0.0033	0.0573
	Hu, Y.	308	China	β	–0.607	.001	–0.124	0.0182	0.1349
	Kondrysova, K.	223	Czech Republic	r	–0.44	.001	–0.292	0.0205	0.1432
	Kubo T.	58	Japan	β	–0.126	.020	–0.719	0.0059	0.0766
	Reinke, K.	51	Germany	β	–0.29	.010	–0.148	0.0012	0.0352
	Tedone, A.	173	USA	β	–0.63	.002	–0.758	0.0104	0.102
	Wang, F.	410	China	γ	–0.58	.001	–0.245	0.0055	0.074
	Yue, C. A.	815	USA	β	–0.15	.001	–0.663	0.0025	0.050

AHMC → WFC articles comprise 14 studies conducted in 10 different countries. The total sample size consists of 5,026 individuals. AHMC → PD articles comprise 13 studies conducted in 7 different countries. The total sample size consists of 4,197 individuals. The different types of effect sizes of the studies were converted to r values and then recalculated using Fisher's z-test. The coded study data were analyzed and reported for meta-analysis using the open-access JASP programme.

RQ1. What are the effects of after-hours mobile connectivity on work-family conflict?

A meta-analysis was conducted using 14 studies to determine the effects of after-hours mobile connectivity on work-family conflict. The variance (τ2) between studies was estimated using the Restricted Maximum Likelihood (REML) method in a random effects model. This method is preferred in meta-analyses with small samples because it provides unbiased estimates of variance components (Viechtbauer, 2005).

Table 2. Meta-Analytic Tests

	Test	p
Heterogeneity	$Q_e(13) = 379.15$	< .001
Pooled effect	t(13) = 5.26	< .001

The heterogeneity test conducted to determine whether the effect sizes obtained from the 14 studies included in the meta-analysis were homogeneous yielded $Q_e(13)=379.15$, p<.001, indicating a significant level of difference between the studies. This result shows that the effect sizes of the articles differed significantly from one another and, therefore, that the random effects model was appropriate to use. The pooled effect size calculated according to the random effects model was determined to be t(13) = 5.26, p<.001. This result reveals that the overall effect size is significantly different and that there is a strong and statistically significant relationship between the variables in the meta-analysis.

Table 3. Meta-Analytic Estimates

		95% CI		95% PI	
	Estimate	Lower	Upper	Lower	Upper
Pooled effect	0.494	0.291	0.697	-0.278	1.265
τ	0.345	0.246	0.564		
τ^2	0.119	0.061	0.318		
I^2	97.619	95.436	99.097		
H^2	41.998	21.912	110.755		

The analysis resulted in a pooled effect size of r = 0.494, with a 95% confidence interval of [0.291, 0.697]. The fact that the confidence interval does not include the value zero indicates that the effect size is statistically significant. This result shows that there is a moderate and positive relationship between the variables examined. Conversely, the variation of the 95% prediction interval between [−0.278, 1.265] indicates that effect sizes may fall below zero in future similar studies, suggesting that the direction and magnitude of the effect may vary across studies. This supports the presence of high levels of heterogeneity in the model.

When examining heterogeneity indicators, the standard deviation (τ) between studies was calculated as 0.345 (95% CI [0.246, 0.564]) and the variance component (τ^2) as 0.119 (95% CI [0.061, 0.318]). These values indicate that the effect sizes have a wide distribution across studies. The I^2 statistic was determined to be 97.62% (95% CI [95.44, 99.10]), indicating that approximately 98% of the total variance stems from real differences between studies rather than sampling errors (Higgins & Thompson, 2002). Similarly, the H^2 statistic was calculated as 41.99 (95% CI [21.91, 110.76]). The fact that the H² value is greater than 1 indicates that the observed variance is much higher than the variance expected in the meta-analysis model (Higgins et al., 2003).

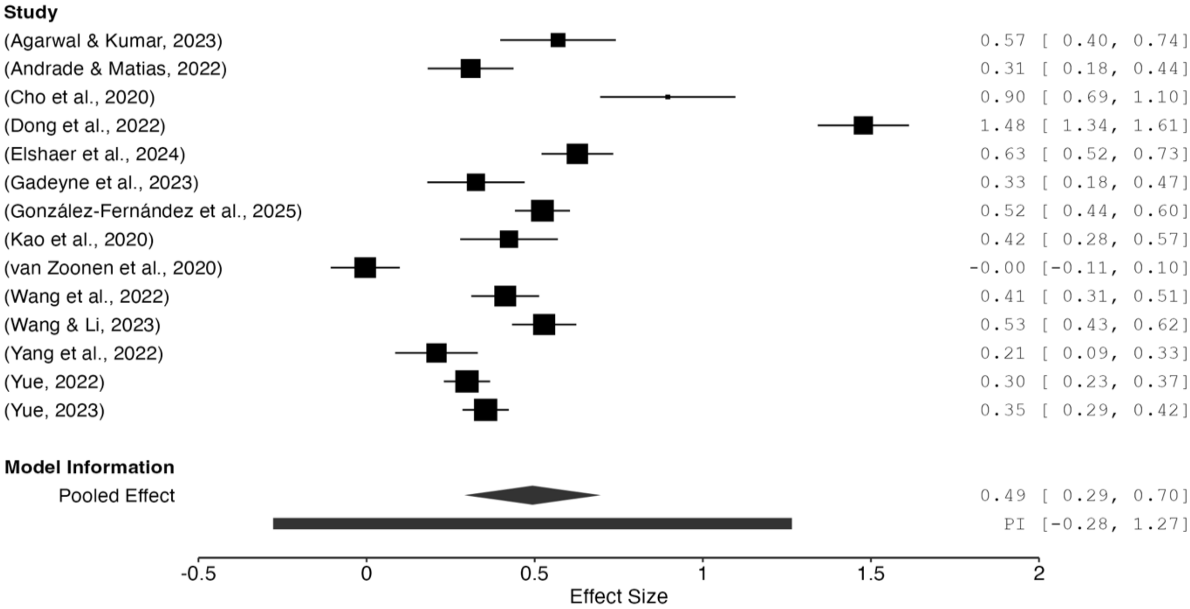

Figure 1. Forrest Plot

Forest plots display the distributions of individual effect sizes of the studies within a 95% confidence interval. The size of the square representing each study indicates its weight in the meta-analysis. As seen in the figure, effect sizes range from -0.00 to 1.48. The highest effect size is reported by Dong et al. (2022) (g = 1.48, 95% CI [1.34, 1.61]), while the lowest effect size is determined to be van Zoonen et al. (2020) (g = −0.00, 95% CI [−0.11, 0.10]). The diamond shape below the figure represents the pooled effect size, which was determined to be 0.49 [0.29, 0.70]. Since the confidence interval does not include zero, the overall effect is statistically significant. This result indicates that after-hours mobile connectivity increases work-family conflict to a moderate degree and in a positive direction. The prediction interval is determined as [−0.28, 1.27], indicating a wide range. This result suggests that future studies may produce ineffective or negative outcomes in certain situations.

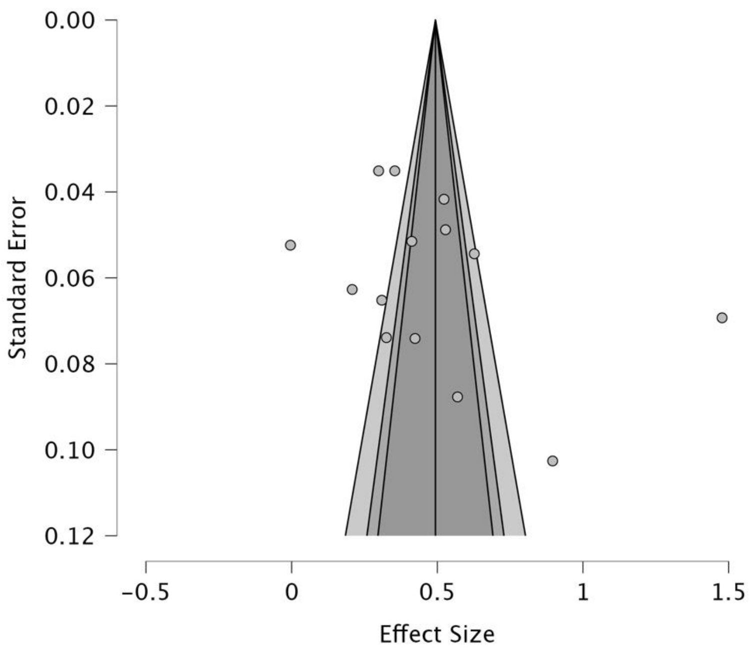

Figure 2. Funnel Plot

The funnel plot was used to visually assess whether the meta-analysis results contained potential publication bias. A symmetrical distribution of points within the funnel-shaped area indicates low publication bias, whereas a systematic asymmetrical distribution indicates a high probability of publication bias (Egger et al., 1997). In the figure, the overall distribution is symmetrical and centred within the funnel. Those outside the funnel do not show systematic asymmetry. This result indicates that there is no visual evidence of publication bias.

Table 4. Weighted Regression Test for Funnel Plot Asymmetry (Egger's test)

	Asymmetry Test			Limit Estimate μ		
Estimates	t	df	P	Estimate	Lower 95% CI	Upper 95% CI
14	1.278	12	.225	0.124	-0.422	0.671

Publication bias was assessed using Egger's test. The analysis yielded a regression coefficient of $t(12) = 1.278$, $p=.225$, which was not statistically significant. This result indicates that there is no statistically significant asymmetry among the studies included in the meta-analysis, and therefore, no strong evidence of publication bias.

RQ2. What are the effects of after-hours mobile connectivity on psychological detachment?

A meta-analysis was conducted using 13 studies to determine the effects of mobile connectivity after working hours on psychological disengagement. The variance between studies (τ^2) was estimated in this analysis using the Restricted Maximum Likelihood (REML) method from the random effects model.

Table 5. Meta-Analytic Tests

	Test	p
Heterogeneity	$Q_e(12) = 145.85$	< .001
Pooled effect	$t(12) = -8.06$	< .001

The heterogeneity test conducted to determine whether the effect sizes obtained from the 13 studies included in the meta-analysis were homogeneous yielded the result $Q_e(12)=145.85$, $p<.001$. This result indicates that the effect sizes across the articles differed significantly, and therefore the random-effects model is appropriate. The pooled effect size, calculated according to the random-effects model, was $t(12) = -8.06$, $p < .001$. This result reveals that the overall effect size is significantly different and that there is a strong and statistically significant relationship between the variables in the meta-analysis.

Table 6. Meta-Analytic Estimates

		95% CI		95% PI	
	Estimate	Lower	Upper	Lower	Upper
Pooled effect	-0.461	-0.586	-0.336	-0.892	-0.030
τ	0.189	0.127	0.337		
τ^2	0.036	0.016	0.114		
I^2	91.623	83.050	97.195		
H^2	11.938	5.900	35.655		

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The analysis yielded a combined effect size of r = -0.461 and a 95% confidence interval of [-0.586, -0.336]. This result indicates a moderate and negative relationship between the variables examined. The fact that the confidence interval does not include the value zero indicates that the effect size is statistically significant. This result suggests that the effect sizes of similar studies conducted in the future will also mostly be negative, but in some cases, the effect may be weak (close to zero).

The heterogeneity indices were calculated as the standard deviation τ = 0.189 (95% CI [0.127, 0.337]) and variance component τ^2 = 0.036 (95% CI [0.016, 0.114]) between studies. These values indicate that the effect sizes differed significantly across studies. The I^2 statistic was determined to be 91.62% (95% CI [83.05, 97.19]). This result shows that approximately 92% of the total variance is due to real differences between studies, rather than sampling errors. This level falls into the category of very high heterogeneity. Similarly, the H^2 statistic was calculated as 11.94 (95% CI [5.90, 35.65]). The fact that the H^2 value is greater than 1 indicates that the observed variance is much higher than the variance expected in the meta-analysis model (Higgins et al., 2003).

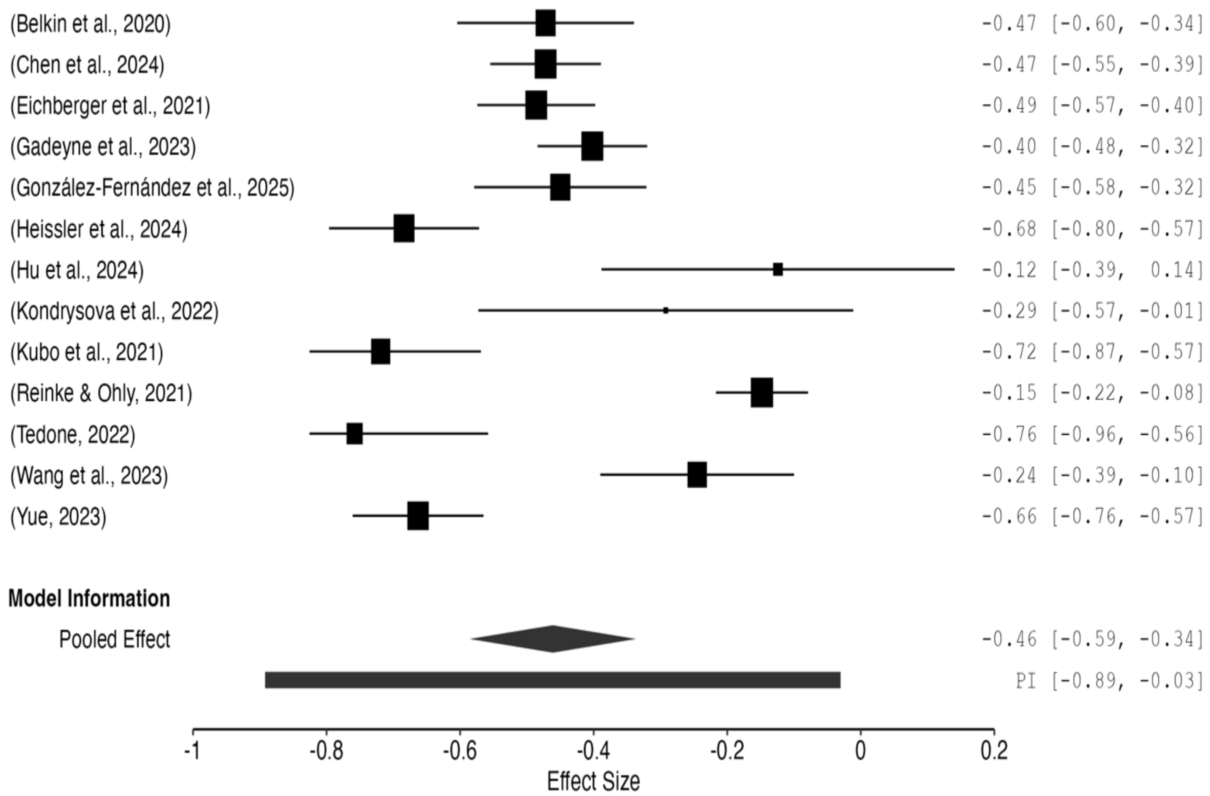

Figure 3. Forrest Plot

As seen in the forest plot, effect sizes range from -0.15 to -0.76. The highest effect size was found in Tedone (2022) (g = -0.76, 95% CI [-0.96, -0.56]), and the lowest effect size was found in Reinke and Ohly (2021) (g = −0.16, 95% CI [−0.22, -0.08]). The pooled effect size was determined to be -0.46 [-0.59, -0.34]. As the confidence interval does not include zero, the overall effect is statistically significant. This result indicates that after-hours mobile connectivity moderately and negatively reduces psychological detachment. The prediction interval was determined as [−0.89, −0.03].

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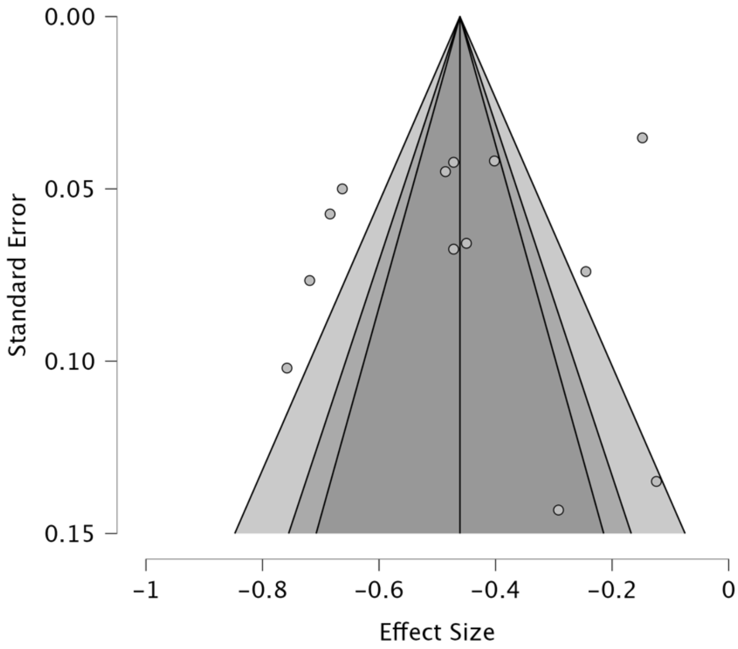

Figure 4. Funnel Plot

The funnel plot visually assessed whether the meta-analysis results contained potential publication bias. In the figure, the overall distribution is symmetrical and centred within the funnel. Points outside the funnel do not show systematic asymmetry. This result indicates that there is no visual evidence of publication bias.

Table 7. Weighted Regression Test for Funnel Plot Asymmetry (Egger's test)

	Asymmetry Test			Limit Estimate μ		
Estimates	t	df	P	Estimate	Lower 95% CI	Upper 95% CI
13	-0.882	11	.397	-0.309	-0.643	0.026

Publication bias was also assessed using the Egger test. The analysis yielded a regression coefficient of t(11) = -0.882, p=.397. This result indicates that there is no statistically significant asymmetry among the studies included in the meta-analysis and, consequently, no strong evidence of publication bias.

5. Discussion

The results of a meta-analysis of 14 articles on the effect of after-hours mobile connectivity on work-family conflict reveal a moderate and positive relationship with an effect size of 0.49. This result signifies a significant negative impact on the use of mobile technology tools. An analysis of 23 studies conducted between 2012 and 2023 by Blake et al. (2024) determined that there is a significant relationship with a small to moderate effect size. This finding is consistent with the results of this study. Another meta-analysis conducted by Kühner et al. (2023) concluded that work-life conflict has a combined effect size of 0.32. Similarly, in another study conducted by Santos et al. (2023), work-life conflict was calculated to have an effect size of 0.33. A study conducted by Baumeister et al. (2021) concluded that the use of information and communication technology tools outside of working hours significantly affects work-life conflict, with an effect size of 0.23. The effect size obtained in this study is seen to be higher than in previous studies. The fact that the effect size of this meta-analysis, conducted with studies conducted during and after the COVID-19 pandemic, is higher than in previous studies supports the view mentioned at the beginning of the study that the pandemic has created an increased demand for after-hours work connections among employers.

It is evident that there are many sub-dimensions to the increase in work-family conflict caused by after-hours mobile connectivity. The use of mobile devices constitutes a natural violation of work-life boundaries (Middleton & Cukier, 2006). An individual's social life outside work, family life, and periods of physical and mental rest can be constantly disrupted by mobile connectivity. This situation results in time that should be allocated to other responsibilities outside of work, such as parenting, friendships, marriage, etc., being allocated to work-related activities. The psychological effects it creates in the individual and time management problems certainly constitute the most fundamental dynamics of work-family conflict. It is well established that a lack of psychological detachment from work and related responsibilities increases work-family conflict (Bennet et al., 2018; Papadakis & Karakose, 2025). It is precisely at this point that RQ2's scope is formed by psychological detachment.

Psychological detachment refers to an individual's ability to mentally distance themselves from work-related thoughts, feelings, and demands during non-working hours (Sonnentag & Fritz, 2015). The research findings indicate that after-hours mobile connectivity has a moderate and negative effect on psychological detachment, with an effect size of -0.46. In other words, after-hours mobile connectivity negatively affects psychological detachment. Studies have shown that as psychological detachment increases, the degree of burnout decreases (Bennet et al., 2018). However, after-hours mobile connectivity directly affects burnout by preventing individuals from mentally disconnecting from work during non-working hours. The results of the study are consistent with those of Kühner et al. (2023), who found that after-hours work connectivity negatively affects psychological detachment with an effect size of -0.38. Another meta-analysis study conducted by Wendsche and Lohmann-Haislah (2017) found a moderate negative relationship between participation in after-hours work activities and work-related thinking versus psychological detachment. The study results are consistent with previous findings on the psychological detachment dimension.

6. Concluison

Mobile technologies constitute an important research area for the scientific field, not only due to the advantages they offer but also in terms of the risks they bring. This study uses meta-analysis to reveal the effects of after-hours mobile connectivity on work-family conflict and psychological detachment. In terms of work-family conflict, the combined effect obtained from studies conducted particularly during and after the COVID-19 period reveals a medium-sized positive effect. This study has achieved a higher effect size than previous studies. In this respect, work-related mobile connectivity demand will constitute an important area for future research. After-hours work contact disrupts role-to-role compatibility by reducing the time and energy an individual can devote to their family role (Greenhaus & Beutell, 1985). The spillover of work demands into after-hours periods consumes an individual's limited resources, reducing the resources allocated to the family domain (ten Brummelhuis & Bakker, 2012). Employees are more likely to experience role ambiguity and work-family conflict (Barber & Santuzzi, 2015). This situation can have extremely negative consequences for the individual, family, and work life. Work-family conflict can lead to increased stress, anxiety, depression, and burnout (Michel et al., 2011), decreased positive affect and life satisfaction, increased negative affect (Ford et al., 2007), decreased job satisfaction, decreased organisational commitment, increased absenteeism, and increased intention to leave (Allen et al., 2000; Netemeyer et al., 1996).

Individuals who are unable to disconnect from work during non-working hours psychologically experience a reduction in their mental and physical rest periods. Consequently, psychological disengagement creates numerous negative physical and mental effects on the individual. Low levels of psychological detachment lead to distractibility, poor working memory, and slow cognitive response during working hours (Bennett et al., 2018; Sonnentag, 2018), emotional exhaustion and low energy (Sonnentag, 2018; Wendsche & Lohmann-Haislah, 2017), increased negative affect and job dissatisfaction, decreased organisational citizenship behaviour (Haun et al., 2018), decreased alertness, reduced attention performance, and increased physiological fatigue (Hülsheger et al., 2015; Karakose & Polat, 2025). Therefore, although employers may view work continuing as hidden overtime outside of working hours as a gain, it can actually have quite negative consequences for both the individual and the employer. Of course, the development of a political and legal framework in this area is gaining importance. The pace and intensity of today's world already create significant psychological burdens on individuals, making it important to manage them at manageable levels to cope. At this point, the concept of segmentation comes to the fore in order to achieve work-life balance. Segmentation is a personal boundary management preference that determines the extent to which individuals keep their work and private life roles separate or intertwined (Ashforth et al., 2000). It is particularly prominent in terms of achieving work-life balance. Studies have shown that individuals with a high preference for segmentation have higher levels of psychological detachment and lower levels of work-family conflict (Derks et al., 2016; Kreiner, 2006; Ozdogru et al., 2025; Park et al., 2011). Segmentation management in managing out-of-hours mobile connectivity will be an important area for future studies.

In order to maximise the benefits of mobile connectivity, one of the most important achievements of the modern world, it is important to be aware of its negative effects. Ensuring that mobile technologies provide the greatest possible benefit in areas such as education, health, social life, and working life depends on the proper management of their negative aspects. This study is expected to provide an important foundation for future work in this field.

Declarations

Conflicts of Interest. The author declares no conflict of interest.

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