

Will after-hours technology-mediated work make employees leave? A mediated moderation model

Will ATW
make
employees
leave?

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Abstract

Purpose – As after-hours technology-mediated work (ATW) becomes common in organizations, the increased workload and interference to life caused by ATW has induced employee turnover. This research develops a mediated moderation model to explain how employees' intrinsic and extrinsic motivations for ATW affect their turnover intention through work–life conflict.

Design/methodology/approach – A survey was conducted to collect data of 484 employees from Chinese companies. Partial Least Square was used to perform data analysis.

Findings – The results show that intrinsic motivation for ATW has an indirect negative impact on turnover intention via work–life conflict, whereas extrinsic motivation for ATW has both a positive direct impact and a positive indirect impact (via work–life conflict) on turnover intention. This study also helps find that time spent on ATW can strengthen the positive impact of extrinsic motivation for ATW on turnover intention but has no moderation effect on the impact of intrinsic motivation for ATW. Furthermore, this study reveals that the interaction effect of time spent on ATW and extrinsic motivation on turnover intention is mediated by employees' perceived work–life conflict.

Originality/value – By discovering the distinct impact of employees' intrinsic and extrinsic motivations for ATW on turnover intention, this research provides a contingent view regarding the impact of ATW and offers guidance to managers regarding how to mitigate ATW-induced turnover intention through fostering different motivations.

Keywords After-hours technology-mediated work, Intrinsic motivation, Extrinsic motivation, Work–life conflict, Intention to leave

Paper type Research paper

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1. Introduction

In today's world, Information Communication Technology (ICT) has become an integral part of communication within organizations. ICT tools like email, social media, instant messaging and video conferencing have made it easier for employees to communicate efficiently. However, the downside is that technology has also made it possible for work demands to extend beyond traditional office hours and reach employees even when they are off-work and outside the office (Boswell and Olson-Buchanan, 2007). As a result, after-hours technology-mediated work (ATW) becomes a common phenomenon in many organizations (Ferguson *et al.*, 2016; Boswell and Olson-Buchanan, 2007).

Previous studies on ATW have primarily focused on the negative impact of its intensity, such as time and frequency. These studies suggest that the more employees engage in ATW, the more likely they are to experience negative feelings such as anxiety and stress and perform poorly in both work and life (Ferguson *et al.*, 2016; Wright *et al.*, 2014; Boswell and Olson-Buchanan, 2007; Boswell *et al.*, 2016; Butts *et al.*, 2015; Chen and Casterella, 2018; Chen and Karahanna, 2018), which could ultimately lead to turnover and undermine the company's competitive advantages (Hom *et al.*, 2017). However, we argue that employees' motivation is a missing piece to unravel the impact of ATW on employees (Deci and Ryan, 1985, 2002; Schlachter *et al.*, 2018). Existing research has ignored that employees with different motivations for work may react differently to ATW. As suggested by the literature of workaholics, some employees may intrinsically value and enjoy work (Porter, 2001). These employees are willing to voluntarily extend their work hours and even sacrifice their nonwork time or activities for work (London, 1983). Feeling enjoyment, these employees demonstrate stronger satisfaction and commitment to work and are unlikely to leave the organization due to ATW. In contrast, some employees prefer a work-life balance or segmentation and mainly engage in ATW due to external pressure or expectation, that is extrinsically motivated for ATW (Butts *et al.*, 2015; Köffer *et al.*, 2014). These employees feel compelled to work excessively and that their well-being is not the concern of their organization. Therefore, they usually experience negative feelings such as stress, anxiety, burnout (Korn *et al.*, 1987; Porter, 2001) and low work and life satisfaction, which will arouse intent to leave (Scott *et al.*, 1997; Spence and Robbins, 1992). Thus, whether ATW will make employees want to leave the organization may depend on employees' motivation for ATW. Accordingly, in this research, we will adopt a motivational perspective to examine the impact of ATW on employees.

Moreover, it has been neglected that employees' motivation and time spent on ATW could interact with each other to influence turnover intention. We argue that the impact of employees' motivation for ATW varies with the actual time employees spent on ATW. Specifically, when employees spend little time on ATW, they will have limited opportunities to experience the pleasant or unpleasant feelings associated with ATW. As their time spent on ATW increases, their feelings will be more salient. For intrinsically motivated employees, more time spent on ATW means that they can better achieve their personal goals and obtain more joy and pleasure from work, while for extrinsically motivated employees, more time leads to more stress, anxiety, exhaustion and dissatisfaction due to the increased workload. Therefore, we believe that examining the joint effect of employees' motivation and time spent on ATW will help to generate novel insights.

Furthermore, work-life conflict may be the underlying mechanism to explain the impact of employees' motivation for ATW and their turnover intention. Work-life conflict describes a form of inter-role conflict in which the role pressures from the work and life domains are mutually incompatible (Greenhaus and Beutell, 1985). In our research, we focus on the work interference with life (Carlson *et al.*, 2000) because ATW is initiated from the work domain which occupies the mental and physical resources for life and hampers one's role fulfillment in the life domain. Prior ATW research has found work-life conflict to result in employees' turnover intention. Ferguson *et al.* (2016) showed that time-based work-life conflict and

strain-based work–life conflict can induce burnout and low organizational commitment, which in turn increases employees’ turnover intention. [Belkin et al. \(2020\)](#) demonstrated that work–life imbalance, resulting from high organizational expectation for email monitoring after hours, will increase employees’ turnover intention. They argued that this is because employees need to replenish their depleted resources through quitting and finding a less demanding position. In the meantime, employees’ motivation for ATW can also affect their perception of work–life conflict. When employees are intrinsically motivated for ATW, that is experiencing fun and personal growth during ATW ([Deci and Ryan, 2002](#)), they may voluntarily arrange more time for ATW and be less likely to feel that ATW interrupts their life. In contrast, employees with extrinsic motivation for ATW, who dislike ATW but still engage in ATW due to external pressures ([Mazmanian et al., 2013](#)), may experience anger, stress, anxiety and dissatisfaction during their ATW, which gives rise to strain-based work–life conflict ([Carlson et al., 2000](#)). Therefore, work–life conflict is adopted in our research to understand the influencing process through which employees’ motivations for ATW impact their turnover intention.

In this paper, we intend to answer the research question: How will employees’ intrinsic motivation and extrinsic motivation for ATW influence their turnover intention? Based on the existing literature, we developed a mediated moderation model and proposed that work–life conflict mediates the interaction effect of intrinsic motivation and time spent on ATW and the interaction effect of extrinsic motivation and time spent on ATW on employees’ turnover intention.

This research contributes to the existing literature in the following aspects. First, we offer a motivational perspective to explain how ATW will arouse employees’ turnover intention. Our results showed that employees’ intrinsic motivation for ATW negatively influences their perception of work–life conflict and turnover intention, while their extrinsic motivation for ATW positively influences their perception of work–life conflict and turnover intention. Second, we advance the existing knowledge about the impact of time spent on ATW by investigating the interaction effect of ATW time and employees’ ATW motivation. We find that time spent on ATW intensifies the impact of extrinsic motivation for ATW on turnover intention and makes no difference to the impact of intrinsic motivation for ATW on turnover intention. Third, our research reveals that the interaction effect of employees’ extrinsic motivation for ATW and time spent on ATW is mediated by work–life conflict, which reveals that work–life conflict is an important mechanism to explain how ATW influences employees. These findings indicate that whether ATW will arouse employees’ turnover intention depends on employees’ motivation for ATW. Overall, this research provides a deepened understanding of the impact of ATW on employees and organizations and offers guidance to managers in terms of how to mitigate their employees’ turnover intention aroused by ATW.

2. Theoretical foundation and hypotheses development

2.1 Motivation for ATW and turnover

2.1.1 *Employees’ motivation for ATW.* Motivation can be described as the drive for someone to perform a certain behavior ([McClelland, 1987](#)). We draw on Self-Determination Theory (SDT) ([Deci and Ryan, 1985](#)) to identify employees’ motivation for ATW. SDT posits that, based on the different underlying desires and goals that give rise to an action, there are two basic types of human motivations: intrinsic motivation and extrinsic motivation. Intrinsic motivation occurs when one perceives the action is inherently satisfying, interesting and enjoyable. Extrinsic motivation happens when external stimuli such as punishments or rewards compel one to perform the behavior.

Employees can be either intrinsically motivated or extrinsically motivated to engage in ATW because they hold different perceptions of extra work. Based on the literature of workaholics, some employees, for example achievement-oriented employees, think work is

inherently fun, enjoyable and satisfying (Scott *et al.*, 1997). These employees love work and even are willing to sacrifice their nonwork life and activities for work. They will have intrinsic motivation for ATW. However, some employees dislike extra work, for example those who prefer work–life segmentation (Kreiner, 2006). These employees often experience negative feelings such as anxiety, stress, pessimism and job dissatisfaction due to excessive work (Scott *et al.*, 1997). They will not voluntarily engage in ATW unless there are some external pressures or expectations (Butts *et al.*, 2015). That is, they are extrinsically motivated to engage in ATW.

During ATW, employees' intrinsic and extrinsic motivations for ATW can be reinforced. According to the cognitive evaluation view of SDT (Deci and Ryan, 1985), if one's needs of autonomy, relatedness and competence are satisfied by performing a behavior, he or she will feel intrinsically motivated for conducting the behavior (Deci and Ryan, 2002). ICT may force employees to receive and deal with work requests in afterhours, which may increase employees' workload (Turel *et al.*, 2011). However, such technology also allows employees to access organizational resources anywhere anytime (Mazmanian *et al.*, 2013). For employees who want to pursue higher achievements or improve their current performance, they can invest more time to review past work, Polish ongoing work and prepare future work during ATW (Scott *et al.*, 1997; Boswell and Olson-Buchanan, 2007). Such investment of extra time and energy in work not only helps employees better accomplish their work but also contributes to their perceived control over their job performance, career and even personal life in the long run (Thompson and Prottas, 2006). In addition, in an organization where ATW is prevalent, employees can receive important work messages and monitor the progress of their subordinates' or peers' work in real time (Mazmanian *et al.*, 2013), which further contribute to their sense of control over their work (Spector, 1986) and relatedness to their work group. Meanwhile, taking on more challenging work tasks and completing work under time pressure can make employees feel personal mastery and growth (Benlian, 2020) as well as help them establish a committed and responsible professional image (Mazmanian *et al.*, 2013), increasing their perception of competence and self-worth (Alvesson, 2001). All these perceptions of autonomy, competence and relatedness will shape employees' intrinsic motivation for ATW.

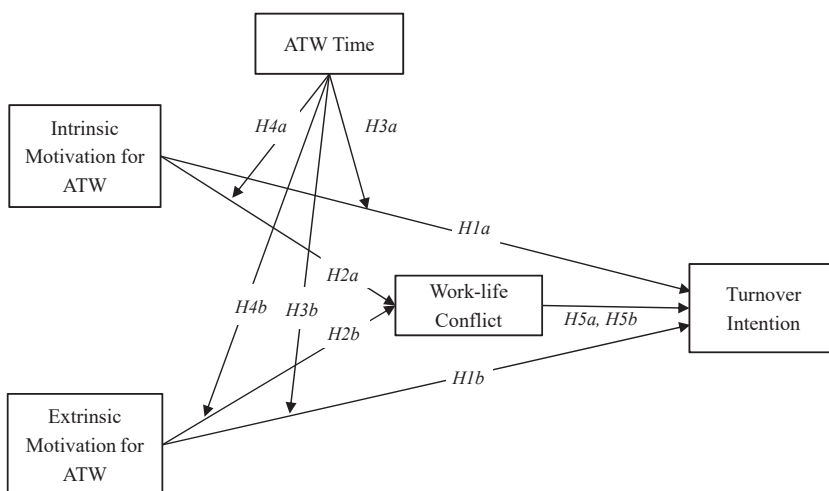
Based on the organismic integrative view of SDT, people have a natural tendency to integrate their ongoing experience and therefore they may internalize the external regulations into self-regulations. Deci and Ryan (2002) posited that extrinsic motivation can be further categorized into external regulation, introjected regulation, identified regulation and integrated regulation based on the extent to which one becomes self-regulated due to external forces. Thus, people can be extrinsically motivated to act because of pursuing rewards or avoid punishment (external regulation), the need to avoid low self-esteem and other bad feelings about themselves (introjected regulation), the identification to the significance of the action (identified regulation) and the congruence of the action with personally endorsed values and goals (integrated regulation). All these reasons may happen to employees in the context of ATW. For example, employees may be willing to engage in ATW because the more they invest into their work, the better performance they will achieve, which guarantees their reward, such as a higher salary. In this situation, employees are motivated by the external regulation. Besides, to avoid guilt and uneasiness, employees may feel obligated to engage in ATW (Butts *et al.*, 2015; Barley *et al.*, 2011) because they feel a sense of belonging to the work team and do not want to disappoint their colleagues or leaders, or undermine the collective effort (Ollier-Malaterre *et al.*, 2013). In this case, employees' ATW is motivated by the introjected regulation. When employees understand that their organizations are facing fierce business competition and they must grasp every opportunity to maintain their business advantage, they may identify with the necessity and importance of ATW. Here, employees' ATW is motivated by the identified regulation.

For these employees, integrated regulation is the primary motivation. Overall, it is because of the instrumental values that employees develop the extrinsic motivation for ATW.

Existing literature has not directly examined the impact of intrinsic and extrinsic motivations for ATW on employees' turnover intention, but their findings support the existence of these two types of motivation. For instance, researchers have showed that ATW can be driven by employees' affective commitment to the organization (Boswell and Olson-Buchanan, 2007), ambition (Boswell, 2007), social presence (Chen and Casterella, 2018), connectedness to others (Cousins and Robey, 2015) and connectedness to whatever happening at work (Mazmanian *et al.*, 2013). The evidence suggests that employees engage in ATW because of the enhanced perception of relatedness, autonomy and competency, all of which are components of intrinsic motivation. However, ATW may also be resisted because it can result in many negative outcomes in employees, such as burnout (Wright *et al.*, 2014), exhaustion (Derks *et al.*, 2014), work-life conflict (Ferguson *et al.*, 2016), low work and non-work performance (Chen and Karahanna, 2018) and life interruption (Chen and Karahanna, 2018). Therefore, researchers also investigated the external reasons that force employees to engage in ATW, such as organizational culture for ATW (Köffer *et al.*, 2014), climate for ATW (Fenner and Renn, 2010), expectation and norms for ATW (Schlachter *et al.*, 2018), requirement for ATW (Dery *et al.*, 2014), norms of work-life segmentation (Derks *et al.*, 2014), ambition (Boswell and Olson-Buchanan, 2007) and desire for projecting professional image (Schlachter *et al.*, 2018). These findings show that there are situations when employees will engage in ATW due to external pressure or instrumental values even though ATW can incur uncomfortable or unpleasant feelings. Therefore, we contend that employees can also have extrinsic motivation for ATW.

Furthermore, motivation originating from different sources can determine the intensity, direction and persistence of the target behavior (McShane and Von Glinow, 2017) and lead to different results. Hence, in this research, we contend that employees' intrinsic motivation and extrinsic motivation for ATW will have distinct impacts. We develop a research model (see Figure 1) and derive hypotheses in the following sections.

2.1.2 Intrinsic motivation and turnover intention. In the context of ATW, intrinsically motivated employees are the ones who can perceive relatedness, competency and autonomy



Source(s): Authors' own creation/work

Figure 1.
Research model

during their engagement of ATW. If employees can perceive relatedness from ATW, it means that they feel closely connected to their colleagues and being cared for by their colleagues during ATW. Therefore, they will have a strong sense of belonging to their work team and organization (Deci and Ryan, 2002). If employees develop the feeling of competence from ATW, it means that they can effectively accomplish the work tasks they encountered and see the potential in themselves during ATW (Deci and Ryan, 1985). In this situation, employees become more confident and their need to fully develop their potential can be satisfied. Hence, they will have lower intention to leave the job. If employees can perceive autonomy from ATW, it means that they view ATW as an opportunity to challenge themselves, improve themselves and achieve their personal goals (Scott *et al.*, 1997), which allows them to have more control over their work performance and the pace of their career development (Deci and Ryan, 2002; Thompson and Prottas, 2006; Spector, 1986). All these positive feelings and experiences about colleagues, work and organization will contribute to employees' job satisfaction (Loher *et al.*, 1985) and thus will reduce their desire to leave the job (Lo, 2015). Therefore, we propose that,

H1a. Employees' intrinsic motivation for ATW reduces their turnover intention.

2.1.3 Extrinsic motivation and turnover intention. Employees who are extrinsically motivated to engage in ATW are those who do not find ATW interesting or enjoyable but feel compelled to participate in it to avoid punishment or to gain rewards (Deci and Ryan, 2002). First, if an employee's ATW is mainly driven by the external constraints, such as punishment or reward, then it suggests that this employee lacks the internal desire for ATW, which implies that his or her loyalty and commitment to work and organization is weak (Trevino, 1992; Bateman and Strasser, 1984). Once there are better job offers, their possibility to leave the job will be high (Lo, 2015). Besides, employees' ATW could be due to that their organizations make it a compulsory policy or that there is a strong norm to engage in ATW in their organization (Richardson and Benbunan-Fich, 2011). Such requirements and expectations of ATW will make employees feel that their organizations only care about whether the work has been done in the best way they see rather than the well-being of their employees (Wright *et al.*, 2014). Prior studies have shown that employees who feel uncared for by their organization are more likely to leave their job (Alkahtani, 2015). Meanwhile, when an organization has high expectations for ATW and uses sanction policies to force employees to engage in ATW, employees need to be always available and frequently check notices of work-related messages (Park *et al.*, 2020). Such pressures can make them feel stressed out and exhausted, resulting in their intention to quit the job (Derks *et al.*, 2014). Therefore, we propose that,

H1b. Employees' extrinsic motivation for ATW increases their turnover intention.

2.2 Employees' motivation for ATW and work-life conflict

2.2.1 Intrinsic motivation and work-life conflict. Work-life conflict is defined as a type of interrole conflict, in which a person feels that the pressures from his or her work role and family role are mutually incompatible (Greenhaus and Beutell, 1985). Since ATW occupies employees' time and energy in their life domain, we will focus on the work-to-life conflict caused by ATW. Employees who have intrinsic motivation for ATW, are those who can experience pleasure and fun during ATW (Deci and Ryan, 2002). Therefore, they might willingly devote more personal time to work, and as a result, they may not feel that their work and family roles are in conflict. Meanwhile, since the engagement of ATW is consistent with the desirability of intrinsically motivated employees, they may not feel losing control over their work and life (Oksa *et al.*, 2021) and thus will experience less work-life conflict. In fact, for intrinsically motivated employees, ATW can even produce a positive effect on life. This is because intrinsically motivated employees perceive ATW as a good opportunity to develop

their potential and competency (Deci and Ryan, 2002). Benlian (2020) found that the work demands that create opportunity for personal growth, that is challenge stressors, can incur positive affects in employees. In turn, such positive affects invoked in work can broaden one's mental capability and vigor (Rothbard, 2001) and improve their engagement and performance in the life domain (Greenhaus and Powell, 2006), which reduces the work–life conflict experienced by employees. Therefore, we propose that,

H2a. Employees' intrinsic motivation for ATW reduces their work–life conflict.

2.2.2 Extrinsic motivation and work–life conflict. Extrinsically motivated employees are those who are not in favor of ATW but still engage in ATW due to some external reasons, such as obligation, competition pressures and job insecurity (Deci and Ryan, 2002). For instance, when the workload is very heavy, to accomplish their work on time, employees may feel necessary to use the ICT tools to communicate with colleagues after hours. Besides, if employees strive for promotion and career growth, they may choose to actively engage in ATW to demonstrate their competency, professionalism and ambition (Schlachter *et al.*, 2018). In these occasions, employees have no choice but to take on the work demand. As a result, they will have less time and energy to fulfill their family role, which will cause work–life conflict (Edwards and Rothbard, 2000). Meanwhile, the perception of having no choice and acting against one's own will may incur negative feelings in employees, such as anger, distress and anxiety (Benlian, 2020), which will have a spillover effect on employees' life, exacerbating work–life conflict (Butts *et al.*, 2015). Benlian (2020) and Chen and Karahanna (2018) found that negative affects incurred in work will cause nonwork emotional exhaustion and hamper employees' nonwork performance and even the satisfaction of family members. Furthermore, if employees are mainly motivated by the contingent outcomes of ATW, it implies that they are not fond of ATW and might instead choose to dedicate themselves to roles in their personal lives, such as being a good wife or mother (Lee *et al.*, 2021). With such inner desire, employees may wish to invest more time and energy into their life but must make a sacrifice for ATW. Therefore, they may perceive a strong sense of work–life conflict. Hence, we propose that,

H2b. Employees' extrinsic motivation for ATW increases their work–life conflict.

2.3 The moderating role of time spent on ATW

Different from most prior research contexts where one's motivation for a behavior highly relates to the subsequent behavior (Sheeran, 2002; Sheeran and Webb, 2016; Deci and Ryan, 2002), in the context of ATW, one's motivation for ATW does not necessarily relates to one's actual engagement in ATW. For instance, high motivation for ATW does not mean more time spent on ATW, because the actual happening of ATW cannot be fully determined by employees. It may also depend on the actual work demand, expectations of the organization, availability of related technology and the availability of coworkers using the same technology (Mazmanian *et al.*, 2013; Mellner, 2016). If there is no work that needs to be done after hours or no available contacts (Mazmanian *et al.*, 2013), even though employees have a strong motivation for ATW, ATW will not happen. Besides, low motivation for ATW does not mean less time spent on ATW. This is because, even though employees dislike ATW and intend to separate their work and life, they may still choose to engage in ATW to fulfill their job obligation, establish their professional image, help their organization to maintain business competency and obtain respect and liking of their colleagues (Mazmanian *et al.*, 2013; Ollier-Malaterre *et al.*, 2013; Van Zoonen and Rice, 2017). Hence, in the context of ATW, employees' motivation for ATW is independent of the actual time they spend on ATW, and they could separately or jointly influence employees' turnover intention.

Specifically, we argue that how employees' intrinsic motivation and extrinsic motivation for ATW affect their turnover intention depends on the actual time spent on ATW. For

instance, no matter what kind of motivation is held by the employee, if ATW rarely happens, then the impact of intrinsic and extrinsic motivations for ATW on employees' turnover may be weakened or even disappear. If the time of ATW is long, the impact of these two motivations for ATW on employees may be more salient. In this situation, employees are facing extended work hours and become physically and mentally exhausted (Schlachter *et al.*, 2018). Butts *et al.* (2015) argued that employees may react differently to such physical and mental exhaustion caused by long time of ATW. For employees who want to protect their life from unwanted work intrusion but feel obliged to engage in ATW due to organization's expectation (Barley *et al.*, 2011), that is being extrinsically motivated for ATW, long time spent on ATW will exacerbate their negative reactions and dampen their positive reactions. Employees who think work is inherently fun and strive to pursue career success will voluntarily devote time and energy to ATW, that is being intrinsically motivated for ATW. As a result, the negative feelings caused by long time spent on ATW will be weakened and the positive reactions will be exacerbated. Therefore, we argue that the impact of employees' intrinsic motivation and extrinsic motivation on work-life conflict and turnover intention will be moderated by the time spent on ATW.

As aforementioned, intrinsically motivated employees will feel that ATW offers them a chance to be better connected to colleagues, develop their potential and take control over their work and life, which reduces their intention to leave. Hence, the more they engage in ATW, the more likely for them to experience these positive feelings. In fact, these positive feelings can neutralize the negative outcomes of ATW, such as physical and mental exhaustion and thus alleviate employees' urge to leave the job. Specifically, because of spending more time on ATW, employees will feel strongly connected to colleagues at work and embedded into the work settings. According to the Job Embeddedness Theory, these employees are enmeshed with an invisible web, and if they leave the job, they need to make great sacrifices (Mitchell *et al.*, 2001). The cost of leaving will decrease their turnover intention (Lo, 2015). Meanwhile, intrinsically motivated employees are willing to invest great efforts into ATW (Deci and Ryan, 1985). They may actively monitor the notices of new work messages, promptly reply to the messages, generously offer help to colleagues and be friendly and patient during their communication (Butts *et al.*, 2015; Shujaat *et al.*, 2019). Hence, for these employees, the happening of ATW offer a stage to show their passion, kindness and competence and therefore can help them establish a good professional image (Schlachter *et al.*, 2018), which may enable them to obtain more work resources and support in the future (Van Zoonen and Rice, 2017; Shujaat *et al.*, 2019), reducing their desirability to leave the organization. Therefore, we propose that,

H3a. ATW time positively moderates the relationship between intrinsic motivation and turnover intention, such that the negative relationship is stronger as ATW time increases.

As discussed earlier, extrinsically motivated employees engage in ATW to avoid punishment or obtain rewards (Deci and Ryan, 2002). Therefore, their commitment and loyalty to the organization are low. When they are required to spend a lot of time on ATW which makes them feel physically and mentally exhausted, they will naturally consider quitting the job without worrying whether their turnover will cause damage or inconvenience to the organization (Cohen, 1993). For those who engage in ATW due to punishment, every episode in which they are forced to respond to the after-hours work demand may make them feel that their organizations do not care about their well-being (Kurtessis *et al.*, 2017). Hence, the more work requests they received after hours, the more negative effect, such as anger and dissatisfaction (Butts *et al.*, 2015), toward their organization will be incurred, which will weaken their attachment to the organization and increase their turnover possibility. Since these employees' ATW is compelled by their organization, they may behave passively during

their ATW. For example, they may choose to delay their reply to the work message or reply to the message impatiently or irresponsibly (Butts *et al.*, 2015). As the ATW increases, such passive behavior will ruin their work reputation and relationship with leaders and colleagues (Schlachter *et al.*, 2018; Oksa *et al.*, 2021) and result in a loss of work resources and promotion opportunities, which will increase their intention to leave the organization (Lo, 2015). Therefore, we propose that,

H3b. ATW Time positively moderates the relationship between Extrinsic Motivation and Turnover Intention, such that the positive relationship is stronger as ATW Time increases.

For intrinsically motivated employees, ATW is aligned with their intrinsic needs. Therefore, they can experience positive feelings from ATW, such as happiness, pleasure and satisfaction (Benlian, 2020). The more they engage in ATW, the more positive feelings they will experience, which will promote both their work and life engagement and performance (Van Zoonen and Rice, 2017) and result in low conflict between work and life. Moreover, intrinsically motivated employees are willing to invest time and efforts in ATW (Scott *et al.*, 1997). Their enthusiasm, activeness and responsiveness during ATW can help them accumulate relational capitals and cognitive capitals at work, leading to lower communication cost and easier knowledge sharing with co-workers (Davison *et al.*, 2018; Derks *et al.*, 2016). Hence, when the need of ATW is high, these employees can finish their work more effectively and thus can save more time, attention and energy for their life domain (Michel *et al.*, 2011; Edwards and Rothbard, 2000). Meanwhile, a good relationship with supervisors and colleagues can offer emotional and instrumental support that helps employees to mitigate the pressures from the life domain (Van Zoonen *et al.*, 2020). In fact, intrinsically motivated employees are those who may voluntarily choose to spend long time on work to pursue personal achievement. Korn *et al.* (1987) posit that such employees are similar to the hyper-performers who are resourceful, adaptable, creative and good at stress management. Thus, they will be more capable of taking care of both their work and life and experience less work–life conflict (Scott *et al.*, 1997). Thus, we propose that,

H4a. ATW Time positively moderates the relationship between Intrinsic Motivation and Work–life Conflict, such that the negative relationship is stronger as ATW Time increases.

Time spent on ATW can also moderate the relationship between employees' extrinsic motivation for ATW and their perception of work–life conflict. Firstly, when the need of ATW is low, it means that ATW will not cost employees too much energy and that they can still re-engage in life after finished work. In this situation, the work demand is still in the acceptable range to employees and therefore will not incur extreme reaction in employees (Barley *et al.*, 2011). Therefore, the impact of extrinsic motivation for ATW on work–life conflict will not be very strong. Secondly, extrinsic motivation for ATW reflects employees' negative attitude for ATW and preference for separating work and life. Hence, they have the desire to protect their non-work time from the unwanted work demand and limit the duration of such intrusion (Powell and Greenhaus, 2010). As a result, as the time spent on ATW increases, they will experience negative feelings such as anger, dissatisfaction and unhappiness, which may further hamper their interactions with family members and performance in the life domain, causing work–life conflict (Butts *et al.*, 2015). Butts *et al.* (2015) posited that preference of work–life separation will exacerbate the negative emotions and lessen the positive emotions in employees during their ATW. In fact, when there are no ATW requests, extrinsically motivated employees may have their own arrangement for family life. However, when there are a lot of ATW, the employees may have to cancel or reschedule their family activities (e.g. seeing a movie or going to a picnic). In such cases, both the employees'

life satisfaction and their family members' life satisfaction will be hampered (Benlian, 2020), incurring work–life conflict. Hence, we propose that,

H4b. ATW time positively moderates the relationship between Extrinsic Motivation and Work–life Conflict, such that the positive relationship is stronger as ATW Time increases.

2.4 The mediating role of work–life conflict

When work–life conflict happens, it means that one may have allocated too much time and attention to the work domain which hindered their performance and well-being in the life domain (Greenhaus and Beutell, 1985). Firstly, the extended work hour and increased workload will make employees feel fatigue, burnout, physically and emotionally exhaustion and even cause health problems, such as psychological distress and insomnia (Schlachter *et al.*, 2018; Chen and Karahanna, 2018; Buruck *et al.*, 2020; Park *et al.*, 2020), which will hamper their well-being and makes them what to quit the job. Secondly, in such cases, employees will not have enough recovery time to replenish their physical and mental resources that are depleted by the work demand (Zijlstra *et al.*, 2014; Mazmanian *et al.*, 2013). As a result, these employees may feel that the current job cannot help them achieve their career goal and fully develop their potential. Thirdly, when too much work demand intrudes their life, employees may feel that they are neglected by their organization and therefore develop low organizational commitment and job satisfaction, which will increase their intention to leave (Carlson *et al.*, 2000; Frone *et al.*, 1992; Higgins *et al.*, 1992). Accumulating evidence has confirmed that employees' perception of work–life conflict can arouse their turnover intention (Maertz and Boyar, 2011; e.g. Frone *et al.*, 1992; Carlson *et al.*, 2000; Adams *et al.*, 1996; Wright *et al.*, 2014).

Based on the impact of work–life conflict on turnover intention, we posit that work–life conflict can not only mediates the impact of intrinsic and extrinsic motivations on turnover intention, but also mediates the interaction effect of intrinsic motivation and ATW time and the interaction effect of extrinsic motivation and ATW time on turnover intention. If ATW time is short, both intrinsic and extrinsic motivations will have a relatively weak impact on turnover intention. This is because, regardless the motivation for ATW, if no work needs to be done after hours, it will not interfere with employees' lives to induce work–life conflict. Employees with intrinsic motivation for ATW are those who can experience pleasant feelings from ATW. For example, they may consider ATW an opportunity to help them fit into the work group or to show their talent (Schlachter *et al.*, 2018). Therefore, when ATW time is high, they will consider it as their opportunity. As they fit into the work group and being recognized by their competencies, their achievements and satisfaction in the work-role may alleviate their feeling of loss of private time caused by ATW or even induce work to life enrichment that helps to improve their life role performance (Casper *et al.*, 2018; Jiang and Men, 2017). In such situations, employees' perception of work–life conflict will be weakened and thus have less intention to leave the job. Extrinsically motivated employees dislike ATW and prefer to have their own plans for leisure time if there is low need of ATW (Azar *et al.*, 2018). When more time is spent on ATW, the positive impact of extrinsic motivation on turnover intention will be enhanced. This is because ATW compels them to postpone or cancel their original plan for family, hampering the life satisfaction of the employees and even their family members (Powell and Greenhaus, 2006). Moreover, when employees are compelled to undertake too much ATW, they are likely to experience negative emotions, which have been found to result in low performance in both work and life (Benlian, 2020), intensifying work–life conflict and making employees consider quitting their current job. Accordingly, we argue that the interaction effect of ATW time and employees' motivation (intrinsic motivation and extrinsic motivation) on turnover intention can be mediated by employees' perception of work–life conflict. Therefore, we propose that,

H5a. Work–life conflict mediates the interaction effect of intrinsic motivation and ATW time on turnover intention.

H5b. Work–life conflict mediates the interaction effect of extrinsic motivation and ATW Time on turnover intention.

Will ATW
make
employees
leave?

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3. Method

3.1 Data collection

We conducted a survey to collect data. The target population of our survey was all WeChat users who had used WeChat to complete job tasks after hours. With over 1.3 billion monthly active users, WeChat is the second most popular messaging app in the world (Statistica, 2023). We collected data in China because China is the home market of WeChat and WeChat has been well integrated into the work and life of Chinese people. In a survey released by China Economic Herald in April 2022, more than half of the respondents admitted that, during their remote work, they used WeChat to conduct the work, which implied the prevalence of WeChat in ATW.

The participant recruitment was based on two inclusion criteria. First, they needed to have used WeChat for ATW, which ensured that they had relevant knowledge and experience of our research context. To meet this condition, we asked participants to report their time spent on ATW in the past two weeks. If the answer was zero, the participant would be excluded. Second, participants needed to be currently employed so that their reported turnover intention was realistic in the sense that they knew what it entailed if they left their current job. If not, the participant would be excluded.

The questionnaire was administered via an online survey platform. We first uploaded the survey to the survey platform and then released the link of the survey in the WeChat Friend Circle and WeChat groups to invite people to take the survey. Overall, we have received 515 completed questionnaires. After deleting the questionnaires with invalid answers, we got 484 valid returns. The participants were from 32 different regions of China, which alleviated biases related to regional economic and cultural differences. The participants came from a variety of industries and company types, job positions and age groups, which demonstrated the diversity of our sample. Appendix 1 presents their detailed demographics data.

3.2 Measures

All the measurements (see Appendix 2) were adopted from previous studies and rated by a 5-point Likert scale (1 = strongly disagree, 5 = strongly agree). For ATW time (TIME), we adopted the scales from Richardson and Thompson (2012). In our research, there are three after-hours situations: time before work on workdays, time after work on workdays and weekends or holidays. Respondents were asked to choose how much time they spent on ATW per day in these three situations. They could choose from “0–15 min”, “16–30 min”, “31–59 min”, “1–2 h” to “above 2 h” according to their actual experience. For intrinsic motivation (IM) and extrinsic motivation (EM), we adopted the scales from Michael *et al.* (2013) and Hansen and Levin (2016) to measure how an individual is intrinsically or extrinsically motivated for ATW. The scale of work–life conflict (WLC) was adopted from Netemeyer *et al.* (1996). The last item of this scale was dropped due to low factor loading, and we used the other four items to measure WLC. Turnover intention (TI) was measured by the scale developed by Mobley *et al.* (1979) and two of the items were reverse coded. Before the formal data collection, we conducted a pre-test with a group of Information Systems (IS) scholars. Based on their feedback, we slightly revised the wording of some questions to improve readability.

4. Data analysis and results

4.1 Measurement validation

Cronbach's alpha and composite reliability were calculated to evaluate the reliability of the measurements. The reliability scores of all constructs were above 0.7 (Table 1), suggesting a high level of reliability (Nunnally, 1978). The average variance extracted (AVE) of all constructs are above 0.60, indicating that the principal constructs have captured more construct-related variance than error variance (Hair et al., 1998). The correlations among all the constructs are below 0.70 and smaller than the square root of AVE, indicating sufficient discriminant validity (Bagozzi et al., 1991). As Table 2 shows, all the item loadings on the assigned construct are above 0.70 (except the first item loading of extrinsic motivation which is 0.654) and greater than the cross-loading on other constructs, which suggests satisfactory convergent validity and discriminant validity of our measures (Chin et al., 2003).

Construct	Alpha	CR	AVE	EM	IM	TIME	WLC	TI
Extrinsic motivation (EM)	0.948	0.861	0.736	<i>0.858</i>				
Intrinsic motivation (IM)	0.956	0.856	0.647	0.661	<i>0.804</i>			
Time spent on ATW (TIME)	0.725	0.782	0.727	0.232	0.241	<i>0.852</i>		
Work-life conflict (WLC)	0.937	0.838	0.711	0.031	-0.196	0.120	<i>0.843</i>	
Turnover intention (TI)	0.834	0.954	0.650	0.245	0.105	0.152	0.474	<i>0.806</i>

Table 1. Construct reliability, AVE and correlation

Note(s): Alpha = Cronbach's alpha. CR = Composite reliability. The italic values in diagonal cells are square roots of AVEs

Source(s): Authors' own creation/work

Items	EM	IM	TIME	WLC	TI
EM1	<i>0.654</i>	0.554	0.040	0.150	0.013
EM2	<i>0.818</i>	0.410	0.009	0.101	0.006
EM3	<i>0.891</i>	0.283	0.030	0.081	0.040
EM4	<i>0.900</i>	0.260	0.093	0.059	0.032
EM5	<i>0.830</i>	0.339	0.067	0.091	0.098
IM1	0.322	<i>0.874</i>	0.102	0.049	0.057
IM2	0.306	<i>0.888</i>	0.141	0.059	0.060
IM3	0.316	<i>0.878</i>	0.116	0.063	0.050
IM4	0.346	<i>0.739</i>	0.156	0.174	0.120
TIME1	0.297	0.090	<i>0.729</i>	0.181	0.131
TIME2	0.162	0.061	<i>0.878</i>	0.017	0.148
TIME3	0.182	0.048	<i>0.729</i>	0.093	0.065
WLC1	0.117	0.006	0.014	<i>0.906</i>	0.143
WLC2	0.082	0.001	0.032	<i>0.924</i>	0.125
WLC3	0.068	0.038	0.058	<i>0.920</i>	0.126
WLC4	0.055	0.048	0.065	<i>0.833</i>	0.146
TI1	0.172	0.019	0.044	0.036	<i>0.883</i>
TI2	0.200	0.046	0.097	0.053	<i>0.858</i>
TI3	0.192	0.127	0.449	0.037	<i>0.748</i>
TI4	0.189	0.148	0.374	0.072	<i>0.797</i>

Table 2. Loadings and cross-loading of construct measures

Note(s): EM = extrinsic motivation, IM = intrinsic motivation, TIME = ATW time, WLC = work-life conflict, TI = turnover intention. Factor loadings on their assigned construct are in italic

Source(s): Authors' own creation/work

4.2 Common method bias

To eliminate the concern of common method bias, we followed Podsakoff *et al.* (2003) to apply both procedural and statistical remedies. First, procedurally, we used anonymous measures which did not show the variable names in the questionnaire and used reverse questions for some items. Second, statistically, we conducted the Harman’s single factor test and the single latent method factor test (Podsakoff *et al.*, 2003). For the Harman’s single factor test, all the items were entered a Principal Component Analysis (PCA). Among all the extracted factors, the one with the largest eigenvalue only accounted for 30.94% of the variance, indicating that the variance of our data is not coming from one common method source. Therefore, common method bias is not a severe problem in our research. For the single latent method factor test (Podsakoff *et al.*, 2003), we created a latent method factor consisting of the indicators from the largest factor extracted from the PCA and included this method factor into our main analysis as a control variable. The findings are consistent before and after the inclusion of this method factor, suggesting the absence of common method bias.

4.3 Hypothesis testing

We used SmartPLS for hypothesis testing. Table 3 presents the PLS results. First, intrinsic motivation and extrinsic motivation have different impacts on turnover intention and work–life conflict. As the result of Model 1 shows, intrinsic motivation for ATW has a negative direct impact ($\beta = -0.117, p < 0.05$), while extrinsic motivation for ATW has a positive direct impact ($\beta = 0.195, p < 0.001$) on turnover intention, supporting H1a and H1b. As shown by the result of Model 2, intrinsic motivation for ATW negatively influences work–life conflict

Variables	Model 1 DV: turnover intention		Model 2 DV: work–life conflict		Model 3 DV: turnover intention	
	β	<i>t</i> -value	β	<i>t</i> -value	β	<i>t</i> -value
<i>Main effect</i>						
Intrinsic Motivation (IM)	-0.117*	-1.963	-0.429***	-7.843	0.078	1.348
Extrinsic Motivation (EM)	0.195***	3.446	0.134**	2.581	0.134**	2.588
<i>Moderator</i>						
ATW Time (TIME)	0.092	1.630	0.126*	2.438	0.035	0.670
<i>Mediator</i>						
Work–life Conflict (WLC)					0.455***	9.936
<i>Interaction effects</i>						
IM*TIME	-0.068	-0.991	-0.015	-0.246	-0.061	-0.976
EM*TIME	0.150*	2.180	0.108*	2.420	0.101	0.109
IM*EM	0.089*	2.123	0.093	1.715	0.047	0.224
<i>Control variables</i>						
Age	-0.246***	-4.359	-0.183**	-3.544	-0.163**	-3.126
Gender	-0.120	-1.085	-0.053	-0.520	-0.096	-0.954
Education	-0.180*	-2.417	-0.055	-0.806	-0.155*	-2.286
Job Position	-0.044	-0.748	-0.040	-0.741	-0.026	-0.483
Job Tenure	0.003	0.050	0.060	0.933	-0.024	-0.373
R ²	0.186		0.218		0.328	

Note(s): * $p < 0.05$; ** $p < 0.01$; *** $p < 0.001$. DV = dependent variable
Source(s): Authors’ own creation/work

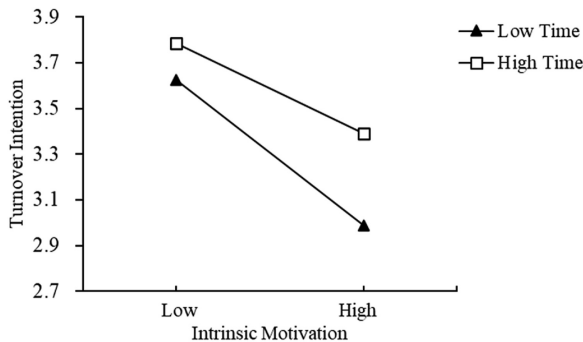
Table 3.
Hypothesis testing
results

($\beta = -0.429, p < 0.001$), while extrinsic motivation for ATW positively influences work–life conflict ($\beta = 0.134, p < 0.01$). Therefore, H2a and H2b are both supported.

Second, the moderation effects of ATW time on the impact of intrinsic motivation and extrinsic motivation are different. The interaction term of ATW time and intrinsic motivation on turnover intention is not significant ($\beta = -0.068, ns$), failing to support H3a. The interaction term of ATW time and extrinsic motivation on turnover intention is significantly positive ($\beta = 0.150, p < 0.05$), suggesting that the positive impact of extrinsic motivation on turnover intention is strengthened as more time is spent on ATW. Hence, H3b is supported. The simple slopes (Figures 2 and 3) also show that the impact of intrinsic motivation on turnover intention is not affected by ATW time, while the impact of extrinsic motivation on turnover intention is stronger when ATW time increases. Similarly, the interaction effect of Time spent on ATW and intrinsic motivation on work–life conflict is not significant ($\beta = -0.015, ns$), failing to support H4a. The interaction effect of ATW time and extrinsic motivation on work–life conflict is significant and positive ($\beta = 0.108, p < 0.05$), indicating that ATW time can enhance the positive impact of extrinsic motivation on work–life conflict. Therefore, H4b is supported.

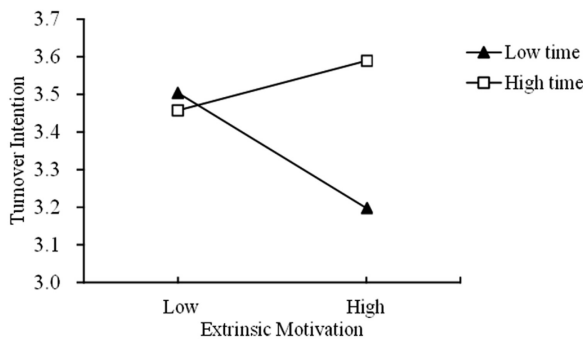
To test the mediated moderation effect proposed in H5a and H5b, we followed the three-step procedures proposed by Muller *et al.* (2005). Muller *et al.* (2005) contend that there is a mediated moderation effect if the following three conditions are satisfied. First, the interaction effect of the independent variable (IV) and the moderator (MO) on the dependent

Figure 2.
Interaction effect of intrinsic motivation and ATW time on turnover intention



Source(s): Authors' own creation/work

Figure 3.
Interaction effect of extrinsic motivation and ATW time on turnover intention



Source(s): Authors' own creation/work

variable (DV) is significant. Second, IV has significant influence on the mediator (ME) and the interaction effect of IV and MO on ME is significant. Third, when ME is added into the model and the interaction effect of ME and MO on DV is controlled, ME has significant effect on DV and the interaction effect of IV and MO on DV is reduced or become insignificant.

In our research, the interaction effect of intrinsic motivation and ATW time is not significant on either turnover intention ($\beta = -0.068$, ns) or work–life conflict ($\beta = -0.015$, ns). Therefore, there is no mediated moderation effect between intrinsic motivation and turnover intention. H5a is not supported. Nevertheless, we found that the interaction between extrinsic motivation and ATW time on turnover intention is significant (see Model 1 in Table 3), which satisfies Condition 1. Moreover, the impact of extrinsic motivation on work–life conflict is significant, and the interaction between extrinsic motivation and ATW time on work–life conflict is significant (see Model 2 in Table 3), which satisfies Condition 2. We also found that when work–life conflict is added into the model and the interaction between ATW time and work–life conflict on turnover intention is controlled, work–life conflict shows a significant impact on turnover intention ($\beta = 0.455$, $p < 0.001$) and the interaction between extrinsic motivation and ATW time on turnover intention becomes insignificant ($\beta = 0.101$, ns) (see Model 3 in Table 3), which satisfies Condition 3. Altogether, the results suggest that work–life conflict fully mediates the interaction between extrinsic motivation and ATW time on turnover intention, supporting H5b.

The impacts of control variables such as age, gender, education, job position and job tenure are reported in Table 3. The results show that age and education have a significant negative impact on turnover intention, indicating that older employees and employees with a higher education level will have lower turnover intention. We also found that age has a significant negative impact on work–life conflict, suggesting that older employees will unlikely perceive work–life conflict. In addition, the interaction between intrinsic motivation and extrinsic motivation for ATW has a significant effect on turnover intention ($\beta = 0.089$, $p < 0.05$) but no significant effect on work–life conflict ($\beta = 0.093$, ns).

5. Discussion

This study develops a mediated moderation model to investigate the interaction effect of employees' motivation and time spent on ATW on their turnover intention and the mediating role of work–life conflict. Our research yields three major findings. First, this study shows that intrinsic motivation and extrinsic motivation for ATW have distinct impacts on employee's perceived work–life conflict and turnover intention. Employees' intrinsic motivation for ATW negatively influences, while employees' extrinsic motivation for ATW positively influences, their perception of work–life conflict and turnover intention. Second, we find that time spent on ATW can enhance the positive impact of extrinsic motivation on work–life conflict and turnover intention. Third, we demonstrate that work–life conflict mediates the interaction effect of employees' motivation and time spent on ATW on turnover intention. The results show that work–life conflict positively relates to employees' turnover intention and the interaction effect of extrinsic motivation and time spent on ATW on turnover intention became non-significant after adding work–life conflict as a mediator.

However, contrary to our proposition, time spent on ATW does not moderate the impact of intrinsic motivation on work–life conflict and turnover intention. The reason could be that time spent on ATW mitigates the impact of intrinsic motivation on work–life conflict and turnover intention. In our hypothesis, we theorize that intrinsically motivated employees believe that ATW can make them better relate to colleagues, feel competent and take control over the pace of their career development (Deci and Ryan, 2002; Mazmanian *et al.*, 2013). Therefore, they can work happily, actively and effectively during ATW, which can foster a

positive atmosphere for employees' family life and increase their attachment to and satisfaction with the organization (Benlian, 2020; Califf *et al.*, 2020). Hence, we hypothesize that intrinsic motivation reduces employees' work-life conflict and turnover intention. However, it is also possible that as the time spent on ATW increases, employees are faced with work overload and will be physically and emotionally exhausted (Van Zoonen and Rice, 2017), which can hamper their job satisfaction, work performance and life performance (Chen and Karahanna, 2018; Benlian, 2020). Meanwhile, too much time spent on ATW will make employees feel losing control over their work-life boundaries (Mazmanian *et al.*, 2013), which will discount their perceived enjoyableness of ATW and dilute their enthusiasm and proactivity in ATW, making them less tolerant to the conflict caused by ATW to their life and arouse their intention to look for a new job.

5.1 Theoretical implication

This study contributes to IS and management research in four aspects. First, it offers a motivational perspective to explain whether ATW will arouse employees' turnover intention. Existing literature has examined the impact of time, frequency and intensity of ATW on employees' turnover intention as well as other outcomes (Ferguson *et al.*, 2016; e.g. Wright *et al.*, 2014; Belkin *et al.*, 2020). A common finding is that the more employees engage in ATW, the more likely they will experience burnout and exhaustion (Ferguson *et al.*, 2016), which will hamper their performance in both work and life (Chen and Karahanna, 2018) and therefore make them want to quit the job (Wright and Nishii, 2007). Our research contends that how employees react to ATW depends on their underlying motivation for ATW. We investigated the impact of employees' intrinsic motivation and extrinsic motivation for ATW on their turnover intention. The results show that intrinsic motivation for ATW decreases, while extrinsic motivation for ATW increases, employees' turnover intention. This finding indicates that, besides the degree of engagement in ATW, employees' motivation for ATW can also affect the turnover intention induced by ATW, which provides a new perspective to understand the impact of ATW on employees and organizations.

Second, this research advances our knowledge about ATW by examining the interaction effect of time spent on ATW and employees' motivation. Existing research only separately examined the main effect of time spent on ATW and some factors that may contribute to the formation of employees' intrinsic motivation for ATW such as perceived job autonomy (Moore, 2000; Carillo *et al.*, 2021), and extrinsic motivation for ATW such as perceived organizational norm and expectation (Richardson and Benbunan-Fich, 2011). Different from the literature, we adopted an integrative approach to examine the interaction effect of employees' motivation and the time spent on ATW. Our results show that more time spent on ATW does not always cause detrimental consequences to organization. It can only intensify the positive impact of extrinsic motivation on work-life conflict and turnover intention but has no moderation effect on the impact of intrinsic motivation on work-life conflict and turnover intention. This finding indicates that the impact of ATW time depends on the nature of employees' motivation for ATW. Under the same amount of time spent on ATW, distinct types of motivations and different intensity levels of the motivation will result in various influences on employees.

Third, our research opens the black box of the relationship between employees' motivation for ATW and turnover intention by illustrating the mediation effect of work-life conflict. As an outcome commonly seen in the literature of ATW (Ragsdale and Hoover, 2016; Köffer *et al.*, 2014), work-life conflict has been found to be a strong predictor of employees' turnover intention (Hom *et al.*, 2017; Lee *et al.*, 2017; Griffeth *et al.*, 2000; Alkahtani, 2015), but researchers have rarely examined the mediating role of work-life conflict in the relationship between ATW and employees' turnover intention. Only Ferguson *et al.* (2016) and Wright

et al. (2014) have used work–life conflict to explain the impact of time spent on ATW on employees’ turnover intention, but they did not consider the impact of employees’ motivation for ATW. Our research shows that work–life conflict can mediate the impact of employees’ intrinsic motivation and extrinsic motivation for ATW on turnover intention and the interaction effect of extrinsic motivation and time spent on ATW on turnover intention. This finding not only deepens our understanding regarding how work–life conflict happens and then results in employees’ turnover intention in the context of ATW, but also reveals that work–life conflict is an important mechanism through which ATW engenders impacts on employees.

Lastly, our research offers a more holistic view regarding the impact of ATW by considering employees’ motivations for ATW. Existing studies have been mostly focused on the dark side of ATW. They found that high engagement in ATW will result in work–life conflict (Ferguson *et al.*, 2016), turnover intention (Wright *et al.*, 2014), job dissatisfaction (Wright *et al.*, 2014; Diaz *et al.*, 2012), low organizational commitment (Turel *et al.*, 2011), burnout (Wright *et al.*, 2014), exhaustion (Chen and Karahanna, 2018) and anxiety (Becker *et al.*, 2021). In contrast, our research finds that intrinsic motivation for ATW reduce employees’ work–life conflict and turnover intention, and this impact will not be affected by the time spent on ATW. Hence, for employees who can perceive autonomy, competence and relatedness during ATW, ATW can produce positive outcomes and benefit the organization. This finding provides a more comprehensive understanding about the impact of ATW on employees and helps to reconcile the inconsistent findings in the ATW literature regarding the consequences of ATW by considering the differential influences of employees’ motivations.

5.2 Managerial implication

While previous studies on ATW have mostly examined how the duration, frequency and intensity of ATW influence employees’ work and nonwork outcomes (Ferguson *et al.*, 2016; e.g. Wright *et al.*, 2014; Belkin *et al.*, 2020), we contend that employees’ motivation to engage in ATW also matters. The findings of our research have important implications for practitioners.

First, our research shows that intrinsic motivation for ATW decreases work–life conflict and then indirectly decreases turnover intention while extrinsic motivation for ATW increases work–life conflict and turnover intention. These findings suggest that ATW does not always result in undesirable outcomes and that the impact of ATW depends on how employees are motivated. For employees who dislike ATW and feel that they are forced to engage in ATW, ATW will induce work–life conflict and turnover intention. Contrarily, employees who enjoy ATW will experience low work–life conflict and turnover intention because they consider ATW as pleasant, satisfying, enjoyable and a viable way for self-achievement. This is consistent with the literature of workaholic, which contends that not everyone suffers from stress due to long work hours and that whether employees feel frustrated or fulfilled about long work hours may depend on why employees spend so much time on work (Porter, 2001). Therefore, we suggest managers to take measures to help employees develop more intrinsic motivation for ATW. For example, manager can organize workshops or lectures about career development to cultivate employees’ interests in ATW regarding how to fulfill ambitions faster by taking advantage of ATW, or they can integrate gamification features into ATW to increase employees’ pleasant feelings when working after hours. For organizations, the need of ATW or the time of ATW is uncontrollable, because it often depends on the need of their business operations and the need of customers. To accomplish business objectives without losing productivity and talents, it is imperative for organizations to implement effective interventions to cultivate employees’ intrinsic

motivation for ATW to alleviate the negative feelings caused by ATW when ATW is inevitable.

Second, we find that time spent on ATW can intensify the impact of extrinsic motivation for ATW on work–life conflict and turnover intention. This result indicates that, for employees who feel compelled by their organization to engage in ATW, when they must spend a lot of time on ATW, they are very likely to feel an intense work–life conflict and thus have strong intention to leave the job. To avoid this problem, managers can take two strategies. If the organization must heavily rely on ATW to maintain its business operations, that is when heavy ATW is inevitable, managers can rely on “soft control” measures (Truss *et al.*, 1997; Kelman and Hong, 2016) such as gamification or a honest conversation with employees to express their appreciation to improve the ATW experience or mitigate uncomfortable feelings caused by excessive ATW, rather than “hard control” measures (Kelman and Hong, 2016; Truss *et al.*, 1997) such as sanctions to force their employees to engage in ATW. For the organizations where ATW must be enforced by sanctions, managers need to ensure that the actual time spent on ATW is not too long to reduce employees’ perception of work–life conflict and intention to leave the job. For example, managers can set a “real off-work time”, after which employees are not obligated to respond to any work-related messages.

Finally, we find that work–life conflict not only mediates the main effects of intrinsic motivation and extrinsic motivation on employees’ turnover intention, but also mediates the interaction effect of extrinsic motivation and time spent on ATW on employees’ turnover intention. This implies that employees’ perception of work–life conflict is an important precursor of turnover intention in the context of ATW. Hence, if an organization has a strong need for ATW and most employees engage in ATW under fear of being punished or losing competitiveness, managers need to pay close attention to their employees’ perception of work–life conflict. Measures such as offering boundary management training (Fenner and Renn, 2010; Jostell and Hemlin, 2018), family-friendly policy (Chou and Cheung, 2013) and supervisory support (Harris *et al.*, 2015) can be adopted, which will not only offer instrumental support to help employees deal with the work–life conflict but also convey the message to employees that they are cared and valued by the organization (Alkahtani, 2015). As a result, the turnover intention caused by high ATW time in extrinsically motivated employees may be reduced.

5.3 Limitations

This research has two limitations. First, it only examines the separate impacts of intrinsic and extrinsic motivations for ATW on turnover intention. However, researchers have pointed out that intrinsic and extrinsic motivations can co-exist and interact with each other to influence human behaviors (Scott Rigby *et al.*, 1992). Future research should examine whether intrinsic and extrinsic motivations for ATW are complements or substitutes when affecting employees’ turnover intention. Second, previous research has shown that individuals with different cultural backgrounds may react differently to the blurred boundary between work and life (Aryee *et al.*, 1999). Our data was collected in China where people tend to embrace the culture of collectivism and have relatively weak awareness to protect their private life from ATW (Triandis, 2018). Future research needs to study samples from other cultures to assess the generalizability of our findings.

6. Conclusion

In the digital age when ATW has become increasingly prevalent in organization, employees’ turnover can go up because of this new work arrangement. In this research we develop a mediated moderation model to explain how employees’ intrinsic and extrinsic motivations for ATW affect their turnover intention. The results show that whether ATW arouses

employees' turnover intention depends on their underlying motivation for ATW. Specifically, intrinsic motivation for ATW indirectly reduces employees' turnover intention by decreasing work–life conflict, while extrinsic motivation directly and indirectly (via work–life conflict) increases turnover intention. Meanwhile, we find that time spent on ATW can strengthen the impact of extrinsic motivation for ATW on turnover intention but makes no difference for employees' who are intrinsically motivated for ATW. Furthermore, we show that the interaction effect of time spent on ATW and extrinsic motivation for ATW on turnover intention is mediated by employees' perception of work–life conflict, which calls for managers to pay more attention and offer more help to their employees who experience work–life conflict due to ATW. Overall, by discovering the distinct impacts of intrinsic motivation and extrinsic motivation for ATW on turnover intention, our research offers a contingent view regarding the impact of ATW, which advances our understanding of the impact of ATW on employees and organizations and offers guidance to managers in terms of how to mitigate the turnover intention aroused by ATW among employees with different motivations for ATW. We call for more ATW research in the future to examine the impact of different motivations for ATW on employee behaviors.

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Appendix 1

Will ATW
make
employees
leave?

Characteristics	Range	Frequency	Percentage
Age	>= 56	13	2.7%
	46-55	132	27.3%
	36-45	63	13.0%
	26-35	212	43.8%
	<=25	64	13.2%
Gender	Female	228	47.1%
	Male	256	52.9%
Education	Graduate Degree	170	35.1%
	College Degree	251	51.9%
	Junior College	49	10.1%
Job position	High School or below	14	2.9%
	Senior manager	46	9.5%
	Mid-level manager	115	23.8%
	First-line manager	119	24.6%
Job tenure	Employee	204	42.1%
	>20 Years	153	31.6%
	11-20 Years	54	11.2%
	6-10 Years	65	13.4%
Job function	3-5 Years	99	20.5%
	<3 Years	113	23.3%
	Accounting	74	15.3%
	Administration	69	14.3%
	HR	11	2.3%
	IT	7	1.4%
	Legal	3	0.6%
	Marketing	63	13.0%
	Other	212	43.8%
	Planning	5	1.0%
Industry	Production	19	3.9%
	R&D	21	4.3%
	Transportation	16	3.3%
	Service	8	1.7%
	Retails	24	5.0%
	Residential services	12	2.5%
	Research	11	2.3%
	Realty	14	2.9%
	Public Utility	3	0.6%
	Public administration	71	14.7%
	Mining	2	0.4%
	Manufacture	42	8.7%
	IT	31	6.4%
	Hotel	2	0.4%
	Healthcare	15	3.1%
	Finance	66	13.6%
	Entertainment	10	2.1%
Energy	17	3.5%	
Education	112	23.1%	
Construction	18	3.7%	
Agriculture	10	2.1%	

(continued)

Table A1.
Demographics

Characteristics	Range	Frequency	Percentage
Region	Zhejiang	9	1.9%
	Yunnan	2	0.4%
	Xinjiang	13	2.7%
	Tibet	2	0.4%
	Tianjin	1	0.2%
	Sichuan	7	1.4%
	Shanxi	16	3.3%
	Shandong	10	2.1%
	Shaanxi	147	30.4%
	Other	14	2.9%
	Ningxia	9	1.9%
	Neimenggu	1	0.2%
	Liaoning	7	1.4%
	Jilin	2	0.4%
	Jiangxi	1	0.2%
	Jiangsu	12	2.5%
	Human	1	0.2%
	Hubei	4	0.8%
	Hong Kong	2	0.4%
	Henan	107	22.1%
	Heilongjiang	2	0.4%
	Hebei	4	0.8%
	Hainan	2	0.4%
	Guizhou	27	5.6%
	Guangxi	4	0.8%
	Guangdong	16	3.3%
	Gansu	9	1.9%
	Fujian	11	2.3%
	Chongqing	4	0.8%
	Beijing	22	4.5%
	Anhui	5	1.0%
	Shanghai	11	2.3%

Table A1. Source(s): Authors' own creation/work

Appendix 2 Measurements

Extrinsic motivation for ATW (Michael *et al.*, 2013; Hansen and Levin, 2016)

Rated on a five-point Likert scale where 1 = strongly disagree to 5 = strongly agree

- (1) I feel that ATW will increase my value to my employer
- (2) I feel that ATW will improve my next performance review
- (3) I feel that ATW will improve my chance of receiving a raise
- (4) I feel that ATW will make my supervisor satisfied with my overall performance
- (5) I feel that ATW will help me maintain good relationship with my supervisor

Intrinsic motivation for ATW (Michael *et al.*, 2013; Hansen and Levin, 2016)

Rated on a five-point Likert scale where 1 = strongly disagree to 5 = strongly agree

-
- (1) I feel that ATW is enjoyable
 - (2) I feel that ATW is pleasant
 - (3) I feel that ATW is fun
 - (4) I feel that ATW is inherently rewarding

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Time spent on after-hours technology-mediated work (Richardson and Thompson, 2012)

- (1) Before going to work, I usually spend _____ on technology-mediated work
- (2) a. 1–15 min; b. 16–30 min; c. 31–59 min; d. 1–2 h; e. more than 2 h.
- (3) After work, I usually spend _____ on technology-mediated work
- (4) a. 1–15 min; b. 16–30 min; c. 31–59 min; d. 1–2 h; e. more than 2 h.
- (5) In my holiday, I usually spend _____ on technology-mediated work
- (6) a. 1–15 min; b. 16–30 min; c. 31–59 min; d. 1–2 h; e. more than 2 h.

Work-life conflict (Netemeyer *et al.*, 1996)

Rated on a five-point Likert scale where 1 = strongly disagree to 5 = strongly agree

- (1) The demand of my work interferes with my personal and family life.
- (2) Due to job duties, I have to make changes to my plans for family activities.
- (3) My job produces strain that makes it difficult for me to fulfill family duties.
- (4) The amount of time my job consumes makes it difficult for me to fulfill family responsibilities.
- (5) Things I want to do at home do not get done because of my job demand (dropped).

Turnover Intention (Mobley *et al.*, 1979)

Rated on a five-point Likert scale where 1 = strongly disagree to 5 = strongly agree

- (1) I never thought about leaving my company (Reverse Coding)
- (2) I have a long-term career development plan in my current company (Reverse Coding)
- (3) I often feel bored for my current work and want to change my job
- (4) In the next six months, I will probably leave my current company

Source(s): Authors' own creation/work.

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