# The Relationship between Time Personality and Teachers' Emotional Exhaustion: A Moderated Mediation Model

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## Abstract

In the highly interconnected and connected contemporary environment, work connectivity behavior has become an inevitable typical situation for most teachers. Individuals with different time personality traits not only differ in time management, time planning, and multi-tasking tendencies, but also have different time perceptions of the same physical time. However, how individuals with different time personalities affect emotional exhaustion in work connectivity behavior scenarios needs to be further explored. Based on conservation of resource (COR) theory, differences in time personality traits show different degrees of emotional exhaustion through individuals' work connectivity behavior. Meanwhile, organizational citizenship behavior, as very important extra-role behavior, can positively influence organizational functioning and interpersonal interactions within the organization, and based on attribution theory, individuals with high levels of organizational citizenship behavior would perceive off-time work connectivity behavior as altruistic and pro-organizational behavior. Therefore, this study integrated two theoretical perspectives to explain the effect of time personality on emotional exhaustion, the mediation of work connectivity behavior and the moderating role of organizational citizenship behavior (helping behavior or civic morality dimensions), both of which play a role in predicting emotional exhaustion based on time personality. In this study, the analysis of the valid data obtained from 630 teachers revealed: (1) Time personality has a positive significant effect on emotional exhaustion. (2) Work connectivity behavior mediates the relationship between time personality and emotional exhaustion. (3) Two dimensions of organizational citizenship behavior, helping behavior and civic morality, inversely moderate the relationship between work connectivity behavior and emotional exhaustion and the mechanism by which time personality positively facilitates emotional exhaustion through the mediation of work connectivity behavior. What is more, the study discusses the findings on the effects of time personality on emotional exhaustion and suggests its practical implications.

**Keywords:** time personality, work connectivity behavior, emotional exhaustion, organizational citizenship behavior

## 1. Introduction

In an environment where the pace of work is accelerating, the personal time of individuals is being invaded by ubiquitous connections. Subjective time pressure, work life conflict, etc., will change our emotions, thus changing the behavior of individuals in the organization. In fact, the post epidemic era has accelerated the popularity of instant messaging and obtaining information or services through mobile communication devices has become an indispensable part of work and life. With the rapid development of economy and society, the pace of work and life of individuals is accelerating, and the workload and complexity of tasks facing the workplace are also increasing. As a non renewable resource, time is more and more precious, which plays an important role in the development of teachers. The school expects teachers to devote as much time and energy as possible to work to create educational value. Facing the same time, individuals with different time personalities have different perceptions. As far as the reality is concerned, many teachers, in order to meet the expectations of their superiors and improve their work efficiency, experience the binding of work information and tasks during non working hours. Therefore, starting from the teachers' time personality characteristics, it is important to clarify the relationship between work connectivity behavior and emotional exhaustion in a time context, which helps managers implement corresponding countermeasures and maximize the role of mobile communication equipment in modern work. It is also the focus of current researchers and managers. Theoretically, time personality can be applied to various workplace scenarios from the "Job-Individual matching" model. At the individual level, time personality can be applied to the analysis of occupations. Time personality can adapt to occupations with different needs (Francis Smythe, 1999). Similarly, at the group level, time personality can be matched with different organization types. At the team level, the research has found that communication and cooperation between individuals with different time personality traits are conducive to stimulating vitality, which can

have a significant impact on the improvement of organizational operational efficiency (Francis Smythe, 1999). In addition to the "adaptation" function embodied by time personality in different time situations, time personality also reflects the "adaptation" function by influencing the physical and mental health of individuals. The research shows that varied forms of time insight have different effects on physical and mental health (Keough, Zimbardo & Boyd, 1999). At the level of work connectivity behavior, at present, the support of members within the organization for work connectivity will affect the time, attention and energy that individuals devote to the work field. Therefore, work connectivity behavior is more likely to cause work-family conflict (Derks et al., 2015). Therefore, the work connectivity behavior will encroach on the time, energy and other resources of the individual's personal life, causing the individual to fail to supplement resources in time, which will lead to emotional exhaustion. Based on this, this study believes that time personality, as a personal trait involved in time management, has an individual's cognition of time resources and will also have an impact on work connectivity behavior.

The accelerating pace of work and life affects the time concept of individuals. The rapid development of communication science and technology provides technical support for "access" at any time. Work connectivity behavior has become a representative situation that most teachers will experience. The difference of time personality makes teachers' time consciousness, time planning, impatience and other dimensions different. Therefore, the difference of time personality characteristics affects individual work connectivity behavior. As a typical representative of out of role behavior, the organizational citizenship behavior of teachers is not only conducive to the formation of good interpersonal interaction within the organization, but also conducive to improving the overall operational efficiency of the organization. Therefore, scholars and managers have been paying extensive attention to it from various perspectives. The organizational citizenship behavior of teachers has typical out of role behavior characteristics. Since

the mechanism of action can be explained based on the theory of self-determination, individuals have the right to decide how much they participate in organizational citizenship behavior. Therefore, based on the attribution theory, when teachers with high organizational citizenship behavior level regard participation in work connectivity behavior as altruistic behavior, they will experience less resource loss caused by work connectivity behavior. The study found that work connectivity behavior can have a positive impact on individuals on the one hand, and a negative impact on individuals on the other (such as emotional exhaustion) (Middleton, 2007; Mazmanian et al., 2013). Because of the contradictory characteristics of the process, the impact of the environment and the differences between individuals, the work connectivity behavior has two sides of this mechanism. Can individuals with different time personality traits produce negative effects such as emotional exhaustion through work connectivity behavior?

The study will focus on the research of work connectivity behavior on emotional exhaustion in the fast-paced work and social environment and try to explain the relationship between work connectivity behavior and emotional exhaustion. At the same time, it will explore that in addition to the support of supervisors, colleagues and families, can the level of organizational citizenship behavior of individuals reduce the negative impact of work connectivity behavior after-hours. To sum up, from the perspective of individual differences, researchers prefer to explain the internal influencing factors of work connectivity behavior from the dimension of organizational environment. In the existing research, the integration preference dimension is used more frequently in the dimension of individual characteristics. Because work connectivity behavior is generated under the background of today's "crazy rhythm" social life, this paper wants to study whether the time personality trait of individuals will affect the negative impact of work connectivity behavior, such as emotional exhaustion, and what kind of moderating impact it will have on the organizational citizenship behavior of individuals in the pursuit of "speed and efficiency".

## 2. Concept and Relevant Researches

### 2.1 Time Personality

Concept. Time personality is a tool to divide personality traits. Different from the Big Five Personality, time personality focuses on personality characteristics and individual differences in the time context, which is the adaptive tendency and ability characteristics of individuals to stable time situations. Although the physical characteristics of time are homogeneous and unitary for each individual., due to individual differences, the same physical time will make individuals have different psychological feelings, and thus affect individual judgments and behavior. Therefore, the differences in time awareness under different cultural backgrounds will have different effects on individual behavior (Feng Keli, 2010). With the deepening of research, people gradually realized that the differences in time awareness are not only due to different psychological processes of individuals, but also personality differences, which is called "time personality". In the late 1980s, researches began large-scale researches on time personality in multiple disciplines. The research on time personality has gradually transformed from the early feature division of "polychronicity" and "monochronicity" to the recognition that time personality is accompanied by a stable time using style, that is, this stable style enables individuals to control their responses according to different situations (Kaufman, 1991). According to the trait theory, scholars have identified the meaning of time personality as five key characteristics. With the development of the research, the understanding of time personality gradually began to form a psychological structure based on time experience and individual self-concept. Later, the study of time personality tried to explain its dynamic mechanism and introduced the concept of time motivation (Usunier & Valette Florence, 2007). Time personality is one of the personality traits, so the exploration of time personality also belongs to the exploration of human nature, which can provide insights for research, social production and life practice in other disciplines.

Structure. Chinese scholars first put forward the idea of localized time personality, pointing out that it includes two dimensions: time insight at the perceptual level and time management tendency at the behavioral level, which enriched the early

understanding that time personality is only "the sum of actions". Research on time personality has been carried out based on time experience and time behavior tendency. Others divide time into many dimensions such as insight, urgency, orientation, management, compliance, motivation, etc. Later, on the basis of the research on the related topics of time personality, researchers reconstructed the comprehensive time personality model to cover the related topics of time personality more comprehensively. At present, there are mainly two factor models (single dimension research), four factor models (linear model and circular model) and five factor models (trait theory dimension). First, it is a two-factor model of single dimension research, which divides individuals into two categories. The first is that individuals prefer to complete single task at a certain time, which is classified as "single task tendency" (also called "oneness"). The other type of individuals prefers to perform multiple tasks at the same time within a certain period of time, which is classified as "multi task tendency" (also called "multiplicity"). The Polychronic Attitude Index (PAI) (Kaufman, Lane & Lindquist, 1991) was also developed in this period. Its scores from low to high represent "single task orientation" to "multi task orientation". As the division dimensions of the two-factor model are relatively simple, the unique feature of the four-factor model is that it uses the concept of "style" to explain time personality (Usunier & Valette Florence, 1991, 194). On the basis of the two-factor model, they focus on the dimension of individual time preference (Usunier & Valette Florence, 2007). The concept of time is different in the eastern and western cultural backgrounds. In the eastern environment, the pattern of time often exists in a circular form, while in the western environment, it exists in a linear form. In the four-factor model, both linear economic time and time compliance are involved. At the same time, the interaction between time personality and social and cultural factors is concerned, and the in-depth study of time personality is realized. Five factor model is mainly derived by Francis Smythe (1999) based on the theory of trait. Its main point is that time personality is an adjustable concept composed of multiple dimensions including behavior, cognition and emotion. It has the characteristics of considering the interaction of various traits. At the

same time, on the basis of the above model, researchers have developed the corresponding time personality scale.

Function. The core function of time personality, which is widely recognized by many disciplines, is to be able to cope with different time situations, and its impact on individual physical and mental health. At present, most of the functional studies on time personality focus on a certain characteristic of time personality, but it has shown a broad application prospect in management, education, clinical and other fields. In the research, there is a hypothesis of classifying time situations, which is considered to have strong situation time situations and weak situation time situations (Mischel, 1977). Beaty et al. (2001) believed that the former would reshape the concept of time through a certain amount of information at a high frequency. Weak situations are described as having no special requirements for behavior. In the study of strong situations, based on the perspective of "Job-Individual matching", time personality is matched with various occupational categories from the individual dimension, and the study believes that different time personalities can adapt to different occupational needs (Francis Smythe, 1999). From the group dimension, time personality traits can match with different organizational types. From the team perspective, if there are different time personality interactions among members, it will help to improve the overall efficiency of the organization and thus stimulate group motivation (Francis Smythe, 1999). At present, research in weak situations is relatively lacking compared with that in strong situations, and most of them focus on the "waiting" dimension. Based on the four-factor model, the subjective feelings of individuals in "waiting" are directly affected by time personality. Individuals with strong linear economic time and time orientation show more negative feelings about "waiting". At the same time, they are more impatient because they perceive higher levels of time pressure (Moreau & Usunier, 1999). The study found that when an individual is in a weak situation, his/her behavioral characteristics are more closely related to personality (van Emmerik, 2008). In order to further understand the regularity and stability of time personality, the research on time personality in weak situations

needs to be supplemented. In the dimension of physical and mental health, in addition to the negative impact of time urgency on heart health, its impact on mental health has always been a hot topic discussed by scholars and managers. For example, different forms of time insight have different effects on physical and mental health. The relationship among procrastination stress, anxiety and depression has also attracted the attention of researchers. Scholars have also proved that time personality has a relationship with individual physical and mental health. For example, in the dimension of time management, research shows that the better the effect of time management is, the higher the individual's sleep quality will be (Huang et al., 2009). Research shows that individuals with lower impatience dimensions will show higher cooperation (Curry et al., 2008). Each dimension of time personality affects the individual's cognition, emotion and attitude, and then affects their behavior in the organization. Therefore, understanding the key features of each dimension of time personality is very important to help individuals better adapt to the time in the work situation.

*2.2 Work Connectivity Behavior*

Concept. Since the 1990s, the rapid development of science and technology has made telecommuting possible (Nilles, 1998). Electronic communication and computer technology have enabled individuals to complete their work in non-traditional workplaces (Bailey & Kurland, 2002). So far, with the introduction of personal computers and mobile phones, people have generated a lot of speculation about the possibility of remote work and taking work home (Felstead et al., 2005). At the beginning of the 21st century, in the face of more flexible work processing methods brought about by the rapid development of electronic communication and computer technology, some scholars first proposed the term "work connectivity", which refers to the public behavior of individuals using mobile wireless devices to process work (Schlosser, 2002). Later, other scholars paid attention to the time-space constraints of traditional working methods and proposed the concept of "work connectivity behavior after hours", which refers to a series of behavior that members participate in work or communicate with colleagues through portable

wireless communication devices during non working hours (especially before work, after work, weekends or holidays) (Richardson & Benbunan Fich, 2011; Ma Hongyu et al., 2014). At this stage, some scholars' analysis of work connectivity behavior mainly focused on the individual's preference to communicate with work partners during non working hours (Reinsch et al., 2008; Wright et al., 2014), while some scholars focused on the characteristics that individual work is no longer restricted by traditional workspace through the introduction of communication equipment (Cavazotte et al., 2014; Azad & Salamoun, 2016). With the widespread occurrence of work connectivity behavior and the deepening of this research by scholars, the analysis of work connectivity behavior focuses on its emotional attitude. Some scholars believe that the occurrence of work connectivity behavior stems from the individual's voluntary motivation (Schlachter et al., 2018). At the same time, some scholars believe that since work connectivity after-hours will cause subordinates to have contradictory perception of being authorized and oppressed, positive or negative complex emotional attitudes, it is speculated that individuals are not willing to send work connectivity behavior (Piazza, 2007). Finally, from the perspective of multiple roles, some scholars believe that according to the boundary theory, work connectivity after-hours not only includes multiple role participation in the work field (Davis., 2002), but also includes the joint undertaking of work and life roles (Richardson & Rothstein, 2008). According to existing research, Chinese scholars analyzed from the dimensions of technology use, space-time flexibility, emotional attitude and multiple roles, and defined work connectivity behavior as an individual's behavior of handling work related matters in non working hours. Among them, there are no restrictions on the content and form of handling work matters in the place where they occur, but this emphasizes that individuals play multiple roles in it. (Yuan Shuo, 2018). Some scholars define work extension as the time outside normal working hours (usually at home) and work outside a fixed workplace (usually in the morning and/or evening before the main working hours) (Mullan, K. & Wajcman, J, 2019).

Organizational level research. As one of the

supporting characteristics of the work connectivity behavior, the organizational connectivity culture is a signal that superiors, colleagues and customers are releasing to individuals when individuals are under the organizational connectivity culture atmosphere. In order to complete socialization, individuals will actively and quickly respond to the work connectivity signals released by them due to image management and other factors (Reinsch et al., 2008). Fenner and other researchers found that the communication culture transmitted by organizations in the workplace will strengthen the psychological motivation of individuals, thus helping individuals develop task orientation in work connectivity behavior. If some organizations issue relevant systems, so that individuals must participate in work connectivity to meet their work needs. Richardson et al. (2011) believed that when an organization can equip individuals with the equipment needed for work connectivity, individuals are more willing to participate in work connectivity behavior.

The influence of team level as an antecedent variable. In the past, there was little research on the team level (mainly supervisors and team willingness) (Raghuram & Fang, 2014). At the same time, from the perspective of the theory of subjective initiative, if the members of the group had used technology to handle work in the past, it would be better if they would continue to participate in work connectivity behavior in the future. (Perez et al., 2004). Therefore, from this mechanism, team connectivity intention is the main influencing factor of individual work connectivity intention. In addition, at the team level, research by Arlinghaus et al. (2014) shows that individuals are more willing to actively participate in work connectivity behavior if they feel the support or trust of their superiors.

The individual level research mainly focuses on four aspects (personality traits, motivation/needs, attitudes, and task characteristics). In the trait dimension, the study found that multiple time orientation, conscientiousness, role segmentation preference and role integration preference all had an impact on work connectivity behavior. Individual motivation or needs will also have an impact on work connectivity behavior. Specifically, from the perspective of the theory of

self-determination, scholars believe that when individuals are in a state of fatigue or stress, they expect themselves to be able to complete self recovery in non working hours. Because work connectivity behavior will affect the individual's demand for self recovery, it will cause individuals to reduce their work connectivity behavior (Ohly & Latour, 2014). Research has proved that individuals' attitudes towards working methods (such as telecommuting) or work related technologies will also have an impact on their work connectivity behavior. At the same time, from the perspective of the task characteristics of the work, research has found that the more flexible the work is, the more likely it is to promote the production of work connectivity behavior (Tenakoon et al., 2013). With regard to the research on the role and result dimensions of work connectivity behavior, scholars analyzed the double-edged sword effects of work connectivity behavior in both positive and negative aspects based on the perspective of paradox. On a positive level, research can be carried out from the relevant factors in the field of work. In the work family field, the study found that work connectivity behavior can improve the boundary permeability between work and family (Leung, 2011), and help achieve smooth flow of resources between work and family fields. At the same time, due to the characteristics of work connectivity behavior, work choices that can make their horizons more flexible in time and space can enhance the sense of control of individuals, thus improving personal and organizational performance. Work connectivity behavior makes individuals communicate more frequently with colleagues or superiors, thus shortening the distance between them (Fonner & Roloff, 2012). This process will help individuals improve their sense of organizational identity and belonging, so that individuals can more accept work connectivity behavior, so that individuals enter a virtuous circle. At the same time, when individuals adopt work connectivity behavior, they can improve their comprehensive abilities in the workplace (Boudreau & Robey, 2005) and help their careers develop more smoothly (Fenner & Renn, 2004). After increasing the frequency of communication with colleagues and superiors, they can help meet the needs of communication among members of the organization, in turn, it improves their

satisfaction and happiness in the workplace (Dennis et al., 2008; Diaz et al., 2012), thereby reducing the turnover intention and turnover rate of individuals (Hill et al., 2003). In the negative aspect, the research can still be carried out from the relevant factors in the work field. From an objective point of view, in the process of work connectivity behavior, individuals need to spend more personal time and costs to communicate with each other in terms of technology, such as equipment or communication failures (Rennecker & Godwin et al., 2005). Work connectivity behavior encroaches on the individual's personal lifetime, making the individual unable to stay away from work in time, space and psychology. The level of psychological disengagement is greatly affected. Without enough psychological disengagement, it will not be conducive to the recovery of individual experience and the supplement of energy (Park et al., 2011). When work connectivity behavior becomes excessive or negative, its negative effect will exceed its positive effect, which will affect the self recovery of individual energy, even consume individual psychological resources to cause emotional exhaustion, and reduce their sense of work happiness (Braukmann et al., 2018). At the family level, the study found that work connectivity behavior entering the family will not only bring pressure to family members, but also greatly reduce the length and quality of sleep when individuals excessively participate in work connectivity behavior (Barber & Jenkins, 2014), which will lead to poor working conditions of individuals the next day, accompanied by adverse reactions such as emotional exertion, and reduce the time invested in the energy or attention (Lanaj, 2014). It is found that the stronger the social norms of organizational connectivity and the higher the support of supervisors and colleagues in the organization for work connectivity behavior are, the more resources individuals will invest in work connectivity behavior, and the more likely they are to cause work-family conflict (Derks et al., 2015).

*2.3 Emotional Exhaustion*

Concept. Emotional exhaustion describes the exhaustion state caused by excessive consumption of resources (mainly refers to psychological resources and emotional resources), and it is also a psychological representation of the emotional resources exhausted by individuals under great pressure. Emotional exhaustion will not only affect individual work performance and quality of life, but also have a negative impact on organizational effectiveness. For a long time, the research on emotional exhaustion (Emotional Exhaustion) is often closely related to the research on job burnout. Some scholars believe that emotional exhaustion is the result of stress caused by stressors in the work situation (Maslach, Schaufeli & Leiter, 2003), sometimes accompanied by a feeling of tension, even a negative emotional experience of depression. The concern and related research on emotional exhaustion started from the concern about job burnout, which is one of the manifestations of job burnout. In the 1970s, the concept of job burnout was first proposed (Freudenberger, 1974), which was mainly used to study the exhaustion of medical staff due to excessive resource depletion in high-intensity work. Maslach et al. (1981) gave a new definition of job burnout. What is most recognized is the three-dimensional model containing emotional exhaustion. At the same time, some scholars also noticed that many individuals in the workplace are accompanied by the phenomenon of job burnout, and thought that it is the emotional response of individuals in the face of high levels of work pressure (Maslach, 1976). When individuals are in a high-pressure environment for a long time, they may face job burnout (mainly composed of three dimensions such as emotional exhaustion) (Maslach et al., 2001). Work related emotional exhaustion (job related emotional exhaustion) refers to the result of a stress response caused by workplace stress sources (Maslach et al., 2001). From the perspective of the development of the research subject, the work related emotional exhaustion can be divided into individuals' emotional exhaustion and superiors' emotional exhaustion.

Precedent variables. In the research, we analyzed the antecedent factors for individuals to produce emotional exhaustion. One is the individual characteristic factors, and the other is the job characteristic factors brought by the workplace (Maslach et al., 2001). The factors of individual characteristics affecting emotional exhaustion mainly include two dimensions: demography and

individual psychology. Demographic characteristics are important issues in emotional exhaustion research, such as age, gender, marital status, years of work, education, etc., which have a significant impact on the level of emotional exhaustion (Li Liying et al., 2007). Most of the researches on the superior's emotional exhaustion focused on the superior's attitude and expectation. The research found that the superior's suspicion of their own ability and safety orientation would lead to their emotional exhaustion (Dolan & Renaud, 1992). Factors of work characteristics include Boles J. S. et al. (1997) found that the work family role pressure brought by the workplace can lead to individual emotional exhaustion. Malignant interpersonal relationships at work (such as workplace bullying) can cause individual emotional exhaustion (Maslach C., 1982). At the same time, it is worth noting that the style of the leadership style has a negative effect on the superiors. The helping behavior of superiors and team members can reduce the pressure and tension of individuals, thus reducing the situation of emotional exhaustion. Babakus (2008) found that the support of the superior (such as providing training), the granting of rights, the awarding of awards, and other factors can effectively alleviate the emotional exhaustion of individuals when they form a high level of social support. However, in the actual work, the superiors seeking social support from the surrounding may be considered as exposing their own shortcomings, thus preventing the superiors from obtaining effective social support. Therefore, social support can rarely alleviate the emotional exhaustion of superiors in real life. Finally, organizational factors have an important impact on the emotional exertion of individuals and superiors. On the one hand, some organizational factors (such as organizational justice) can affect individual work resources, thereby affecting their emotional exhaustion. On the other hand, the work resources obtained by superiors can also effectively reduce their emotional exhaustion. Previous studies have shown that organizations attach importance to long-term development, which can effectively alleviate the emotional exhaustion of their superiors. Consistent with this, organizational demands on the work of superiors (such as performance requirements) or resource shortages will lead to emotional excess (Knudsen et al., 2009),

while providing more resources for individuals (such as wages, benefits, etc.) will have an important impact on emotional excess of schools (Khairuddin et al., 2016). In a word, individual characteristics factors (mainly including demographic characteristics and individual psychological characteristics) and job characteristics factors (mainly including role conflict and role ambiguity, superiors' support, workload, social support, sense of fairness, interpersonal emotional stress in work, occupational characteristics, etc.) are the main factors affecting individuals and superior emotional exhaustion. These influencing factors have different influences on individuals and superiors in different times and backgrounds.

Result variables. Emotional exhaustion will lead to some adverse consequences, such as affecting individual physical and mental health, interpersonal relationship, work attitude, work performance or behavior. Because emotional exhaustion is a destructive psychological state, the research on the dimension of impact results in emotional exhaustion finds that it will not only affect the individual's work, but also affect the individual's physical and mental health and life. First, the influence of emotional exertion on individual work. First, its emotional exhaustion will increase the negative work behavior of individuals, such as anti production behavior (Quattrochi Tubin S, 1982), turnover behavior (Wright et al., 1998), absence, etc. Second, emotional exertion will reduce the positive work attitude or behavior of individuals, such as reducing organizational commitment (Leiter and Maslach, 1988; Cole Berneth, 2010), job satisfaction, job performance, organizational citizenship behavior, etc. At the same time, research has proved that individual emotional exertion will also weaken the authorization effectiveness of moral superiors (Dust, S. B et al., 2018). Third, the research on the adverse effects of individual emotional exertion has been expanding, and scholars have begun to shift their research focus to the dimensions of service disruption, work negligence and moral reduction. Secondly, the impact on individuals themselves. The study found that emotional exhaustion would reduce individual life satisfaction and affect the level of mental health. Finally, the impact on others.

Emotional exhaustion can cause relationship conflicts between colleagues and family members (Greenbaum et al. 2014), leading to attacks against superiors, colleagues and family members. Although an individual's emotional exertion will cause a decline in his/her performance within his/her role, the study found that his/her organizational citizenship behavior toward his/her superiors and colleagues will increase. This is because the individual expects to quickly obtain resource returns from the supervisor or colleagues to avoid further loss of existing resources (Halbesleben and Bowler, 2007). It is also found that superiors' emotional exhaustion can indirectly predict individual's emotional exhaustion through individual's perception of procedural justice. If superiors undergo emotional exhaustion, it will also aggravate subordinates' emotional exhaustion. Because of the lack of emotional resources of the superior, it is difficult to suppress the impulse of "attack" on the subordinate, so it will aggravate the emotional exhaustion of the subordinate and reduce the positive emotional performance of the subordinate. In a word, the existing research describes the influence of individual (including superiors and individuals) emotional exhaustion on themselves, superiors and colleagues. In general., there are two deficiencies in the research on emotional exhaustion: first, there is a lack of research on the impact of organizational activities on individual emotional exhaustion. The existing research mainly focuses on the influence of individual characteristics and work characteristics on individual emotional exertion. However, the impact on the activities at the organizational level is rarely involved. Second, how does the lack of positive variables affect the laboratory of emotional exhaustion. Many existing studies have selected negative variables such as emotional labor, job insecurity, and abusive management as their antecedent factors to explore, trying to find the negative source of the negative variable emotional exhaustion. However, the actual school management is more concerned about how to alleviate or eliminate the emotional excess of individuals through some active management activities. Obviously, it is a way to reduce the negative antecedents in schools if we want to reduce the individual emotional excess. However, it is also very important to add some positive antecedent elements (such as school social

responsibility) (Chen Honghui et al., 2020).

*2.4 Organizational Citizenship Behavior*

Concept.Organizational citizenship behavior refers to the individual initiative behavior that organization members spontaneously make outside of the organizational reward and punishment system but conducive to the improvement of organizational effectiveness outside of individual work tasks (Demnis Org; Cf. Bateman & Org, 1983; Smith, Org & Near, 1983).The research of organizational citizenship behavior was first proposed based on the concept of "willingness to cooperate" (Barnard, 1960) and the concept of "civic behavior" (Katz, 1966) of psychologists (Organ, 1988; 1995). This "willingness to cooperate" shows that individuals and colleagues of the organization are not only willing to make voluntary efforts to achieve the goals set by the organization, but also willing to make efforts to the survival and development of the organization itself (Barnard, 1960). On the basis of the concept of "willingness to cooperate", scholars further explained "citizen behavior", and believed that "citizen behavior" based on "willingness to cooperate" refers to voluntary behavior that is beneficial to the organization and makes the organization run more smoothly (Katz, Kahn; 1970). Since this citizenship behavior is discussed in the organizational context, scholars further named the "citizenship behavior" that occurs in organizations as "Organizational citizenship behavior: OCB", specifically referring to "citizenship behavior" that is conducive to organizations (Smith, Org & Near; 1984). Later, some scholars redefined OCB as a behavior that is spontaneously implemented by individuals without being constrained by the organizational reward and punishment system and is beneficial to the effective operation of the organization as a whole (Organ; 1988). OCB is also regarded by scholars as a kind of "affinity" and "facilitation" behavior that can represent the close relationship between individuals and organizations (helping organizations move towards success): as long as it is conducive to (or the purpose is conducive to) the organization, and the behavior voluntarily implemented beyond role expectations can be regarded as OCB (Van Dyne, Cummings & Parks, 1995). Clarifying scholars' definition of the structure of OCB and deeply exploring the

structure of OCB have important theoretical implications for its subsequent empirical research (Podsakoff, Mackenzie, Paine and Bachrach; 2000). Therefore, scholars explored the conceptual structure of OCB in different situations. First of all, scholars first recognized the structure of OCB as altruism and obedience, in which altruism is shown as actively helping organizational members who need helps, and obedience is shown as putting the organization first when acting (Smith, Organ & Near; 1983). Later, in the study of OCB, scholars believed that OCB has a five dimension structure (Organ; 1988), including altruistic behavior, sense of responsibility, courtesy, sportsmanship and civic morality. After the five dimensional structure, some studies pointed out that the five dimensions include two dimensions: organizational citizenship behavior in favor of organizations (OCBO) and organizational citizenship behavior in favor of organizational members (OCBI) (Williams and Anderson, 1991; Skarlicki & Latham, 1995). Secondly, by redefining OCB as a proactive performance in organizations, scholars have subdivided OCB into three sub constructs: organizational compliance, organizational participation and organizational loyalty (Graham, 1991; Van Dyne, Cummings and Parks, 1995). Then, based on the local characteristics of China, scholars divided OCB into ten dimensions, including corporate identity, conservation of organizational resources, etc. (Farh et al., 1997). Finally, some scholars made a new subdivision of OCB and proposed a seven dimensional structure including "sportsmanship and civic morality" (Podsakoff, Mackenzie, Paine & Bachrach, 2000).

Precedent variables. The antecedents of OCB are superior factors, individual attitude factors, self-efficacy, personality factors, organizational factors and demographic factors. First of all, as one of the main antecedents of OCB, leadership style has been widely studied by scholars in both China and the West. In western research, it is found that transformational leaders make subordinates behave more impersonally to meet the organizational goals, so subordinates are more likely to behave as OCBs (Bono & Judge, 2003). Later, scholars proved through empirical research that transformational leaders can positively predict OCBs (Piccolo & Colquitt, 2006; Boerner,

Eisenbeiss & Griesser, 2007). In the relevant studies in China, due to the influence of China's localization environment and the difference in the division of individual boundary conditions, the conclusions about the relationship between superior style and organizational behavior are different. For example, some scholars found that authoritarian superior style can negatively predict organizational citizenship behavior (Liang et.al., 2007), but some scholars found that authoritarian leadership is positively correlated with organizational citizenship behavior (Zhang et al., 2017). Secondly, job satisfaction and organizational justice are also the main antecedents of OCB (Organ, 1995; Podsakoff et al., 2000). Many individuals believe that much of their stress in the workplace comes from their relationship with their superiors (Kaiser, Hogan & Craig, 2008). The results of the influence of superior style on individuals are presented in the form of attitude. Therefore, the leadership style further affects the subordinate's OCB through its effect on the subordinate's job satisfaction (Williams & Anderson, 1991) and sense of fairness (Guo, 2006; Ahmed, Ramzan, Mohammad & Islam, 2011; Collins & Lai, 2013). According to the research, organizational justice mediates the relationship between service-oriented superiors and subordinate OCBs at the department level through organizational justice (Enrhart, 2008), self-efficacy and service atmosphere (Walumbwa, Hartnell and Oke, 2011). Similarly, transactional leadership, LMX superiors and subordinate OCB are all mediated by organizational fairness. Because the behavior within an individual role is mainly affected by external motivation, while the behavior outside the role is mainly affected by its internal motivation (Van Dyne, Cummings & Parks, 1995). In the case that perceived organizational justice will have a significant impact on individual intrinsic motivation (Trinkner, Tyler & Goff, 2016), research suggests that individual behavior outside the role is affected to some extent by the level of perceived organizational justice (Folger & Cropanzano, 2001).

Moderating variables. Whether subordinates perceive leadership style or subordinates 'judgment of organizational fairness, it is closely related to personal values (Leung & Bond, 1984).

The values are influenced by individual characteristics and the cultural context in which they live. It is logical to examine the relationship between leadership style, organizational justice and organizational citizenship behavior, which may vary depending on individual characteristics and situational factors. As mentioned above, the change of western empirical research on OCB is that situational factors increasingly appear as antecedents of OCB. The antecedents of organizational citizenship behavior have increasingly shifted from attitude variables to situational factors. For example, the research of Shen Yimo et al. (2019) shows that the atmosphere of difference will have an impact on the subordinate's OCB. In addition, different from the western conclusion, in the Chinese context, demographic factors, such as age and fellow villagers, have a more obvious impact on OCB. This conclusion reflects the importance that Chinese highlight the relationship quality. Different relationship quality makes individual's judgment on interpersonal relationship different and differentiated. Borman and Motowidlo pointed out that individual performance can also be regarded as contextual performance and task performance (Borman & Motowidlo, 2011). Individuals directly contribute to the effectiveness of the organization by doing tasks that they feel are important but not required by the organization. This is because those things that individuals think are important constitute a contextual cue that allows individuals to feel supported by the organization. Organ believes that OCB is an out of role behavior that individuals implement because they perceive contextual clues. The performance OCB brings to the organization is contextual performance. In contrast, the performance that individuals complete through accepting organizational arrangements is task performance. Organ & Ryan (1995) attached great importance to the performance distinction between Borman and Motowidlo—this is not only of theoretical significance, but also of practical significance - because it means that the antecedents of situational performance should not be the interaction of knowledge, skills and formal organizational incentives, but rather the attitude variables such as organizational justice that can reflect situational factors. At the same time, individual personality characteristics and work environment play a possible role in moderating the relationship between situational attitude variables and OCB.

Result variables. Because OCB is considered to be beneficial to the efficient operation of the organization in general (Organ, 1988), its outcome variables are mainly represented by the positive impact on organizational performance (Wang Guomeng et al., 2011). The positive impact of OCB is mainly manifested in two aspects: organization and individual. The positive impacts on the organizational level are as follows: the improvement of the utilization of limited resources, the improvement of work efficiency, the resistance to changes in external risks, and the reduction of friction between organizational members, the decline of communication costs, and the improvement of performance stability at the individual level (Podsakoff, et al., 2000). OCB indirectly helps to improve organizational performance, reduce internal friction, and improve customer satisfaction. Although the positive effects of OCB have always been the mainstream of research, in recent years, more and more studies have emerged that OCB may have a negative impact on organizations. According to the traditional OCB theory, the implementation of OCB by organizational members is based on complete altruistic motivation. Under this assumption, the negative effects of OCB mainly focus on the negative effects caused by the lack of energy and limited resources of the individuals implementing OCB. Organ and Ryan (1995) proposed that a high level of OCB would bring role load and higher pressure to individuals. At the individual level, individual work pressure increases (Fox & Freeman, 2001), resulting in work family imbalance (Chiu et al., 2001) and reduced work efficiency and performance (Agarwal., 2016; Ma, Ou & Wilson, 2016); At the group level and organizational level, organizational citizenship behavior will not only affect the interpersonal relationships of everyone in the organization, but also affect the operational efficiency of the organization (Ma, et al., 2016).

## 3. Theoretical Basis and Research Assumptions

### 3.1 Conservation of Resources Theory

Conservation of resources theory refers to a process in which resources interact with the social

environment. According to the theory of resource conservation, individuals have limited resources (such as time, emotion, energy and attention), so they will try their best to acquire, preserve and maintain their limited resources (Hobfol & Stevan, 1989), such as energy resources with time and knowledge dimensions. It is a theory of pressure and motivation that is widely used in organizational literature. More and more researches on COR show that they believe that resources are a process of dynamic operation and interaction due to the change and deformation of individuals and the environment. COR theory provides a new framework to test, predict and understand this interaction relationship, and shape the environment by adjusting this relationship to achieve the best balance between resource costs and benefits.

Some scholars believe that the definition of resources is "things that individuals can perceive and help achieve their goals". This perspective takes the motivation of individuals to save and obtain resources as the starting point. It focuses on the subjective judgment and evaluation of individuals on whether things help to achieve their goals, not whether they play a role in the process of achieving their goals (Halbesleben et al., 2004). Based on this, we can divide the recognized "valuable" resources into two categories. One is for certain specific things, which have universal value in the environment of individuals (such as health). The other refers to resources with unique resource value for individuals, which can meet their own needs. This also explains that some recognized valuable resources may not meet the needs of some individuals, and "worthless" may even cause resource depletion. Similarly, some resources that are not considered "valuable" by the public may be regarded as precious "valuable" resources by some individuals. Therefore, for organizations, it is important to recognize the "key resources" of individuals with different characteristics in different situations to improve management effectiveness.

In this study, the resource impact of individuals' work connectivity behavior on individuals mainly includes the following two aspects. On the one hand, a long time of continuous work will make individuals have to consume more energy than the normal level, and the compression of non

working time will lead to individuals being unable to get enough time to rest, so individuals can not return to the normal level of physiological and psychological state, can not complete the process of psychological separation, and enter a negative cycle of resource loss. On the other hand, work connectivity behavior after-hours will enable individuals to cross work and life more frequently, increase the possibility of role confusion and role confusion, and increase the difficulty for individuals to separate from "individual" identity. It is possible to supplement resources during non working hours, but the work issues always interrupt or hinder individuals to supplement resources. From the perspective of resource conservation theory, the generation process of pressure can be mainly explained from the two dimensions of resource loss and resource acquisition. Based on the resource conservation theory, individuals try to find ways to protect their own resources and obtain new resources. When their existing resources are threatened, such as their environment, they may lose or consume some resources, or the input of resources does not produce immediate returns, or if the rate of return or result does not reach the preset standard, the individual will feel insecure or stressed. Therefore, when faced with pressure, people tend to actively choose or create an environment with rich resources. In order to better supplement resources, they will also try to avoid the loss of their own resources (Hobfall, 2001). However, when there are work task needs, interpersonal demands and other reasons in the work, individuals inevitably need to consume time, emotion, energy and other resources in this process, especially when the resources needed by individuals are insufficient and cannot be timely supplemented, individuals will have emotional excess. According to the resource conservation theory, work connectivity behavior belongs to passive behavior for many individuals, and the occurrence of work connectivity behavior will consume valuable personal resources (such as time, emotion and energy). According to the universal path in COR theory, work connectivity behavior will consume individuals' resources, while individuals have to reduce organizational citizenship behavior to maintain limited resources. But for people with different personality traits, because their needs for specific resources are different, individuals will

have different perceptions of the same work connectivity behavior, and thus produce different behavior.

## 3.2 Attribution Theory

Attribution refers to the individual's explanation of the cause and motivation of behavior or events (especially some important, new, unexpected and negative events) (Eberly, Holley, Johnson, and Mitchell, 2011; Martinko, Harvey, & Dasborough, 2011), which affects the individual's subsequent reaction. Individuals will redefine others' behavior according to the perceived causes and motivations of others' behavior, and respond according to the redefined behavior (Ferris, 1995). Scholars have different perspectives on the classification of target behavior or events in attribution. Some scholars believe that individuals will consider three types of information related to behavior or events when attribution - uniqueness information (individual behavior comparison in different situations), consistency information (individual similarity in behavior at different times), and consensus information (universality of behavior among individuals in similar situations) (Kelly, 1973). The combination of different types of information will affect the specific types of internal and external attribution of individuals. Some scholars pay attention to the dimension of causal interpretation of attribution, as well as the emotional and behavioral consequences of attribution. Researchers believe that the three causal interpretation dimensions of attribution include causality (to what extent the event is attributed to the internal and external causes of the observer), stability (the duration of the observed event) and controllability (will or optional control or uncontrollability). Different types of attribution will bring different emotional responses and behavioral responses (Weiner, 1985). When the attribution is roughly divided into internal attribution and external attribution, the internal attribution mainly refers to the causes of the relevant individuals (actors) themselves. The external attribution mainly refers to the external environment of the individual. Later, it was put forward through development and integration - relationship attribution, that is, focusing on finding the explanation of the cause of events from the relationship between individuals and others. When individuals make relationship attribution,

they are more likely to make relationship centered behavior (Eberly et al., 2011). Attribution theory is selected as one of the theoretical bases of this study because the motivation attribution of individuals with higher organizational citizenship behavior level to work connectivity behavior will affect the understanding and response of individuals to work connectivity behavior (Ferris, 1995). Based on attribution theory, work connectivity behavior after-hours refers to the use of mobile communication devices to deal with work related matters during non working hours, which is beneficial to the organization. Individuals with high levels of organizational citizenship behavior voluntarily participate in the implementation of behavior that are beneficial to the organization or can make the organization run more smoothly (Katz, Kahn; 1970), thus reducing the emotional excess brought by individual work connectivity behavior.

## 3.3 Time Personality and Emotional Exhaustion

As a stable personality trait, time personality has an impact on individual emotion, thinking and behavior. When individuals in the organization have different personal stability characteristics in time perception, planning and management, it will affect the extent to which individuals choose to devote their time, attention and energy to the work field. At present, the research on the concept of time personality mainly includes two factor, four factor and five factor models. Based on the trait theory, from the perspective of five factor model, individuals with high time personality traits have the following characteristics: they are highly aware of the passage of time, set deadlines and meet requirements, and prefer to plan ahead and do several things at the same time. The research based on the five factor model found that (Francis Smythe, 1999), when individuals scored higher in time awareness and impatience, they tended to be more stressed under the condition of too many tasks. At the same time, because individuals with high time personality traits are more sensitive to time perception, they are more likely to show tension in the same physical time. Emotional exhaustion refers to a state of exhaustion caused by the excessive use of emotional resources, psychological resources or physiological resources by individuals, which is the result of stress caused by stressors in the work

environment (Maslach et al., 2001). Based on this, this study proposes hypothesis 1:

Hypothesis 1: Time personality has a positive significant effect on emotional exhaustion.

*3.4 Time Personality and Work Connectivity Behavior*

The individual's time personality will show its stable "adaptation" tendency and ability characteristics to the time situation. "Connection is everywhere" blurs the boundary between work and life, and mobile communication devices allow individuals to have more choices in working time and space. Due to the difference of time personality, individual time management, time awareness, time planning, impatience and other dimensions are different, so the difference of time personality affects work connectivity behavior. Individuals with high time personality scores perceive the urgency and time constraints of task completion. According to the work job demands-resources model, in the short term, based on the control theory and individual motivation, the time management, time planning, multi task tendency, impatience and other dimensions of high time personality individuals are higher than those of ordinary individuals, so they will be more likely to adopt work connectivity behavior in non working hours to better control their work and time when they can flexibly choose office space. Based on this, this study proposes hypothesis 1:

Hypothesis 2: Time personality has a positive effect on work connectivity behavior.

*3.5 Work Connectivity Behavior and Emotional Exhaustion*

When an individual uses mobile communication devices to process work during non working hours, he/she needs more energy to deal with interference to keep several transactions running at the same time. In this process, the individual has to distract to adapt to the environment (Ito & Brotheridge, 2003). According to the provisions of COR theory, individuals will strive to accumulate and protect resources that are crucial to achieving their goals (Hobfoll, 19892001). For example, an individual may receive a work message that a colleague needs to reply when meeting with a friend, or be reminded that a report is ready for review when attending his own course at the weekend. Although some non work time work

messages may not require employees to solve them immediately, they will distract their attention from life. In fact, work connectivity behavior has a double-edged sword effect (Cavazotte et al., 2014). On the one hand, work connectivity behavior can give individuals more sense of control over their work and family, enable individuals to arrange their work and life more flexibly, and can feel the role conflict they feel when they cross the work and life fields. But on the other hand, work connectivity behavior may cause resource loss. According to the COR theory, long-term continuous work will lead to the inability of individuals to get timely recovery experience. At the same time, when the boundary between work and life is too loose or too flexible, individuals must not switch their work roles and family roles frequently, resulting in a sense of confusion that further consumes individual psychological resources, this will lead to emotional exhaustion. Some scholars define stress as the risk of resource loss, real resource loss, or lack of resource income after paying for resources (Hobfoll, 1989), so it is inevitable that individuals will have time or role pressure when dealing with work in non working hours; in this process, the consumption of individual resources will lead to emotional exhaustion. Research shows that the use of mobile communication devices to handle work will involve the loss of family resources, because they are occupied by the work field, resulting in work family conflict (Grandey & Cropanzano, 1999). However, this paper believes that work connectivity behavior will not just cause work-family conflict, because it is essentially related to time-based conflict which leads to the occupation of personal time, and work encroaches on personal life. According to COR theory, individuals strive to protect or repair their own resources. Obviously, when individuals realize that their valuable resources will be consumed or have been consumed, they will experience pressure such as time or role, and feel restless, thus consuming individual emotional resources. The work connectivity behavior of individuals in non working hours will divert their attention and thus affect the completion of personal life related matters. In this process, both work needs and personal life needs will be ignored. In addition, work connectivity behavior after-hours will not only make individuals experience time or role

pressure conflicts, but also bring conflicts based on behavior. If the resource loss caused by the conflict cannot be timely supplemented, individuals will have pressure, which will lead to emotional exhaustion. Based on this, this paper proposes the following assumptions:

Hypothesis 3: Work connectivity behavior has a positive effect on emotional exhaustion.

Hypothesis 4: Work connectivity behavior mediates the relationship between time personality and emotional behavior.

*3.6 Moderating Effect of Organizational Citizenship Behavior*

OCB is considered as a series of "affinity" and "facilitation" behavior that can show the close relationship between individuals and organizations, and help organizations to succeed (Van Dyne, Cummings & Parks, 1995). With the continuous deepening of research on OCB, scholars have expanded the definition of organizational citizenship behavior, believing that as long as it is beneficial (or the purpose is beneficial) to the organization, and is voluntarily implemented, and exceeds role expectations, it can be regarded as OCB (Van Dyne et al., 1995). Work connectivity behavior after-hours is the behavior of a series of mobile devices to deal with work matters. This process may be to help colleagues solve problems, work against the clock, participate in organizational activities, etc. Based on attribution theory, it is altruistic or organizational. Therefore, from the perspective of individuals with high-level organizational citizenship behavior, working connectivity behavior after-hours is the behavior that they voluntarily implement. It is obvious that for individuals who voluntarily generate work connectivity, their voluntary losses will be different from those who involuntarily generate work connectivity behavior. Therefore, this study speculates that the level of organizational citizenship behavior will have an impact on the relationship between work connectivity behavior and emotional exhaustion. At the same time, organizational citizenship behavior has been divided into five dimensions (Organ; 1988), seven dimensions (Podsakoff, Mackenzie, Paine and Bachrach, 2000) and ten dimensions (Farh et al., 1997) by scholars. However, after the five dimensional structure,

relevant studies pointed out that the five dimensions include two higher-order dimensions: OCBO and OCBI (Williams & Anderson, 1991; Skarlicki & Latham, 1995).

In the scale developed by Podsakoff et al. (1997), there are Helping Behavior ScaleIt which mainly measures the behavior of employees to help members in the organization to solve problems related to work and Citizen Morality Scale which mainly measures individuals' behavior of participation and responsibility in organizational life. The two dimensions of behavior are used to evaluate the level of OCBO and OCBI in organizational citizenship behavior, so as to more clearly understand what role organizational citizenship behavior plays in it. Therefore, this study will explore the role of two high-level dimensions (helping behavior and civic morality) in the relationship between work connectivity behavior and emotional exhaustion. Based on this, this study proposes the following assumptions:

Hypothesis 5a: The helping behavior of organizational citizenship behavior negatively moderates the impact of work connectivity behavior on emotional exhaustion. When the individual's organizational citizenship behavior has a high level of helping behavior, the positive impact of work connectivity behavior on emotional exhaustion is reduced.

Hypothesis 5b: The civic morality of organizational citizenship behavior negatively moderates the impact of work connectivity behavior on emotional exhaustion. When the individual's organizational citizenship behavior has a high level of civic morality, the positive impact of work connectivity behavior on emotional exhaustion is reduced.

Hypothesis 6a: The helping behavior of organizational citizenship behavior moderates the mediation effect of time personality on emotional exhaustion through work connectivity behavior. When the level of helping behavior is high, the mediating effect between time personality and emotional exhaustion is relatively weak. When the level of helping behavior is low the mediating effect between time personality and emotional exhaustion is relatively strong.

Hypothesis 6b: The civic morality of organizational citizenship behavior moderates the

mediation effect of time personality on emotional exhaustion through work connectivity behavior. When the level of civic morality is high, the mediating effect between time personality and emotional exhaustion is relatively weak. When the level of civic morality is low, the mediating effect between time personality and emotional exhaustion is relatively strong.

The research model is as Figure 1.
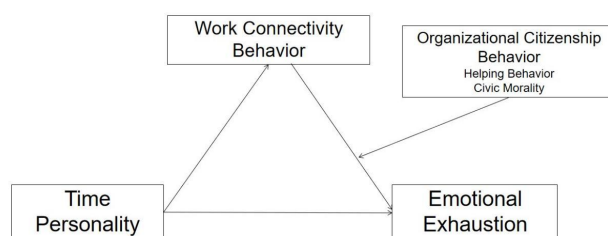


**Figure 1.** The Model of the Research

## 4. Research Design

### 4.1 Measurement

Basic personal information. This part mainly includes demographic characteristics and basic information of the school where the survey sample is located, specifically: gender, age, education and years of working, etc.

Time personality uses the time personality indicator (TPI) designed by Francis Smythe in 1999 with the method of factor analysis to measure teachers' time personality level, including five items, such as "highly aware of the passage of time, and I need to have a plan before doing things". Score time personality traits on the Likert 5 subscale.

Work connectivity behavior selects the scale developed by Richardson and Thompson (2012) for measurement and makes localization adjustment for the two sub scales. The study makes appropriate adjustments according to the actual background of Chinese teachers' work to ensure the quality of the questionnaire items. In the duration subscale, considering the domestic work habits, most teachers combine the "before going to work" time period with the formal start of the day's work, and choose four time periods

that are prone to work connectivity behavior, including "lunch break, vacation". The occurrence frequency subscale deleted some situations that did not conform to the majority of Chinese teachers' work connectivity behavior, and finally merged into 11 items. Score work connectivity behavior on the Likert 5 subscale.

Emotional exhaustion is based on the three item scale developed by Watkins et al (2014). On this basis, one item is added to form a four item scale such as "I am worried that my work will affect my mood". Score emotional exhaustion on the Likert 7 subscale.

The OCB scale draws on the scale of Podsakoff et al (1997). In the helping behavior section, there are seven main topics, including "Willing to share your expertise with other members"; in the Civic Morality section, there are three main topics: "Willing to express their best views on the company at the risk of being dissatisfied". Score OCB on the Likert 7 subscale.

### 4.2 Sample

We focus on senior high school teachers with certain work experience, and 745 questionnaires are collected. After the preliminary analysis of the questionnaire, 630 valid questionnaires were obtained after eliminating the invalid questionnaires, with an effective rate of 84.6%. In the gender distribution, males accounted for 38.8% and females accounted for 61.2%. In the age distribution, 51.6%, 37.2%, 7.7% and 3.5% of teachers aged 18 to 25, 26 to 35, 36 to 45 and above respectively. In terms of education level, the sample of undergraduates is the largest (57.4%), followed by postgraduates (24.4%). In terms of working years, the proportion of teachers who have worked for less than one year, 1-3 years and more than five years is similar, 29.8%, 33.7% and 22.4% respectively.

## 5. Result

### 5.1 Bias Test

The scales used in this study are mature scales that have been widely used, and the items have been fine tuned according to the actual situation of teachers' work in China to ensure the comprehensibility of the topics. In order to ensure the objectivity of the data collected, the questionnaire was distributed and filled in

anonymously in this study. In order to avoid the possible common method bias, this study conducted a common method bias analysis based on the single factor test proposed by Harman. The common method deviation test was conducted on 34 items in the questionnaire, including work connectivity behavior, emotional behavior, organizational citizenship behavior, and time personality. The final inspection result shows that the KMO value is 0.915; And according to the factor analysis results, six factors were extracted, of which the first factor accounted for 27.27%, less than the critical standard of 40%. Therefore, there is no serious common methodological bias in this study. The specific inspection results are shown in Table 1:

**Table 1.** CMV Test (Principal Component Analysis)

| Component | Total | Percentage of Load | Cumulative Percentage |
|---|---|---|---|
| 1 | 9.27 | 27.27 | 27.27 |
| 2 | 7.41 | 21.79 | 49.07 |
| 3 | 2.99 | 8.78 | 57.85 |
| 4 | 2.08 | 6.13 | 63.98 |
| 5 | 1.51 | 4.44 | 68.41 |
| 6 | 1.06 | 3.12 | 71.53 |

*5.2 Reliability Analysis*

The reliability score of the study is shown in Table 2. Four variables are involved in this study, of which work connectivity behavior is also subdivided into two dimensions. Finally, the Cronbach's a coefficient of all scales is above 0.8, so the variable scales of the questionnaire have good reliability.

**Table 2.** Reliability Analysis

| Variable | Cronbach's $\alpha$ | Items |
|---|---|---|
| Time Personality | 0.81 | 5 |
| Emotional Exhaustion | 0.89 | 4 |
| Work Connectivity Behavior | 0.93 | 15 |
| Organizational Citizenship Behavior | 0.95 | 10 |
| Helping Behavior | 0.96 | 7 |
| Civic Morality | 0.86 | 3 |

*5.3 Validity Test*

The four main variables involved in this study were analyzed by confirmatory cause analysis (work connectivity behavior, emotional exhaustion, time personality, and organizational citizenship behavior), of which OCB was mainly divided into two dimensions. The final analysis results are shown in Table 3. Compared with other models, the five factor model has the best fitting effect which represents different constructs. The results showed that the discriminant validity among the variables was obvious.

**Table 3.** Confirmatory Factor Analysis

| Model | $x^2$ | $df$ | $x^2/df$ | CFI | TLI | RMSEA |
|---|---|---|---|---|---|---|
| Single factor model | 5903.57 | 527 | 11.20 | 0.35 | 0.31 | 0.10 |
| Two factor model | 2987.57 | 526 | 5.68 | 0.70 | 0.68 | 0.12 |
| Three factor model | 2457.13 | 524 | 4.69 | 0.77 | 0.75 | 0.11 |
| Four factor model | 2130.99 | 521 | 4.09 | 0.81 | 0.79 | 0.10 |
| Five factor model | 1915.25 | 517 | 3.70 | 0.83 | 0.82 | 0.09 |

*5.4 Correlation Analysis*

According to the Pearson correlation analysis method, this study conducted a correlation analysis on four variables The results are shown in Table 4. It can be found that there is a significant positive correlation between time personality and

work connectivity behavior (r=0.23, p<0.01). Time personality was positively correlated with emotional exhaustion (r=0.31, p<0.01). There was a significant positive correlation between work connectivity behavior and emotional exhaustion (r=0.22, p<0.01). The above data shows that the

results of variable correlation analysis in this study are in line with expectations and can be used for subsequent regression analysis and hypothesis testing.

**Table 4.** The Result of Correlation Analysis

| Variable | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 |
|---|---|---|---|---|---|---|---|---|---|
| Age | - | | | | | | | | |
| Years of | 0.69** | - | | | | | | | |
| Education | 0.35** | 0.43** | - | | | | | | |
| Marriage | 0.70** | 0.66** | 0.50** | - | | | | | |
| Work | 0.02 | -0.02 | -0.14* | -0.01 | - | | | | |
| Time | 0.17** | 0.13* | 0.04 | 0.13* | 0.23** | - | | | |
| Emotional | -0.16** | -0.07 | -0.15** | -0.14* | 0.22** | 0.31** | - | | |
| Helping | 0.04 | 0.01 | 0.04 | 0.12* | 0.08 | 0.50** | 0.19** | - | |
| Civic | 0.16** | 0.10 | 0.07 | 0.15** | 0.10 | 0.55** | 0.06 | 0.70** | - |

*p<0.05， **p<0.01.

### 5.5 Main Effect Test

The hierarchical regression analysis was carried out, and the empirical excess was put into dependent variables. Age and education, which had significant results in the correlation analysis, were put into the control variables in the first layer to form model 1. Then time personality was put into the second layer to form model 2. After adding the control variable, the time personality is significantly positive related to emotional exhaustion ($\beta$= 0.36, p<0.001). Hypothesis 1 of this study is verified. The analysis results are shown in the following Table 5:

**Table 5.** Regression Analysis of Time Personality and Emotional Exhaustion

| Variable | Emotional Exhaustion | |
|---|---|---|
| | Model1 | Model2 |
| Age | -0.15 | -0.21*** |
| Education | -0.20** | -0.22*** |
| Time Personality | | 0.36*** |
| $R^2$ | 0.07 | 0.19 |
| Adjusted $R^2$ | 0.06 | 0.19 |

* p<0.05 , ** p<0.01.*** p<0.001. Standardization coefficient.

### 5.6 Mediating Effect Test

Time personality and work connectivity behavior. In order to verify whether time personality will affect the production of work connectivity behavior, hierarchical regression analysis was conducted. Set the work connectivity behavior to "Y", and set the control variable to "F" to form model 1. Put "time personality" as X in the "D" layer to form model 2. The results are shown in Table 6. It can be seen that the nature of the unit has obvious correlation with the work connectivity behavior. After the control variable is put in, time personality is significantly positive in the work connectivity behavior ($\beta$= 0.22, p<0.001. The analysis results verify hypothesis 2.

**Table 6.** Regression Analysis of Time Personality and Work Connectivity Behavior

| Variable | Work Connectivity Behavior | |
|---|---|---|
| | Model1 | Model2 |
| Control Variable | -0.14* | -0.13* |
| Time Personality | | 0.22*** |
| $R^2$ | 0.02 | 0.07 |

| Adjusted $R^2$ | 0.02 | 0.06 |
|---|---|---|

* p<0.05 , ** p<0.01.*** p<0.001. Standardization coefficient.

Work connectivity behavior and emotional emission. In order to study the relationship between work connectivity behavior and emotional emission, hierarchical regression analysis was conducted. Take emotional exhaustion as Y, and put the control variable in the third layer to form model 1. Work connectivity behavior X in the third layer to form model 2. After setting the control variable, there is a significant positive correlation between work connectivity behavior and emotional emission ($\beta$ = 0.20, p<0.001), that is, if the intensity of the individual work connectivity behavior is higher, there will be a higher degree of emotional exhaustion. Hypothesis 3 is validated (as shown in Table 7).

**Table 7**. Regression Analysis of Work Connectivity Behavior and Emotional Exhaustion

| Variable | Emotional Exhaustion | |
|---|---|---|
| | Model1 | Model2 |
| Gender | -0.15 | -0.01 |
| Age | -0.21* | -0.21* |
| Years of working | 0.08 | 0.10 |
| Education | -0.03 | -0.13 |
| Marriage | -0.02 | -0.33 |
| Work Connectivity Behavior | | 0.20*** |
| $R^2$ | 0.08 | 0.12 |
| Adjusted $R^2$ | 0.06 | 0.10 |

* p<0.05 , ** p<0.01.*** p<0.001. Standardization coefficient.

Mediation of work connectivity behavior. This section examines whether there is a mediating effect between the work connectivity behavior and the emotional exhibition. The PROCESS Model 4 is used to test the mediation effect, and the time personality, work connectivity behavior, and emotional exhaustion are put into X, M, and Y respectively. The control variables are set. The

report results are shown in Table 8. It can be seen that after putting the three variables into the regression process, time personality still has a positive effect on emotional exhaustion ($\beta$=- 0.79, p<0.001), and the work connectivity behavior has a positive effect on emotional exhaustion ($\beta$= 0.23, p<0.05), indicating that work connectivity behavior plays a partial mediating effect between time personality and the emotional exhaustion. Therefore, hypothesis 4 is verified.

**Table 8.** The Mediation of Work Connectivity Behavior

| Variable | Emotional Exhaustion |
|---|---|
| | Model1 |
| Gender | 0.06 |
| Age | -0.45** |
| Years of working | 0.12 |
| Education | -0.04 |
| Marriage | -0.04 |
| Time Personality | 0.79*** |
| Work Connectivity Behavior | 0.23* |
| $R^2$ | 0.08 |
| Adjusted $R^2$ | 0.06 |

* p<0.05 , ** p<0.01.*** p<0.001. Standardization coefficient.

In order to further verify the existence of intermediary effect, this study repeated 5000 times in a limited sample through Bootstrap method to ensure the representativeness of the sample. The analysis results are shown in Table 9. It can be seen that the confidence interval CI of the direct effect of time personality on emotional exhaustion is [0.539, 1.044], excluding 0, indicating that time personality has a positive effect on emotional exhaustion; The confidence interval of indirect effect of emotional commitment CI= [0.003, 0.147], excluding 0, indicating that time personality can play a role in emotional excess through work connectivity behavior. To sum up, the individual's work connectivity behavior mediates the interaction between time personality and emotional excess. Hypothesis 4 is verified again.

**Table 9.** The Result of Mediation Effect

| | Effect Size | SE | 95% Interval | Confidence |
| --- | --- | --- | --- | --- |
| | | | Minimum | Maximum |
| Direct Effect | 0.792 | 0.128 | 0.539 | 1.044 |
| Indirect Effect | 0.067 | 0.037 | 0.003 | 0.147 |

*5.7 Moderating Effect Test*

The study examined the organizational citizenship behavior's moderation of work connectivity behavior and emotional exhaustion. Organizational citizenship behavior is mainly divided into helping behaviour and civic morality. The research has enabled the PROCESS Model 14 to be tested for moderating effect, with time personality as X, emotional exhaustion as Y, work connectivity behavior as M, organizational citizenship behavior (helping behaviour and civic morality) as W, gender, age, years of working and education as control variables. The report results are shown in Table 10.

**Table 10.** The Result of Moderating Effect

| | Emotional Exhaustion | | | |
| --- | --- | --- | --- | --- |
| | Model1 | Model2 | Model3 | Model4 |
| Work Connectivity Behavior | 0.19*** | 0.10*** | 0.71*** | 0.23* |
| **Moderation** | | | | |
| Helping Behavior | 0.20*** | | 0.05** | |
| Civic Morality | | 0.07 | | -0.15* |
| **Interaction** | | | | |
| Work Connectivity Behavior*Helping Behavior | | | 0.19** | |
| Work Connectivity Behavior*Civic Morality | | | | -0.11* |
| $R^2$ | 0.16 | 0.13 | 0.24 | 0.24 |
| $F$ | 4.98*** | 4.49*** | 7.96*** | 13.67*** |

*p<0.05，**p<0.01，***p<0.001.Standardization coefficient.

Moderation of organizational citizenship behavior. After controlling the main effects of work connectivity behavior, helping behavior, and civic morality respectively, according to the moderating effect analysis results as shown in Table 10, it can be concluded that the interaction between work connectivity behavior and helping behavior has a significant impact on emotional exhaustion (β= 0.19, p<0.01), while the interaction between work connectivity behavior and civic morality has a significant impact on emotional exhaustion (β= -0.15, p<0.1). Therefore, hypothesis 5a and hypothesis 5b are verified.

The moderating effect of helping behavior. When the individual's helping level is high, the relationship between work connectivity behavior and emotional exhaustion is weak. When the helping behavior level is high, the relationship between work connectivity behavior and emotional exhaustion is significantly enhanced. Therefore, hypothesis 5a is verified. In order to more clearly show the moderating in the dimension, this study has drawn a moderating effect diagram, as shown in Figure 2.
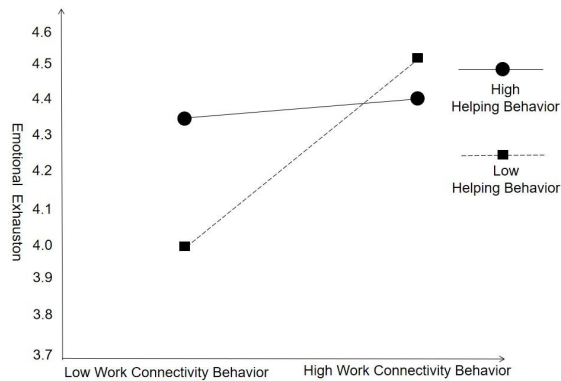
**Figure 2.** The Moderating Effect of Helping Behavior

Then, the Bootstrapping method is used to test the mediation effect of being moderated. Through data analysis, it can be concluded that the intermediary effect index value of moderating is -0.052, and the 95% confidence interval is [-0.092, -0.001]. If zero is not included, the mediating effect of moderating is significant. The moderating effect analysis results are shown in Table 11. At the low level of helping behavior (M-1SD), the indirect effect is significant (95% confidence interval is [0.025, 0.228]). At the high level of helping behavior (M+1SD), the indirect effect was not significant (95% confidence interval was [-0.040, 0.103]). The analysis results are shown in Table 11. That is, the higher the level of teachers' helping behavior is, the stronger the mediating role of work connectivity behavior between time personality and emotional exhaustion is. Therefore, hypothesis 6a has been verified.

**Table 11.** The Test of Moderated Mediation of Helping Behavior

| Helping Behavior | Indirect Effect | SE | 95% Confidence Interval | |
|---|---|---|---|---|
| | | | Minimum | Maximum |
| Low | 0.126* | 0.052 | 0.025 | 0.228 |
| Middle | 0.072* | 0.038 | 0.007 | 0.155 |
| High | 0.017 | 0.036 | 0.036 | 0.103 |

*p<0.05，**p<0.01，***p<0.001.

The moderating function of civic morality. Table 10 shows that the work connectivity behavior*civic morality is significant, so hypothesis 5b has been verified. Specifically, when the level of civic morality is high, the positive relationship between work connectivity behavior and emotional exhaustion is weak. When the level of civic morality is low, the relationship between work connectivity behavior and emotional behavior is significantly enhanced. In order to more clearly show the moderating effect of the civic morality, this study has drawn a moderating effect diagram, as shown in Figure 3.
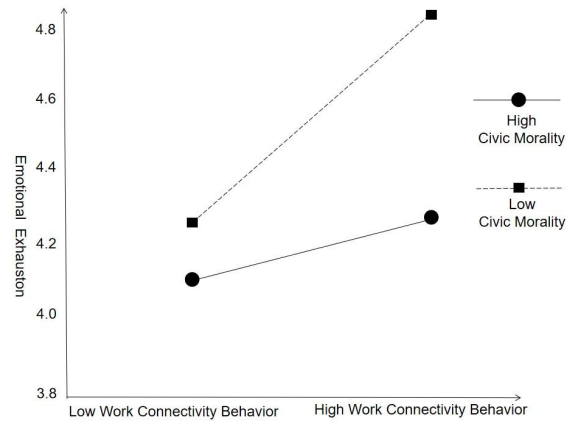


**Figure 3.** The Moderating Effect of Civic Morality

Then, we use Bootstrapping method to test the mediation being moderated. The results of moderating effect analysis are shown in Table 12. It can be seen that the indirect effect is significant (95% confidence interval is [0.012, 0.213]) at a low level of civic morality (M-1SD). At the level of high civic morality (M+1SD), the indirect effect was not significant (95% confidence interval was [-0.034, 0.126]). That is, the lower the individual's civic morality is, the stronger the indirect effect of work connectivity behavior between the individual's time personality and emotional exhaustion is. Therefore, hypothesis 6b is verified.

**Table 12.** The Test of Moderated Mediation of Civic Morality

| Civic Morality | Indirect Effect | SE | 95% Confidence Interval | |
|---|---|---|---|---|
| | | | Minimum | Maximum |

| | | | | |
|---|---|---|---|---|
| Low | 0.116* | 0.051 | 0.012 | 0.213 |
| Middle | 0.074* | 0.038 | 0.009 | 0.154 |
| High | 0.033 | 0.040 | -0.034 | 0.126 |

*p<0.05， **p<0.01， ***p<0.001.

## 6. Conclusion

Through a questionnaire survey of 630 teachers, based on the theory of resource conservation and attribution, the study analyzed the impact of time personality on emotional exhibition, explored the mechanism of work connectivity behavior, help and civic morality in this relationship, and proposed a mediated model, The conclusions are as follows: (1) Time personality has a positive significant effect on emotional exhaustion. (2) Time personality has a positive effect on work connectivity behavior. (3) Work connectivity behavior has a positive effect on emotional exhaustion. (4) Work connectivity behavior mediates the relationship between time personality and emotional behavior. (5) The helping behavior of organizational citizenship behavior negatively moderates the impact of work connectivity behavior on emotional exhaustion. When the individual's organizational citizenship behavior has a high level of helping behavior, the positive impact of work connectivity behavior on emotional exhaustion is reduced. (6) The civic morality of organizational citizenship behavior negatively moderates the impact of work connectivity behavior on emotional exhaustion. When the individual's organizational citizenship behavior has a high level of civic morality, the positive impact of work connectivity behavior on emotional exhaustion is reduced. (7) The helping behavior of organizational citizenship behavior moderates the mediation effect of time personality on emotional exhaustion through work connectivity behavior. When the level of helping behavior is high, the mediating effect between time personality and emotional exhaustion is relatively weak. When the level of helping behavior is low the mediating effect between time personality and emotional exhaustion is relatively strong. (8) The civic morality of organizational citizenship behavior moderates the mediation effect of time personality on emotional exhaustion through work connectivity behavior. When the level of civic morality is high, the mediating effect between time personality and emotional exhaustion is relatively weak. When the level of civic morality is low, the mediating effect between time personality and emotional exhaustion is relatively strong.

## 7. Discussion

### 7.1 Time Personality and Emotional Emission

The data analysis results of this study show that there is a positive relationship between time personality and emotional personality, which helps to understand that schools should actively use time personality traits to strengthen organizational management based on teachers' personal needs. Because individuals with high time personality traits are characterized by impatience and high perception of the passage of time, they will feel more pressure from the workplace, which leads to individual emotional exhaustion. Therefore, even with the same physical time, individuals with different time personality traits will feel different time pressures. Similarly, faced with the same number of tasks, individuals with high time personality traits are more willing to accept simultaneous multitasking when they have the tendency to multitask. Therefore, schools should always pay attention to the needs of teachers. For individuals with different time personality traits, the organization should regularly communicate with teachers about their work progress and give timely feedback, reasonably arrange the division of work according to individual time personality level, try to avoid waste and unnecessary interference of team members' work resources (time, energy, psychology, etc.), reduce unnecessary resource losses (Susan Mohammed & Alipour, 2014), and further improve individual and team performance.

### 7.2 Mediation of Work Connectivity Behavior

Time personality influences emotional exhaustion through work connectivity behavior, which is confirmed in the data analysis of this study. Therefore, schools should actively use the characteristics of time personality to strengthen management based on the personal needs of teachers. Time personality is a double-edged sword. On the one hand, when teachers have high time personality characteristics, they can better adapt to the fast-paced organizational work

environment, and can also take the initiative to take work connectivity behavior to make contributions to improving personal and organizational performance. On the other hand, if the organization is not managed, the individuals with high time personality characteristics will excessively adopt work connectivity behavior in the too loose or flexible work connectivity environment, which will lead to work-family conflict or frequent switching, which will lead to role ambiguity and continuous loss of personal resources, leading to emotional exhaustion, which is the first step of job burnout. Therefore, the organization should control the action path that high time personality traits promote worker connectivity. First of all, schools should maximize the matching of people and positions during work arrangement based on time personality characteristics. For example, in the selection process of recruitment or promotion, individual time personality inspection is added to improve the matching degree with team atmosphere and job demands. Secondly, the organization should establish work connectivity behavior management norms to restrain excessive work connectivity behavior of teachers. Finally, managers should set an example by not managing the frequency and length of communication with teachers after-hours because of excessive work connectivity behavior.

*7.3 Moderation of Organizational Citizenship Behavior*

The reason why individuals with high-level organizational citizenship behavior can play a reverse weakening role between work connectivity behavior and emotional exhaustion is that they attribute work connectivity behavior to OCBI and OCBO. Therefore, in their cognition, they voluntarily take work connectivity behavior to get close to organizations or individuals. Based on this, managers can generate work connectivity in non working hours for individuals who are more confident and at a high level of organizational citizenship behavior. On the contrary, low level individuals may be more likely to generate emotional exhaustion for work connectivity. For them, they need to be careful to generate work connectivity, or should pay more attention to them and supplement resources for them in a timely manner. At the same time, this study also proves that individuals with high level helping behavior and civic morality in the

organization will have better performance to cope with the possible emotional exhaustion when facing the work connectivity behavior that is difficult to avoid. Therefore, the organization should create an atmosphere that encourages organizational citizenship behavior, build a human resource system based on time personality, actively guide and encourage teachers to allocate and plan work time reasonably, correctly understand their time personality characteristics, and reasonably deal with work connectivity, so as to improve work efficiency.

**8. Limitations and Future Directions**

This paper also has some limitations, which can be further expanded in future research. First, in terms of research design, cross section design is adopted, and the causal explanation is limited. For example, individuals who do not plan for time or use multiple tasks may develop a strong preference in the future. It cannot reflect the change of emotional exhaustion level caused by the change of time personality through work connectivity behavior. Researches can adopt the tracking method to dynamically observe the relationship between time personality, work connectivity behavior, emotional exhaustion and organizational citizenship behavior in the future. Although this study uses a simple research design, which takes time personality as the starting point, and provides a timely opportunity to discover the mechanism of working connectivity behavior after=hours to positively promote emotional exhaustion, this paper suggests using a longitudinal design in future research to confirm the current findings in more detail. Second, the dependence on self-report. This paper uses the method of teacher self-evaluation to collect data and explore the impact of time personality on emotional behavior through work connectivity behavior. However, because the impact of teachers' time personality on emotional exhaustion through work connectivity behavior will inevitably vary due to the work atmosphere of different schools, we can consider combining the evaluation of their direct superiors, colleagues in the team and other people, and the objective data generated by individuals themselves to further improve the reliability of the research results, so that the research conclusion has more theoretical explanatory power and practical

reference value. Third, in terms of moderating effect, this paper only examines the impact of helping behavior dimension evaluation and civic morality dimension evaluation on time personality trait on emotional exhaustion through work connectivity behavior from the perspective of individuals. However, in this process, the leadership style of direct supervisors, the work connectivity atmosphere within the team, and the social norms of the organizational level may affect time personality. Because this research has proved that the individual time personality trait will affect emotional exhaustion through work connectivity behavior, future researches can make further exploration based on cross layer analysis and dynamic model.

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