PSYCHOLOGICAL OUTCOMES OF TIME MANAGEMENT BEHAVIOUR AMONG UNIVERSITY TEACHERS: MEDIATING ROLE OF PERCEIVED CONTROL OF TIME

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CERTIFICATION

This is certified that we have read the thesis submitted by Masud Akhtar bearing registration No. 10-FSS/PHDPSY/M11. It is our judgment that this thesis is of sufficient standard to warrant its acceptance by International Islamic University, Islamabad for the degree of Ph.D in Psychology.

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I know that plagiarism is not allowed. It is wrong and unethical. Thus the contribution of others authors has been acknowledged by citing their names and references both in the ruining text and in the reference list.

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Abstract

Time management is very important in personal as well as in professional life of university teachers. Poor time management results in destructive psychological outcomes in personal and professional life of university teachers. Therefore the present study is based on *the Process Model of Time Management* by Macan (1994). The study aimed to examine the mediating role of perceived control of time between time management behaviour and psychological outcomes among university teachers. The study also examined the direct effect of time management behaviour and perceived control of time on the prediction of personal and job-related outcomes. Moreover role of time management behaviour in the prediction of perceived control of time was also investigated. The present study is based on cross-sectional survey research design. Sample of the present study comprised of university teachers (N = 300). Seven self-report measures were used for data collection including Time Management Behaviour Scale, Perceived Control of Time Scale, Warwick Edinberg Mental Well-being Scale, Depression Anxiety Stress Scale, Job Satisfaction Scale, In Role Performance Scale, and Role Overload Scale. Overall research was divided into two parts. Firstly, pilot study was carried out in order to examine the psychometric properties of the scales and exploration of the direction of relationship between variables. Pilot study was conducted on the limited sample of university teachers (N = 100). Pilot study participants were not included as main study participants. After pilot testing, main study was carried out. Sample of the main study comprised of university teachers from different public and private sector universities of Pakistan (N = 300). Both male and female university teachers were included in the sample. Age ranged from 28 to 38 years (M = 35.42, SD = 10.79) participated in this research. Only regular university teachers with at least on year full time teaching experience were

included in the sample. However, the experience of teachers fluctuated between 1 to 37 years (M = 5.87, SD = 4.60). The qualification level of university teachers was MA / MSc (n = 64, 21.3%), MPhil / MS (n = 133, 44.3%) and PhD (n = 103, 34.3%). Linear regression analysis and hierarchical regression was computed to test the hypotheses. Most of the hypotheses were supported in the present study. Results of the linear regression analysis reveal that time management behaviour positively predicted well-being whereas negatively predicted stress among university teachers. Time management behaviour positively predicted job satisfaction and job performance whereas negatively predicted role overload among university teachers. Time management behaviour positively predicted perceived control of time. Perceived control of time positively predicted well-being whereas negatively predicted stress among university teachers. Perceived control of time positively predicted job satisfaction and job performance whereas negatively predicted role overload. Results of the hierarchical regression analysis revealed that perceived control of time mediated between time management behaviour and well-being among university teachers. Perceived control of time mediated between time management behaviour and stress among university teachers. Perceived control of time mediated between time management behaviour and job satisfaction among university teachers. Similarly, perceived control of time mediated between time management behaviour and job performance among university teachers. The findings confirmed the underlying empirical assumptions of the *Process Model of Time Management* Overall the findings are valuable in the fields of educational and organizational psychology. The recommendations of the study were discussed under the limitations and suggestions.

Summary of the Research

The Process Model of Time Management explains that time management behaviour influences the life of the employees through a specialized two-step process. In the first step, time management behaviour predicts perceived control of time among employees whereas in the second step perceived control of time directly influences the personal and job-related outcomes (Macan, 1994). In more specific terms, *the Process Model of Time Management* emphasizes the indirect effect of time management behaviour on outcomes besides well-research direct effect. Thus time management behaviour develops perception of the control on time which than effects the personal and job-related outcomes (Macan, 1994). In the present study, *the process model of time management* is tested among the university teachers of Pakistan in which well-being and stress are taken as personal outcomes whereas job satisfaction, job performance and work overload are taken as job outcomes. Besides many other reasons, the specific relevance of time management behaviour with teaching profession is one of the many factors behind the consideration of universities in the present study. Teaching is a profession which requires punctuality, spontaneity and more specifically time management. Teachers not only personally practice time management they also teach and train students to manage their time effectively. Besides this, the establishment of modern Quality Enhancement Cell in all universities has also set standards of time management behaviour for teachers which are constantly monitored.

The present study comprised of a sample of 300 university teachers including male teachers (n = 150, 50%) and female teachers (n = 150, 50%), who volunteered to participate in the study, they were recruited through purposive sampling technique.

The data was collected through seven measures including Time Management Behaviour Scale (Macan et al., 1990), Perceived Control of Time Scale (Claessens, van Eerde, Rutte, & Roe, 2012), Warwick Edinberg Mental Well-being Scale (Warwick and Edinburgh Universities, 2006), Depression Anxiety Stress Scale (Lovibond & Lovibond, 1995), Job Satisfaction Scale (Guimaraes & Igbaria, 1992), In Role Performance Scale (Williams & Anderson, 1991), and Role Overload Scale (Cooper et al., 2001). The data was analyzed by using linear regression analysis and hierarchical regression analysis. The researcher established the reliability and validity in piolet testing. The findings of linear regression analysis revealed direct effect of time management behaviour and perceived control of time on dual outcomes. The findings confirmed that time management behaviour enhances well-being, reduces stress, increases job satisfaction and performance whereas diminishes work overload. The most important findings are related to the hypothesis tested for the confirmation of *the Process Model of Time Management.* The mediation computed through hierarchical regression analysis confirmed the major assumptions behind process model. The study proved that time management behaviour develops perceived control of time which than predicts two types of effects on employees including effects on their well-being and stress. Perceived control of time also mediated between time management behaviour and work-related outcomes. The study also considered gender especially with reference to time management behaviour. The findings confirmed that female teachers have better time management behaviour as compared to male teachers. The most important contribution of this research rests in the fact that time management behaviour effects personal and professional aspects of the teachers. The study shed light in whereabouts of issues related to time management.

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(Chapter-I)

INTRODUCTION

Chapter-I

Introduction

Time management is one of the most important behaviours in educational institutions. It has dual importance for teachers and students. Many theorists and researchers (Britton, & Tesser, 1991; Burt & Kemp, 1994) attempted explain different postulates of time management behaviour. The most comprehensive model ever proposed on time management behaviour is *The Process Model of Time Management* by Macan (1994). This model explains the functions of time management behaviour in life of employees in organizations. It explains that time management behaviour develops the perceptions of control of time which leads towards many positive consequences in the personal and professional life of the employees. Even the model is so comprehensive that is also describes the possible outcomes in terms of reducing stress while enhancing job satisfaction and job performance among the employees. Due to the consistent evidences on the sound validity of this model in the diverse educational institutions across the world (Eilam & Aharon, 2003; Geyser, 2012; Swart, Lombard, & de Jager, 2010; Zemetakis, Bouranta, & Moustakis, 2010), the model was investigated in the educational institutions of Pakistan.

The current study is aimed to examine the mediating role of perceived control of time between time management behaviour and its outcomes on the basis of *The Process Model of Time Management.* This empirical investigation is grounded in theory and it has applied significance due to practical role of time management behaviour in educational institutions. This study is also a collectivistic addition in the literature of this model which was still limited to the studies of individualistic cultures. Moreover the existing literature merely focused on time management

behaviour of students and ignored the teachers. The study has taken teachers into consideration contrary to the traditional focus of researchers on students in educational institutions. University teachers were targeted because they experienced more workload related to the management of their time but it was less researched area in the indigenous context. Moreover, less research work is available in other Asian's countries with respect to time management behaviour among university teachers. Overall the study is worthwhile on theoretical and practical grounds.

Time Management Behaviour

Time management behaviour is a set of skills or personal competencies required to use and management time effectively (Macan, 1994). Time management behaviour is an important construct which remained under the focus of researchers and theorists from decades (Claessens, van Eerde, Rutte, & Roe, 2005; Geyser, 2012; Ishimura & Kodama, 2008; Wright, 2002). Most of the current researchers have taken time management behaviour as an antecedent variable to predict various psychological outcomes in modern organizations (Chang & Nguyen, 2011; Tavakoli, Tavakoli, & Pouresmaeil, 2013). Most of the studies on time management behaviour in the educational institutions have focused on students (Eilam & Aharon, 2003; Geyser, 2012; Swart et al., 2010; Zemetakis et al., 2010) however empirical work on teachers from this perspective remained missing. The present study is an attempt to bridge this gap.

The environmental of the modern organizations is more competitive as compared to the past. Thus time management behaviour is considered a positive aspect of employee's behaviour in the modern organizations (Major, Klein, & Ehrhart, 2002; Orlikowsky & Yates, 2002). Researchers conducted survey, qualitative

and experimental studies on time management behaviour (George & Jones, 2000). Time management behaviour is a construct which is used in the multidisciplinary research however the most prominent work on this construct is carried out in psychology. The above mentioned scale is also developed by psychologists. Besides this the most prominent model eve proposed on time management i.e. The Process Model of Tome Management is also creation of a psychologist Macan (1994). Thus this topic is more closely linked with psychology than all other disciplines. The main theme of psychology is the study of behaviour and time management is also an important human behaviour (Macan, 1994).

Psychologists have carried out extensive research on the correlates of time management behaviour and more specifically most of the studies are conducted in the domain of educational psychology and students remained the focus of majority of researchers (Dormann & Zapf, 2002; Endler, Macrodimitris, & Kocovski, 2000; Garhammer, 2002; Lange, Taris, Kompier, Houtman, & Bongers, 2003; Macan, 1996). The present study is also being conducted in the higher education institutions but the teachers are focused in this research instead of students. It remained a trend in the past research that students are mostly considered for studying time management behaviour. Time management behaviour is an important skill of academic setting (Kelly, 2002). Due to the changing nature of work environment, researchers and professionals have focused on time management behaviour (Orlikowsky & Yates, 2002). Besides this, time management skills are considered essential for career progression and professional excellence (Garhammer, 2002).

The stance of the present study is also related to the prediction of psychological outcomes by using time management behaviour as predictor variable.

Time management is set of techniques which are used to management the time (Eilam & Aharon, 2003; Davis, 2000; Mudrack, 1997). Time management behaviour develops perceived control of time among employees which positively influences their personal and professional (Macan, 1994). The Process Model of Time Management illustrates the link between time management behaviour, perceived control of time and outcomes which is under the focus of this investigation.

Perceived Control of Time

Perceived control of time is an individual's perception that time his under his or her own control and it can be effectively used will personal will (Macan, 1994). The Process Model of Time Management has three elements. The first element is time management behaviour. The second element is perceived control of time. The third element is related to the outcomes. Macan (1994) integrated these elements to form a process of time management on the basis of a stance that time management behaviour does not directly predict outcomes in the organizations. By ignoring the direct effect of time management behaviour, Macan (1994) concentrated on the indirect effect. Thus the model was constructed on the assumption that time management behaviour directly predicts perceived control of time and then the perceived control of time predicts outcomes among employees. In more clear words perceived control of time mediates between time management behaviour and outcomes among employees.

Macan (1994) illustrated three types of outcomes including personal and job related stress, job satisfaction and job performance among employees. Likewise, perceived control of time is also an important predictor of various positive psychological outcomes (Claessens, Van Eerde, Rutte, & Roe, 2005; Schwable, Hafner, Stock, & Hartmann, 2009) in the modern organizational life.

Psychological Outcomes

The present study is based on *The Process Model of Time Management* in which indirect effect of time management behaviour on outcomes is proposed. The present study has also focused on examining the indirect effect of time management behaviour as proposed by the theorist (Macan, 1994). *The Process Model of Time Management* explains that time management behaviour firstly directly predicts perceived control of time and then the perceived control of time predicts outcomes in the organizations. The theorists proposed three possible outcomes including stress or stressors, job satisfaction and job performance. In the present study, well-being is also added in the outcomes. As model suggests, mediating role of perceived control of time between time management behaviours and psychological outcomes is examined in the present study. *The Process Model* solely suggests the indict effect of time management behaviour on psychological outcomes. However, in the present study, the investigation of the direct effect of time management behaviour on the prediction of psychological outcomes is also focused. In the present study, the focused psychological outcomes comprised of psychological well-being, stress, job satisfaction, job performance and role overload.

Psychological Well-being and Time Management

The present study has focused on well-being is an important psychological outcome of time management behaviour and perceived control of time. Past research confirmed the direct and indirect effect of time management behaviour on well-being. Likewise, prior researches reported the direct effect of perceived control of time on well-being (Mecan, 1994; Peeters & Rutte, 2005). McMahon (2006) illustrates that historically Greeks initiated work related to well-being. Well-being remained under

the attention of the researchers throughout the history however it gained much importance after the emergence of positive psychology (Peterson, 2009; Sligman, 2002). Well-being is the combination of five elements including good relationships, having meaning, being engagement, feeling good and having a sense of accomplishment (Sligman, 2011). Well-being is characterized as a combination of positive psychological resources (Giboa, & Itzhak, 2001). It is developed as an interplay of positive personal and environmental characteristics (McNulty, 2012). Well-being is multi-dimensional contract which has psychological, cognitive and affective dimensions (Daniels, 2000; Giboa & Itzhak, 2001; McNulty & Fincham, 2011; Tamir & Ford, 2012).

Positive psychology was emerged in 1998 and focused to strengthen the different aspects of well-being (Sligman, 1999). Positive psychologists focus was the shift of converting human weaknesses to human strengths (Seligman & Csikszentmihalyi, 2000). Keyes and Lopez (2002) illustrates that mental health can be ensured through the combination of high emotional well-being, high social well-being and high psychological well-being. Well-being is more related to an individual's personal perceptions therefore it is also labeled as subjective well-being. It is based on an individual's personal perception rearing quality of life, cognitive judgments and emotional reactions (Diener, 2000) and positive psychology has also more focused on subjective well-being rather than other types of well-being (Diener, 2000; Oishi, Diener, Choi, Kim-Prieto, & Choi, 2007). Cross-cultural differences are reported in well-being (Suh & Koo, 2008).

Ryff and Keyes (1995) taken subjective well-being and psychological well-being as two distinct concepts and proposed a multidimensional model of

psychological well-being comprising of the combination of six unique aspects including mastery, self-acceptance, positive relatedness, life purpose, personal growth and autonomy. Different theories and models are proposed by mental health researchers and theorists for developing the understanding of the different aspects of well-being. More elaborately, *Theory of Hedonic Well-being* mainly focused on tendency of minimizing pain and maximizing happiness, pleasure or comfort whereas *Theory of Eudemonic Well-being* focused on biologically predisposed factors (Peterson, Park, & Seligman, 2005). *Multiply Discrepancy Theory* emphasises the role of social comparisons as possible determinants of satisfaction. It illustrates that upward comparisons decreases satisfaction whereas downward comparisons increase satisfaction and well-being (Michalos, 1985). *Top-Down Theories* focus on the external factors e.g. wealth, life quality, sense of freedom determine well-being whereas *Bottom-Up Theories* focuses on subjective elevations or internal factors that determine well-being (Diener, Suh, Lucas, & Smith, 1999). *Orientations to Happiness Model* focuses on three factors that contribute to happiness including meanings in life, engaged life and pleasant life (Sligman, 2006). *Mental Health Continuum Model* emphasises of the combination of social, emotional and psychological well-being as completion of mental health (Keyes, 2002).

Stress and Time Management

The present study has focused on stress as psychological outcome of time management behaviour and perceived control of time. The condition, situation, problem or any issue which is perceived threatening or challenging for our well-being (McCraty, 2006; McShane & Tranaglione, 2002). Stress is a negative state (Cohen, Janicki-Deverts, & Miller, 2007) which results in many negative physiological,

psychological and behavioural consequences (McShane & Tranaglione, 2002). Different models are proposed in physiology, psychology and sociology (Hinkle, 1973).

Stress is a multidimensional contract. *Physiological Toughening Model* proposed by Diensbier (1989) divided stress into two categories including acute stress and chronic stress. Stress experience immediately followed by the occurrence of a stressor is known as acute stress whereas with the passage of time if coping strategies are not adopted and it the stress management techniques are not applied the acute stress changes into chronic stress. *The Lazarus Theory of Stress* by Lazarus and Launier (1978) is related to appraisal and cognitive labeling of the stresses. *The Interruption Theory* is brainchild of Mendler (1982) explains that stress is responded by automatic hyperactivity. In the current decade researcher have more focused on the possible coping antecedents that can be used to counter the adverse effects of stress and stressors. *The Process Model of Time Management* by Macan (1994) also suggests that time management behaviour and perceived control of time can be effectively used to inversely predict stress and related symptoms among employees and this is the stance of the present study too.

Job Satisfaction and Time Management

Research confirms that time management behavior contributes of job satisfaction (Claessens et al., 2004). The present study has focused on job satisfaction as direct and indirect outcome of time management behaviours. This also focused on examining the effect of perceived control of time on job satisfaction among university teachers. Job satisfaction is a well-researched topic of Industrial Organizational Psychology (Lu, Barriball, Zhang, & While, 2012). It is employee's general

contentment which is influenced by numerous factors (Shajahan & Shajahan, 2004). Employees' liking and disliking of a job is often used to define job satisfaction (Spector, 1997). Both affective (Thomson, 2012) and cognitive (Moorman, 1993) aspects of job satisfaction are mentioned in the literature. Although numerous theories are proposed by the researchers to understand the job satisfaction however two broader classifications are content theories and process theories (Luthans, 2005).

One major classification of job satisfaction theories is based on job content related classification. More specifically *Hierarchy of Needs Theory* (Maslo, 1943). It illustrates that employees' job satisfaction stems from the satisfaction of five needs including physiological needs, safety needs, love needs and belongingness needs, esteem needs and actualization needs. *Two Factors Theory* (Herzberg, 1966) explains that some factors are hygiene factors that are necessary for a job like pay whereas other factors are motivating factors like additional incentives. *Theory X and Theory Y* is given by McGregor (1960) who classified employees into two categories on the basis of their orientation and motivation towards work. Theory-X negatively evaluated employees whereas Theory-Y positively evaluated employees who love work and are naturally satisfied with their jobs. *Theory of Needs* by McClelland (1961) explains that employees work to fulfil three needs including achievement, power and affiliation. If these needs are satisfied in a job, employees are more likely to have job satisfaction and if these needs are not satisfied, employees are less likely to become job satisfied. *The ERG Theory* by Alderfer (1969) also explains job satisfaction from needs' satisfaction perspective. This theory has rather summarized the needs proposed by Maslow (1943). This theory used existence needs to describe physiological and safety needs, relatedness to compile social and esteem needs and growth to explain actualization needs. The stance of this theory is also much similar

to the grounded theory that satisfaction of these needs determines job satisfaction of the employees.

The second classification is related to process theories of job satisfaction. In this classification the major theories included *Equity Theory, Expectancy Theory, Goal Setting Theory* and *Job Characteristics Model. Equity Theory* predicts job satisfaction from the justice perceptions of reward in comparison with colleagues (Luthans, 2005) whereas *Expectancy Theory* is based on the fulfilment of the employees' expectations regarding the reward of their efforts. *Goal Setting Theory* which is a creation of Locke (1968) explains the job satisfaction is associated with the goal setting in the organizations. *Job Characteristics Model* by Hackman and Oldham (1975) is one of the most popular theories of job satisfaction. It explains that five specific characteristics of job including task identity, task significance, job autonomy, skills verity and feedback are important factors that determine job satisfaction (Luthans, 2005; Perry, Mesch, & Paarlberg, 2006).

These theories explain some of the predictors of job satisfaction in organizations. Many other factors also predict job satisfaction. More specifically, role of personal factors in job satisfaction is well-researched in organizational literature (Judge, Heller, & Mount, 2002; Furnham, Eracleous, & Chamorro-Premuzic, 2009). Researchers have examined the effect of these factors on the prediction of job satisfaction (Judge & Klinger, 2007; Judge & Lanen, 2001). The present study has focused on time management behavior as a personal factor of teachers predicting their job satisfaction. Thus the study focused on the effect of an individual teacher's time management behaviour of the prediction of job satisfaction. Likewise, effect of perceived control of time on job satisfaction is also focused.

Job Performance and Time Management

The present study has also focused on the role of time management behaviour in the prediction of job performance. They also focused on examining the effect of perceived control of time on job performance among university teachers. Job performance is an important construct of IO Psychology (Viswesvaran, 2011). Job performance is related to the combination of behaviours and job related activities that performed to achieve the goals of the organization (Butler & Rose 2011). Job performance has great importance for teachers as it directly influences their career excellence (VanScotter, Motowidlo, & Cross, 2000). Job performance is a multi-dimensional in nature as it comprised of two broader classifications including task performance and contextual performance. Task performance is related to duties and responsibilities at job whereas contextual performance is an employee's contribution to the activities that promote healthy psychological, social and organizational environment (Borman & Motowidlo, 1993; Motowidlo & Schmit, 1999). Different theories are proposed by researchers to describe the role of personal, situational, organizational and job specific factors that contribute to high job performance in the modern organizations.

Sonnentag and Frese (2002) classified theories of job performance into three categories. Campbell, Gasser, and Oswald (1996) neglected the influence of situational factors on performance and credited individual differences in terms of skills, experience, knowledge and ability as possible explanation of job performance in organizations. Thus the *Individual Differences Perspective* focused on human expertise for determining job performance. *The Situational Perspective* has given less importance to the employees' personal factors and explained job performance from a

contextual perspective. This approach explains that job performance is prominently influenced by the culture, climate and environment of an organization (Sonnentag & Frese, 2002). Thus contextual factors are considered more important for ensuing performance (Fay & Sonnentag, 2000).

In the light on the above two major perspectives, the present study has more focused on *Individual Differences Perspective* because the present study focused on the effect of time management behaviour of teachers on their job performance. *The Performance Regulation Perspective* holds a very unique standing. It neither focuses on individual differences nor does consider the contextual factors as possible predictors of job performance. Rather, it has focused on the performance process itself. Thus employees' way of perceiving and responding tasks determine the nature of their performance (Alonso, 2000; Sonnentag, 2000). Job performance is predicted by numerous factors in general and employees' personal factors in particular (Dugguh & Dennis, 2014; Newstrom, 2007). The present study has taken time management behaviour and perceived control of time as possible personal psychological characteristics of the university teachers that predict job performance. Numerous empirical evidences (Bono & Judge, 2003; Dalal & Hulin, 2008; Farh & Tesluk, 2012; Erez & Judge, 2001; Joseph & Newman, 2010; Kacmar, Harris, Collins, & Judge, 2009) confirmed that personal psychological characteristics and positive self-evaluations of the employees directly and indirectly predict job performance in the modern organizations.

Role Overload and Time Management

In the present study, role overload is taken as a work-related outcome of time management behaviour and perceived control of time among university teachers. Role

overload is a stressors and anything which causes stress is labeled as stressors. Stressors consisted of three types including non-work stressors, work-related stressors and wok-non work stressors. Non-work stressors are related to personal life of an employee. Work related stressors are related to occupational life of an employee. Work non-work stressors are related to the combination of stress from personal and professional life. Work related stressors are further divided into four categories including physical environmental stressors, interpersonal stressors organizational stressors and role related stressors (McShane & Tranaglione, 2002). Role overload is a role related stressor. Role overload is a role related stressor. These stressors are directly related to the tasks and duties of the employees at job (Briggs, 2005). Role overload is linked with the quantity of work assigned to a single person. Role-overload is receiving too many job assignments which are perceived as overload or excessive burden.

Role stressors are heterogeneous. Therefore different models are proposed by researcher to classify role related stressors (Srivastav, 2010). The concept of role stressors is brainchild of Kahn, Wolfe, Quinn, Snoek, and Rosenthal (1964) who for the first time in history introduced the concepts of role conflict and role ambiguity. Later on Rizzo, House and Lirtzman (1970) work on role conflict among employees. In the same way, Beehr, Walsh and Taber (1976) introduced role overload. Pareek (1982) initially proposed three role stressors including role overload, role ambiguity and role conflict but later on Pareek (1983) extended his role stressor model to eight role stressors including role overload, inter-role distance, role stagnation, role expectation conflict, role erosion, role isolation, self-role distance, personal inadequacy and role ambiguity. Osipow (1998) compiled a list of five role related stressors including role overload, role conflict, role ambiguity, role boundary and role

responsibility. Srivastav and Pareek (2008) extended the work on the measurement of these role stressors and proposed the model consisting of eleven role stressors (Srivastav, 2009) and also included role underload among the categorization of organizational role stressors. Despite many differences in the categorization of role stressors, it is worth mentioning that almost all of the researchers have focused on role overload as exclusive element of their models.

The present study has also focused on role overload. Contrary to the traditional Pakistani universities, now the university teachers perform multiple roles as they have to attend meetings, supervise students, write articles, prepare results, induct students and manage their problems (Azeem & Nazir, 2008). Therefore role overload can be managed with the help of time management behaviours (Jex & Elacqua, 1999).

Literature Review

The research has acknowledged the importance of time management for organizations (Farh & Tesluk, 2012; Joseph & Newman, 2010; Kacmar et al., 2009). The present study has focused on the dual outcomes of time management behaviour including personal outcomes and job outcomes. The personal outcomes are further divided into well-being and stress. Job related outcomes comprised of job satisfaction, job performance and role overload. Different issues at job can be effectively handed by effectively employing time management as a core strategy. Time management behaviour is proved as a superlative predictor of job satisfaction (Chang & Nguyen, 2011; Tavakoli, Tavakoli, & Pouresmaeil, 2013). Time management is considered ideal for improving the psychological functioning of employees and for countering the adverse of negative work stressors (Jex & Elacaua, 1999). Stress and time management is inversely correlated (Lang, 1992) whereas well-being can be enhanced by superior time management skills (Peeters & Rutte, 2005). Employees' vulnerability to negative effects of stress and stressors can be protected though the use of time management related strategies (Shahani et al., 1993). Lang (1992) described lower anxiety and depressive symptoms as negative outcomes of time management.

Numerous researches related to time management illustrate that time management is an important factor for employees that directly effects well-being and even the time management can be effectively utilized for enhancing well-being of employees in organizations (Peeters & Rutte, 2005; Schwable, Hafner, Stock, & Hartmann, 2009). Even beyond well-being, time management can be used for predicting job satisfaction and job productivity which is also taken as job performance (Griffith, 2003). Superior job performance can be directly and indirectly predicted

through time management (Vanishree, 3013). Administrators can effectively use time management as a core strategy and self-regulatory mechanism to ensure the superior job performance of employees (De Vos & Soens, 2008; Nonis, Fenner & Sager, 2011). Time management creates the perception control of time among employees (Ishimura & Kodama, 2008; Macan, 1994) which has various positive functions among employees.

Time management behaviour is found to be consistently related to perceived control of time and perceived control of time enhances the level of employees' satisfaction with their jobs and also enhances their performance at job (Claessens, 2004; Claessens et al., 2004; Macan, 1994). Besides contributing to job satisfaction, it also enhances well-being (Schwable, Hafner, Stock, & Hartmann, 2009). The Process Model of Time Management proposed by Mecan (1994) is different from other models in some aspects. Macan (1994) disagreed with the traditional conceptualization—taking perceived control of time is an integral part of time management behaviour—and argued that perceived control of time in not a part of time management behaviour rather it is outcome of time management behaviour. Another distinctive illustration of Macan (1994) was related to the outcomes of time management. Contrary to the existing research which used time management behaviour to predict direct outcomes from job and personal life of employees, The Process Model of Time Management suggested explains an indirect effect of time management behaviour on the outcomes among employees.

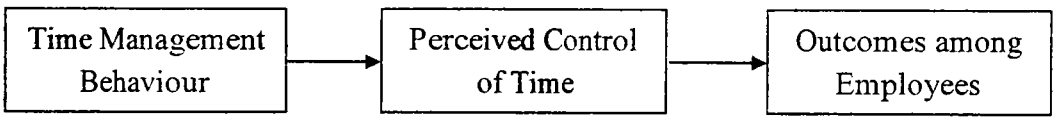

Figure 1. The Process Model of Time Management

Figure 1 shows that time management behaviour predicts perceived control of time and perceived control of time effects employees' work related attitudes. In more clear terms, time management in an individual develops perception of control of the time among employees which influences on their personal life and professional life. Macan (1994, p. 382) stated "By setting goals, scheduling, and organizing one's time, one gains a sense of mastery over how one allocates one's time, that is, the perception that one has control over one's time. Macan (1994) suggested that perceive control over time mediates between time management and its outcomes. In this regards, Hafner and Stock (2010) also confirmed that perceived control of time mediated between time management behaviour and well-being association.

The Process Model of Time Management is mainly tested and supported in the individualistic context (Claessens, 2004; Macan, 1994). Moreover, the prior cross-cultural studies in educational institutions, reported salient differences in collectivistic and individualist cultures (Noshen, 2013; Noshen, Riaz, & Batool, 2014). Thus the preset study is an initiative for being a prime research on Process Model of Time Management among the university teachers from Pakistan in which organizational culture is collectivistic. The present study has not only focused on the direct effect of time management behaviour on psychological outcomes instead the indirect path suggested by the Process Model of Time Management is also taken under investigation.

Rationale of the Study

The previous literature about time management in educational institutions mostly focused on students (Eilam & Aharon, 2003; Geyser, 2012; Lahmers & Zulauf, 2000; Misra & McKean, 2000; Swart, Lombard, & de Jager, 2010; Zemetakis, Bouranta, & Moustakis, 2010). The importance of time management cannot be explained in educational institutions not only for students but also need to be assessed among the staffs including teachers. Kearns and Gardiner (2007) argued that time management behaviour is equally important for students and teachers. After the identification of these research gaps—as prior research remained limited to students—the present study has focused on university teachers contrary to the students-focused past research. Universities comprised of students, teachers and administrative staff. Among the students, positive effects of time management behaviour are well-researched (DiPipi-Hoy, Jitendra, & Kern, 2009). Relatively less research has been conducted on the teaching staff in universities (Green & Skinner, 2005; Griffith, 2003; Peeters & Rutte, 2005). Although the cultural differences in time management behaviours are well-recognized (Cemaloglu & Filiz, 2010). In order to bridge this gap, the present study focused on the university teachers of the collectivist context of Pakistan. The present study is based on The Process Model of Time Management by Mecan (1994) which is considered an important model of time management. The Process Model of Time Management proposed that perceived control of time mediates between time management behaviour and outcomes. Thus the present study focused on dual paths.

Employees face challenges in personal life as well as professional life. The present study focused on psychological outcomes of time management among

university teachers. Thus stress and well-being are taken as personal life outcomes of university teachers whereas job satisfaction, job performance and role overload are taken as job-related outcomes. Existing literature confirms the importance of time management behaviour for employees in general and for teachers in particular (van de Meer, Jansen, & Tarenbeek, 2010; Kearns & Gardiner, 2007). Moreover, Higher Education Commission (2016) has considered time management behaviour as integral part of the evaluation of the teachers through Quality Enhancement Cells established in all HEC-recognized universities. Besides teaching, teachers also face a burden of administrative responsibilities as an aftermath of current transitions in the higher education institutions (Azeem & Nazir, 2008). Consequently excellent time management skills are required to adjust with such excessive work overload. Thus the investigation of the time management behaviour in the current scenario contains applied significance for university teachers. Likewise the present study holds theoretical value because it is grounded in a theory of time management behaviour. Besides all these empirical and theoretical insights, time management determines success in life as time management behaviour in included among *"the 7 habits of highly effective people"* (Covey, 1989).

Conceptual Framework

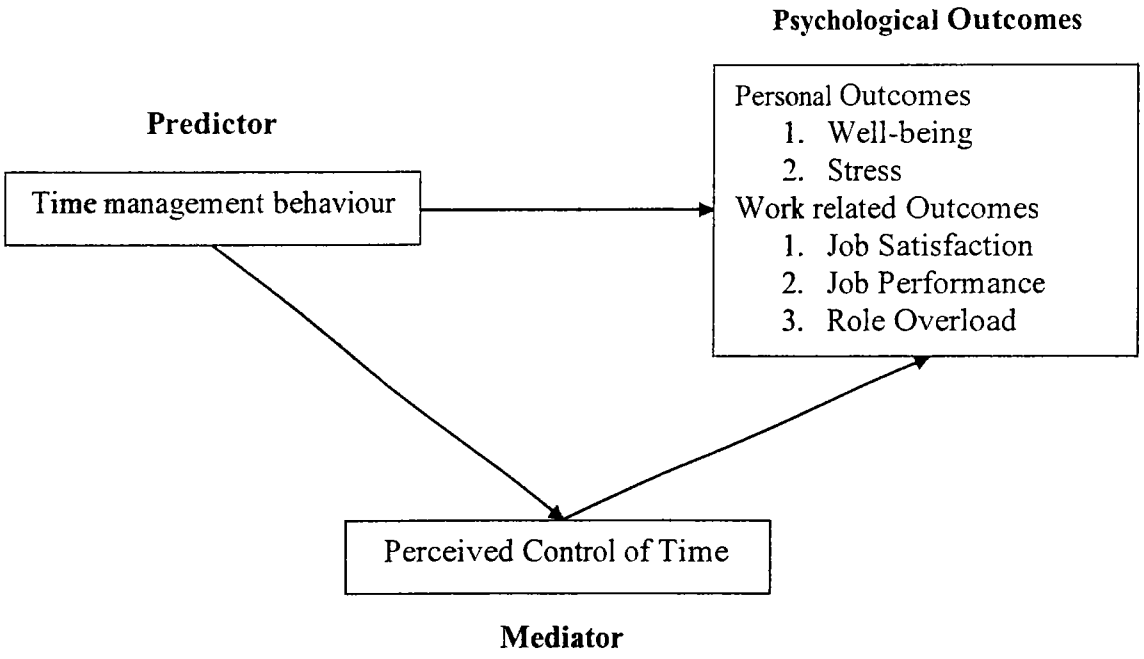

Figure 2. Mediation of perceived control of time between time management behaviour and psychological outcomes among university teachers

(Chapter-II)

PILOT STUDY

METHOD

Chapter-II

Pilot Study

It is correlational research on personal and job outcomes of time management behaviour among university teachers. The present research is completed in two phases including pilot study and main study respectively.

Method

Objectives

1. To examine the psychometric properties of study measures including reliability and validity.
2. To investigate the direction of the relationship among all study variables.

Operational Definitions

Time Management Behaviour

In the present study, English version of Time Management Behaviour Scale (Macan, Shahani, Dipboye, & Philips, 1990) was used to measure time management behaviour among university teachers. High scores on the scale indicated high time management and low scores indicated low level of time management behaviour.

Perceived Control of Time

In the present study, English version of Perceived Control of Time at Work Scale (Claessens, Eerde, Rutte, & Roe, 2012) was used to measure perceived control of time among university teachers. High scores on the scale indicated high perceived control of time and low scores indicated low level of perceived control of time.

Psychological Well-being

In the present study, English version of Short Warwick Edinburg Mental Well-being Scale (Warwick Edinburg University, 2006) was used to measure well-being among university teachers. High scores on the scale indicated high well-being and low scores indicated low level of well-being.

Stress

In the present study, English version of stress subscale of Depression Anxiety Stress Scale (Lovibond & Lovibond, 1995) was used to measure stress among university teachers. High scores on the subscale indicated high level of stress and low scores indicated low level of stress.

Job Satisfaction

In the present study, English version of Job Satisfaction Scale (Guimaraes & Igbaria, 1992) was used to measure the level of job satisfaction among university teachers. High scores on the scale indicated high level of job satisfaction and low scores indicated low level of job satisfaction.

Job Performance

In the present study, English version of In Role Job Performance Scale (Williams & Anderson, 1991) was used to measure the performance of the university teachers at job. High scores on the scale indicated high level of job performance and low scores indicated low level of job performance.

Role Overload

In the present study, English version of Role Overload Scale (Cooper, Dewe, & O'Driscol, 2001) was used to measure the role overload of the university teachers. High scores on the scale indicated high level of role overload and low scores indicated low level of role overload.

Participants

In the pilot study, a sample of university teachers (N = 100) with age ranged from 30 to 55 years (M = 45.23, SD = 12.23) participated in the present study. The sample size calculated for pilot study on the basis that it should be sufficient and representative and was collected from universities situated in Islamabad, Province of the Punjab, Khyber-Pakhtunkhwa and Gilgit-Biltistan (see Annexure-J). The data was collected on the basis of inclusion and exclusion criteria. The inclusion-exclusion criterion was based on fulltime regular employment and at least one year of job experience. Contractual and visiting university teachers were not included in the sample. Only HEC recognized universities were visited for data collection. For this purpose list of HEC recognized universities was obtained from Higher Education Commission Islamabad. Employees of DAI (Degree Awarding Institutions) were also not included in the sample.

Both public (n = 71, 71%) and private sector university teachers (n = 29, 29%) participated in this research. Male (n = 64, 64%) and female university teachers (n = 36, 36%) were part of sample. Participants exhibited three different qualification levels including masters (n = 12, 12%), M. Phil (n = 58, 58%) and PhD (n = 30, 30%). Both single (n = 43, 43%) and married teachers (n = 57, 57%) participated in this research. Purposive sampling technique was used for data collection.

Instruments

In the present study, seven instruments were used to collect the data from participants. Time Management Behaviour Scale (Macan, Shahani, Dipboye, & Philips, 1990) comprising of 29 items, Perceived Control of Time at Work Scale (Claessens, van Eerde, Rutte, & Roe, 2012) comprising of 29 items, Short Warwick Edinburg Mental Well-being Scale (Warwick Edinburg University, 2006), comprising of 7 items, Stress subscale of Depression Anxiety Stress Scale (Lovibond & Lovibond, 1995) comprising of 7 items, Job Satisfaction Scale (Guimaraes & Igbaria, 1992) comprising of 6 items, In Role Job Performance Scale (Williams & Anderson, 1991) comprising of 3 items, Role Overload Scale (Cooper et al., 2001) comprising of 5 items were used for data collection. The scales were based on Likert-type response pattern and scores were interpreted in terms of low and high scores. The scales were previously used many times and were validated in different contexts including Pakistan (Azar & Zafar, 2003; Kelly, 2002; McCook, 2002; Morris & Viswanath, 2010; Nosheen, 2012; Nawaz, 2015; Thurasamy, & Liew, 2014). However, written permission was taken for the use of these scales in the present study.

Procedure

The university teachers were approached in their respective institutions situated in Islamabad, Province of the Punjab (Attock, Faisalabad, Gujrat, Lahore, Multan, Veheri, Wah Cant), Khyber-Pakhtunkhwa (Mansehra, Haripur) and Gilgit-Biltistan (Gilgit). Teachers were briefed about the study being conducted. They were told that data will be utilized for drawing inferences for the present study. After short briefing, written informed consent was obtained from the participants before administering the questionnaires. All the data was collected from teachers well before midterm

examinations. The researcher addressed the queries of participants, if asked. Return rate was 65% as 100 out of 150 questionnaires were returned. No incentive was given for research participation. After the completion of the scales, the researcher appreciated and thanked the participants for sharing the valuable information. The departmental and APA ethical considerations were also deliberated by the researcher at every step of data collection.

RESULTS

Results

The pilot study aimed to examine the psychometric properties of study variables and the salient relationship among all study variables. Descriptive statistics, alpha coefficients, range statistics, univariate analyses and Pearson correlation among variables was computed.

Table 1

Descriptive statistics, alpha reliability coefficients for all variables (N = 100)

Variables	*M*	*SD*	α	Range		Skewness	Kurtosis
				Potential	Actual		
1. Time management behaviour	60.20	12.32	.83	0-96	27-96	-.13	.44
2. Perceive control of time	16.83	27.41	.73	5-25	8-23	-.13	.85
3. Well-being	25.69	3.94	.76	7-35	8-33	-.37	.61
4. Stress	15.87	4.04	.73	0-21	10-20	-.28	-.11
5. Job satisfaction	26.19	6.13	.72	6-30	19-29	.20	-.39
6. Job performance	43.32	9.17	.82	7-49	23-48	.34	.76
7. Role overload	33.49	5.01	.77	10-50	19-46	-.41	.36

Table 1 shows descriptive statistics, alpha reliability coefficients for all variables. Reliability analysis shows that all study variables have high internal consistency. The values of skewness and kurtosis for all variables are less than 1 which indicates that data is normally distributed.

Table 2

Pearson product moment correlation among study variables (N = 100)

Variables		1	2	3	4	5	6	7
1.	Time management behaviour	-	.32***	.28***	-.24**	-.42***	.32***	.23**
2.	Perceive control of time		-	.29***	-.37***	-.39***	.48***	.38***
3.	Well-being			-	-.48***	-.19*	.23**	.61***
4.	Stress				-	.39***	-.50***	-.24**
5.	Role overload					-	-.44***	-.40***
6.	Job satisfaction						-	.59***
7.	Job performance							-

*$p < .05$. **$p < .01$. ***$p < .001$.

Table 2 shows Pearson product moment correlation for all study variables. Results indicate that time management behaviour has significant positive correlation with perceived control of time r (98) = .32, $p < .001$, well-being r (98) = .28, $p < .001$, job satisfaction r (98) = .32, $p < .001$, job performance r (98) = .23, $p < .01$ whereas significant negative correlation with stress r (98) = -.24, $p < .01$ and role overload r (98) = -.42, $p < .001$. Perceived control of time has significant positive correlation with well-being r (98) = .29, $p < .001$, job satisfaction r (98) = .48, $p < .001$, job performance r (98) = .38, $p < .001$ whereas significant negative correlation with stress r (98) = -.37, $p < .001$, and role overload r (98) = -.39, $p < .001$. Well-being has significant negative correlation with stress r (98) = -.48, $p < .001$, and role overload r (98) = -.19, $p < .05$ whereas significant positive correlation with job satisfaction r (98) = .23, $p < .001$ and job performance r (98) = .61, $p < .001$. Stress has significant positive correlation with role overload r (98) = .39, $p < .001$ whereas significant negative correlation with job satisfaction r (98) = -.50, $p < .001$ and job performance r (98) = -.24, $p < .01$. Role overload has significant negative correlation with job

satisfaction r (98) = -.44, p < .001and job performance r (98) = -.40, p < .01. Job satisfaction has significant positive correlation with job performance r (98) = .59, p < .001.

DISCUSSION

Discussion

Pilot testing serves two purposes including pretesting of the instruments and exploration of the salient trends in the findings of a research, more specifically relationship among variables. In the present study, seven self-report instruments were used including Time Management Behaviour Scale (Macan, Shahani, Dipboye, & Philips, 1990), Perceived Control of Time at Work Scale (Claessens, van Eerde, Rutte, & Roe, 2012), Short Warwick Edinburg Mental Well-being Scale (Warwick Edinburg University, 2006), Stress subscale of Depression Anxiety Stress Scale (Lovibond & Lovibond, 1995) Job Satisfaction Scale (Guimaraes & Igbaria, 1992), In Role Job Performance Scale (Williams & Anderson, 1991) and Role Overload Scale (Cooper et al., 2001) were used in the pilot study.

Psychometric properties of these scales were examined by conducting different statistical analyses. Firstly descriptive statistics were computed for all variables. In order to test the normality of the data, skewness and kurtosis were computed for all scales. Skewness is a statistical measure of symmetry whereas kurtosis measures pointiness (Field, 2005). If the data is normally distributed, the curve is symmetrical in which the scores are systematically distributed. Most of the scores of participants concentrate in the center of the curve whereas relatively less number of scores occur on the tails of the curve. Thus more concentration of the scores on the right and left tails of the curve is considered positively and negatively skewed data respectively (Miles & Shevlin, 2001). Similarly, the normal curve is mesokurtic whereas in other cases can be either leptokurtic or platykurtic (Cisar & Cisar, 2010).

Statisticians recommend that in order to ensure the normality of scores on a scale, the values of skewness and kurtosis must be less than +1 and -1. In any case, if the value skewness or kurtosis exceeds the above mentioned value, the univeriate normality or the data is considered problematic (Cisar & Cisar, 2010). In the present study, the values of the skewness and kurtosis are less than 1 which indicates that univariate normality of all scales is appropriate. Besides this, it is worth mentioning that the normality is one of the major statistical assumptions that must be addressed before conducting the parametric statistics. In the present study, various parametric tests are administered due to specific nature of the data.

Alpha reliability analysis was computed. Alpha reliability is the measure of internal consistency of the scores in a behavioural measure (Nunnally & Bernstein, 1994). Psychometricians (Kline, 1999; Nunnally & Bernstein, 1994) recommend that values of alpha reliability for a reliable measure must be equal to or greater than .70. In the present study, the values of all scales are equal to or greater than .70 which indicates that the internal consistency of all scales is satisfactory. Thus the scales used in the present study are reliable and appropriate for further analyses. Pearson correlation was computed to examine the relationship between variables of the present study. In the pilot study, relationships between variables were also investigated. The major analysis in the main study is regression. For conducting the regression analysis, one of the major assumptions is confirmation of the relationship between predictor and outcome variables (Field, 2005).

The present study is based on the assumption that time management behaviour and perceived control of time among university teachers is associated with personal life outcomes including well-being and stress as well as job-related outcomes

including job satisfaction, job performance and work overload. Time management can be effectively utilized as a strategy to handle differences issues at job. One the time management behaviour is harnessed, it changes in individual's mind that he or she can control time and having such perceptions increases their job satisfaction and these perceptions regarding the control of time also work as a shield to protect employees from stress and stressors of personal and professional life (Claessens et al., 2004).

As anticipated, in the pilot study time management behaviour is found to be positively associated with well-being among teachers of universities. These findings are in line with prior scientific literature (Peeters & Rutte, 2005) confirming that higher levels of time management behaviour are linked with higher well-being. Similarly, time management behaviour was anticipated to be negatively correlated with stress among university teachers. The correlation coefficients suggesting inverse relationship between time management behaviour and stress confirmed this assumption. Thus, the results of the correlation coefficient are consistent with the past research indicating that time management behaviour serves as a protecting factor to reduce the levels of stress among employees (Lang, 1992).

Besides enhancing well-being and reducing stress, time management behaviour is also linked with job-related outcomes in universities. In the present study, three job-related outcomes of time management behaviour are taken into consideration, thus job satisfaction, job performance and world overload are focused in the present study. According to the underlying assumption, time management behaviour is found to be positively correlated with job satisfaction in the present study. Consistent research evidences confirm that time management behaviour enhances job satisfaction among employees (Griffith, 2003). The same findings are

observed with job performance. In the current research, time management behaviour was positively correlated with job performance of the university teachers. These findings are supported by the past research which confirms that time management behaviour increases employees' performance at job (Nonis, Fenner, & Sager. 2011).

Time management behaviour not only enhances job satisfaction and job performance, it also reduces the work overload perceived by the university teachers due to excessive work and too many assignments which are actually not completed well in time and consequently leads towards greater work overloads. Work overload is one of the most prominent role-related stressors in the modern organizations as employees are required to complete bulk of work in limited time. In this regard, university teachers who have good time management behaviours are capable of managing their work activities and completing their job related assuagements in right times without any unwanted delays. Contrary, teachers with poor time management behaviour fail to complete their work in a given time and consequently suffer from work overload. Thus the assumption the time management behaviour is likely to be negatively correlated with work overload was supported in the present study. The correlation coefficients are consistent with prior literature (Claessens, 2007). The inverse relationship between time management behaviour and work overload confirmed that time management behaviour reduces work overload among university teachers.

Perceived control of time is another importance time management related construct (Claessens et al., 2004). Therefore, perceived control of time is also linked with personal and job-related outcomes among university teachers. The present study anticipated that perceived control of time is likely to be positively correlated with

well-being among university teachers. The findings confirmed this assumption which was grounded in the prior literature confirming the consistent link between perceived control of time and well-being among employees (Claessens et al., 2004). Besides enhancing well-being of teachers, perceived control of time is found to be negatively associated with stress. Thus the perception of the university teachers that their time is under their own control can help in reducing their stress level.

Just like time management behaviour, perceived control of time is also associated with job-related outcomes including job satisfaction, job performance and work-overload. In the present study, the assumption that perceived control of time is likely to be positively correlated with job satisfaction was supported by the findings. The positive relationship between perceived control of time and job satisfaction confirmed that perceived control of time enhances level of job satisfaction among university teachers. These findings are consistent with the past research (Claessens et al., 2004). Similarly, perceived control of time is supposed to be positively associated with job performance among university teachers. The results confirmed this assumption which was based on the prior empirical evidence (Hafner, 2010; Macan, 1994). Similarly, it was anticipated that perceived control of time is likely to be negatively associated with work overload. The results of the present study confirmed this assumption. Findings of the current research are consistent with the prior literature (Macan, Shahani, Dipboye, & Philips, 1990). The important limitation during piolet testing was the return rate of the data collection which was 65% as 100 out of 150 questionnaires were returned. The study not only confirmed that all the scales are reliable to use for further analysis rather it also ensured that the correlation coefficients between variables are in the desired directions.

(Chapter-III)

MAIN STUDY

METHOD

Chapter-III

Method

The preset study has examined the mediating effect of perceived control of time between time management behaviour and outcomes in university teachers.

Objectives

1. To examine the impact of time management behaviour on the prediction of psychological outcomes including personal outcomes (well-being and stress) and work-related outcomes (job satisfaction, job performance and role overload) among university teachers.
2. To find out the impact of time management behaviour on the prediction of perceived control of time among university teachers.
3. To examine the impact of perceived control of time on the prediction of psychological outcomes including personal outcomes (well-being and stress) and work-related outcomes (job satisfaction, job performance and role overload) among university teachers.
4. To examine the mediating impact of perceived control of time between time management behaviour and psychological outcomes among university teachers.
5. To investigate gender differences in time management behaviour among university teachers.

Hypotheses of Study

1. Time management behaviour is likely to positively predict psychological well-being among university teachers.

2. Time management behaviour is likely to negatively predict stress among university teachers.
3. Time management behaviour is likely to positively predict job satisfaction among university teachers.
4. Time management behaviour is likely to positively predict job performance among university teachers.
5. Time management behaviour is likely to negatively predict role overload among university teachers.
6. Time management behaviour is likely to positively predict perceived control of time among university teachers.
7. Perceived control of time is likely to positively predict psychological well-being among university teachers.
8. Perceived control of time is likely to negatively predict stress among university teachers.
9. Perceived control of time is likely to positively predict job satisfaction among university teachers.
10. Perceived control of time is likely to positively predict job performance among university teachers.
11. Perceived control of time is likely to negatively predict role overload among university teachers.
12. Perceived control of time is likely to mediate between time management behaviour and psychological well-being among university teachers.
13. Perceived control of time is likely to mediate between time management behaviour and stress among university teachers.

14. Perceived control of time is likely to mediate between time management behaviour and job satisfaction among university teachers.
15. Perceived control of time is likely to mediate between time management behaviour and job performance among university teachers.
16. Perceived control of time is likely to mediate between time management behaviour and role overload among university teachers.
17. Female university teachers will significantly score higher on time management behaviour as compared to male university teachers.

Operational Definitions

Time Management Behaviour

Time management behaviour is a set of skills and techniques used to effectively make use of time and to get a good personal control of time (Macan, 1994). In the present study, Time Management Behaviour Scale (Macan et al., 1990). was used to measure time management behaviour among university teachers. High scores on the scale indicate high time management behaviour and low scores indicate low level of time management behaviour among university teachers.

Perceived Control of Time

Perceived control of time is the self-perception of the control of time and work (Claessens, van Eerde, Rutte, & Roe, 2012). In the present study, Perceived Control of Time at Work Scale (Claessens et al., 2012) was used to measure perceived control of time among university teachers. High scores on the scale indicate high perceived control of time and low scores indicate low level of perceived control of time among university teachers.

Psychological Outcomes

The present study comprised of two types of psychological outcomes including personal outcomes (psychological well-being and stress) and work-related outcomes (job satisfaction, job performance and work overload).

Psychological Well-being

Psychological well-being is a general term for the condition of an individual from social, psychological or medical perspective. An individual's positive state indicates high well-being whereas negative states indicate low well-being (Seligman, 2011). In the present study, Short Warwick Edinburg Well-being Scale (Warwick Edinburg University, 2006) was used to measure well-being among university teachers. High scores on the scale indicated high well-being and low scores indicated low level of well-being among university teachers.

Stress

Stress is condition created when an individual has to respond an internal of external stressor. It is state of mind which is created when an individual faces a situations or condition which is perceived threatening for challenging for well-being (Waters & Ussery, 2007). In the present study, stress subscale of Depression Anxiety Stress Scale (Lovibond & Lovibond, 1995) was used to measure stress among university teachers. High scores on the subscale indicated high level of stress and low scores indicated low level of stress among university teachers.

Job Satisfaction

It is employee's general level of contentment with job (Shajahan & Shajahan, 2004). In the present study, Job Satisfaction Scale (Guimaraes & Igbaria, 1992) was used to measure the level of job satisfaction among university teachers. High scores on the scale indicated high level of job satisfaction and low scores indicated low level of job satisfaction among university teachers.

Job Performance

It is related to the combination of behaviours and job related activities that performed to achieve the goals of the organization (Butler & Rose 2011). In Role Job Performance Scale (Williams &Anderson's, 1991) was used to measure the performance of the university teachers at job. High scores on the scale indicated high level of job performance and low scores indicated low level of job performance among university teachers.

Role Overload

Role overload is excessive burden of duties due to too many assignments (McShane & Tranaglione, 2002). In the present study, Role Overload Scale (Cooper et al., 2001) was used to measure the role overload of the university teachers. High scores on the scale indicated high level of role overload and low scores indicated low level of role overload among university teachers.

Sample

University teachers ($N = 300$) with age ranged from 28 to 38 years ($M = 35.42$, $SD = 10.79$) participated in this research, further equally divided into male teachers (n

= 150, 50%) and female university teachers (n = 150, 50%). The age range is different in main study compare with piloting because of increase of sample size in main study. Data was collected from 13 universities situated in Islamabad, Province of the Punjab, Khyber-Pakhtunkhwa and Gilgit-Biltistan. Only HEC-recognized universities were targeted for data collection. Purposive sampling technique was the major underlying strategy of data collection. Data was collected from the teachers on the basis of specified inclusion-exclusion criteria based on employment status and job experience. Therefore, only regular university teachers with at least on year full time teaching experience were included in the sample. However, the experience of teachers fluctuated between 1 to 37 years (M = 5.87, SD = 4.60). The qualification level of university teachers was MA / MSc (n = 64, 21.3%), MPhil / MS (n = 133, 44.3%) and PhD (n = 103, 34.3%). Both married (n = 159, 53%) and single teachers (n = 141, 47%) were the part of sample. Both public sector (n = 213, 71%) and private sector university teachers (n = 87, 29%) were approached for data collection. The public sector universities included QAU Islamabad, IIUI, Hazara University Mansehra, University of Education, COMSATS Islamabad, Allama Iqbal Open University Islamabad, Govt. College University Faisalabad, BZU Multan, University of Gujrat and Karakorum University Gilgit-Biltistan and University of Haripur. The private sector universities included University of Wah and University of Management and Technology Lahore.

Instruments

Time Management Behaviour Scale

Time Management Behaviour Scale developed by Macan et al. (1990) measures a set of skills to examine time management behaviour. It contains 24 items

scale. The scale is based on positively phrased items which are rated on a 5-point Likert type format ranging from *strongly disagree* = 1 to *strongly agree* = 5. Individual can minimum obtain 24 scores on this scale whereas maximum scores cannot exceed than 120. Obtained scores on this scale were interpreted in terms of low and high scores rather than cut off scores. The scale has originally alpha reliability of .82. This scale is used in the indigenous context and it is illustrated that it is reliable and valid measure of time management behaviour among employees (Azar & Zafar, 2003). Prior research with the teachers of educational institutions also confirmed its reliability and validity (Peeters & Rutte, 2005). The most frequently used scale of time management behaviour is Time Management Behaviour Scale by Macan et al. (1990).

Perceived Control of Time at Work Scale

Perceived Control of Time at Work Scale developed by Claessens, van Eerde, Rutte, and Roe (2012) measures an individual's perceptions regarding personal control on the time. It consisted of 5 items. The scale is based on positively phrased items which are rated on a 5-point Likert type response pattern ranging from *strongly disagree* = 1 to *strongly agree* = 5. Individual can minimum obtain 5 scores on this scale whereas maximum scores cannot exceed than 25. Obtained scores on this scale were interpreted in terms of low and high scores rather than cut off scores. The scale has originally alpha reliability of .80. This scale is used previous studies and it is illustrated that it is reliable and valid measure of perceived control of time (Glassens, 2004; Kelly, 2002).

Short Warwick Edinburg Well-being Scale

Short Warwick Edinburg Well-being Scale was developed by two universities Warwick and Edinburgh Universities (2006) used to measure well-being among participants. It comprised of 7 items. The scale is based on positively phrased items which are rated on a 5-point Likert type format ranging from *strongly disagree* = 1 to *strongly agree* = 5. Individual can minimum obtain 7 scores on this scale whereas maximum scores cannot exceed than 35. Obtained scores on this scale were interpreted in terms of low and high scores instead of cut off scores. The scale has originally alpha reliability of .83. This scale is used in numerous studies conducted in the higher education institutions of the indigenous context and it is illustrated that it is reliable and valid measure of well-being (Anwar, 2014; Nawaz, 2015)

Depression Anxiety and Stress Scale

Stress subscale of Short version of DASS developed by Lovibond and Lovibond (1995) used to examine the stress among participants. It consisted of 7 items. The scale is based on positively phrased items which are rated on a 4-point Likert type response pattern. The response options ranged from *did not apply to me at all = 0 to most of the time = 3.* Individual can minimum obtain 0 scores on this scale whereas maximum scores cannot exceed than 21. Obtained scores on this scale were interpreted in terms of low and high scores instead of cut off scores. The stress sub scale has originally alpha reliability of .88. This scale is used in numerous studies conducted in the universities of the indigenous context and it is illustrated that it is reliable and valid measure of well-being (Asghar, 2014; Nosheen, 2012).

Job Satisfaction Scale

Job Satisfaction Scale developed by Guimaraes and Igbaria (1992) used to measure the teachers' satisfaction with job. It comprised of 6 items. The scale is based on positively phrased items which are rated on a 5-point Likert type format ranging from *strongly disagree* = 1 to *strongly agree* = 5. The possible range of score is 6 to 30 as minimum and maximum scores respectively. Scores were interpreted low and high scores instead of cut off scores. The scale has originally alpha reliability of .78. This scale is used in numerous studies and it is reported that it is reliable and valid measure of job satisfaction (King, Xia, Quick, & Selhi, 2005; Morris & Viswanath, 2010).

In Role Job Performance Scale

In Role Job Performance Scale was developed by Williams and Anderson's (1991) used to measure the job-related performance of university teachers. It consisted of 7 items. The scale is based on positively phrased items which are rated on a 7-point Likert type response pattern ranging from *strongly disagree* = 1 to *strongly agree* = 7. Individual can minimum obtain 7 scores on this scale whereas maximum scores cannot exceed than 49. Obtained scores on this scale were interpreted in terms of low and high scores rather than cut off scores. The scale has originally alpha reliability of .85. This scale is used in the prior research with employees and it is reported that it is reliable and valid measure of job performance (Green & Green, 2006; McCook, 2002).

Role Overload Scale

Role Overload Scale developed by Cooper et al. (2001) used to measure the level of work overload among university teachers. It comprised of 10 items. The scale is based on positively phrased items which are rated on a 5-point Likert type response pattern ranging from *strongly disagree* = 1 to *strongly agree* = 5. Individual can minimum obtain 10 scores on this scale whereas maximum scores cannot exceed than 50. Obtained scores on this scale were interpreted in terms of low and high scores instead of cut off scores. The scale has originally alpha reliability of .71. This scale is used previous studies and it is reported that it is reliable and valid measure of perceived control of time (Gahlam & Singh, 2014; Lo, Thurasamy, & Liew, 2014).

Procedure

The university teachers were approached in their respective institutions situated in Islamabad, Province of the Punjab, Khyber-Pakhtunkhwa and Gilgit-Biltistan. The same procedure as mentioned in the pilot study was repeated in the data collection for main study. After short briefing, written informed consent was obtained from the participants before administering the questionnaires. All the data was collected from teachers well before midterm examinations in April 2015. The questionnaires were personally handed over to the participants. The researcher answered all questions of the participants during scale completion. Return rate was 35% as 300 out of 850 questionnaires were returned. The response rate was so low because the motivated university teachers were participated in this research and this may be the limitation of the data collection. Participants completed all measures of the study on voluntary basis without any incentive. The ethical clearance was granted from International Islamic University ethical committee.

RESULTS

Results

The study investigated the mediating effect of perceived control of time between time management behaviour and psychological outcomes. Finally the present study examined gender differences in study variables, more specifically in time management behaviour among university teachers. In order to achieve these objectives, following statistical tests were administered. Psychometric properties are computed for all study variables. More specifically alpha reliability coefficients and Pearson correlation was computed.

Table 3

Descriptive statistics, alpha reliability coefficients for all variables (N = 300)

Variables	*M*	*SD*	α	Range		Skewness	Kurtosis
				Potential	Actual		
1. Time management behaviour	61.80	12.57	.89	0-96	27-96	.06	-.01
2. Perceived control of time	16.93	3.01	.70	5-25	10-25	.22	-.05
3. Well-being	26.11	4.04	.76	7-35	8-35	-.82	.90
4. Stress	16.94	4.10	.76	0-21	7-20	.08	-.34
5. Job satisfaction	21.10	4.52	.79	6-30	6-13	-.31	.05
6. Job performance	35.51	6.45	.73	7-49	13-49	-.32	.25
7. Role overload	21.17	5.04	.77	10-50	11-46	-.23	.78

Table 3 shows psychometric properties of study variables. Results show that alpha reliability coefficients for all scales are greater than .70 which indicates satisfactory internal consistency. The values of skewness and kurtosis are less than +1 and -1 which indicates that data is normally distributed.

Table 4

Pearson correlation among study variables (N = 300)

Variables	1	2	3	4	5	6	7
1. Time management behaviour	-	.33***	.51***	-.49***	.53***	.44***	-.14*
2. Perceived control of time		-	.42***	-.25***	.20**	.41***	-.24***
3. Well-being			-	-.11*	.43***	.42***	-.15*
4. Stress				-	-.16*	-.28***	.36***
5. Job satisfaction					-	.25***	-.36***
6. Job performance						-	-.17*
7. Role overload							-

*$p < .05$. **$p < .01$. ***$p < .001$.

Table 4 indicates that time management behaviour is positively correlated with perceived control of time r (298) =.33, $p< .001$, well-being r (298) = .51, $p< .001$, job satisfaction r (298) = .53, $p< .001$, job performance r (298) = .44, $p< .001$. Time management behaviour is negatively correlated r (298) = -.49, $p< .001$ with stress and role overload r (298) = -.14, $p< .05$. Well-being is positively correlated with job satisfaction r (298) = .43, $p< .001$ and job performance r (298) = .42, $p< .001$. Well-being is negatively correlated with stress r (298) = -.11, $p< .05$ and role overload r (298) = -.15, $p< .05$. Stress is negatively correlated with job satisfaction r (298) = -.16, $p< .05$ and job performance r (298) = -.28, $p< .001$. Stress is positively correlated with role overload r (298) = .36, $p< .001$. Job satisfaction is positively correlated with job performance r (298) = .25, $p< .001$ and negatively correlated with role overload r (298) = -.36, $p< .001$. Job performance is negatively correlated with role overload r (298) = -.17, $p< .05$.

Table 5

Linear regression analysis depicting effect of time management behaviour on well-being among university teachers

	Outcome: Well-being	
		95%CI
Predictors	Model 1 *B*	*LL, UL*
(constant)	15.98***	[14.00, 17.97]
Time management behaviour	.16***	[.13, .20]
R^2	.26	
F	104.97***	

Note. *B* = Unstandardized regression coefficients; *LL* = Lower limit; *UL* = Upper limit; CI = Confidence interval
***$p < .001$.

The R^2 value of .26 explained 26% variance in the outcome variable with F (1, 298) = 104.97, $p < .001$. Findings indicate that time management behaviour positively predicted well-being among university teachers ($B = .16, p < .001$).

Table 6

Linear regression analysis depicting effect of time management behaviour on stress among university teachers

	Outcome: Stress	
		95%CI
Predictors	Model 1 *B*	*LL, UL*
(constant)	16.04***	[11.25, 17.84]
Time management behaviour	-.14***	[-.11, -.17]
R^2	.24	
F	93.55***	

***$p < .001$.

The R^2 value of .24 explained 24% variance in the outcome variable with F (1, 298) = 93.55, $p < .001$. Findings indicate that time management behaviour negatively predicted stress among university teachers ($B = -.14, p < .001$).

Table 7

Linear regression analysis depicting effect of time management behaviour on job satisfaction among university teachers

	Outcome: Job satisfaction		
			95%CI
Predictors	Model 1 *B*		*LL, UL*
(constant)	9.32***		[7.13, 11.51]
Time management behaviour	.19***		[.16, .23]
R^2		.28	
F		116.63***	

***$p < .001$.

The R^2 value of .28 explained 28% variance in the outcome variable with F (1, 298) = 116.63, $p < .001$. Findings indicate that time management behaviour positively predicted job satisfaction ($B = .19, p < .001$).

Table 8

Linear regression analysis depicting effect of time management behaviour on job performance among university teachers

	Outcome: Job performance		
			95%CI
Predictors	Model 1 *B*		*LL, UL*
(constant)	21.61***		[718.29, 24.92]
Time management behaviour	.23***		[.17, .28]
R^2		.19	
F		70.93***	

***$p < .001$.

The R^2 value of .19 explained 19% variance in the outcome variable with F (1, 298) = 70.93, $p < .001$. Findings indicate that time management behaviour positively predicted job performance ($B = .19, p < .001$).

Table 9

Linear regression analysis depicting effect of time management behaviour on role overload among university teachers

	Outcome: Role overload	
		95%CI
Predictors	Model 1 *B*	*LL, UL*
(constant)	25.65***	[22.83, 28.54]
Time management behaviour	-.06*	[-.01, -.10]
R^2	.02	
F	6.02*	

***$p < .001$.

The R^2 value of .02 explained 2% variance in the outcome variable with F (1, 298) = 6.02, $p < .05$. Findings indicate that time management behaviour is significant negative predictor of role overload among university teachers ($B = -.06, p < .05$).

Table 11

Linear regression analysis depicting effect of perceived control of time on stress among university teachers

	Outcome: Stress	
		95%CI
Predictors	Model 1 *B*	*LL, UL*
(constant)	22.65***	[20.05, 25.05]
Perceived control of time	-.34***	[-.49, -.19]
R^2	.06	
F	19.23***	

***$p < .001$.

The R^2 value of .06 explained 6% variance in the outcome variable with F (1, 298) = 104.97, $p < .001$. Findings indicate that perceived control of time negatively predicted stress among university teachers ($B = -.34$, $p < .001$).

Table 12

Linear regression analysis depicting effect of perceived control of time on job satisfaction among university teachers

	Outcome: Job satisfaction	
		95%CI
Predictors	Model 1 *B*	*LL, UL*
(constant)	16.13***	[16.71, 24.40]
Perceived control of time	.29***	[.13, .46]
R^2	.04	
F	11.75***	

***$p < .001$.

The R^2 value of .04 explained 4% variance in the outcome variable F (1, 298) = 104.97, $p < .001$. The constant value ($B = 16.13$, $p < .001$) lies within the limits of confidence interval. Findings indicate that perceived control of time positively predicted job satisfaction ($B = .29$, $p < .001$).

Table 13

Linear regression analysis depicting effect of perceived control of time on job performance

	Outcome: Job performance	
		95%CI
Predictors	Model 1 *B*	*LL, UL*
(constant)	20.55***	[16.71, 24.40]
Perceived control of time	.88***	[.66, 1.11]
R^2	.17	
F	60.21***	

***$p < .001$.

The R^2 value of .17 explained 17% variance in the outcome variable with F (1, 298) = 60.21, $p < .001$. Findings indicate that perceived control of time positively predicted job performance ($B = .88, p < .001$).

Table 14

Linear regression analysis depicting effect of perceived control of time on role overload among university teachers

	Outcome: Role overload	
		95%CI
Predictors	Model 1 *B*	*LL, UL*
(constant)	36.12***	[32.93, 39.32]
Perceived control of time	-.41***	[-.59, -.23]
R^2	.06	
F	18.87***	

***$p < .001$.

The R^2 value of .06 explained 6% variance in the outcome variable with F (1, 298) = 18.87, $p < .001$. Findings indicate that perceived control of time is significant negative predictor of role overload among university teachers ($B = -.41, p < .001$).

Table 15

Hierarchical regression analysis depicting mediation of perceived control of time between time management behaviour and well-being

	Outcome: Well-being			
		Model 2		
Predictors	Model 1 *B*	*B*	95%CI *LL, UL*	Sobel Test
(constant)	15.98***	11.46***	[8.96, 1.94]	3.22***
Time management behaviour	.16***	.14***	[.10, .16]	
Perceived control of time		.37***	[.24, .51]	
R^2	.26	.33		
F	104.97***	72.88***		
ΔR^2		.07		
ΔF		30.42***		

***$p < .001$.

Table 15 shows results of hierarchical regression analysis on the mediating effect of perceived control of time between time management behaviour and well-being among university teachers. Findings indicate that regression weights subsequently reduced from Model 1 to Model 2 (.16 to .14) but remained significant. This indicates that perceived control of time partially mediated between time management behaviour and well-being among university teachers (Barron & Kenny, 1986). Results indicate that time management behaviour has both direct and indirect effect on well-being. Thus the findings support the Process Model of Time Management (PMTM).

Table 16

Hierarchical regression analysis depicting mediation of perceived control of time between time management behaviour and stress

	Outcome: Stress			
	Model 2			
Predictors	Model 1 *B*	*B*	95%CI *LL, UL*	Sobel Test
(constant)	16.23***	13.59***	[11.44, 15.73]	4.22***
Time management behaviour	-.12***	-.10***	[-.07, -.13]	
Perceived control of time		-.22***	[-.10, -.34]	
R^2	.21	.25		
F	79.68***	48.97***		
ΔR^2		.04		
ΔF		14.61***		

***$p < .001$.

Table 16 shows results of hierarchical regression analysis on the mediating effect of perceived control of time between time management behaviour and stress among university teachers. Findings indicate that regression weights subsequently reduced from Model 1 to Model 2 (.12 to .10) but remained significant. This indicates that perceived control of time partially mediated between time management behaviour and stress among university teachers (Barron & Kenny, 1986). Results indicate that time management behaviour has both direct and indirect effect on stress. Thus the findings support the PMTM.

Table 17

Hierarchical regression analysis depicting mediation of perceived control of time between time management behaviour and job satisfaction

	Outcome: Job satisfaction			
	Model 2			
Predictors	Model 1 *B*	*B*	95%CI *LL, UL*	Sobel Test
(constant)	7.87***	10.36***	[7.87, 12.85]	2.48**
Time management behaviour	.20***	.18***	[.15, .21]	
Perceived control of time		.21**	[.07,.34]	
R^2	.36	.37		
F	163.69***	88.69***		
ΔR^2		.01		
ΔF		9.19**		

**$p < .01$. ***$p < .001$.

Table 17 shows results of hierarchical regression analysis on the mediating effect of perceived control of time between time management behaviour and job satisfaction among university teachers. Findings indicate that regression weights subsequently reduced from Model 1 to Model 2 (.20 to .18) but remained significant. This indicates that perceived control of time partially mediated between time management behaviour and job satisfaction among university teachers (Barron & Kenny, 1986). Results indicate that time management behaviour has both direct and indirect effect on job satisfaction. Thus

Table 18

Hierarchical regression analysis depicting mediation of perceived control of time between time management behaviour and job performance

	Outcome: Job performance			
		Model 2		
Predictors	Model 1 *B*	*B*	95%CI *LL, UL*	Sobel Test
(constant)	21.60***	13.82***	[9.67, 17.97]	4.95***
Time management behaviour	.23***	.18***	[.12, .23]	
Perceived control of time		.64***	[.42, .87]	
R^2	.19	.27		
F	70.84***	55.38***		
ΔR^2		.08		
ΔF		32.43***		

***$p < .001$.

Table 18 shows results of hierarchical regression analysis on the mediating effect of perceived control of time between time management behaviour and job performance among university teachers. Findings indicate that regression weights subsequently reduced from Model 1 to Model 2 (.23 to .18) but remained significant. This indicates that perceived control of time partially mediated between time management behaviour and job performance among university teachers (Barron & Kenny, 1986). Results indicate that time management behaviour has both direct and indirect effect on job performance. Thus the findings support the PMTM.

Table 19

Hierarchical regression analysis depicting mediation of perceived control of time between time management behaviour and role overload

	Outcome: Role overload			
		Model 2		
Predictors	Model 1 *B*	*B*	95%CI *LL, UL*	Sobel Test
(constant)	25.68***	32.31***	[28.73, 35.88]	----
Time management behaviour	-.06*	-.10***	[-.05, -.15]	
Perceived control of time		-.55***	[-.73, -.36]	
R^2	.02	.11		
F	6.02*	19.12***		
ΔR^2		.09		
ΔF		31.61***		

*$p < .05$. ***$p < .001$.

Table 19 shows results of hierarchical regression analysis on the mediating effect of perceived control of time between time management behaviour and role overload among university teachers. Findings indicate that regression weights subsequently increased from Model 1 to Model 2 (-.06 to -.10). This indicates that perceived control of time is not mediated between time management behaviour and role overload among university teachers (Barron & Kenny, 1986). Results indicate that time management behaviour has just direct effect on role overload whereas indirect effect is not found. Thus the findings regarding role overload does not support the PMTM.

Table 20

Mean, standard deviation and t-values for male and female teachers on study variables

Variables	Male (n = 150)		Female (n = 150)		t(298)	95%CI		Cohen's d
	M	SD	M	SD		LL	UL	
Time management behaviour	57.85	16.06	63.29	11.66	6.44	13.63	7.25	.74
Perceived control of time	16.93	2.93	16.94	3.07	.03	-1.80	.02	.03
Well-being	25.66	4.12	26.55	3.92	1.92	-1.22	.65	.22
Stress	16.85	3.88	17.02	4.31	.35	-.72	.25	.04
Job satisfaction	21.13	4.46	21.07	4.59	.91	-.92	1.08	.01
Job performance	35.19	6.78	25.83	6.11	.86	-2.11	.83	.09
Role overload	28.81	4.62	29.53	5.39	1.23	-1.86	.43	.04

Table 20 shows mean, standard deviation and t-values for male and female university teachers on study variables. Results indicates significant mean differences on time management behaviour with t (298) = 6.44, $p < .001$. Findings indicate that female university teachers (M = 63.29, SD = 11.66) significantly scores higher on time management behaviour as compared to male university teachers (M = 57.85, SD =16.06). The value of Cohen's d indicates high effect size. Findings indicate non-significant mean differences on perceived control of time with t (298) = .03, $p > .05$, well-being with t (298) = 1.92, $p > .05$, stress with t (298) = .35, $p > .05$, job satisfaction with t (298) = .52, $p > .05$, job performance with t (298) = .86, $p > .05$ and role overload with t (298) = 1.23, $p > .05$.

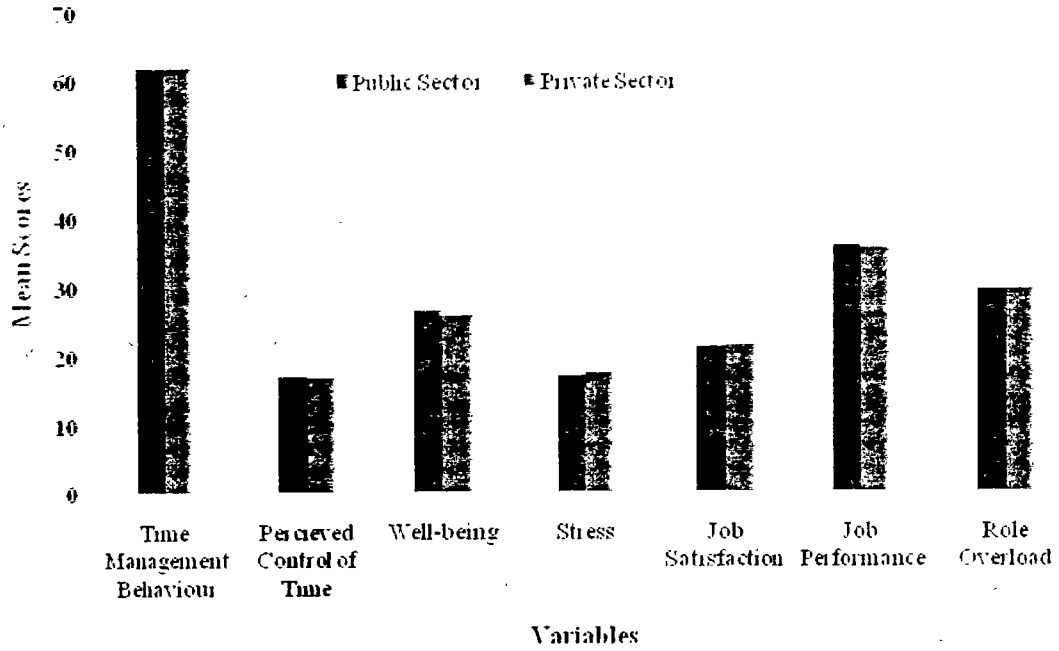

Figure 3. Mean scores of male and female university teachers on study variables (i.e., time management behaviour, perceived control of time, well-being, stress, job satisfaction, job performance, and role overload)

Figure 3 shows mean differences on study variables with reference to gender. Female teachers prominently scored higher on time management behaviour as compared to male counterparts. Remaining differences are non-significant. However, female teachers slightly scored higher on well-being and role overload whereas male teachers comparatively scored higher on job satisfaction. Differences on perceived control of time and stress are negligible.

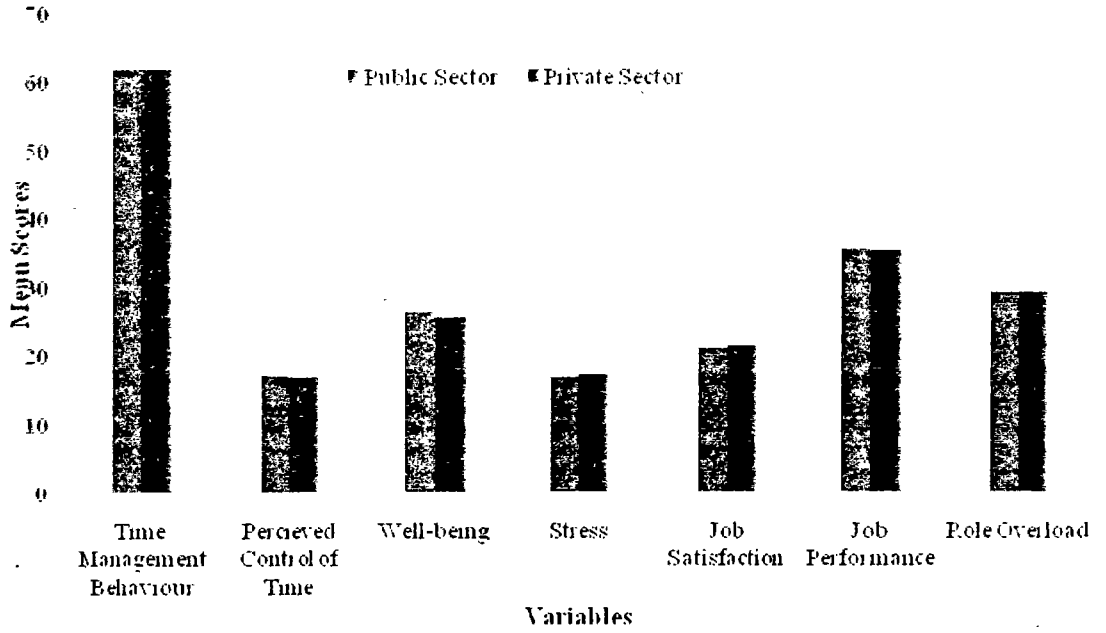

Figure 4. Mean scores of public and private sector university teachers on study variables

Figure 4 shows mean differences on study variables among teachers of public and private sector universities. Differences on time management behaviour, perceived control of time, job performance and role overload are negligible. Public sector university teachers exhibited comparatively higher scores on well-being as compared to private sector university teachers. Private sector university teachers exhibited comparatively higher scores on stress and job satisfaction as compared to public sector university teachers. However, all of these mean differences among public and private sector teachers are non-significant.

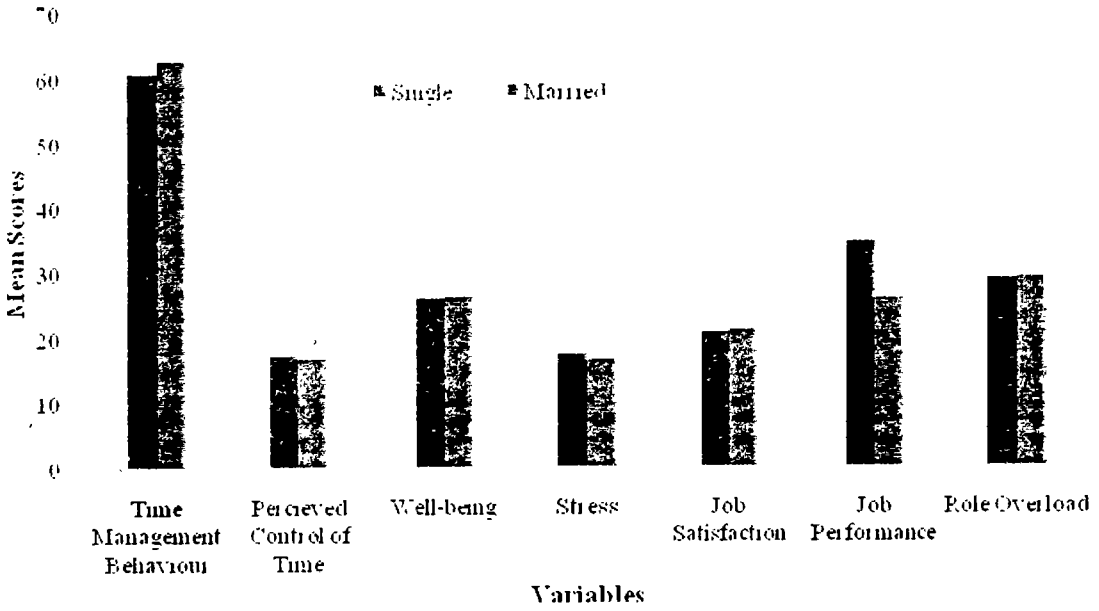

Figure 5. Mean scores of single and married university teachers on study variables

Figure 5 shows mean differences on study variables with reference to marital status of university teachers. Married teachers scored higher on time management behaviour, well-being and job satisfaction as compared to unmarried university teachers. Single university teachers exhibited more scores on perceived control of time, stress and job performance as compared to married university teachers. Mean differences on role overload are negligible. However, all of these mean differences are non-significant.

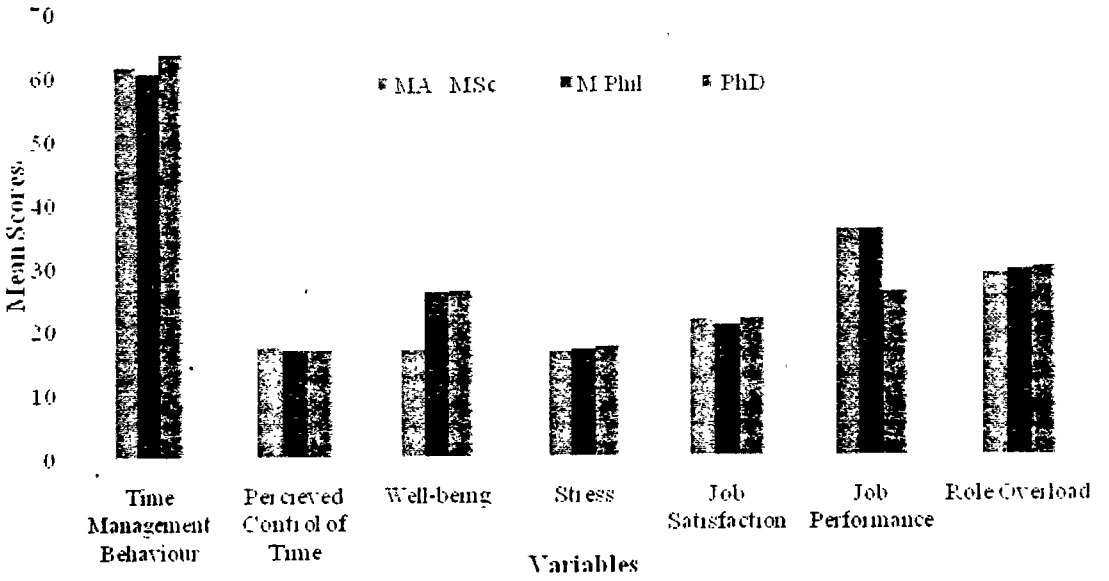

Figure 6. Mean scores of M.Sc / MA, M.Phil and Ph.D university teachers on study variables

Figure 6 shows mean differences on study variables with reference to qualification. PhD teachers scored higher on time management behaviour, well-being, job satisfaction, stress and role overload as compared to M.Phil and MA / MSc teachers. MA / MSc teachers scored higher on perceived control of time as compared to M.Phil and PhD teachers. MA / MSc teachers exhibited more job performance as compared to PhD teachers. However, all differences are non-significant.

DISCUSSION

Discussion

The present study in conducted in the universities of Pakistan. Time management behaviour is one of the most important positive life behaviours which directly influence various psychological outcomes among teachers (Lang, 1992; Peeters & Rutte, 2005; Salaven & Totterdell, 1993). The main focus of the present study is on time management behaviour and its psychological consequences. The psychological outcomes are broadly categorized into two categories including personal life outcomes and job-related outcomes. Two personal life outcomes of time management behaviour are taken into consideration including well-being and stress—which are important psychological constructs related to the overall mental health of the individual. The family factors were not considered in the personal life outcomes. The present study has also incorporated three job-related outcomes including job satisfaction, job performance and role overload.

Prior studies (Macan, 1996; Sabiel, 2009) on the outcomes of time management behaviour has mostly tested the direct paths and direct hypotheses, however, besides direct effects, the present study has also tested mediating effect of perceived control of time between time management behaviour and outcomes among university teachers. Prior researches (Rwegoshora, 2009; Sabiel, 2009) confirmed that time management behaviour directly predicts personal and job outcomes among university teachers—although these researches are conducted in the individualistic cultures (Afful-Broni, 2013; Oliver, Wehby, & Reschly, 2011).

In order to achieve the above mentioned objectives, the present study is divided into two parts including pilot testing on selected sample and the main study. Findings of the pilot study facilitated in examining the satiability of scales for the

main study. In the main study, the major statistical analyses are linear and hierarchical regression analysis. However, prior conducting the main analysis to test hypotheses, psychometric properties of all the scales were computed. Values of skewness and kurtosis for all scales were less than +1 and -1 which confirmed that data is normally distributed on all constructs (Cisar & Cisar, 2010). Reliability coefficients for all scales were greater than .70 which ensured that the scales are reliable for use in the main analysis (Kline, 1999). Correlation coefficients between study variables also appeared in theoretically consistent directions. Tests of univariate normality and correlation coefficients for predictor and outcome variables also in part addressed the major assumptions for conducting regression analyses. Linear regression (entered method) and hierarchical regression were administered to test the direct and mediation hypothesis respectively. Most of the hypotheses were supported in the present study.

The first hypothesis "time management behaviour is likely to positively predict psychological well-being among university teachers" was supported in the present study. The findings are in line with the prior research evidences regarding the role of time management in the prediction of well-being (Wu & Passerini, 2013). In the past two decades, the rise of positive psychology has inspired transitions in the focus of research in IO Psychology. Thus under the umbrella of positive psychology, modern organizational researchers have focused on taking positive steps for enhancing well-being (Sin & Lyubomirsky, 2009; Vazquez, Kervas, Rahona, & Gomez, 2009). In this regard, time management behaviour is an important factor which contributes to health in general and psychological well-being in particular (Adams & Jex, 1999). In the present study, time management explained variance in well-being which confirmed the assumption that time management is a superlative predictor of well-being (Peeters & Rutte, 2005). Time management behaviour not

only enhances well-being rather it also services as a shield for protecting university teachers from the adverse effects of stress and stressors (Jex & Elacqua, 1999; Hashemizadeh, 2013; Orpen, 1994; Van Earde, 2003).

The second hypothesis "time management behaviour is likely to negatively predict stress among university teacher" was supported in the current research. The findings are consistent with the existing empirical literature (Green & Skinner, 2005; Griffiths, 2003). Employees face many changelings in personal and professional life. Teachers face stress due to work, non-work and work non-work stressors. Although clear individual differences exist on the perceptions and experience of stress among employees but still stress-free organizations cannot be created (Riaz, 2015). Stress is a well-researched topic in the organizational and educational psychology (Halkos & Bousinakis, 2010; Rok, 2011; Tytherleigh Webb, Cooper, & Ricketts, 2007). However, stress management has currently received more attention under the influence of positive psychology—which focuses on enhancing well-being and managing stress (Scott, 2015). In this regard, time management behaviour can be effectively used as a counter-stress mechanism to reduce the experience of stress in life (Claessens et al., 2004; Green & Skinner, 2005; Griffith, 2003) as findings of the present study confirmed that time management behaviour negatively predicts stress. Time management behaviour is not limited the personal life of teachers; it also affects their professional life. It is worth mentioning that it also contributes to various job-related outcomes among university teachers (Eilam & Aharon, 2003). The same has proved in the present study.

The third hypothesis "time management behaviour is likely to positively predict job satisfaction among university teachers" was supported in this study.

Consistent research has confirmed that time management is a superlative predictor of job satisfaction in organizations (Ahmad, Yusef, Shobri, & Wahab, 2013; Macan, 1996) and more specifically in education institutions (Ritz, Burris, & Brashears, 2013). In the light of these findings, the immediate area of concern is related to the inculcation of the time management behaviour in the life of the university teacher in order to ensure high job satisfaction in the high education institutions of Pakistan. Job satisfaction is linked with various productive outcomes in higher education institutions (Kipkebut, 2010; Platis, Reklitis, & Zimeras, 2015).

The fourth hypothesis "time management behaviour is likely to positively predict job performance among university teachers" was also supported in the current scientific inquiry. The findings are in line with the past research (Davis, 2000). Modern organizations invested multiple resources to enhance the job performance of employees. In organizations, structural, economic, human, social and psychological capitals are used to ensure high job performance. Even major HR practices intend to ensure top performance employees by equipping them with professional training, placing them on the right jobs, appraising their performance and compensatin0g their losses in order to insure top-performance employees (Collings & Wood, 2009; Klerck, 2009; Paauwe & Boon, 2009; Johnason, 2009). Job performance of university employees perform dual functions. First, it is directly beneficial for the teachers for their promotion and satisfaction (Beven, 2012). Secondly, it contributes to the productivity and overall performance of their universities (Carmeli, Gilat & Waldman, 2007). In Pakistan, after the establishment of the Higher Education Commission (2016), standards are set for the ranking of the universities. Therefore a competitive environment is created in which besides many other factors, teachers make a real difference. Findings of the present study confirmed that time management

behaviour positively predicts job performance of university teachers. It is worth mentioning that time management behaviour is linked with more practical advantages in terms of job performance. Instead of other sources, in the current decades, management researchers has more focused on psychological resources to ensure high job performance (Salanova, Agut & Peiró, 2005; Silvia & Tortia, 2014). Thus time management behaviour can be used as a psychological resource to increase the performance of the academia. Time management behaviour enables teachers to timely complete their work.

Employees face three types of stressors including work-related stressors (related to their job), non-work stressors (related to their personal life) and work / non-work stressors (combination of stresses from personal and professional life). Role overload is also included in the classification of work-related stressors (Lambert, Hogan, Paoline, & Clarke, 2005; Zhou, Zeng, Hu, Xi, & Tan, 2014). The fifth hypothesis "time management behaviour is likely to negatively predict role overload" was supported in this study. The findings are consistent with prior empirical literature (Strongman & Burt, 2000). Teachers' major job specifications in the universities are related to teaching, research supervision and publication of researches. Teachers managing their time effectively can perform their role effectively. In role stressors are either related to role overload or role underload. In either cases, time management behaviour is the core factor which determine whether a "role" will remain a role or will be converted into "role overload" (Hahemizadeh, 2013). Role overload is one of the major stressors in the modern day work life. A good deal of research suggests that such stressors results in numerous physiological, psychological and behavioumral consequences. Stressors reduce job satisfaction, job performance, organizational commitment and surge turnover intention among employees (Jon, 2013; Iroegbu,

2014; Pienaar, Sieberhagen, & Mostert, 2007). Superiority of the time management behaviour rests in the fact that it creates perception among teachers that their time is in their own control and they can make use of it according to their priorities (Kelly, 2002).

Controlling and monitoring time is integral part of time management (Eilam & Aharon, 2003). The sixth hypothesis "time management behaviour is likely to positively predict perceived control of time among university teachers" was supported by the findings of the current investigation. Results of the present study are consistent with the past research (Kelly, 2002; Hafner & Stock, 2010). Macan (1994) suggests that perceived control of time is an important component of time management behaviour. Perception is related to assigning meanings or the interpretation of life realities (Daniel, 2011). Thus having time management behaviour creates that perception in the mind of teachers that time is under the own control and they can utilize it however they want. Perceived control of time is further linked with positive consequences. The present study has focused on dual outcomes of perceived control of time including personal outcomes and job-related outcomes. Well-being and stress are taken as personal psychological outcomes (Kelly, 2002) whereas job satisfaction, job performance and role overload are taken as job-related outcomes (Daniels & Harris, 2000).

The seventh hypothesis "perceived control of time is likely to positively predict well-being among university teachers" was supported in the present study. The findings are consistent with the past research (Avey, Luthans, Smith, & Palmer, 2010). Teaching is less physical but more mental activity. Therefore mental well-being is necessary for executing efficient teaching responsibilities because well-being

is directly linked with outstanding performance at job (Jamal & Baba, 2001). Organizational researchers believe that instead of relying on traditional organizational resources, they have to create positive psychological capital—combination of hope, optimism, resilience and self-confidence—among employees (Luthans, Avolio, Avey, & Norman, 2007). The notable function of positive psychological capital is enhancement of the well-being of the employees (Culbertson, Mills, & Fullager, 2010). These evidences endorse the importance of well-being which is predicted by perceived control of time in the present study. Thus perceived control of time is also a non-traditional human asset which enhances the well-being of teachers. Perceived control of time is directly linked with the health of the employees in general (Adams & Jex, 1999) and well-being in particular (Jackson & Martin, 1996). Besides enhancing health and well-being, perceived control of time it also buffers the negative effects of stress (Claessens et al., 2004).

The eighth hypothesis "perceived control of time is likely to negatively predict stress among university teachers" was supported in the present study. The findings are in line with the past research (Nonis, Hudson, Logan & Ford, 1998) which confirmed that perceived control of time is important predictors of stress. Perceived control of time is an efficient mechanism to overcome, reduce and cope with stress, strain and stressors (Kelly, 2002). Claessens, van Eerde, Rutte, and Roe (2007) reviewed the time management related literature and found that through consistent empirical evidences that perceived control of time is inversely related to stress in diverse samples of employees. The present study confirmed that perceived control of time directly predicts personal life outcomes and job outcomes of university teachers.

The ninth hypothesis "perceived control of time is likely to positively predict job satisfaction among university teachers" was supported in the present study. Results of the linear regression analysis confirmed this hypothesis. Research (Claessens et al., 2007) suggests that perceived control of time is an important and consistent predictor of job satisfaction. Time management researchers (Davis, 2000; Macan, 1994) have proved through empirical evidence that perceived control of time directly predicts job satisfaction. Claessens et al. (2007) collected and analysed numerous evidences to prove that along with time management behaviour, perceived control of time is an important predictor of job satisfaction in the employees of distinct organizations. In spite of the fact that determinants of job satisfaction are frequent and diverse in different organizations. But perceived control of time is an important predictor of job satisfaction especially with reference to teaching profession. Beyond job satisfaction which more related to perceptions, perceived control of time is also linked with job performance of the teachers in universities.

The tenth hypothesis "perceived control of time is likely to positively predict job performance among university teachers" was supported in the present study. The findings are in line with the past literature (Claessens et al., 2004). An ongoing monitoring system is devised for universities in which all teachers are evaluated by their students and their supervisors. Similarly, HEC (2016) has established Quality Enhancement Cell (QEC) in all universities which continually monitors the performance of the teachers in teaching, research and other related activities. QEC of the universities is linked with QEC is HEC and consequently both units work in connection to ensure the high performance of the university teachers. Due to these transitions, extraordinary job performance is required for the professional growth and survival of the university teachers. The present study has confirmed that perceived

control of time directly predicts job performance of the teachers. Thus the immediate need is the initiation of psychological training programs to change the teachers' perception that they are owner of their own tome and they can effectively manage it by using various time management strategies.

The eleventh hypothesis "perceived control time is likely to negatively predict role overload among university teachers" was supported in the present study. The findings are consistent with the research of Macan et al. (1990). Role overload is a major role-related stressor which is linked with various negative consequences in organizations (Chou & Robert, 2008; Pienaar, Sieberhagen, & Mostert, 2007). Currently Pakistani organizational researchers (Khan & Irfan, 2014; Jan, 2013) have also focused on role stressors. However they remained limited to the investigation of the negative outcomes of the role stressors instead of focusing on its antecedents and more specifically the factors that can be beneficial in reducing the role overload such as perceived control of time. The present study in part bridges this gap, it recommends perceived control of time as a protective factors against role overload. The same has been proved in the present study as perceived control of time has inverse effect on role overload in university teachers.

Most of the researches on the psychological outcomes of time management behaviour and perceived control of time are conducted in the individualistic contexts. However, the present study tested the direct effect of these two time related constructs on outcomes in the educational institutions of a collectivist society. The study is not just limited to the direct effects, the study has also tested the mediation hypotheses by following the Macan's (1994) model of time management which suggests that perceived control of time should not be included as a part of time management

behaviour affecting outcomes, instead the perceived control of time should be treated as a mediator between time management behaviour and it outcomes. The twelfth hypothesis "perceived control of time is likely to mediate between time management behaviour and well-being" was supported in the present study. The findings are consistent with the past research (Claessens, 2004) reporting the perceived control of time mediates between time management behaviour and well-being related outcomes. The indirect path in the mediation model is proved in this study which supports the underlying theory of Macan (1994) in Pakistani universities. The findings confirmed that time management behaviour effects perceived control of time which than enhances well-being of the teachers. Similar mediation hypothesis is accepted by taking stress as an outcome variable.

The thirteenth hypothesis "perceived control of time is likely to mediate between time management behaviour and stress among university teachers" was supported in the current scientific investigation. Time management is defined as clusters of behavioural skill sets that are deemed to facilitate efficiency and assuage stress (Sansgiry, Kawatkar, Dutta, & Bhosle, 2004). The indirect path between the time management behaviour and stress mediated by perceived control of time was confirmed in the present research. The findings were consistent with the research of Claessens (2004) empirical evidence and Macan's (1994) theoretical assumptions. However, the testing this hypothesis in the higher education institutions of Pakistan is addition in the existing knowledge. Individual differences in the perception and experience of stress are well-recognized in the psychology (Angel, 2010). In the light of these findings, it can be interpreted that teachers who have time management skills perceive their self-control on time and these perceptions help teachers to reduce the

stress. Jex and Elacua (1999) illustrated that time management behaviour is a best strategy for the removal of stress.

In the both stated mediation hypotheses, perceived control of time mediated between time management behaviour and two personal life outcomes including well-being and stress. Problems faced by teachers in their personal life directly affect professional life and vice versa e.g. work family conflict or family work conflict (Haslam, Filus, Morawska, Sanders, & Fletcher, 2014). More specifically time based conflict (a type of work family conflict)—which arise due the lack of competence in managing time for personal and professional life—is an important stressors which affects the entire life of an employee (Amstad, Meier, Fasel, Elfering, & Semmer, 2011). Thus the present study has focused on the outcomes from personal and professional life of teachers. To some extent, problems from personal life impair job performance and satisfaction whereas issues at job yield adverse effects on the well-being and overall mental health (Burke, Koyuncu, & Fiksenbaum, 2010). The present study has also tested the mediation hypotheses with job-related outcomes.

The fourteenth hypothesis "perceived control of time is likely to mediate between time management and job satisfaction" was supported by the findings of the hierarchical regression analysis revealing that perceived control of time is a significant mediator of time management and job satisfaction. The findings on the mediation hypothesis are in line with the prior mediation-related theoretical and empirical evidences (Claessens, 2004; Macan, 1994). Just like the previous researches (Griffth, 2003; Macan et al., 1990), the direct effect of time management and perceived control of time on job satisfaction is also considered in the present study. However, the present study has also linked these construct in a meditational model by

following the theory of Macan (1994). The present study confirmed that time management behaviour predicts perceived control of time which than predicts job satisfaction among university teachers. Both in the direct and medication hypothesis, time management behaviour has superior functions because in both cases it is antecedent of the job satisfaction. The same mediation hypothesis is testing by including job performance as outcome variables.

The fifteenth hypothesis "perceived control of time is likely to mediate between time management behaviour and job performance" was supported in the present study. The prior research for the same mediation hypothesis has included overall work productivity as outcome variable (Claessens, 2004). However, the present study has also considered job performance of the university teachers. Teachers' time management behaviour is also indirectly evaluated by QEC in the universities (HEC, 2015). Two major duties including taking classes and supervising researcher students are also time-linked activities. These questions are asked from students during the evaluation of the university teachers. For example one question "the teacher enters in the class on time and leaves the class on time which is given in the timetable". The results on the mediation hypothesis confirm that time management behaviour leads towards perceived control of time among university teachers which increases their job performance because only timely performed tasks are considered rewarding in the educational institutions.

The sixteenth hypothesis "perceived control of time is likely to mediate between time management behaviour and role overload" was not supported in the present study. Role overload is role-related stressor (Srivastav, 2010). Initially, French and Kaplan (1972) introduced the concept of qualitative and quantitative role

overload. Quantitative role overload is related to too many assignments in little time whereas qualitative role overload is an employee's personal deficiency in terms of lack of competence or ability to fulfill the responsibilities (as cited in Rahim, 2011). Thus due to the diverse nature of the construct of role overload, hypotheses was not supported. In future research, qualitative and quantitative role overload should be treated separately.

The seventeenth hypothesis "female university teachers exhibit significantly higher scores on time management behaviour as compared to male university teachers" was supported in the present study. The findings are consistent with the previous research on gender differences in time management (Misra & McKean, 2000). It is worth mentioning that female are serving as vice chancellors of the universities. Females of Pakistan are now even getting selected in the traditional male oriented jobs. As per findings which show females' edge in time management behaviour, female should be given more opportunities for employment in Pakistani educational institutions. Overall the present study makes a valuable addition in the existing empirical literature in educational psychology. Overall the findings are in line with the hypotheses which make it clear the time management has clear effect on the personal and professional life of teachers in universities.

CONCLUSION, IMPLICATIONS AND LIMITATIONS

Limitations and Suggestions

1. The present study was based on survey method in which cross-sectional survey research design was used to collect the information from universities situated in different cities of Pakistan. In future, triangulation and more specifically method triangulation can be beneficial in addressing the limitations in the study linked with the reliance on a specific deisgn to draw inferences.
2. In present study, seven self-report measures were used to collect the information from university teachers. These instruments are vulnerable for social desirability, response bias or faking good. Thus instead of self-rating by the participants the cross-rating possibility can be more beneficial to address the problems caused by social desirability. More specifically, the job performance of the teachers should be rated by their heads in the future research. I future research, the issue of social desirability can also be addressed psychometrically.
3. The immediate area of research is validation of these instruments in the indigenous context of Pakistan. Thus, Confirmatory Factor Analysis (CFA) should be carried out for all scales.

Implications

1. Empirically consistent findings with the model of Macan (1994) enhance the validity of this model in the higher education institutions of Pakistan:
2. The study has confirmed that time management behaviour has direct and mediating effect on psychological outcomes of the university teachers. Specialized training programs should be organized by the QEC (established by HEC in all universities) for all teachers to learn time management behaviour, related skills and strategies. The theorist (Macan, 1996) explains that time

management behaviours can be developed, improved and enhanced though time management training.

3. The study depicted that time management is linked with dual outcomes. On one side, it contributes to metal health related outcomes by enhancing well-being and reducing stress. On the other side, it also enhances job satisfaction, job performance and reduces role overload.

Conclusion

The study aimed to investigate the effect of time management behaviour and perceived control of time on the prediction of psychological outcomes among university teachers. The study also examined mediation of perceived control of time between time management behaviour and psychological outcomes. Psychological outcomes comprised of personal outcomes and job-related outcomes. More specifically personal outcomes consisted on well-being and stress. Job-related outcomes consisted of job satisfaction, job performance and role overload. Gender differences in time management behaviour were also examined. Hypotheses were testing through linear regression analysis, hierarchical regression analysis and independent sample *t*-test. Most of the findings were in hypothesized directions. Two time-related constructs including time management behaviour and perceived control of time significantly predicted dual outcomes among university teachers. Time management and perceived control of time positively predicted well-being whereas inversely predicted stress among university teachers. Time management behaviour and perceived control of time positively predicted work related attitudes including job satisfaction and job performance whereas negatively predicted role related stressor. Besides direct effect, perceived control of time mediated between time management

behaviour and dual consequences. Gender differences on time management behaviour were also found in the desired directions. Female university teachers exhibited higher scores on time management behaviour as compared to male counterparts. Time management behaviour is an important construct of educational psychology. The present study has confirmed that time management behaviour directly influences the mental health of academia by enhancing well-being and reducing stress. However, the positive effects of time management behaviour are not limited to personal life only; it also affects work related attitudes by enhancing the satisfaction with job and performance at job. Top performance is beneficial for employees and organizations alike. It can contribute in part towards the rapid promotion of teachers and it also contributes in the overall performance of the universities in terms of their ranking in national and international universities of the world. Similarly, time management behaviour softens the negative effects on role overload. Overall the present study has empirical significance.

The study shed light on the importance of managing time which follows are process to influence the personal and professional life of university teachers. The process is grounded in the theory indicating that time management behaviour predicts the perceived control of time among teachers which finally effects their psychological outcomes. The same process is confirmed through the present study which is a valuable addition in the empirical knowledge and this knowledge in applied in nature which can be effectively incorporated to improved the well-being, work-related attitudes and overall professional life of university faculty.

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ANNEXURES

Annexure-A

INTRODUCTION AND INFORMED CONSENT

I am student of PhD at Department of Psychology, International Islamic University Islamabad. The department conducts different researches on various social, psychological and organizational issues. The present study is an academic research which aims to examine the effects of time management behaviour on university teachers. Your participation is highly appreciated. The obtained information will remain confidential and would solely be used for the research purpose.

I have complete information about the nature, objectives, and importance of this study and willing providing the information for research purpose.

_____

Signature of Participant

Annexure-B

DEMOGRAPHIC INFORMAITON SHEET

Gender: Male / Female

Age (In years): _____

Education: MA /MSC, MS / MPhil, PhD

Marital Status: Single / Married

Total Job Experience: _____

University Name: _____

University Type: Public Sector / Private Sector

Annexure-I

TIME MANAGEMENT BEHAVIOUR SCALE

Sr. No	Statements	Strongly Disagree	Disagree	Neutral	Agree	Strongly Disagree
1	I do things in order of priority.	0	1	2	3	4
2	I accomplish what needs to be done during the day.	0	1	2	3	4
3	I always get assignments done on time.	0	1	2	3	4
4	I feel I use my time effectively.	0	1	2	3	4
5	I tackle difficult or unpleasant tasks without procrastinating.	0	1	2	3	4
6	I force myself to make time for planning.	0	1	2	3	4
7	I am spending enough time planning.	0	1	2	3	4
8	I prepare a daily or weekly "to do" list.	0	1	2	3	4
9	I am able to meet deadlines without rushing at the last minute.	0	1	2	3	4
10	I keep up-to-date on my reading and homework assignments.	0	1	2	3	4
11	I prevent interruptions from distracting me from high priority tasks.	0	1	2	3	4
12	I avoid spending too much time on trivial matters.	0	1	2	3	4

Sr. No	Statements	Strongly Disagree	Disagree	Neutral	Agree	Strongly Disagree
13	I am spending enough time on academic matters.	0	1	2	3	4
14	I plan time to relax and be with friends in my weekly schedule.	0	1	2	3	4
15	I have a weekly schedule on which I record fixed commitments such as classes and work hours.	0	1	2	3	4
16	I try to do the most important tasks during my most energetic periods of the day.	0	1	2	3	4
17	I make constructive use of my commuting time.	0	1	2	3	4
18	I periodically re-assess my activities in relation to my goals.	0	1	2	3	4
19	I have discontinued any wasteful or unprofitable activities or routines.	0	1	2	3	4
20	I screen and group my telephone calls to allow for control over telephone interruptions.	0	1	2	3	4
21	I judge myself by accomplishment of tasks rather than by amount of activity or "busyness".	0	1	2	3	4

Sr. No	Statements	Strongly Disagree	Disagree	Neutral	Agree	Strongly Disagree
22	My actions are determined primarily by me, not by circumstances or by other people's priorities.	0	1	2	3	4
23	I have a clear idea of what I want to accomplish during the coming semester.	0	1	2	3	4
24	I am satisfied with the way I use my time.	0	1	2	3	4

Annexure-D

PERCEIVED CONTROL OF TIME AT WORK SCALE

Sr. No	Items	Strongly Disagree	Disagree	Neutral	Agree	Strongly Disagree
1	I feel in control of my time	1	2	3	4	5
2	I find it difficult to keep to my schedule because others take me away from my work	1	2	3	4	5
3	I feel that I have my work under control	1	2	3	4	5
4	I feel confident in that I am able to complete my work on time	1	2	3	4	5
5	I often have little control of what is happening at work	1	2	3	4	5

Annexure-E

SHORT WARWICK-EDINBURGH MENTAL WELL-BEING SCALE

Sr. No	Statements	None of time	Rarely	Some of time	Often	All of time
1	I have been feeling optimistic about the future	1	2	3	4	5
2	I have been feeling useful	1	2	3	4	5
3	I have been feeling relaxed	1	2	3	4	5
4	I have been dealing with problems well	1	2	3	4	5
5	I have been thinking clearly	1	2	3	4	5
6	I have been feeling close to other people	1	2	3	4	5
7	I have been able to make up my own mind about things	1	2	3	4	5

Annexure-F

STRESS SUBSCALE OF DEPRESSION ANXIETY STRESS SCALE

Sr. No	Statements	Did not apply to me	Some of the Time	A good part of time	most of the time
1	I found myself getting upset by quite trivial things	0	1	2	3
2	I tended to over-react to situations	0	1	2	3
3	I found it difficult to relax	0	1	2	3
4	I found myself getting upset rather easily	0	1	2	3
5	I felt that I was using a lot of nervous energy	0	1	2	3
6	I found myself getting impatient when I was delayed in any way (eg, lifts, traffic lights, being kept waiting)	0	1	2	3
7	I felt that I was rather touchy	0	1	2	3

Annexure-G

JOB SATISFACTION SCALE

Sr. No	Items	Strongly Disagree	Disagree	Neutral	Agree	Strongly Disagree
1	I am satisfied with the promotion I have received in this organization.	1	2	3	4	5
2	I am satisfied with the salary I received in this organization.	1	2	3	4	5
3	I am satisfied with the status I have earned in this organization.	1	2	3	4	5
4	I am satisfied with the projects I have been involved.	1	2	3	4	5
5	I am satisfied with the progress I have made toward achieving my overall career goals.	1	2	3	4	5
6	Generally speaking I am satisfied with my job.	1	2	3	4	5

Annexure-H

IN ROLE PERFORMANCE SCALE

Sr. No.	Statements	Strongly Disagree	Slightly Disagree	Disagree	Neutral	Agree	Slightly Agree	Strongly Agree
1	I adequately complete my assign duties	1	2	3	4	5	6	7
2	I fulfilled responsibilities specified in my job description	1	2	3	4	5	6	7
3	I performed tasks that are expected of me	1	2	3	4	5	6	7
4	I meet formal performance requirements of my job	1	2	3	4	5	6	7
5	I engage in addition that will directly affect my performance evaluation	1	2	3	4	5	6	7
6	I did not neglect aspects of the job I am obliged to perform	1	2	3	4	5	6	7
7	I fail to perform my essential duties	1	2	3	4	5	6	7

Annexure-I

ROLE OVERLOAD SCALE

Sr. No	Items	Rarely True	Occasional True	Often True	Usually True	Most of Time True
1	All work I am expected to do too many different tasks in too little time.	1	2	3	4	5
2	I feel that my job responsibilities are increasing.	1	2	3	4	5
3	I am expected to perform tasks on my job for which I have never been trained.	1	2	3	4	5
4	I have to take work home with me.	1	2	3	4	5
5	I have the resources I need to get my job done.	1	2	3	4	5
6	I feel competent in what I do.	1	2	3	4	5
7	I work under right time deadlines.	1	2	3	4	5
8	I wish that I had more help to deal with the demands placed upon me at work.	1	2	3	4	5
9	My job requires me to work in several equally important areas at once.	1	2	3	4	5
10	I am expected to do more work than reasonable.	1	2	3	4	5

Annexure-J

LIST OF UNIVERSITIES CONSIDERED IN DATA COLLECTION

Sr. No.	Name of Universities	Public / Private Sector
1	Quaid-i-Azam University Islamabad	Public Sector
2	International Islamic University Islamabad	Public Sector
3	University of Wah, Wah	Private Sector
4	University of Haripur, Haripur	Public Sector
5	Hazara University Mansehra	Public Sector
6	University of Education (Attock, Veheri, Multan)	Public Sector
7	University of Management and Technology Lahore	Private Sector
8	COMSATS Attock	Public Sector
9	Allama Iqbal Open University Islamabad	Public Sector
10	Govt. College University Faisalabad	Public Sector
11	BZU Multan	Public Sector
12	University of Gujrat, Gujrat	Public Sector
13	Karakorum University Gilgit-Biltistan	Public Sector