

Mediating Role of Perceived Control of Time Between Time Management Behavior and its Outcomes

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Abstract

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. Data of university teachers (N = 300) was collected through 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. Regression analysis explained 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 study has both theoretical as well as applied significance. The findings confirmed the underlying theoretical assumptions of the Process Model of Time Management Overall the findings are valuable in the fields of educational and organizational psychology.

Keywords: Time Management Behaviour, Perceived Control of Time, Well-Being, Scale, Job Satisfaction, Job Performance, Role Overload.

Introduction

Research in the last two decades has acknowledged the importance of time management for organizations (Claessens et al., 2004). The present study has focused on the dual outcomes of time management behavior 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 handled by effectively employing time management as a core strategy. Time management behavior 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 on time management illustrate that time management is an important factor for employees that directly leave an additive influence on well-being and even the time management can be effectively utilized for enhancing well-being of employees in organizations (Bond & Feather, 1988; Macan, 1996; Peeters & Rutte, 2005; Van Eerde, 2003). 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, 2013). Managers interested in enhancing the performance of their employees can effectively use time management as a core strategy and self-regulatory mechanism to ensure the high slandered 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.

Literature Review

Time management behavior if found to be consistently related to perceived control of time. Therefore, the present study has also focused on the investigation of the effect of perceived control of time on the prediction of dual psychological outcomes. Perceived control of time positively influences employees' life by helping them to overcome and effectively cope with tensions and stressors related to job and personal life. Besides this, perceived control of time makes salient contributions in the employees' professional life by directly influencing their work related attitudes. In this regard, 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 present study is not limited to the direct effect of time management behavior and perceived control of time on the prediction of dual outcomes instead the current research has also focused on the investigation of the mediation of perceived control of time between time management behavior and psychological outcomes among university teachers of Pakistan.

The present study is grounded in sound theory of time management which is so for considered the most prominent and comprehensive model on time management. The Process Model of Time Management proposed by Mekan (1994) has taken a unique standing on time management. Prior theorists and researchers illustrated that perceived control of time is an integral time management behavior. However, Macan (1994) disagreed with this traditional conceptualization and argued that perceived control of time in not a part of time management behavior rather it is outcome of time management behavior. Another distinctive illustration of Macan (1994) was related to the outcomes of time management. Contrary to the past researchers who used time management behavior to predict direct outcomes from job and personal life of employees, The Process Model of Time Management suggested an indirect effect of time management behavior of the outcomes among employees.

Time management behavior 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. Machen (1994) also suggested that by using time management techniques person can get more

control over time that in turn enhance job satisfaction. Similarly, well-being and time management have strong correlation to each other and this correlation is mediated by perceive control over time (Macan, 1994). Hafner and Stock (2010) also confirmed that perceived control of time mediated between time management behavior and well-being association.

The Process Model of Time Management was brainchild of the theorist of individualistic context and it was successfully tested and confirmed through research in the same context (Claessens, 2004; Macan, 1994). 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 the collectivistic context of Pakistan. The present study has not only focused on the direct effect of time management behavior on psychological outcomes instead the indirect path suggested by the Process Model of Time Management is also taken under investigation.

The present study has focused on the time management behavior and related concepts in universities. Past 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 most important segment of the education institutions comprising of academia was consistently ignored in spite of the fact that both perform different responsibilities and mismanagement in their time may result in distinct consequences. The importance of time management cannot be explained in educational institutions by considering students only. Kearns and Gardiner (2007) argued that time management behavior is equally important for students and teachers. After the identification of these research gaps, the present study has focused on university teachers, contrary to the students-focused past research. Universities comprised of students and teachers. Among the students, positive effects of time management behavior are well-researched (DiPipi-Hoy, Jitendra, & Kern, 2009). Besides this, the investigation of the role of time management behavior among university teachers can provide a more comprehensive picture regarding the positive consequences of time management behavior in universities.

Relatively less research has been conducted so far in the work of work or organizations (Green & Skinner, 2005; Griffith, 2003; Peeters & Rutte, 2005) which are again observed in the individualistic cultures. Although the cultural differences in time management behaviors 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 utmost importance of the present study stems from the grounded theory. The present study is based on The Process Model of Time Management by Mekan (1994) which is so far considered the most important model of time management ever proposed in the past century. The Process Model of Time Management proposed that perceived control of time mediates between time management behavior and outcomes. Thus, the present study focused on dual paths. Firstly, the study focused on the investigation of the direct effect of time management behavior and perceived control of time on the psychological outcomes among university teachers. Secondly the study focused on the mediation model based on the indirect effect of time management behavior on the prediction of psychological outcomes.

Life of employees is divided into two parts including personal life and professional life. The present study focused on psychological outcomes from both parts of life of the 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 behavior for employees but its importance for educational institutions is worth mentioning (van de Meer, Jansen, & Tarenbeek, 2010; Kearns & Gardiner, 2007). Moreover, Higher Educational Commission of Pakistan has considered time management behavior as integral part of the evaluation of the teachers through Quality Enhancement Cells established in all HEC-recognized universities. Contrary to school and college teachers, university teachers perform multiple roles including teachers, administrators and organizers. Besides teaching, they 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 behavior 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 behavior. Besides all these empirical and theoretical insights, time management determines success in life as time management behavior is included among "*the 7 habits of highly effective people*" (Covey, 1989).

Hypotheses

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

Methodology

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%). Data was collected from 13 universities situated in Islamabad, Province of the Punjab, Khyber-Pakhtunkhwa and Gilgit-Baltistan. 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 ($n = 141$, 41%) 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.

Time Management Behavior Scale (TMBS). TMBS developed by Macan et al. (1990) measures a set of skills to examine time management behavior. 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 behavior among employees (Azar & Zafar, 2003). Prior research with the teachers of educational institutions also confirmed its reliability and validity (Peeters & Rutte, 2005).

Perceived Control of Time at Work Scale (PCTWS). PCTWS 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 Mental Well-being Scale (SWEMWS). SWEMWS developed by Tennant et al. (2007) 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 (DASS). 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 (JSS). JSS 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. Individual can minimum obtain 6 scores on this scale whereas maximum scores cannot exceed than 30. 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 .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 (IRJPS). IRJPS 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 (ROS). ROS 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, Thurasarny, & Liew, 2014).

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. The researcher answered all questions of the participants during scale competition. Return rate was 35.29% as 300 out of 850 questionnaires were returned. Participants provided information on voluntary basis without any incentive. After the completion of the scales, the researcher appreciated and thanked the participants as no payment was admissible in return for providing the valuable information on time management and related variables.

Analysis

Table 1: Pearson correlation and Psychometric properties of variables (N = 300)

Variables	1	2	3	4	5	6	7
1. Time management behaviour	(.89)	.33***	.51***	-.49***	.53***	.44***	-.14*
2. Perceived control of time		(.70)	.42***	-.25***	.20**	.41***	-.24***
3. Well-being			(.76)	-.11*	.43***	.42***	-.15*
4. Stress				(.76)	-.16*	-.28***	.36***
5. Job satisfaction					(.79)	.25***	-.36***
6. Job performance						(.73)	-.17*
7. Role overload							(.77)
M	61.80	16.93	26.11	16.94	21.10	35.51	21.17
SD	12.75	3.01	4.04	4.10	4.52	6.45	5.04
Potential range	0-96	5-25	7-35	0-21	6-30	7-49	10-50
Actual range	27-96	10-25	8-35	7-20	6-13	13-49	11-46
Skewness	.06	.22	-.82	.08	-.31	-.32	-.23
Kurtosis	-.01	-.05	.90	-.34	.05	.25	.78

Note. Diagonal contains alpha coefficients

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

Table 1 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. 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 2: Mediation of perceived control of time between time management behaviour and outcomes

Predictors	Model 2			Outcome
	Model 1 <i>B</i>	<i>B</i>	95% CI <i>LL, UL</i>	
(constant)	15.98***	11.46***	[8.96, 1.94]	(1) Well-being
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***		
(constant)	16.23***	13.59***	[11.44, 15.73]	(2) Stress
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***		
(constant)	7.87***	10.36***	[7.87, 12.85]	(3) Job satisfaction
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**		
(constant)	21.60***	13.82***	[9.67, 17.97]	(4) Job performance
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***		
(constant)	25.68***	32.31***	[28.73, 35.88]	(5) Role overload
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***		

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

Table 2 shows results of hierarchical regression analysis on the mediating effect of perceived control of time between time management behavior and outcome variables. (1) 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 behavior and well-being

(Barron & Kenny, 1986). Results indicate that time management behavior has both direct and indirect effect on well-being. Thus, the findings support the Process Model of Time Management (PMTM). (2) 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 behavior and stress. Results indicate that time management behavior has both direct and indirect effect on stress. Thus, the findings support the PMTM. (3) 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 behavior and job satisfaction among university teachers. Results indicate that time management behavior has both direct and indirect effect on job satisfaction. Thus, the findings support the PMTM. (4) 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 behavior and job performance. Results indicate that time management behavior has both direct and indirect effect on job performance. Thus, the findings support the PMTM. (5) 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 behavior and role overload. Results indicate that time management behavior has just direct effect on role overload whereas indirect effect is not found. Thus, the findings regarding role overload does not support the PMTM.

Discussion

The present study is conducted in the universities of Pakistan which are higher education institutions. University teachers competently perform their academic duties by effectively managing their time. Numerous positive behaviours of university teachers directly influence their personal and professional life. 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 present study has also incorporated three job-related outcomes including job satisfaction, job performance and role overload.

The present study has also many unique features. Prior studies (Macan, 1996; 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 indirect effect of time management behaviour on various 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). However, the present study not only tested these direct hypotheses in the collectivist context of Pakistan rather it also tested a new indirect model of time management which is based on the assumption that along with direct effects, time management behaviour creates perceptions of perceived control of time which eventually effects individual's personal and job-related outcomes. In other words, time management predicts perceived control of time and perceived control of time predicts outcomes. More specifically, perceived control of time mediates between time management behaviour and dual outcomes among university teachers.

In order to achieve the above-mentioned objectives, the present study is divided into two parts including pilot testing on limited sample and the comprehensive main study. Findings of the pilot study facilitated in taking confident decisions regarding the use of scales and the formulation of the hypotheses in 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 triggered revolutionary transitions in the focus of research. Thus, under the umbrella of positive psychology, modern 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 behaviour positively predicted well-being which is an important addition is the existing literature limited to the studies of individualistic cultures (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 scientific literature (Green & Skinner, 2005; Griffiths, 2003). Employees face dual responsibilities of personal and professional life. Due to personal life problems and job-related issues, most of the employee experience stress. In spite of the fact that individuals differ in their level of stress, stress-free society cannot be created and in the same manner stress-free organizations are exceptional in the challenging and rapidly changing environment of modern organizations (Riaz, 2015). In some cases, the experiences of the stress are even more contexts specific. Due to the war against terrorism, numerous Pakistani educational institutions were targeted with the suicide bombing which has added more stress in the life of university teachers. Thus, Pakistani university teachers are working under more adverse conditions than the other countries of the world. Besides these critical circumstances which are not in their own control, the teachers’ personal inability to manage their time effectively triggers more stress in their life. 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 (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 third hypothesis “time management behaviour is likely to positively predict job satisfaction among university teachers” was supported in this study. Consistent research on these two constructs of positive organizational behaviour has confirmed that time management is a superlative predictor of job satisfaction in diverse modern organizations in general (Ahmad, Yusef, Shobri, & Wahab, 2013; Macan, 1996) and in the education institutions in particular (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). University teachers are researchers, writers, think tanks and brains of nations. Thus, satisfied academia with jobs can make more positive contribution in the development of the nation and ensuring knowledge-based economy.

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 existing literature (Davis, 2000). Modern organizations invested multiple resources to enhance the job performance of employees. This structural, economic, human, social and psychological capitals are used to ensure high job performance. Even major HR practices also serve this organization purpose by selecting top performance employees, equipping them with professional training, placing them on the right jobs, appraising their performance and compensating 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, standardised systems are devised 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 have more focused on psychological resources to ensure high job performance (Salanova, Agut & Peiró, 2005; Silvia & Tortia, 2014). Thus, time management behaviour can be used a valuable psychological asset to increase the performance of the academia. Time management behaviour enables teachers to complete them well in time which in the long run prevent them from the excessive burden of work or role overload.

Employees face three types of stressors including work-related stressors, non-work stressors and work, non-work stressors. 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 roles in the universities are related to teaching, research supervision and publication of researches. Those teachers who manage their time effectively can perform their role effectively. Teachers failing to manage their time suffer from excessive overload or role overload. Role overload also takes another form when too many job assignments are given to a teacher to complete in too little time. In either case, time management behaviour is the core factor which determines whether a “role” will remain a role or will be converted into “role overload” (Hahemizadeh, 2013). Role overload is stressors and stressors are linked with numerous physiological, psychological and behavioural consequences. It reduces job satisfaction, job performance, organizational commitment and increases turnover intention among employees (Jon, 2013; Iroegbu, 2014; Pienaar, Sieberhagen, & Mostert, 2007). Higher Education Commission has introduced a training program for the newly appointed university teachers. Inclusion of time management training in these training modules can be more beneficial for university teachers. 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 an integral part of time management (Eilam & Aharon, 2003). In a comprehensive model of time management, 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). University teachers can be divided into two broader categories; those who believe that their time is in their own control and those who do not believe in it. The preceding are more advantageous than the proceeding. Because perceived control of time is associated with a plenty of positive outcomes. But still the discussion moves around time management behaviour which

predicts perceived control of time. Once the perception of time control is formed, it leads towards manifold positive psychological consequences in the life of university teachers. 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 sixth 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). Mentally healthy university teachers can make more prolific contribution for a nation than mentally exhausted teachers. Organizational researchers have finally realized 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 remarkable function of this 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. 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). Perceived control of time has dual functions. Besides enhancing health and well-being it also counters the negative effects of stress (Claessens et al., 2004).

The seventh 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 existing body of knowledge. A good deal of prior research confirmed that perceived control of time is an important predictor of stress (Nonis, Hudson, Logan & Ford, 1998). Perceived control of time is an efficient mechanism to overcome, reduce and cope with stress, strain and stressors (Kelly, 2002). It is important to mention that instead of employing many difficult stress management techniques, developing the perceived control of time is an efficient stress management strategy which is easy to execute, readily available and essentially productive. Claessens, van Eerde, Rutte, and Roe (2007) reviewed the time management related literature and found that proved 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 dual mental health outcomes, though it is not limited to the prediction of personal life outcomes. Perceived control of time directly effects job outcomes of university teachers.

The eighth 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. Existing literature suggests that perceived control of time is an important and consistent predictor of job satisfaction (Adams & Jex, 1999; Claessens et al., 2004). 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 analyzed numerous evidences to prove that along with time management behaviour, perceived control of time is a consistent 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. Teachers not manage their personal time effectively; they also teach and train their students how to manage time effectively. Teachers who believe that time is not under their own control and leave their time-linked responsibilities on the later of the fate, finally become very dissatisfied with their jobs. Beyond job satisfaction which more related to perceptions, perceived control of time is also linked with job performance of the teachers in universities.

The ninth 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 (Macan et al., 1990). Most of the universities of Pakistan are providing knowledge through semester system. The major challenge in the semester system is to adjust with extreme time pressures, busy schedules and excessive deadlines. These all factors create many undue hurdles for teachers in ensuring high job performance. Higher Education Commission of Pakistan has revised the performance appraisal systems for university teachers. The most prominent change made in this regard is the replacement of promotion with selection. During the past years, university teachers were directly promoted to higher designations after the completion of the promotion requirements. However, this rule is no more is Pakistani universities. Now-a-days, teachers are required to appear in a selection board in which they have to prove their competence. Thus, the performance indicators are completely revised. Similarly, an ongoing monitoring system is devised for universities in which all teachers are evaluated by their students and their supervisors. Similarly, HEC 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 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 time and they can effectively manage it by using various time management strategies.

In the above lines, it is thoroughly discussed that excessive burden of duties, too busy routines and competitive demands creates role overload for the teachers. Teachers are expected to perform the tasks that sometimes are beyond their roles and other times are too difficult due to limited times. The tenth hypothesis “perceived control time is likely to negatively predict role overload among university teachers” was supported in the present study. The findings are consistent to the past empirical evidences (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. The present study in part bridges this gap, it recommends perceived control of time as a protective factor against role overload. The same has been proved in the present study as perceived control of time has inverse effect on role overload among university teachers. Thus, the findings of the present research add a worthy empirical evidence in the existing body of knowledge from the collectivist context of Pakistan.

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 its outcomes. The theoretical assumptions behind the above-mentioned model—which is considered the most comprehensive model ever given on time management (Macan, 1994)—are tested in the present study through the formulation of indirect hypotheses. It is worth mentioning that just like direct paths, most of the indirect paths are also confirmed in the present study. In the present study, mediation of the perceived control of time between time management behaviour and psychological outcomes is carried out.

The eleventh 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. However, in this research job satisfaction and stress were taken as well-being related variables but the well-being was not directly investigated. The present study has directly investigated well-being as outcome variable instead of using well-being as an umbrella term to label related constructs. The indirect path in the mediation model is proved in the present study which supports the underlying theory of Macan (1994) in the higher education institutions of Pakistan. The findings confirmed that time management behaviour effects perceived control of time which then enhances well-being of the teachers. In other words, time management behaviour changes the perception of the university teachers that time is in their own control and they can effectively utilize it which will be beneficial for their well-being. The same mediation hypothesis is accepted for the stress as outcome variable.

The twelfth 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 a collectivist country is addition in the existing knowledge. Individual differences in the perception and experience of stress are well-recognized in the psychology (Angel, 2010). Stress is experienced by the employees of all types of organizations although its level may differ across professions (Riaz, 2015). But what makes real differences is the time management ability of the teachers. The findings evidenced that individuals having time management behaviour perceives that have their own control on their time and these perceptions help employees to reduce the stress. Jex and Elacqua (1999) illustrated that time management behaviour is a best strategy for the removal of stress.

In both of the mediation hypotheses, perceived control of time mediated between time management behaviour and two personal life outcomes including well-being and stress. Personal life cannot be separated from the occupational life and vice versa. The classification of work-non-work stressors explains that problems from the personal life directly affects 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—which arise due the lack of competence in managing time for personal and occupation life—is an important stressor which affects the entire life of an employee (Amstad, Meier, Fasel, Elfering, & Semmer, 2011). Thus, the present study has taken dual outcomes into consideration. Because one cannot be differentiated from the other. 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 thirteenth hypothesis “perceived control of time is likely to mediate between time management behaviour 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 indirect hypothesis are in line with the prior mediation-related theoretical and empirical evidences (Claessens, 2004; Macan, 1994). The past research (Griffith, 2003; Macan et al., 1990) is evident on the direct effect of time management behaviour and perceived control of time on job satisfaction considered in the present study. However, the present study has linked these constructs in an indirect path by following the theory of Macan (1994). The present study confirmed that time management behaviour predicts perceived control of time which then predicts job satisfaction among university teachers. Both in the direct and indirect hypothesis, time management behaviour has superior functions because in both cases it is antecedent of the job satisfaction. The same indirect hypothesis is testing by including job performance as outcome variables.

The fourteenth 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 specifically considered job performance of the university teachers. Teachers are required to fulfil diverse job responsibilities in allocated time. Teachers’ time management behaviour is also indirectly evaluated by QEC in the universities. Two major duties including taking classes and supervising researcher students are also time-linked activities. These are some of the questions which are in written asked from the 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”. If a teacher gets too late and timing of a class is over, his or her presence makes no difference. The same issue is with the research supervision. If a teacher fails to supervise an M.Phil. Research scholar in the completion of the thesis, after three years the degree time will be expired. Completion of the thesis after this allocated time will be fruitless. This is why it is commonly said that “a stick in time saves nine”. This discussion confirms that job activates which are not performed in their assigned time, are worthless. 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 fifteenth 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). For the first time in history, 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 (Rahim, 2011). The qualitative-quantitative distinction indicates that role overload is caused by dual sources. An employee can be solely responsible to manage qualitative role overload which is related to his or her own abilities to perform the duties well in time. However, on the other hand, quantitative role overload is not under the direct control of an employee because it is related to the duties assigned by the organizations. Thus, in spite of the face that some individuals have time management behavior and they perceived that time is under their control, the excessive quantitative role overload is beyond their perception of control of time and cannot be managed timely. Although the direct effect of time management behaviour and perceived control of time on role overload is well-recognized in the existing literature but the mediated hypothesis based on the indirect path is not supported by the findings of the present study. Having good time management ability or self-perception regarding the control over time makes no difference when the excessive burdens of work is imposed by the organizations and in spite of their good time management skills, employees become workaholic.

Limitations and Recommendations

1. The present study was based on survey method in which cross-sectional design was used to collect the information from universities situated in different cities of Pakistan. Survey method has usually low internal validity although it has high external validity. In the future research, it would be more appropriate to make use of method triangulation which will be beneficial in overcoming the inbuilt limitations of the survey method.
2. The present study is limited to the faculty of the universities. However, the replication of the findings with the administration of the university will enhance the external validity of the findings in the universities. Because academia and administration work in collaboration to ensure high quality education in the universities.
3. In the 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. Similarly, the issues of common method variance must also be addressed in the future research.

4. The immediate area of research is validation of these instruments in the indigenous context. All the scales used in the present study were developed in individualistic cultures and there is need to validate them in the collectivist context of Pakistan. Thus, Confirmatory Factor Analysis (CFA) should be carried out for all scales. Similarly, all the scales were in English language. Although the participants belonged to academia but still it would be more appropriate in the future research to carry out Urdu-translation, adaptation and cross-language validation of these scales.
5. Education system of Pakistan is divided into three segments including schools, colleges and universities. The present study was limited to universities, in future research it will be more appropriate to include remaining two entities of the country's educational system in order to investigate the time management behaviour and its associated consequences from a broader spectrum.
6. Low response rate in the present study also indicates lack of interest by the participants. The major reason behind the insensitivity of the participants is that they are given no tangible advantage in response of their time. Time is money. In future research it would be more appropriate to acquire funding form HEC and the participants should be paid for their time and contribution. Besides all these limitations, the present study is a valuable addition in the existing literature on time management behaviour.

Implications

1. The present study has theoretical as well as applied value. Theoretically consistent findings with the model of Macan (1994) enhance the validity of this model in the higher education institutions of Pakistan. From the perspective of applied significance, the study has targeted university teachers as participants and their prominent problem of time management is taken under the investigation. The findings of this research are directly beneficial for the university teachers of Pakistan.
2. The present study has tested a conceptual model based on direct and indirect relationships between variables. The major assumptions behind this model are supported in the present study. Thus, the present study makes a valuable addition in the existing body of scientific knowledge on time management behaviour and related constructs.
3. The study has confirmed that time management behaviour has direct and indirect effect on psychological outcomes of the university teachers. The immediate area of concern is that teachers must learn time management behaviour. Specialized training programs should be organized by the QEC of all universities for all teachers to learn time management behaviour, related tactics and strategies. The theorist (Macan, 1996) explains that time management behaviours can be developed, improved and enhanced through time management training.
4. The famous organization researcher Hofstede (2004) has placed Pakistani employees on short-term time orientation which also indicates that time related orientation of Pakistani employees is relatively poor. Thus, there is need to work on the time management behaviour of the university teachers in the light the findings of the present study which proved that time management is linked with dual outcomes. On one side, it contributes to mental 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.
5. The inverse effect of time management behaviour on stress and stressor i.e. role overload has added the value of time management. In the light of these findings, time management behaviour can be used as an effective stress management technique which is applicable, sustainable and worthwhile.

Conclusion

The present study was carried out to achieve dual objectives. 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. Two time-related constructs including time management behaviour significantly predicted dual outcomes among university teachers. Both 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, indirect effect of time management behaviour on dual outcomes was also proved in the present study. 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. The present study has targeted higher education institutions of Pakistan which has currently gone through mass transition due to the policies devised by HEC. Time management behaviour is an important construct of educational psychology. It is also included in the emerging field of positive psychology. In the light of the present study based on a practical performance related issue of university teachers, specialized training programs must be designed to equip academic with many practical strategies of time management. 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 effects work related attitudes by enhancing the satisfaction with job and performance at job. Top performance is beneficial for employees and organizations alike. It contributes 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 of role overload caused by the excessive assignments is limited time. Overall, the present study has theoretical and applied significance.

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