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An assessment of the psychological impacts of time management on employees in the events management sector

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ABSTRACT

Background: One of the most task-relevant attributes in contemporary business environments relates to effective time management. Time management is directly related to employees' psychological impacts; it influences work-related aspects such as stress, employee turnover, well-being, job satisfaction, and job performance.

Purpose of the study: The study determines the psychological impacts of time management on employees within a sector high in time demand and dependent on pre-set deadlines – event management, which is an under-examined business sector.

Design/methodology/approach: An explanatory, deductive research approach was selected where an existing theoretical framework was applied to a sector high in time demand. The study used a quantitative approach – using a self-administered questionnaire representing the different dimensions identified in the time management environment (TiME) measurement scale – to collect data from 151 respondents in South Africa (RSA). Hierarchical regression analyses were performed to measure psychological impacts on employees based on their time management practices

Findings: Positive and negative psychological impacts were experienced based on the dimensions on the TiME scale. Positive psychological experiences resulted from the avoidance of procrastination, setting of deadlines, sufficient supervisory and procedural support, and sound time allocation. However, the tendency to focus on only one task could negatively influence the psychological impacts.

Recommendations/value: The cost of employees experiencing negative psychological impacts is high and could lead to stress, procrastination, and demotivation. This could lead to loss of productivity, missed deadlines, and loss of contracts. To prevent these negative impacts, organisations could add policy recommendations to implement effective time management daily.

Managerial implication: The study's significance pertains to implementing time management practices to benefit the psyche of employees and employers, thus ultimately benefiting the organisation.

Keywords

Event management; event management organisations; event management sector; psychological impacts; time management; time management behaviours; TiME scale.

JEL Classification: M12

1. INTRODUCTION

Time cannot be stored, and once it has passed, it cannot be regained, making it a crucial and valuable resource (Aeon & Aguinis, 2017; Chanie *et al*., 2020; Dahm *et al*., 2015; McNamara, 2016; Wendt *et al.,* 2021). Aeon and Aguinis (2017) described the dimension of time as the degree to which people feel they can manage their time and the relative importance of how to manage it with respect to their personal lives linked to working schedules. Mohammed and Nadkarni (2014) stressed that one of the most task-relevant attributes in contemporary business environments relates to effective time management.

Studies have shown that time management is directly related to employees' psychological impacts: it influences work-related aspects such as stress, employee turnover, well-being, job satisfaction, and job performance (Hawkins & Klas, 1997; Rao & Azmi, 2018; van Eerde, 2015. Effective time management is essential, especially in a business sector characterised high in time demand (Allen, 2005; Dahm *et al*., 2015; Hila *et al*., 2017). Sectors high in time demand, such as the event management sector, are often identifiable by their use of deadlines and task dependency (completion of one task is needed for another to begin) (Allen, 2005; Hoda & Murugesan, 2016). The applicability of the time management environment (TiME) scale has only been tested on non-time-demanding sectors such as aircraft maintenance facilities, tertiary education, local government, and human resource consulting. Hence, the value of the study is that it tests the applicability of the scale on a sector very high in time demand and deadline dependent – the event management sector of Pretoria, South Africa.

An event is a tangible experience bound by space and time. When an event has taken place, it is forever over and cannot be absolutely replicated (Patterson & Getz, 2013). Some perspectives associated with events include business events, fairs, and festivals, sports and leisure events, political events and local customs, culture or religious events (Getz, 2008; Nordvall *et al*., 2014; Svensson & Brown, 2014). The event management sector comprises numerous activities, such as accommodation, catering and hospitality services, and entertainment (Minikin, 2014).

Because the event management sector is a high-stress environment, time management is a crucial factor in alleviating the prevalent negative psychological impacts (Chanie *et al.*, 2020; Dahm *et al*., 2015; Ferreira & Groenewald, 2020; Hard, 2020). Identifying the time management factors that influence employees' psychological impacts in this sector can be valuable in supporting the necessity of effective management of time (Scholtz, 2018).

2. LITERATURE REVIEW AND RESEARCH OBJECTIVE

2.1. Overview of the literature

In the eighteenth century, polymath, inventor, scientist, printer, politician, freemason and diplomat Benjamin Franklin claimed that "time is money" (National Archives, 2017); it cannot be controlled and is a scarce commodity as it is irrecoverable. Managing this resource has gained importance as the phenomenon of having too little time for too many tasks has grown (Aeon & Aguinis, 2017; Vitelli, 2017). Contrary to other controllable resources, time cannot be controlled. Time management involves establishing the tasks to be done because all work takes place within time and uses time (Aeon & Aguinis, 2017). It also involves prioritising these tasks and estimating the time needed to complete each (Chanie *et al*., 2020; Hila *et al*., 2017). The importance of time management prompted various authors to research statements, associations, and guidelines related to time management to generalise various time management elements. Table 1 provides the evolution of time management, which is often the focal point of departure in research studies.

Table 1: Time management models, techniques, and theories

Authors	Date	Model or theory	Content
Pareto	1897	Pareto's Principle- The 80–20 Rule	This principle allows maximum results in minimum time. It offers the opportunity to increase personal effectiveness. The principle 80/20 can also be used in time organising, which increases the effectiveness of the individual and that of the organisation
Eisenhower	1954	Eishenhower Matrix or Principle	Eishenhower matrix consists of four quadrants: 1) Important and urgent tasks 2) Important but not urgent tasks 3) Not important but urgent tasks 4) Not important and not urgent tasks
Lakein	1973	ABC Model of Time Management	Three fundamental ideas: Awareness, Believe, and Continuation
Schriber and Gutek	1987	Time Dimensions of Work (TMS)	Measure how well an organisation effectively schedules, co-ordinates, and synchronises its staff and tasks throughout the time
Bond and Feather	1988	Time Structure Questionnaire (TSQ)	Designed to measure the degree to which individuals perceive the use of time as structured and purposive; TSQ does not

			measure traditional time management behaviours
Macan *et al*.	1990	Time Management Behavior Scale (TMBS)	A four-factor-measuring instrument with 46 items derived from topic areas in time management such as setting goals and priorities, learning to say "no", making a things-to-do list, organising, planning, delegating, and procrastinating
Britton and Tesser	1991	Time Management Questionnaire (TMQ)	Distinguish short-range strategies that focus on the day-to-day planning and organisation of time from long-range strategies that regulate their effort regarding a longer time horizon
Landy *et al*.	1991	Behaviorally Anchored Rating Scale (BARS) measures of time urgency also known as the Time Urgency Scale	(1) time awareness, (2) eating behaviour, (3) scheduling, (4) nervous energy, (5) list-making, (6) speech patterns, and (7) deadline control
Macan	1994	Process Model of Time Management	Identifying time management behaviours and impacts by differentiating between strategies related to setting goals and establishing priorities and a diverse array of specific tactics for regulating their time
Claessens *et al*.	2007	Time Management Literature Review	Time management literature on how the organisational environment influences time management
Burt *et al*.	2010	Time Management Environment (TiME) scale	Holistic measurement of both the individual's time management abilities and the organisation's TiME
Covey	2013	Covey's Time Management Grid	The Covey Time Management grid is an effective method of organising priorities. It consists of four quadrants: 1) immediate and important deadlines 2) long-term strategies and development programs 3) time-pressured distractions 4) low value yielding activities
Aeon & Aguinis	2017	Time Management Literature Review	Time management literature on how time management is scattered across various disciplines, including psychology, and how individual differences affect time management efficacy

Sources: Own compilation

An array of definitions for time management is available in previous research publications focussing on business research. However, this study follows the definition from Claessens *et al.* (2007). Claessens *et al.'s* (2007) definition involves effectively using or managing one's time and touches on the behaviours practiced. Time management can be defined as behaviours that achieve effective use of time while performing certain goal-directed activities. These behaviours comprise time assessment, planning, and monitoring (Claessens *et al*.,

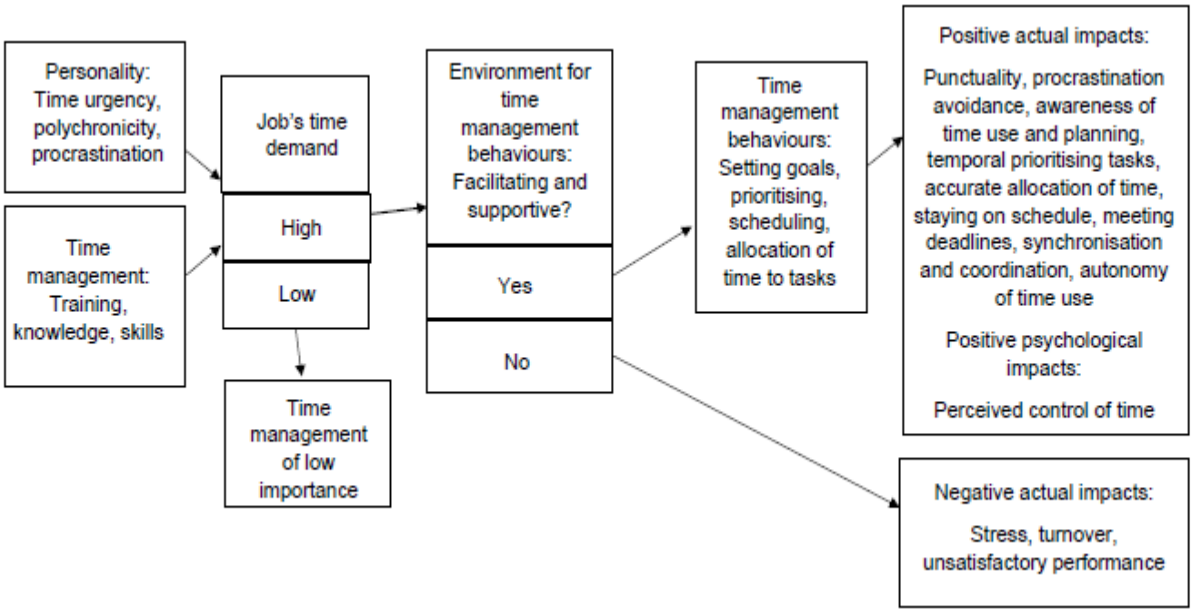
2007); this definition was also supported by Čiarnienė and Vienanžindienė (2014). The importance of time management has also been researched from a business perspective where it showed the ability to increase competitiveness, reduce turnaround time, improve group performance and improve completing time estimates (Aeon & Aguinis, 2017).

After noting the absence of a model integrating the behaviours of time management and the organisation's environment in terms of facilitating these behaviours, Burt *et al.*, (2010) embarked on a project to incorporate previous time management research into an integrative framework. The developed framework comprises a range of available time management resources, such as time management constructs; personality traits literature, and the link between time management and personality traits (Aeon & Aguinis, 2017; Conte *et al.*, 1998; Kaufman-Scarborough & Lindquist, 1998; Landy *et al.*, 1991). It also comprises the process model of time management that identifies time management behaviours and psychological impacts (Aeon & Aguinis, 2017; Macan, 1994); research regarding the temporal demands of a job and the influence of time management training (Francis-Smythe & Robbertson, 2003); and time management literature on how the organisational environment influences time management (Čiarnienė & Vienanžindienė, 2014; Claessens *et al*., 2007).

The framework created by Burt *et al*. (2010), known as the TiME scale, appears to be unique in its focus. It provides a holistic measurement of the individual's personality and time management abilities, the organisation's time management environment, and the psychological impacts employees experience as a culmination of these factors.

Burt *et al.* (2010) extended their framework by suggesting that these time management dimensions can influence an individual's psychological impacts with effective and ineffective time management determining positive and negative psychological impacts, respectively (Burt *et al.*, 2010; Schriber & Gutek, 1987). There are five main TiME scale dimensions presented in Figure 1 (Burt *et al*., 2010).

Figure 1: Time Management Environment (TiME) scale



Source: Burt *et al.* (2010)

- The individual's **personality** and **time management knowledge and skills** determine the likelihood of managing time effectively. Aspects of personality include time-urgency (individuals feel chronically hurried), polychronical use of time (ability to do more than one task at a time) and procrastinatiing (waste time) (Brodsky & Amabile, 2018; Burt *et al*., 2010; Kuhnel *et al*., 2016; Pachler *et al*., 2018; Scholtz, 2018). Time management training has a positive influence on time management abilities (Burt *et al*., 2010; Häfner *et al*., 2014). It teaches capabilities that allow more control over time, more efficient use of time, and increased efficiency at work (Aeon & Aguinis, 2017). In contrast, other studies show that differences in individual's time-related perspectives might mean they are less likely to benefit from receiving training (Aeon & Aguinis, 2017; Macan, 1994).
- The **time demands of the job** determine the extent to which tasks are dependent on time. The more time-dependent the tasks the more important the efficacy of time management (Akthar, 2016; Burt *et al*., 2010; Kaufman *et al*., 1991). Jobs high in time demand are often identifiable by the use of strict and continuous deadlines or high in task dependency, where one task's commencement depends on the completion of the other (Hoda & Murugesan, 2016).
- The **organisational environment** further influences the employees' time management abilities through the prevailing role of time management in the

organisation and allocating this scarce resource. An organisational setting that supports and facilitates effective time management can positively influence employees' time management abilities. In contrast, an unsupportive and impeding organisational setting can have a negative effect on the use of time (Burt *et al*., 2010). Huang *et al.* (2019) further explain that an important factor to consider is the relationship or 'fit' between an individual's time personality and the organisation's time personality. Job–person fit can only exist if there is a match between these personalities and will produce positive impacts such as increased productivity and individual well-being; increased job satisfaction and commitment (Huang *et al.*, 2019).

- The fourth dimension of the TiME scale is **time management behaviours**. It includes setting goals, prioritizing these goals, and scheduling and allocating time to these goals (Burt *et al*., 2010). However, Burt *et al*. (2010) explained that the effective use of time management behaviours stems from creating a supporting and facilitating time management setting. In the TiME scale, these authors stipulated that time management behaviours were associated only with positive psychological impacts.
- The final dimension relates to the **impacts** that will be achieved, considering the results of the previous dimensions; it can either be positive if time is managed effectively or negative if not managed effectively or if poor time management is practiced (Aeon & Aguinis, 2017; Burt *et al*., 2010).

By incorporating the range of time management resources, Burt *et al*. (2010) created a comprehensive framework to allow organisations to determine their current position in time management practices and their employees' psychological impact.

The event management sector can be regarded as high in time demand because rapid and effective time management is required to ensure successful events. In turn, this contributes to the success of the relevant organisations (Green & Skinner, 2005). The event management sector is characterised by high stress; therefore, effective time management is crucial to alleviate some of the inherent stress and ensure tasks are completed correctly and timeously (Ferreira & Groenewald, 2020; Hard, 2015). Inadequate time management within the event sector has led to several challenges. These include (Lucier, 2020; Sanford, 2010):

- increased logistical problems,
- forfeited opportunities for re-appointment,
- increased execution cost of the project,
- loss of organisation,
- time wastage while determining pending task completions, and

- becoming overwhelmed trying to return to a position where you have control over which task should be completed next.

2.2. Research objective

Although the TiME scale's validity as a measure of time management dimensions has been proven (Burt *et al*., 2010), the generalisability of the dimensions has not been sufficiently tested in different sectors and organisational cultures indicating a knowledge gap necessitating further research. The research aims to determine the psychological impacts of time management on employees within a sector high in time demand, the event management sector in Pretoria, the Republic of South Africa (RSA). After conducting a literature search for "time management" using various databases such as EBSCO's Business Sources Complete, ProQuest, Google Scholar, and JSTOR, they found that very little time management-related research was conducted within the last five years (refer to Table 1), from both a business and event management perspective, further motivating conducting of the study. Thus, the researchers aimed to close a gap in the literature by testing the applicability of the TiME scale within a time-demanding and deadline-dependent sector and providing possible time management solutions to challenges experienced in the event management sector.

3. RESEARCH DESIGN AND METHODOLOGY

An explanatory, deductive research approach was selected to apply an existing theoretical framework to a specific context. The study used the event management sector in Pretoria, South Africa to analyse data and draw conclusions. A quantitative data collection technique with an analytical survey research strategy is used to collect structured, quantitative data of sufficient depth to enable meaningful research on this subject (Burt *et al*., 2010; Drucker, 1954; Kaufman-Scarborough & Lindquist, 1998; Macan, 1994; McKay, 1959 Taylor, 1911).

The development of the self-administered questionnaire was based on the dimensions identified in the TiME scale (Burt *et al*., 2010): 1) individual's personality and time management knowledge and skills; 2) time demands of the job; 3) organisational environment; 4) time management behaviours, and 5) impacts that will be achieved. Burt *et al*.'s (2010) complete questionnaire was not readily available; therefore, the researchers had to develop a questionnaire with the same constructs as in the TiME scale dimensions. First, the researchers examined the established measuring items already tested and validated. Measuring items used with the permission obtained from the developers via email included the measurement of the personality dimension of the scale, time-urgency (Landy *et al*., 1991), polychronicity (Poposki *et al*., 2009) and procrastination (Steel, 2010). The items used to measure facilitation of a time management supporting environment were established by Burt *et al.* (2010). Where

established measuring items were not available, the current researchers developed items based on previous research: the time demand of a job (Burt *et al*., 2010) and time management behaviours (Malkoc & Tonietto, 2018). The researchers expanded on the dimensions proposed by Burt *et al*. (2010) (refer to Figure 1) by including analysis of the extent of positive and negative impacts based on theoretical findings by previous researchers (Aeon & Aguinis, 2017; Häfner *et al*., 2014, Häfner *et al*., 2015). To establish measurement items for the dimension of time management training, the researchers used the knowledge and skills received from training and qualification opportunities available in the South African context.

Therefore, the questionnaire comprised six questions representing the time management dimensions impacting employees' psyche (refer to Figure 1). Table 2 presents the questions and sources.

Table 2: Questionnaire structure: questions and source

	TiME scale dimension	Construct	Source	Author(s) and year published
Q1	Personality factors influencing time management	Time-urgency	Established measuring items	Landy *et al.* (1991)
		Polychronicity	Established measuring items	Poposki *et al.* (2009)
		Procrastination	Established measuring items	Steel (2010)
Q2	Training, knowledge and skills		Researchers' own compilation	
Q3	Job's time demand		Compiled from previous research	Burt *et al.* (2010)
Q4	Facilitating and supporting environment		Established measuring items	Burt *et al.* (2010)
Q5	Time management behaviours		Compiled from previous research	Malkoc *et al.* (2018)
Q6	Positive and negative psychological impacts experienced		Compiled from previous research	Burt *et al.* (2010)

Source: Own compilation

Personality factors influencing time management were measured using 33 Likert-scale items (Strongly disagree; Disagree; Neutral; Agree; Strongly agree) regarding the respondent's time management personality (time-urgency, polychronicity, and procrastination) as displayed in Table 6 (Landy *et al*., 1991; Poposki *et al*., 2009; Steel, 2010). The use of Likert-scale's measuring items allowed the researchers to test an increased range of responses to personality questions, gaining a more in-depth perspective (Refer to Table 6). Measuring training, knowledge, and skills aimed to determine the experiences of

respondents on this dimension. The questions consisted of dichotomous (Yes or No) and multiple-choice questions (such as qualifications obtained with options including degree, diploma, certificate, short-learning programmes, and online training programmes) as it only had to establish the type and extent of training and skills the respondent obtained. Job's time demand measured the perceived time demand that respondents experienced in their work environment. To determine whether they believe their work is high in time demand, the researchers used dichotomous questions (Yes or No) as limited depth was needed in the responses. However, to determine whether deadlines were important, the researchers used the rating scales to accurately measure the respondent's opinion (scale from one to ten). Facilitating and supporting environment determined the level of facilitation and support respondents received in their work environments and comprised eighteen Likert-scale items as displayed in Table 6 (Strongly disagree; Disagree; Neutral; Agree; Strongly agree) (Burt *et al*., 2010). Once again, the use of Likert-scale measuring allowed for testing an increased range of responses regarding their time management environment. Time management behaviours determined respondents' practices (Malkoc *et al.*, 2018). One multiple-choice, multiple-response question indicating whether certain behaviours are practiced (with options including setting goals; prioritising; scheduling, and allocation of time to tasks) provided sufficient depth of data on time management behaviours practiced. The final question measures the positive and negative psychological impacts experienced due to time management in their work environments (Aeon & Aguinis, 2017; Burt *et al*., 2010; Häfner *et al*., 2014, 2015). Using Likert-scale measuring items (Not at all; Not on a regular basis; Moderate; On a regular basis; Always) reflected in Table 6 to determine how often they experience these impacts provided a larger range and greater depth of data. Table 3 summarises the format of structured questions within the questionnaire.

Table 3: Format of structured questions

Type of question	Sections in the questionnaire
Dichotomous question (Yes or No)	Question 2.1; 2.1.2; 3.1; 3.4
Multiple-choice, single response question (ranges indicated above)	Question 2.1.3; 2.2
Multiple-choice, multiple response question (ranges indicated above)	Question 2.1.1; 5
Itemised rating scale (provided above)	Question 3.2; 3.3
Likert scale (ranges indicated above)	Question 1; 4; 6

Source: Scholtz (2018)

Although most of the measuring items had previously been tested and validated (see Table 2), a pilot test was conducted to ensure the quality and validity of the questionnaire in its entirety. From the sampling frame, five event management organisations were selected (and subsequently removed from the sampling frame) and contacted for an appointment. As these five organisations formed part of the event management sector, they were suitable respondents to pilot test the questionnaire. All employees and employers were requested to complete the questionnaire and ask questions or comment where they were unsure. The researchers gathered 25 completed questionnaires from the pilot study. With a statistician's help, the completed questionnaires were scrutinised and augmented based on comments received from pilot test respondents. The language of two Likert-scale questions was adapted as the meaning of terms seemed ambiguous to the pilot study respondents. Because only 25 responses were received during the pilot test, no statistical analyses could be conducted.

The researchers used field workers to increase the speed of data collection and prevent any bias from the researchers. While the questionnaires were completed, fieldworkers also allowed for a better response rate and better number of error-free questionnaires collected. Before data were collected, each fieldworker received training on the questionnaire and practices to reduce bias while engaging with a respondent. All fieldworkers were required to sign non-disclosure contracts to ensure ethical conduct and confidentiality of respondents. To ensure ethical data collection, the researchers obtained ethical clearance from the Ethics Committee of the institution. Permission to conduct the research was obtained from the employers or employers of all the participating organisations, and informed consent was obtained from all the respondents who completed the questionnaire.

The researchers used the OLX classifieds database (OLX classifieds, 2016) as the sample frame for the study. It provided the most relevant and complete results regarding event management organisations in Pretoria, South Africa. As a sample frame was used, a systematic probability sampling method was employed to draw a sample (Saunders *et al.*, 2019). The sample consisted of 27 event management organisations selected from the identified sample frame of 62 event management organisations. The employers and all employees of the relevant organisations present on the day were requested to participate in the data collection, with a response rate of 100 percent. Employers and employees completed a total of 151 questionnaires. Table 4 summarises the figures in terms of the sampling frame and organisations and respondents applicable to the pilot testing and data collection phases. Because a sample frame was used, sampling bias may be present if not all event

management organisations in Pretoria, South Africa, formed part of the OLX classifieds database.

Table 4: Sampling frame, organisations, respondents

	Organisations	**Respondents**
Sampling frame	62	
Pilot testing	5	25
Data collection	27	151

Source: Own compilation

4. DATA ANALYSIS AND RESULTS

The sample's demographic statistics, including gender, ethnicity, age, geographical location, and years of operation per organisation, are displayed in Table 5.

Table 5: Demographic statistics of the sample

Gender distribution (%)	
Male	25.8
Female	74.2
Ethnicity of sample (%)	
African	26.5
White	35.1
Colored	21.2
Asian/Indian	17.0
Age group (%)	
18-25	13.9
26-35	43.0
36-45	23.1
46+	20.0
Location of organisation (%)	

Pretoria East	55.6
Pretoria North	7.4
Pretoria West	7.4
Pretoria Moot	22.2
Pretoria Central	7.4
Duration of the existence of the organisation (%)	
Less than 3 years	3.7
3–5 years	29.6
More than 5 years	66.7

Source: Own compilation

The study used hierarchical multiple linear regression analyses to determine the influence of the TiME scale dimensions on the psychological impacts (Quinlan *et al.*, 2015). First, an exploratory factor analysis (EFA) assisted in determining the internal reliability of the scale and subscales and producing a more manageable number of variables from a large set of scale items. Principal axis factoring, as the factor extraction method, and Promax, as the rotation method, were used to determine the underlying factor structure of the questions related to time-urgency, polychronicity, procrastination, facilitating, and supportive nature of organisations concerning time management and the psychological impacts experienced. All questions in the EFA were measured using the 5-point Likert-type scale. The EFA results identified nine factors with sufficient reliability and factorial structure, according to the Cronbach Alpha measure (Hair *et al.*, 2014). The factors identified are summarised in Table 6. Because questions 1.19 and 1.21 were negatively phrased while others were positively phrased, the reversed score (*R*) was used to depict the results. This ensured that the results reflected all the statements to appear in the same direction (Quinlan *et al.*, 2019:112).

Table 6: Factors identified

Factor label	Cronbach Alpha	Questionnaire items included in the factor
Time urgency		
Time urgency	0.856	1.1 I normally talk rapidly 1.2 I am restless and fidgety 1.3 I always feel pressed for time 1.4 I am hard-driving and competitive 1.6 I work quickly and energetically 1.7 I am ambitious 1.8 I believe I am responsible
Polychronicity		
Focus on tasks	0.794	1.9 I prefer to work on several projects in a day, rather than completing one project and then switching to another 1.10 I would like to work in a job where I was constantly switching from one task to another, like a receptionist or an air traffic controller 1.11 I lose interest in what I am doing if I have to focus on the same task for longer periods, without thinking about or doing something else 1.12 When doing several assignments, I like to switch back and forth between them rather than do one at a time
Switching between tasks	0.724	1.13 I like to finish one task completely before focusing on anything else 1.14 It makes me uncomfortable when I am not able to finish one task completely before focusing on another task 1.16 I do not like having to switching my attention between multiple tasks 1.17 I would rather switch back and forth between several projects than concentrate my efforts on just one 1.18 I would prefer to work in an environment where I can finish one task before starting the next
Task orientation	0.770	1.15 I am much more engaged in what I am doing if I am able to switch between several different tasks 1.19 I do not like when I have to stop in the middle of a task to work on something else (R)

		1.20 When I have a task to complete, I like to break it up by switching to other tasks intermittently 1.21 I have a "one-track" mind (R)
Procrastination		
Procrastination	0.947	1.23 I delay making decisions until it's too late 1.24 Even after I make a decision, I delay acting upon it 1.25 I put off making decisions 1.26 I waste a lot of time on trivial matters before getting to the final decision 1.27 In preparation for some deadline, I often waste time by doing other things 1.28 Even jobs that require little else except sitting down and doing them, I find that they seldom get done for days 1.29 I often find myself performing tasks that I had intended to do days before 1.30 I am continually saying "I'll do it tomorrow" 1.31 I find myself running out of time 1.32 I don't get things done on time 1.33 I am not very good at keeping deadlines
Facilitating and supportive environment		
Supervisor support	0.920	4.1 Supervisors provide clear task guidelines 4.2 Plans for task completion are developed with supervisors 4.3 Feedback on my task priorities are given regularly 4.4 Task priorities are regularly discussed with supervisors 4.5 Jobs are designed around task sequences 4.6 Supervisors are interested in the processes used to complete tasks 4.7 Processes used to achieve goals are continuously monitored 4.8 Jobs are designed around the key processes needed to achieve goals
Co-worker support	0.633	4.9 Co-workers discuss task priorities and goals 4.10 Staff work together to organise each day's schedule 4.11 Staff remind each other of appointments
Procedural support	0.864	4.12 Performance is reviewed within a performance appraisal system

		4.13 Making time to plan a day's work is encouraged 4.14 Documents on time management practice are provided to staff 4.15 Use of time management techniques is facilitated by supervisors
Time management values	0.884	4.16 Emphasis is placed on keeping to deadlines 4.17 Time is considered to be an important resource 4.18 Productive use of time is a key value
Psychological impacts experienced		
Positive psychological impacts	0.808	6.1 Punctuality 6.2 Procrastination avoidance 6.3 Awareness of time use 6.4 Awareness of planning 6.5 Temporal prioritizing of tasks 6.6 Accurate allocation of time 6.7 Staying on schedule 6.8 Meeting deadlines 6.9 Synchronization and coordination of tasks 6.10 Autonomy of time use 6.11 Perceived control of time
Negative psychological impacts	0.890	6.13 Unsatisfactory performance 6.14 Consider resigning your job 6.15 Considering another speciality

Source: Own compilation

* Reverse scored (R)

Training, knowledge, and skills; job's time demand, and time management behaviours were not measured using Likert scale items and therefore not included in the EFA. However, the level of skills in time management, the importance of deadlines, and time management behaviours (setting goals, scheduling, prioritising, allocation of time to tasks) within event management organisations were also included in the hierarchical regression analysis.

Following the factor analysis, the regression analysis allowed the measurement of the relationships between the TiME scale dimensions and the positive and negative psychological impacts. The factors identified from the EFA, and additional items identified in the TiME scale and discussed in the literature review served as the independent variables

used for the hierarchical regression analyses. These additional factors include time management training received, the job's time demand, and time management behaviours.

4.1 Positive Psychological Impacts

Analyses with positive psychological impacts as dependent variables examined the relationship with the independent variables derived from the TiME scale dimensions (Table 7). Relevant independent variables were included sequentially (i.e., items were added for each regression analysis), thus generating four hierarchical regression analysis outcomes.

Table 7: Positive psychological impacts – Independent variables

	Variables included
Outcome 1	• Time-urgency, focus on tasks, switching between tasks, tasks orientation, procrastination, level of experience, and skills in time management
Outcome 2	• Time-urgency, focus on tasks, switching between tasks, tasks orientation, procrastination, level of experience, and skills in time management • Importance of deadlines
Outcome 3	• Time-urgency, focus on tasks, switching between tasks, tasks orientation, procrastination, level of experience, and skills in time management • Importance of deadlines • Supervisor support, co-worker support, procedural support , and time management values
Outcome 4	• Time-urgency, focus on tasks, switching between tasks, tasks orientation, procrastination, level of experience, and skills in time management • Importance of deadlines • Supervisor support, co-worker support, procedural support , and time management values • Setting goals, scheduling, prioritising, allocation of time to tasks

Source: Own compilation

After analysing all four outcomes, the adjusted R-square showed that with each successive independent variable, there was an increase in the percentage variability explained for the dependent variable – positive psychological impacts (Table 8). This indicates that each incorporated TiME scale dimension increased the positive psychological impacts. Together, the independent variables accounted for 47.4 percent of the variance for positive psychological impacts.

Table 8: Positive psychological impacts: outcome summary

	R	R Square	Adjusted R Square	Std. Error of the Estimate
Outcome 1	0.419	0.175	0.140	0.80097
Outcome 2	0.579	0.335	0.302	0.72167
Outcome 3	0.671	0.450	0.406	0.66582
Outcome 4	0.726	0.527	0.474	0.62672

Source: Own compilation

Specific independent variables that influenced the hierarchal regression analysis outcomes are reflected in Table 9.

Table 9: Positive psychological impacts: variable specific influencers*

Independent variables	Outcome 1	Outcome 2	Outcome 3	Outcome 4
Procrastination	-.0398	-0.301	-0.228	-0.230
Importance of setting deadlines		-0.424	-0.383	-0.336
Supervisor support				0.147
Procedural support			0.252	0.190
Allocation of time to tasks				0.273

Source: Own compilation

*Standardised beta coefficients are presented

The hierarchical regression for the dependent variable – positive psychological impacts – shows that it is not only the TiME scale dimensions that influence the positive psychological impacts but also specific independent variables within the TiME scale dimension that contributed to the positive psychological impacts.

4.2 Negative Psychological Impacts

Analyses with negative psychological impacts as dependent variables examined the relationship with the independent variables derived from the TiME scale dimensions (Table 10). Relevant independent variables were included sequentially (i.e., items were added for each regression analysis). Since the TiME scale did not include time management behaviours

as part of the negative psychological impacts (refer to Figure 1) (Burt *et al*., 2010), only three hierarchical regression analyses were conducted.

Table 10: Negative psychological impacts: independent variables

	Variables included
Outcome 1	• Time-urgency, focus on tasks, switching between tasks, tasks orientation, procrastination, level of experience, and skills in time management
Outcome 2	• Time-urgency, focus on tasks, switching between tasks, tasks orientation, procrastination, level of experience, and skills in time management • Importance of deadlines
Outcome 3	• Time-urgency, focus on tasks, switching between tasks, tasks orientation, procrastination, level of experience, and skills in time management • Importance of deadlines • Supervisor support, co-worker support, procedural support , and time management values

Source: Own compilation

After conducting analyses for all three outcomes with successive independent variables, the adjusted R-square did not reveal a significant overall increase in variability. The variability that was present decreased with the addition of the independent variable (importance of setting deadlines), indicating a decrease in the influence of negative psychological impacts. With regression analysis outcome 3, the addition of the remaining independent variable saw a slight increase in the variability. This indicated a slight increase in the influence of the remaining TiME scale dimensions on negative psychological impacts. In total, the independent variables accounted for only 5.8 percent of the variance for negative psychological impacts. Table 11 summarises the hierarchical regression analysis outcomes for the dependent variable negative psychological impacts.

Table 11: Negative psychological impacts: outcome summary

	R	R Square	Adjusted R Square	Std. Error of the Estimate
Outcome 1	0.267	0.071	0.032	0.89261
Outcome 2	0.270	0.073	0.027	0.89493
Outcome 3	0.357	0.128	0.058	0.88060

Source: Own compilation

Specific independent variables that influenced the hierarchical regression analysis outcomes are summarised in Table 12.

Table 12: Negative psychological impacts: variable specific influencers*

Independent variables	Outcome 1	Outcome 2	Outcome 3
Focus on tasks	0.270	0.264	0.248
Time management values			-0.174

*Standardised beta coefficients are presented

Source: Author's compilation

The hierarchical regression for the dependent variable – negative psychological impacts – shows that the TiME scale dimensions contributed very little in explaining the variance in the dependent variable.

5. DISCUSSION

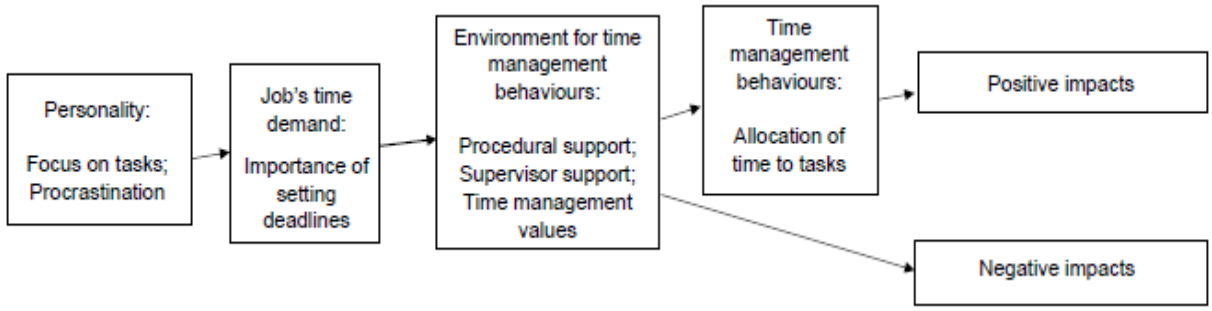
A conceptual model was developed based on the hierarchical regression results to show how employees within the event management sector are influenced positively and negatively by the TiME scale dimensions (see Table 9 and Table 12). Notable differences between the conceptual model and integrative framework developed by Burt *et al*. (2010) are as follows:

- The conceptual model specific to event management organisations differed from the integrative framework developed by Burt *et al.,* 2010 (see Figure 2). It only indicated a focus on tasks (polychronic use of time) and procrastination as a significant influence on the psychological impacts experienced within a time-demanding sector. Factors that were not significant influencers of employees' psychological impacts, and therefore omitted, were personality factors: time urgency, shifting between tasks (polychronic use of time), and task orientation (polychronic use of time).
- The conceptual model specific to event management organisations indicated that time management training, knowledge, and skills are not a significant influencer of employees' psychological impacts (see Figure 2). The time management training, knowledge, and skills dimension was therefore excluded from the developed conceptual model.
- Results confirmed that the event management sector is high in time demand, and employee psychological impacts are significantly influenced by setting deadlines. The

dimension is therefore also incorporated in the conceptual model (see Figure 2). Therefore, the conceptual model refined the analysis done on the time demand dimension of the integrative model (Burt *et al.*, 2010) with setting deadlines as a significant influencer. This incorporation could allow for a more in-depth determination of a sector's high or low time demand and the influence of setting deadlines on employees' psychological impact.

- In terms of a facilitating and supportive environment, the conceptual model specific to event management organisations indicated procedural support, supervisor support, and facilitating time management values (see Figure 2) as significant influencers in increasing positive psychological impact experienced and minimising negative psychological impacts.
- For time management behaviours, the conceptual model specific to event management organisations (see Figure 2) only incorporates time allocation to tasks as a significant influencer of positive psychological impacts experienced. The setting of goals, prioritising, and scheduling is excluded because results indicated that they are not significant influencers of the positive psychological impacts experienced by employees.

Figure 2: Conceptual model



Source: Own compilation

The hierarchical regression analysis determined that the TiME scale dimensions positively and negatively influence event management employees' psyche. It also showed that there are specific variables within dimensions that affect the psychological impacts. On the one hand, an increase in positive psychological impacts can occur if (Brodsky & Amabile, 2018; Scholtz, 2018; Wolters *et al.*, 2017):

- Individuals are not prone to procrastinate;
- Individuals are inclined to set deadlines;

- The organisational environment ensures sufficient support from employees, supervisors, and managers, as well as procedural support; and
- Individuals practice the time allocation to tasks as a general time management behaviour.

On the other hand, an increase in negative psychological impacts can occur if (Brodsky & Amabile, 2018; Scholtz, 2018):

- Individuals cannot multi-task; and
- Individuals do not place sufficient value on time management.

Time is the most important and valuable asset to human beings; it includes the amount of time they have during their lifetime (Aeon & Aguinis, 2017). Therefore, if time is used effectively, it will yield positive and optimum consequences in all aspects of people's lives and, subsequently, society. This study proved that the positive psychological impacts outweigh the negative psychological impacts.

6. CONCLUSION

Time is a unique resource; it can be managed but not controlled. It is further considered as one of the most important and valuable human resources, viewed through a professional and personal lens. The importance of knowing which time management variables contribute toward the positive psychological impacts experienced by employees lies in the influence these variables can have on work-related aspects. To ensure that employees experience more positive and less negative psychological impacts, time-demanding sectors should strive to include more TiME scale dimensions (Scholtz, 2018). This may result in abundant positive psychological impacts.

This study provides an important contribution to the recent time management and event management knowledge base. It further contributes to the literature by demonstrating that time management can influence the psychological impacts within sectors high in time demand. Furthermore, the study contributes a conceptual model applicable to a sector high in time demand and dependent on deadlines – the event management sector. The analysis of the study helps refine the time demand dimension as it confirmed the setting of deadlines as a significant influencer of psychological impacts in a sector high in time demand. Although our findings may apply to the event management sector, or perhaps sectors high in time demand, they may not be applicable to all professions.

Analyses conducted suggest that numerous specific variables contribute to the positive (see Table 9) and negative (see Table 12) psychological impacts within the event management sector in Pretoria, South Africa. The implications for employers are that if positive and negative

influencing factors are maximised and minimised, respectively, they can increase the positive impacts on employees' psyche and achieve reduced pressure at work, thus delivering projects on time and effective utilisation of time. The managerial implications are therefore to discourage procrastination (Brodsky & Amabile, 2018; Wolters *et al*., 2017), encourage the setting of deadlines (Malkoc *et al*., 2018, Scholtz, 2018), sufficient supervisory and procedural support, and good time allocation (Dahm *et al*., 2015). Implementing these factors and increasing their presence could influence the positive psychological impacts for employees (Chanie *et al.,* 2020; Scholtz, 2018). Similarly, managers should minimize negative psychological impacts for employees by providing a work environment conducive of multi-tasking. Placing a high value on time management could encourage more effective time management, thus decreasing negative psychological impacts (Scholtz, 2018).

Future research may investigate the impact of TiME scale dimensions or psychological impacts on organisations' success and functionality in different business sectors and organisational cultures. Furthermore, using a self-discrepancy theory and focusing on dejection- and agitation-related impacts might also shed light on how the TiME scale dimensions influence individuals' work satisfaction and psychological and physical well-being.

Limitations of the study exist in that only event management organisations in Pretoria registered on the OLX free advertisement classifieds formed part of the population for the study, possibly affecting the representativeness of the sample and extent of generalisability. Future research could determine whether adhering to the TiME scale within the event management sector, or other business sectors influences the success of organisations or projects within organisations.

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