

Mise en place: time management behaviour and flow within the hospitality training environment

Ita Geysers*

Freddie Crous

Madelyn Geldenhuys

University of Johannesburg
Auckland Park, Bunting Road Campus
Johannesburg, South Africa
E-mail: itag@uj.ac.za

Corresponding author*

Abstract

This study investigated the relationship between time management behaviour (TMB) and flow (optimal experience) which is a psychological well-being construct embedded in subjectivity within in the culinary training environment. Time constraints may have an adverse impact on a culinary student's personal skill of his/her culinary ability. The construct of *flow* (optimal experience) refers to the state in which individuals are so intensely involved in an activity that nothing else seems to matter. The activity is so enjoyable that individuals will perform it for the sheer sake of doing it, even at great personal cost. A cross-sectional survey was conducted using a sample of n=229 students at a tertiary institution spanning across different ages, racial groups and education levels. Significant relationships were found between flow and TMB. The dimensions of TMB mediated through perceived control of time on flow. Successful TMB skills may be beneficial for increasing flow experiences within hospitality management which in turn could contribute to better work performance within the hospitality industry and should consequently be embedded in culinary training to enhance subsequent work performance.

Keywords: TMB, psychological well-being, flow, culinary training environment, hospitality management, culinary students

Introduction

The mass media has romanticised the culinary aspect of the hospitality industry through culinary shows and as a result the students who enter this profession in South Africa are unaware of the highly pressurised nature because of the environment. Time constraints may have an adverse impact (Green & Selman, 2005) on a student's personal skill of his/her culinary ability. Time pressure is therefore a serious aspect to consider within the culinary training environment.

Culinary training within the South African tertiary education context is part of vocational education and training (VET) and refers to the refinement and progress of specific skills and proficiencies, such as culinary expertise, in addition to the extensive supporting knowledge of culinary proficiencies that is necessary for paid employment within the hospitality industry (Young & Gamble, 2006). The result of training and skills development within the culinary domain should be of an equal standard to being proficient within the workplace (Gekara, Bloor & Sampson, 2011). The challenge for educators therefore lies in training students for their prospective roles within the culinary working environment, and

consequently allowing these students to be accountable for their own creativeness and capabilities (Bereiter & Scardamalia 1993; Bruner, 1996). This emphasis on the development of competence and skills in an environment which is highly pressurised, does not always sit well with students who either enter the training environment without a real interest (this may be specific to the problem in South African higher education, where there is not sufficient career guidance and counselling for a large section of the population) or students who are attracted to this vocation by high profile cooking shows and celebrity chefs featured in the mass media (*cf.* Gamble & Young, 2006; Geysers, Crous & Geldenhuys, 2012.) There are, however, students in this highly pressurised culinary environment that thrive and experience high levels of enjoyment being culinary artists and producing culinary products within the hospitality industry. Culinary art from a training perspective, is a positive experience, a phenomenon which has not yet been explored in a comprehensive and systematic manner. In addition, the rapid growth of positive psychology and the assessment thereof (*cf.* Lopez & Snyder, 2003) has made the exploration of this phenomenon a viable endeavour.

Positive psychology is the scientific and applied approach to unearth peoples' strengths and develop their optimal functioning and experiences (Lopez & Snyder, 2007). Optimal experience may be expressed in terms of psychological flow. Flow refers to the state in which individuals are so intensely involved in an activity that nothing else seems to matter, and is so enjoyable that individuals will carry this activity out, even at great personal cost, simply for the sheer sake of doing it (Bakker, 2005). Time management is a resource of interpreting the use of time, and appraising the comparative importance of activities through the expansion of a prioritisation plan and behavioural clusters which improves productivity and relieve stress (Claessens, 2004). The related concept of time management behaviour, however, refers to the individual differences in the manner in which one person manages his/her time, in comparison to another (Claessens, 2004).

The challenge, given the pressurised nature of culinary studies is therefore to gain an understanding of how students' time management behaviour (the individual differences of how one person manages his/her time when compared to another) (Claessens, 2004) is related to the optimal subjective experience of their training.

From a positive psychological perspective one may be able to focus on positive variables that are related to time management behaviour. It is assumed that managing time becomes critical when dealing with culinary pressures. Within this highly stressful work environment, it is crucial to equip student with the necessary skills such as time management behaviour beyond the basic training of culinary art to manage their time and still experience flow. The focus of this study is therefore on the effect of time management behaviour on the positive (optimal) subjective experience of the construct, flow.

Operationalising the constructs

What follows is a review of the operationalisation of a positive psychological construct embedded in subjectivity, namely, *flow* as well as *time management behaviour*. A construct is a concept which is intentionally adopted for a specific scientific purpose. Operationalisation, gives meaning to assigned constructs through the specifications of operations or activities deemed necessary for measurement and evaluation (Kerlinger & Lee, 2000). Furthermore, operationalisation is the process of accurately defining variables as measurable factors. Thus, the operationalisation process is used to define ambiguous concepts in order to measure them empirically and quantitatively (Shuttleworth, 2008).

The operationalisation of flow

The construct of *flow* (optimal experience) was originally devised by Csikszentmihalyi (1990) to refer to the state in which individuals are so intensely involved in an activity that nothing else seems to matter. So enjoyable is the activity that individuals will perform it for the sheer sake of doing it, even at great personal cost with regards to time and effort within the culinary environment. As a result, flow has been described as a fleeting, intrinsic experience (Bakker, 2005).

A remarkable uniformity exists in the description of flow across a variety of contexts (Fullagar & Kelloway, 2009). Csikszentmihalyi (1990) identified eight characteristic component states of flow. Subsequently, informed by the work of Csikszentmihalyi (1990, 1993), Jackson (1996), Jackson and Marsch (1996), as well as Fullagar and Kelloway (2009) nine components or dimensions which are inherent to the experience of flow were identified.

The first component emphasises the balance *between (action) challenges/opportunities and (action) skills/capabilities*. Flow is most likely to be experienced when an individual perceives a balance between a challenging situation and his/her skills (Nakamura & Csikszentmihalyi, 2002). The second component of flow relates to concentration; more specifically the *merging of action and awareness*. An individual may become so involved in the task that his/her behaviour becomes involuntary and automatic (Fullagar & Kelloway, 2009). The third component of flow relates to the *clarity of goals* which emanates from the individual's strong sense of what needs to be done, as a result of his/her complete involvement. The fourth component of flow consists in the activity's ability to provide immediate, clear, and intelligent *feedback* on the progression of the goal (Fullagar & Kelloway, 2009). The fifth component of flow, *the concentration on the task at hand*, requires a high degree of participation. In other words, this component implies that the attention of the individual is solely and vigorously focused on the activity (Fullagar & Kelloway, 2009). The sixth component of flow is the *paradox of control* (Csikszentmihalyi, 1990) which means that the flow experience involves a feeling of being in control and therefore unworried about the loss of control. The seventh component of flow relates to the *loss of self-consciousness*, that is, the individual loses his/her sense of self and becomes one with the task (Fullagar & Kelloway, 2009). The eighth component of flow is connected to the *transformation of time* in that, when one enters a state of flow, one's sense of time is distorted (Fullagar & Kelloway, 2009). Finally, the ninth component of flow is the *autotelic* experience characterised by the fact that the task is so enjoyable that it is engaged in for its own sake. In other words, the task itself becomes an intrinsically motivating experience (Fullagar & Kelloway, 2009).

Jackson and Ecklund (2004) suggest that, together, the nine mental states of flow provide a comprehensive understanding of the optimal experience. Consequently, in the workplace, flow has been measured as either a global construct or a single dimension such as the challenge/skill component state. In short, although there is a significant variance between the nine component states of flow, they are highly interrelated (Fullagar & Kelloway, 2009). Bakker (2005) scrutinised the most prominent definitions of flow and came to the conclusion that there are three core elements inherent to flow, namely, absorption, enjoyment, and intrinsic motivation. *Absorption* refers to a state of intense concentration, in which individuals are so immersed in their work activities that they become oblivious to everything around them. *Enjoyment* is the outcome of effective cognitive evaluations of the flow experience. *Intrinsic motivation* refers to the inherent pleasure and satisfaction gained from engaging in an activity. Rodriguez-Sanchez, Schaufeli, Salanova, Cifre and Sonnenschein (2011) limited the flow experience to enjoyment and absorption. Like Csikszentmihalyi (1990), Rodriguez-Sanchez *et al.*, (2011) refer to flow as a positive psychological state.

The operationalisation of time management behaviour

Lakein (1973) construed time management as the process of determining requirements, setting objectives to achieve these requirements, and prioritising and structuring the activities that are essential to the achievement of the set objectives. Time management also refers to the effective allocation of time for the completion of the numerous daily tasks, and the structuring and appointment of time. According to Koch and Kleinmann (2002:p. 201), time management is a “self-controlled attempt to use time in a subjectively efficient way to achieve outcomes.” Time management influences the relativity of individuals' view of their use of time as structured and, therefore, resolute, the use of rituals that aid the accomplishment of the desired requirements. Time management behaviour, on the other hand, refers to the individual differences in the manner in which one person manages his/her time, in comparison to another. For instance, some individuals map their time cautiously through the use of such time management techniques as scheduling and listing, whereas others do not (Claessens, 2004).

Claessens (2004) defined time management behaviour as a type of behaviour that is intended for success through the expert use of time comprising of three dimensions. The first dimension is an awareness of the past, the present, and the future; this includes a self-awareness of time usage with regard to activities and duties with respect to the restrictions of an individual's skills. This dimension may be referred to as time assessment behaviour. The second dimension consists of instructions that aim at providing skilful time use. These include setting goals, mapping activities, prioritising and creating lists. This dimension may be referred to as planning behaviour. The third dimension relates to structures that facilitate the management of time usage and self-inquiry through the provision of feedback on ongoing activities. This dimension is referred to as monitoring behaviour.

TMB eludes to four important aspects. Firstly, the setting of *goals and priorities* which are “items that tap the setting of goals the person wants or needs to accomplish and prioritising of the various tasks to achieve these goals” (Macan, Shahani, Dipboye, & Philips, 1990: 761). Secondly, the *mechanics of time management* refers to a type of behaviour which is conducive to the managing of time. Examples of such behaviour include the making of lists, and planning (Macan, *et al.*, 1990). Thirdly, *preference for organisation* refers to the extent to which an individual believes that he/she influences his/her spent time (Macan *et al.*, 1990). Preference for organisation encompasses an individual's temperamental penchant for an intrinsically meaningful life (Chang & Nguyen, 2011). Lastly, *perceived control of time* refers to one's feeling of being in control of how one's time is spent. Perceived control of time is associated with an employee's sense of his/her ability to timeously meet deadlines. An employee should cultivate the habit of scheduling and planning tasks, be confident about his/her ability to complete outstanding tasks in the available time, and avoid procrastination (Macan *et al.*, 1990).

The relationship between time management behaviour and flow

Time management behaviour is found to be positively related to well-being, work and life satisfaction (Macan *et al.*, 1990; Peeters & Rutte, 2005). Autotelic individuals, who display good time management behaviour and goal-setting during their daily activities, also have very intense flow experiences (Ishimura & Kodama, 2009). There is limited research available on the relationship between time management behaviour and flow. However, Barling, Cheung and Kelloway (1996, p. 882) noted that “engaging in time management

behaviour offers one a means of effectively controlling the environment and it is likely to have its greatest effect on individuals with a strong desire to exert such control". As a result, it is expected that the flow experience will be enhanced by time management behaviour. From this hypothesis 1 is stated as follows:

H1: There is a significant relationship between flow and time management behaviour

Claessens (2004) focused on the ability of perceived control of time to predict job satisfaction, performance, and well-being. Davis (2000) suggested the existence of a significant relationship between perceived control of time and both job satisfaction and self-efficacy. In the development of a theoretical model consisting of time management behaviour (goals and priorities, mechanics of time, preference for organisation and perceived control of time) and positive work outcomes (job satisfaction, job performance) (Macan, 1994) no direct link between time management behaviour and work outcomes was found. However, she found a significant connection between the aforementioned outcomes and the perception of control of time. In other words, an increased positive work outcomes only manifests when an individual is under the impression that he/she has control over time. Macan came to the conclusion that it is the perceived control of time, and not time management behaviour, as such which influences the individual's behaviour. Hypothesis 2 is stated as follows:

H2: Perceived control of time mediates the relationship between mechanics of time management, goals and priorities, preference for organisation, respectively on flow.

Method

Sample and procedure

A convenient sample was used for the purposes of this study. The total sample for the study consisted of 229 hospitality management students from a metropolitan university within South Africa's Gauteng province. The minimum inclusion criteria for participation were that individuals were required to be registered students at the university and were only permitted to complete the questionnaires if they had at least completed one month of practical culinary training. The electronic surveys were conducted anonymously and the results were treated in a confidential manner. The sample consisted of the following characteristics: Twenty six percent (26.2%) of the sample were between the ages of 21 and 23 years old, while 72.1% were between the ages of 18 to 20 years old. Twenty eight percent (28.8%) were male, while 71.2 % were female. Forty four percent (44.1%) of the participants were black and 38.4% were white. The first years accounted for 45.9% of the participants and the second years for 44.1%.

Measuring instruments

Biographical questionnaire

A *biographical questionnaire* was developed to determine the characteristics of the participants who were included in the sample and to ensure that all the variables were controlled for. Demographic questions are important, because they influence the interpretation of the context and the background against which the research is conducted (Schueller & Seligman, 2010). The *Work-Related Flow inventory* (WOLF) (Bakker, 2008) consists of 14 items and measures flow at work. The responses range from 1 = never to 7 = always for each question. Examples of questions include: "My job makes me feel good"; and "I get carried away by my work." The Work-Related Flow Inventory (WOLF) was used to assess the flow experiences of the participants (metric properties: validity of .59 for absorption, .51 for work enjoyment and .52 for intrinsic motivation. Reliability of .79 for

absorption .57 for work enjoyment and .56 for intrinsic work motivation has been reported) (Bakker, 2008). Flow as a total score was used for this study. A reliability coefficients of $\alpha = .73$ was obtained for flow (total).

The *Time Management Behaviour Scale (TMBS)* was used to assess the participants' time management behaviours and attitudes, as well as their stress and self-perceptions of performance (Macan *et al.*, 1990). This instrument consists of 46 items with a response range from 1= seldom true to 5=very often true. The TMBS is made up of four subscales, namely, Perceived control of Time, Setting goals and Priorities, Mechanics of time management, and Preference of Organization. Cronbach's alphas for each of the TMB factors as well as an overall TMB score are as follows: Perceived control of Time .67, Setting goals and Priorities .84, Mechanics of time management .85, Preference of Organization .80. The overall reliability for the TMB score was .74 (Misra & McKean, 2000). This study yielded the following reliability coefficients: Perceived control of time $\alpha = .77$; Setting goals and priorities $\alpha = .72$; mechanics of time management $\alpha = .74$ and preference for organization $\alpha = .78$.

Statistical analysis

The SPSS programme (SPSS Inc. 11, 2009) was used for the statistical analysis. Descriptive statistics (means, standard deviation, skewness and kurtosis) were used to analyse the data. The reliability and validity of the constructs were determined by means of Cronbach alpha coefficients and exploratory factor analysis.

Pearson's correlation coefficients were used to analyse the data even further. Correlation coefficients were selected as they express the "reality" of the relations between the variables (Kerlinger & Lee, 2000). Pearson correlation coefficients were chosen for this study as the population scores were found to be normally distributed. The cut-off value for the statistical significance was set at a 95 percent confidence interval ($p < .05$). The cut-off value for the practical significance was set at .10 (small effect).

Multiple regression analysis was used to analyse the data that were obtained from the surveys. Multicollinearity and homoscedacity were accounted for. The multiple regressions used to assess the contribution of the independent variables (goals and priorities, mechanics of time management, preference for organisation and perceived control of time) on the dependent variable (flow). Steps of mediation as proposed by Barron and Kenny (1980) was used to determine the indirect effect of time management behaviour on flow.

Results

Descriptive statistics

The table below shows the means, standard deviation, skewness, kurtosis and average means.

	Item	Mean	STD	Skewness	Kurtosis
1	Flow (Total)	84.13	22.71	-.37	-.56
5	TMB-Goals and Priorities	33.13	8.81	-.26	-.61

6	TMB-Mechanics of time management	29.29	9.88	.36	-.46
7	TMB-Preference for Organization	26.88	6.66	-.38	-.38
8	TMB-Perceived Control of Time	15.21	3.70	-.10	-.30

Table 1 explains the descriptive statistics for Flow and TMB. The cut-off point for the skewness is between -2 and 2 which is indicative of a normal distribution of the participants, while kurtosis is between the normal cut-off between -4 and 4 (Field, 2009). Pyzdek and Keller (2003) explain skewness as a measure of asymmetry, where zero is indicative of perfect symmetry. A normal distribution curve points to zero skewness. Positive skewness, however, indicates that the tail of the distribution curve is more curved above the mean, towards the right. In contrast, negative skewness indicates that the tail of the distribution is more curved below the mean, towards the left.

	Item	1	2	3	4
1	Flow (Total)	-	-	-	-
2	Goals and Priorities	.53**	-	-	-
3	Mechanics of time Management	.37**	.63**	-	-
4	Preference for Organization	.04	.07	.07	-
5	Perceived Control of Time	.19**	.15*	.16*	.30**
Statistical significance		Practical significance			
* $p > .05$		$r > .30$ (medium effect)			
** $p > .001$		$r > .50$			

Relationships between the variables

Table 2 indicates that there is a statistically and practically significant relationship between Flow and TMB-Goals and Priorities ($p < 0,01$; $r > 0,30$; medium effect), TMB-Mechanics of time Management ($p < 0,01$; $r > 0,50$; large effect) and TMB-Control of Time ($p < 0,01$; $r > 0,30$; medium effect). TMB-Goals and Priorities are statistically and practically significantly related to TMB-Mechanics of Time Management ($p < 0,01$; $r > 0,50$; large effect) and TMB-Control of Time ($p > 0,05$; $r > 0,10$; small effect). TMB-Mechanics of Time Management is statistically and practically significantly related to TMB-Control of Time ($p < 0,05$; $r > 0,30$; medium effect). TMB -Preference for Organization is statistically and practically significant for TMB-Control of Time ($p < 0,01$; $r > 0,30$; medium effect).

Indirect effects

Based on the mediation steps of Baron and Kenny (1982), the initial steps were undertaken to determine whether a mediation effect exists. Flow is one of the psychological constructs which forms part of the core of positive psychology. Flow, therefore, provides a useful framework to study the processes and the nature of work experiences (Fullagar & Kelloway, 2009). This study's findings suggests that time management behaviour in the hospitality training environment has a positive effect on the flow construct. TMB, however, is complex as it cannot be linked directly to flow, but operationalises through a mediator, namely, perceived control of time.

Therefore, a culinary student who is well prepared, will have the perception that he/she is in control of his/her time and as a result will experience a positive psychological outcome, such as flow (*cf.* Macan, 1994). Fullagar and Kelloway (2009), furthermore suggest that flow is a meaningful positive psychological construct which mediates the relationship between core dimensions of academic work and well-being.

Pre-analysis confirmed that the independent variables, goals and priorities mechanics of time management and preference for organisation independent variables significantly predict the dependent variable flow. Step 1: The mediator, perceived control of time ($\beta = .19$; $p > .001$; $R^2 = .037$) significantly predict the flow (dependent), and explains 4% of the variance in flow. Step 2: Goals and Priorities ($F=9.574$; $\beta = .147$; $p < .05$), Mechanics of time management ($\beta = .15$; $p < .05$) and Preference for Organisation ($\beta = .28$; $p < .05$) statistically significantly predicts Perceived Control of Time and combined explain 11% of the variance in Perceived Control of Time. Step 3 (indirect effect) is depicted in table 3.

Table 3 Flow as the dependent variable, Goals and Priorities, Mechanics of time management, Preference for Organisation and Perceived Control of Time as the independent variables.

	Unstandardized β coefficients			
	Step 1	Step 2	Step 3	Step 4
Constant	63.60 (4.10)	37.76** (5.22)	40.42**	30.64**
Mechanics of time	.904** (.17)	.25 (.18)	.25 (.18)	.22
Goals and priorities		.47** (.21)	.46** (.21)	.42**
Preference for organisation			-.11 (.20)	-.24
Perceived control of time				.97*
Model R^2	.33**	.52**	.52**	.54**
Model ΔR^2	.11**	.27**	.27**	.29**

* $p > .05$ ** $p > .001$

According to step 1 in Table 4, Mechanics of time management significantly predicts Flow ($F = 28.56$; $\beta = 63.60$; $p > 0,05$) with a variance of 11%. In step 2, with the inclusion of Goals and Priorities ($F_{(226)} = 42.12$) the variance in Flow increased by 16%. Further, Goals and Priorities ($\beta = 1.47$; $p < 0.05$) significantly predicted Flow. In step 3, Preference for Organisation ($F_{(225)} = 0.57$; $\beta = -0.11$; $p > 0.05$) did not significantly predict Flow. In step 4 Perceived Control of Time ($F_{(224)} = 22.64$; $\beta = -0.97$; $p > 0.05$) partially mediates the relationship on Flow through Goals and Priorities and Mechanics of time management The variance in Flow increased with 2%. Preference for Organisation does not mediate with Perceived Control of Time and therefore does not have a significant relationship with Flow.

Discussion

The objective of this study was to investigate the relationship between time management behaviour and flow. The study also aimed at assessing the mediating role of perceived control of time, and the relationship between goals and priorities, mechanics of time

management, preference for organisation, and flow. Based on the work of Macan *et al.*, (1990), Macan (1994) and Chang and Nguyen (2011) time management behaviour, positive work outcomes and well-being are found to be related to one another.

The relationship between time management behaviour and flow

Hypothesis 1 stated there is a relationship between time management behaviour and flow. This hypothesis was partially accepted. Perceived control of time was related to goals and priorities and mechanics of time management. This is in line with previous research (Ishimura & Kodama, 2009; Macan, 1994). However, preference for organisation was not related to goals and priorities and mechanics of time management. Neither was preference for organisation related to flow. This is in contrast to the findings of Macan *et al.*'s (1990) and Macan (1994). According to Chang and Ngyuen (2011), preference for organisation encapsulates more than the physical activities of being an organised person. It is an individual's disposition to live an organised and structured life. Through an organised and structured life a person achieves a sense of purpose, and as a result better psychological well-being. Kearns and Gardiner (2007) do not support this view. They suggest that the avoidance of interruptions and distractions, and the tidying of desks are not related to specific outcomes, such as psychological wellbeing.

The findings of this study were supported by previous research conducted by Häfner and Stock, 2010, Ishimura and Kodama, 2009 as well as Sahoo and Sahu, 2009. Macan *et al.*'s (1990) findings suggested that it was important to distinguish between the four different time management behaviours. According to their study, the low correlations amongst the four factors indicated, for example, that an individual who sets goals and priorities for him/herself do not necessarily make lists or feel in control of time. Their study, furthermore, suggested that the dynamics of the subscales were more complex than what was previously thought. Häfner and Stock (2010) explain that it is widely recognised that time management behaviour is related to perceived control of time, and that perceived control of time is related to well-being. Research by Häfner and Stock (2010), is therefore in line with the findings of this study that time management behaviour significantly predicts control of time.

Hypothesis 2 stated that perceived control of time had a mediating effect on the relationship between goals and priorities, mechanics of time management and preference for organisation respectively on flow. The hypothesis was partially accepted as only goals and priorities and mechanics of time management mediated through perceived control of time on flow. In this study, goals and priorities partially mediate through perceived control of time on flow. This is in line with previous research which indicated a similar finding with wellness outcomes (Macan, 1994; Ishimura & Kodama, 2009).

continues...

The indirect effect of perceived control of time (Geyser, 2012).

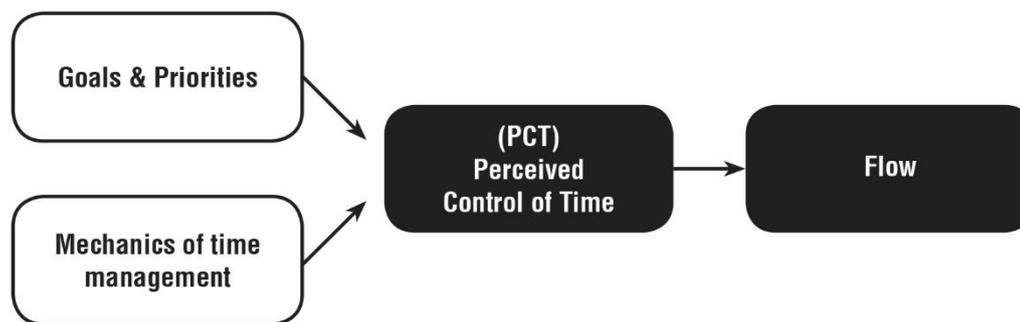


Figure 1: The indirect effect of perceived control of time

Goal setting and prioritising focus on the cognitive processes of short-term and long-term planning (Chang & Nguyen, 2011). According to Ishimura and Kodama (2009), certain skills, such as the pursuit of goals, as well as good time management behaviour, enhance flow activities. Psycho-educational interventions of time management behaviour, such as the training of goal setting and prioritisation of tasks, stimulate flow experiences which lead to personal growth and well-being (Ishimura & Kodama, 2009). Furthermore, the types of goals that individuals pursue and the reasons why they are pursued, act as a synergistic aspect of an individual's well-being (Kashdan, Biswas-Diener & King, 2008) such as a flow experience. In addition, the process model, TMB, specifically suggests that perceived control of time is a significant mediator between time management behaviour, for example, goals and priorities and indicators of well-being (Macan, 1994) such as flow. Macan (1994, p. 382) explains "...By setting goals, scheduling and organizing, 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." Similarly, Van Eerde (2003) suggests that an individual who is able to set goals and priorities, manage his/her time, prefer to work in structured surroundings, and who has a sense of control of his/her time, are less prone to have issues with psychological well-being.

Various other studies (Bond & Feather, 1988; Griffiths, 2003; Hall & Hursch, 1982; Macan, 1994; Nonis & Sager, 2003; Peeters & Rutte, 2005) report on the direct positive effect of time management behaviour on psychological well-being (Häfner & Stock, 2010). Barling, Cheung and Kelloway (1996) suggest that the mediating effect of perceived control of time is complex. They explain that "engaging in time management behaviours offers one a means of effectively controlling the environment and is likely to have its greatest effect for individuals with a strong desire to exert such control" (Barling *et al.*, 1996: 882) Ryan and Deci (2001) explain that goal progress predicts enhanced well-being, such as a flow experience, particularly if the goals are perceived as being important. They suggest further that goal fulfilment is deeply connected to the enhancement of psychological well-being. Individuals experience positive emotions, such as happiness when they evaluate a current situation or event as representing progress toward important goals (Frijda, 1988; Lazarus, 1991) for example, the preparation of a dish. In achievement settings, such as the culinary training environment, a culinary student may experience higher levels of intrinsic motivation and positive emotions when he/she masters the performance goal (Pekrun, Elliot, & Maier, 2006; Rawsthorne & Elliott, 1999).

The mechanics of time management is the only subscale which fully mediates flow through perceived control of time. The mechanics of time management describes a person who is prepared to "behave mechanically" by making a list of things to do, carrying an appointment book and who writes reminder notes to self (Chang & Nguyen, 2011). Zampetakis, Bouranta and Moustakis (2010) describe time management behaviour as a particular way of

planning; therefore, it seems credible that time management behaviour, especially the mechanics of time management could be used as a self-regulation strategy towards the achievement of a novel, or a useful idea, such as a recipe. The nature of culinary activities, for example the format in which recipes are written, the measurement of ingredients and setting of oven temperatures, are instructions to a culinary student to “behave mechanically”. There is a French culinary term for the mechanics of time management, namely, “*mise en place*” which “...in the kitchen it means setting out the ingredients and utensils required for the preparation of the dishes on the menu” (Larousse Gastronomique, 2003:815, Montagne). The *mise en place* in the culinary environment is key to culinary success. A culinary student, whose *mise en place* or mechanics of time management is successfully executed, perceives that he/she is in command of his/her time and experiences flow, as confirmed by this study. This is an interesting finding of this study, as there are significant relationships between mechanics of time management perceived control of time and psychological well-being, such as flow, which is in contrast with Chang and Nguyen’s (2011) and Macan *et al.*’s (1990, Macan, 1994) earlier studies.

A culinary experience is not completely structured as the culinary student needs a certain amount of freedom and autonomy to give expression to his/her creativity when preparing culinary dishes. Zampetakis *et al.*, (2010) explain that an individual’s creativity is related to autonomy (Dewett, 2007; Oldham & Cummings, 1996), therefore, such autonomy may be of no value if an individual does not have the freedom to select his/her tasks for planning and scheduling. Furthermore, in Amabile and Grysiewicz (1989) study, the most often mentioned contextual factor which characterises high-creativity events is freedom. As previously stated, perceived control of time does not mediate on preference for organisation, nor on flow. This is, once again in contrast with Macan’s (1994) findings where preference for organisation as well as goals and priorities (in this study, partially) fully mediated through perceived control of time on psychological well-being, which in Macan’s (1994) study was job satisfaction and somatic tensions. Macan (1994) suggests that individuals in other types of occupations and organisations could have different experiences with regards to time management behaviours. The findings of this study confirm this statement, as mechanics of time management mediated fully and goals and priorities mediated partially on flow in the culinary training environment.

Limitations, recommendations and contribution

Limitations

Firstly, a limitation of this study could have been the manner in which the participants were sampled. The questionnaires were administered electronically after the practical culinary sessions and fatigue could have had an effect on the results that the participants might have been inclined to respond in a more undesirable manner as the participants were tired from working throughout the practical session. A second limitation of this study is the focus on subjective well-being (SWB) as displays and measures of well-being. Broader conceptualizations of well-being such as objective well-being (OWB), for example could have been used as measuring instruments.

Recommendations

Despite the abovementioned limitations, the following suggestions for future research are made. The field of positive psychology strives to improve a person’s well-being through interventions which are designed to increase aspects such as pleasure, engagement, and meaning (Seligman, Rashid & Parks, 2006). Future research within the field of positive psychology and hospitality training environments could expand the data collection to include

repeated and longitudinal measures (Killingsworth, 2009; Schueller & Seligman, 2010). This recommendation could open up opportunities for future research and more relationships between flow and time management behaviour could be determined. The impact of age and improved skills in the professional culinary environment, once the students have graduated, could lead to some interesting findings regarding the flow construct. The direct effect of time management behaviour on flow could be measured once the students start following professional careers and compared to the original results. SWB aims to explain why and how individuals experience their lives positively (Diener, 1984).

Future research into positive psychological constructs could include constructs such as flourishing and thriving and their relationships to flow and subjective well-being. The antecedents and the dimensions of the flow construct could also be measured. A final recommendation would be that future research could identify which time management behaviours, as well as the reasons that promote such behaviours in the culinary environment, would increase the levels of flow in the culinary training environment. This could stimulate individual success and these findings could assist in adapting the practical curriculum for culinary studies.

Contribution

This research contributes to the body of knowledge of positive psychology, particularly within a South African vocational training context. According to Luthans (2002), flow is a flexible construct that lecturers could effectively use during training by developing clear and challenging goals that are relevant to the students' skill level as well as through constructive feedback. Coursework could also be structured in such a manner to allow the student an autonomous experience. By promoting the engaged minds of students through course characteristics, such as the culinary curriculum, flow states could be achieved more frequently (Steele & Fullagar, 2009) which could lead to organizational behaviour (POB). POB is the application of positive psychology with regards to workplace issues and the focus thereof is on measurable strengths and abilities which contribute to better performance (Luthans, 2002).

Conclusion

In conclusion, flow is one of the psychological constructs which forms part of the core of positive psychology. Flow, therefore, provides a useful framework to study the processes and the nature of work experiences (Fullagar & Kelloway, 2009). This study's findings suggests that time management behaviour in the hospitality training environment has a positive effect on the flow construct. Time management behaviour, however, is complex as it cannot be linked directly to flow, but operates through a mediator, namely perceived control of time. Therefore, a culinary student who is well prepared, will have the perception that he/she is in control of his/her time and as a result will experience a positive psychological outcome, such as flow (*cf.* Macan, 1994). Fullagar and Kelloway (2009), furthermore suggest that flow is a meaningful positive psychological construct which mediates the relationship between core dimensions of academic work and well-being.

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