Psychosocial safety climate and burnout among Malaysian research university academicians: the mediating roles of job demands and work engagement

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Abstract: Contemporarily, academicians from Malaysian research university encounter greater burnout due to their high levels of job demands and low extents of job resources. Hence, this paper intends to examine the predictors of burnout among academicians. Furthermore, the paper intends to investigate the potential roles of work engagement, challenge demands and hindrance demands as the mediating variables. A total of 686 academicians from Malaysian research university participated in the study. The results of the study demonstrated that psychosocial safety climate (PSC) and work engagement possess a significant negative relationship with burnout whereas challenge demands and hindrance demands possess a significant positive relationship with burnout. Moreover, work engagement, challenge demands and hindrance demands were found to serve as significant mediators on the relationships between the predictor variables and burnout. The findings of this study are helpful to both academics and practitioners who desire to manage the burnout pervasiveness among Malaysian research university academicians.

Keywords: PSC; psychosocial safety climate; burnout; research university; academicians; job demands; work engagement.

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1 Introduction

Teaching and researching are not only demanding, but they are also a complex profession that requires academicians to not only be fully committed to their work with their heads but also with their hearts. Furthermore, academicians are expected to be professional in terms of work engagement with emotion (Watts and Robertson, 2011). This is even further agreed when higher education institutions are perceived as supporting systems which contribute to the empowerment process by providing trainings that cover a wide range of themes (Mafruhah et al., 2019). Therefore, many academic staff experience higher levels of burnout than those who are in general working populations (Guthrie et al., 2017). In year 2017, the Malaysian Ministry of Higher Education (MOHE) had urged all Malaysian research universities (RUs) to lead a grand challenge program and sustainable development goals to translate the university research into direct benefits for the society. Hence, Malaysian RUs will initiate the projects in partnership with other higher learning institutions for the issues of water and food security, health and well-being as well as climate change. These projects are anticipated for knowledge assimilation and diversification of sources for research funding (Ministry of Higher Education Malaysia, 2017). As a result, academic staff are under new pressures while maintaining consultancy services, producing an increasing number of graduates as well as focusing in publication and patent innovation.

On the other hand, Arma and Ismail (2016) claimed that there are five RUs in Malaysia contending against one another while endeavour to maintain their RU title and ranking. Therefore, this will develop more stress not only to the RU management, but also to their academicians (Arma and Ismail, 2016). It is noted from 2021 Quacquarelli Symonds (QS) World University Rankings that five Malaysian RUs, namely Universiti Malaya (UM), Universiti Putra Malaysia (UPM), Universiti Kebangsaan Malaysia (UKM), Universiti Sains Malaysia (USM) and Universiti Teknologi Malaysia (UTM) are

in the world ranking of 59, 132, 141, 142 and 187 respectively (QS, 2020). Given the fact that there is an intense competition among Malaysian universities, particularly RUs, academicians from these RUs are more likely to experience burnout. They are expected to fulfil the required key performance index (KPI) where all Malaysian RUs are ultimately to be in the top 100 universities in the world university ranking. Furthermore, the National Higher Education Strategic Plan (NHESP), which was legislated in 2007, placed stress on all Malaysian academicians indirectly since it aimed to list at least three universities to be the top 100 and one university in the top 50 of world prominent universities by 2020. However, only UM is listed as the top 100 universities in the world university ranking while none of Malaysian universities is placed in the top 50 of world prominent universities based on 2021 QS world university rankings. Therefore, Malaysian RU academicians are even more vulnerable to burnout since they have to go the extra mile to fulfil the requirements posted by the NHESP.

Additionally, Malaysian RUs are constantly concerned about the number of times their research papers are cited since it is crucial for computing an impact factor, which is adopted to measure the performance of their staff as well as the impact of their research. The impact factor is computed by observing the number of citations for a particular group of papers written by a university in a given year. Kendall (2018) reported the average citations for all five Malaysian RUs over the past five years as shown in Table 1.

Table 1 The average number of citations in Malaysian research universities

Research university	*Overall citations*	*2017*	*2016*	*2015*	*2014*	*2013*
Universiti Malaya	8.4	2.6	6.5	9.6	11.7	12.1
Universiti Sains Malaysia	5.1	1.4	4.0	5.0	6.4	8.7
Universiti Putra Malaysia	4.9	1.4	3.3	5.2	6.6	7.8
Universiti Teknologi Malaysia	4.7	1.4	3.4	5.2	6.0	7.6
Universiti Kebangsaan Malaysia	4.6	1.5	3.3	5.8	5.6	6.6

Source: Kendall (2018)

The figures in Table 1 were calculated using a standard tool (SciVal), which is available to all RUs in Malaysia. It is noted that the average number of citations had decreased drastically over the past five years for all five Malaysian RUs. As a result, there was a drop in the impact factor for all Malaysian RUs, and this had created stress for their academicians to boost up the impact of their research papers. In general, as universities in Malaysia are developing towards becoming world-class RU, academicians are now facing more pressures, making them more vulnerable to burnout (Henny et al., 2014).

Based on the discussions of burnout scenarios among RU academicians, it is noted that overwhelming job demands lead to the prevalence of burnout among academicians from Malaysian RUs. This is in line with the findings by Demerouti et al. (2001) who stated that burnout occurs when job demands are high. They further stated that negative working conditions with unmanageable job demands could lead to energy depletion and eventually weaken employee motivation. Hence, Teoh and Kee (2020) suggested that psychosocial safety climate (PSC) is useful in this context since it is claimed as a leading indicator of a better working environment by providing manageable job demands and a

high level of job resources to cope with demands at work (Bond et al., 2010; Dollard and Bakker, 2010; Dollard et al., 2012; Law et al., 2011). With that, the present researchers believe that PSC can reduce the burnout levels of RU academicians, via developing manageable job demands.

In addition, Idris et al. (2011) also added that additional potential mediators may exist in between the direct effect of PSC and burnout, and therefore this needs to be further investigated in the future research. In conjunction with that, the present study proposes work engagement as a potential mediator on the relationships between PSC, job demands and burnout since past empirical studies demonstrated that work engagement is a significant mediator between PSC and work-related outcomes (Idris et al., 2015; Lee and Idris, 2017; Mansour and Tremblay, 2018) as well as between job demands and work-related outcomes (Sulea et al., 2012; Yulita et al., 2014).

Nevertheless, job demands are not necessarily negative. Hence, Cavanaugh et al. (2000) and Yulita et al. (2014) suggested that job demands should be differentiated into challenge demands and hindrance demands so that the impacts of these two demands on work and individuals can be disclosed accurately. Challenge demands represent the job demands which are anticipated to build challenges or opportunities for personal growth and attainment, whereas hindrance demands are defined as the job demands which are perceived as obstacles to personal growth or demands that interfere with or hinder one's ability to achieve valued goals (Cavanaugh et al., 2000). In relation with both challenge demands and hindrance demands, it triggers the interest of present researchers to investigate further if a high PSC context in RUs is prone to create more positive challenging demands for academicians, while unlikely to generate negative hindrances to work goal attainment. Moreover, it is interesting to examine in the present study if both challenge demands and hindrance demands project different effects on burnout. On the other hand, since PSC emphasises on psychological health and well-being of employee, it is excited to do further researches in the present study relating the way these both demand types create different processes via which PSC influences work engagement and burnout respectively.

Furthermore, Garrick et al. (2014) mentioned that a working environment with manageable job demands due to higher perceived PSC tends to lead the levels of work engagement among employees to escalate at a greater pace compared with employees from the organisation with lower perceived PSC. It is further pointed that PSC can trigger employees to put in more personal resources to engage with job demands so that the valuable psychological care provided by the organisation is being recompensed. Consequently, a high level of work engagement is cultivated due to high personal resources, and this could guard employees from being exposed to burnout (Maricutoiu et al., 2017). Hence, the present study proposes that PSC can enhance the work engagement levels of RU academicians, whereas a promising level of work engagement can reduce the burnout levels of RU academicians. Meanwhile, Lesener et al. (2019) advised that the different effects of challenge demands and hindrance demands on work engagement should be examined in the future research since they postulated that these different types of job demands influence work engagement differently. As a result, the present researchers take the calls to examine the implications of challenge demands and hindrance demands on work engagement of RU academicians. Consequently, this alerts the present researchers to further verify if both challenge and hindrance demands affect

work engagement differently, which in turn bringing the dissimilar repercussions on the burnout levels of RU academicians.

As a response to the limited studies on burnout level among academicians from Malaysian RUs (Watts and Robertson, 2011; Henny et al., 2014), the present study intends to examine a study of PSC relating its effects on burnout of RU academic staff so that a healthier and productive job design is guaranteed through work engagement and two types of job demands, which are challenge demands and hindrance demands. Hence, the present study proposes work engagement, challenge demands and hindrance demands can be the potential mediators for the relationship between PSC and burnout. The researchers of the present study believe that job demands and work engagement among RU academicians can help to minimise their burnout level. With that, the limited literatures on burnout among RU academicians is enriched while the management as well as the policy-makers of RUs are beneficial by developing the excellent job design for their academic staff.

In a nutshell, the present study presents its novelty by discovering the predictors of burnout among academicians from Malaysian RUs so that the limited burnout literature in the context of Malaysian universities is enriched. Besides that, differentiated job demands, that are challenge demands and hindrance demands, are used and tested in the study as recommended and this can increase the insights of the future researchers to understand the different implications from these job demands on work engagement and burnout. Moreover, the present researchers found that work engagement is suggested, but rarely to be used as a mediator between PSC, job demands and burnout. Therefore, this study contributes to the existing literature by determining on how work engagement play its role as a significant mediator. Last but not least, there is no literature which applies PSC into the work settings of universities so far. As a result, this research is significant in highlighting the usefulness of PSC to the academics and the practitioners from the education industry.

2 Psychosocial safety climate

PSC is a combination of the work stress and safety science literature. Work stress research concentrates mainly on work conditions, job demands and resources, employee psychological health and motivational related outcomes. Meanwhile, safety science research study about the safety behaviours and perceptions as well as their influences on workers' physical health (Flin et al., 2000; Zohar and Luria, 2005).

PSC is defined as a shared perception among employees regarding policies, practices and procedures in the workplace as it is related to the workers' psychological health and well-being (Dollard and Bakker, 2010). It is consistently exhibited with empirical evidence that PSC is a forerunner to work-related stress factors in multilevel studies using both cross-sectional (Law et al., 2011) and longitudinal (Bond et al., 2010; Dollard and Bakker, 2010; Dollard et al., 2012) designs. These studies exhibited that PSC is a dominating indicator of a better working environment by supplying manageable demands and a high level of resources to deal with demand or tasks at work. Dollard and Bakker (2010) stated that poor PSC in an organisation might lead to poor job design such as boundless work stress and emotional demands. On the contrary, a higher level of PSC

usually lowers the demands and establish healthy the working conditions by providing sufficient resources.

In consideration of the features of PSC, an organisation, which actively focuses on employee psychological health and safety, tends to build job demands that are motivating and comfortable with health (Dollard and Bakker, 2010). Besides, it is suggested that PSC acts as an organisational resource that projects an impact on lower-level resources (Dollard and Bakker, 2010). The appropriate resource apportionment and job control within the workplace can be facilitated with the existence of PSC. Once employees apprehend that the organisation cares about their well-being when they observe the increment in resource allocation, their engagement levels are then promoted. This was analysed and supported by the same study conducted over two waves on admin staff and teachers (Dollard and Bakker, 2010). It was also found in the same study that higher levels of PSC played as a moderator variable and decreased the effects of job demands on burnout.

3 Challenge demands and hindrance demands

Job demands, which are defined as the aspects of work that required sustained physical, cognitive and emotional efforts to fulfil the work tasks (Demerouti et al., 2001), play an important role to reduce the burnout levels of academicians by PSC. Nevertheless, job demands are not necessarily negative. Hence, Cavanaugh et al. (2000) suggested that job demands should be differentiated into challenge demands and hindrance demands.

Challenge demands represent the job demands which are anticipated to build challenges or opportunities for personal growth and attainment (Cavanaugh et al., 2000). Challenge demands tend to be regarded as an event to learn, attain and demonstrate their capability in the workplace, which are likely to be awarded in individual satisfaction or monetary. For example, high workload, time pressure and high levels of job responsibility may tend to evoke positive affections, such as the feeling of amusement and confidence, which ultimately lead to developing more strategies to deal with the job demands (Cavanaugh et al., 2000; LePine et al., 2005). Therefore, Cavanaugh et al. (2000) claimed that challenge demands are the challenges to be overcome by the employees so that they could learn and attain the breakthrough in a career.

On the other hand, hindrance demands are defined as the job demands which are perceived as the obstacles to personal growth or demands that interfere with or hinder one's ability to achieve valued goals (Cavanaugh et al., 2000). Hindrance demands keen to be perceived as the obstructions that unnecessarily slow down an individual's goal achievement and reward at work. For instance, organisational politics, role ambiguity and red tapes may tend to trigger negative affections, such as the feeling of ineptitude and tension, which eventually lead to passive and emotional-style of coping during work (Crawford et al., 2010; LePine et al., 2005; Wallace et al., 2009). Hence, an employee keen to jumble up their actual responsibilities and downgrade their accomplishments due to the hindrance demands (Cavanaugh et al., 2000; LePine et al., 2004, 2005).

In conjunction with both challenge demands and hindrance demands, the present study takes the suggestions to classify job demands into challenge demands and hindrance demands so that the antecedent of these two types of job demands as well as their impacts on work engagement and burnout are investigated.

4 Hypotheses development

In this paper, the COR theory is based where PSC acts as a resource caravan passageway, where resources are channelled, funnelled and supplied through this mechanism. Additionally, this resources caravan is protected and preserved via boosting and reimbursing low resources at the job level. Therefore, individuals are assured with adequate resources at work and this helps to improve their coping capacity, which in turn reducing the negative implications of job demands. However, it is pointed that organisation with PSC puts in efforts to motivate its employees by providing more challenging tasks which can benefit the employees' learning and proficiency (Idris et al., 2015), while hindering the job features that may bring the negative implications on the well-being of employees (Idris and Dollard, 2011). Therefore, it is proposed in this paper that PSC is positively related to challenge demands (**Hypothesis 1**) and negatively related to hindrance demands (**Hypothesis 2**). Furthermore, owing to the benefits of resource caravans, individuals with a sufficient amount of resources are highly engaged with their job since job resources provide them with energy, mental resilience and entire concentration to manage their job (Jayarathna, 2017). In addition, Idris and Dollard (2011) demonstrated that higher PSC foresees a better level of work engagement among employees since they experience fewer demands, greater resources and being less angry and depressed. Thus, we predict that PSC will be positively related to work engagement (**Hypothesis 3**). Besides, through the resource caravans, individuals are supplied with a competent amount of resources at work and thus protecting them from being burnout due to the absence of resources reduction (Lee and Ashforth, 1996). This is in line with the previous studies that higher levels of PSC can avoid the occurrence of burnout (Huyghebaert et al., 2018; Mansour and Tremblay, 2019). As a result, we hypothesise that PSC will reduce the levels of burnout (**Hypothesis 4**).

According to the COR theory, when there is a dynamic loss in resources due to high demands in one part of a job, individuals tend to have limited resources to deal with another part of job demands and thus making them poorly engaged to their job (Stoeber and Childs, 2010). However, Lazarus and Folkman (1984) claimed that different types of job demands could project different impacts on work engagement among individuals. Also, Lesener et al. (2019) suggested that job demands should be differentiated into challenge demands and hindrance demands so that the implications of both job demands can be tested on work engagement. Based on the prior studies, it is argued that the challenge job demands (e.g., workload, time pressure, cognitive demands, etc.) are positively related to work engagement (Tadic et al., 2013; Kunte and Rungruang, 2019) while hindrance job demands (e.g., role ambiguity, role conflict, etc.) are negatively related to work engagement (Geisler et al., 2019; Kunte and Rungruang, 2019; Riedl and Thomas, 2019; Tadic et al., 2013). Consequently, we propose that challenge demands (**Hypothesis 5**) are positively related to work engagement and hindrance demands (**Hypothesis 6**) are negatively related to work engagement. Moreover, individuals endeavour to construct, safeguard and maintain the personal characteristics, conditions and energies that facilitate them to deal with job demands. However, as individuals fail to do so when coping with the significant of job demands, the reduction of their resources may expedite to stress or burnout (Hobfoll, 1989). Notably, the relationship between job demands and burnout is indeed relying on the type of demands itself, where burnout is either related to challenge demands or hindrance demands (Yulita et al., 2014). Nonetheless, previous studies found that challenge and hindrance demands were

positively related to emotional exhaustion (Abbas and Raja, 2019; LePine et al., 2004; Van den Broeck et al., 2010; Yulita et al., 2014). Particularly, Yulita et al. (2014) claimed that hindrance demands were shown significantly associated with emotional exhaustion stronger than challenge demands on emotional exhaustion. Hence, we propose that challenge demands (**Hypothesis 7**) and hindrance demands (**Hypothesis 8**) are both positively related to burnout. On the other hand, there is limited study on the relationship between work engagement and burnout. Nonetheless, it is shown in the latest study that work engagement, rather than in components, is directly opposite to burnout as a whole, where employees are engaged at their workplace when there is an absence of burnout (Perez-Fuentes et al., 2019; Teoh and Kee, 2018). With that, we hypothesise that work engagement and burnout are negatively related (**Hypothesis 9**).

In evaluating mediating pathways, previous studies revealed the indirect relationships between PSC and work performance (Idris et al., 2015; Lee and Idris, 2017) as well as between PSC and selfless attitude among employees (Mansour and Tremblay, 2018) via work engagement as a mediator. Therefore, we predict that work engagement mediates the relationship between PSC and burnout (**Hypothesis 10**). Meanwhile, Yulita et al. (2014) discovered that work engagement mediates the relationship between challenge demands and physical health problems. Additionally, past studies also identified that job resources, which comprise of challenge demands (Verbruggan, 2009), possessed an indirect relationship with organisational outcomes, such as job performance (Idris et al., 2015) and turnover intention (Schaufeli and Bakker, 2004) through work engagement. Ergo, it is expected that work engagement mediates the relationship between challenge demands and burnout (**Hypothesis 11**). On the other hand, Sulea et al. (2012) also found that work engagement partially mediates the relationship between interpersonal conflict at work, which is also considered as a job demand stressor (Spector and Jex, 1998), and counterproductive work behaviour. As a result, we propose that work engagement can mediate the relationship between hindrance demands and burnout (**Hypothesis 12**).

By focusing on the mediators of different types of job demands, it is shown in the prior studies that job demands mediate the relationship between PSC and emotional exhaustion as well as the relationship between PSC and depression (Idris et al., 2011). Although Idris et al. (2011) did not differentiate the job demands for mediation analysis, the present researchers take the initiative to use challenge demands (**Hypothesis 13**) and hindrance demands (**Hypothesis 14**) to mediate the relationship between PSC and burnout. Meanwhile, there is a lack of study across the works of literature to test the indirect relationship between PSC and work engagement, via job demands. However, Idris and Dollard (2011) and Idris et al. (2015) indicated that job resources, which consist of challenge demands (Verbruggan, 2009), mediate the relationship between PSC and work engagement. Consequently, we propose that challenge demands mediate the relationship between PSC and work engagement (**Hypothesis 15**). On the other hand, Lee et al. (2017) realised that role ambiguity, which is also a type of hindrance demand (Cavanaugh et al., 2000), mediates the relationship between task interdependence and work engagement. Hence, this inspires the present researchers to adopt hindrance demands as a mediator on the relationship between PSC and work engagement (**Hypothesis 16**).

As a result, the hypotheses in this study are summarised as follows:

H1: There is a positive relationship between PSC and challenge demands.

H2: There is a negative relationship between PSC and hindrance demands.

H3: There is a positive relationship between PSC and work engagement.

H4: There is a negative relationship between PSC and burnout.

H5: There is a positive relationship between challenge demands and work engagement.

H6: There is a negative relationship between hindrance demands and work engagement.

H7: There is a positive relationship between challenge demands and burnout.

H8: There is a positive relationship between hindrance demands and burnout.

H9: There is a negative relationship between work engagement and burnout.

H10: Work engagement mediates the relationship between PSC and burnout.

H11: Work engagement mediates the relationship between challenge demands and burnout.

H12: Work engagement mediates the relationship between hindrance demands and burnout.

H13: Challenge demands mediate the relationship between PSC and burnout.

H14: Hindrance demands mediate the relationship between PSC and burnout.

H15: Challenge demands mediate the relationship between PSC and work engagement.

H16: Hindrance demands mediate the relationship between PSC and work engagement.

5 Participants and procedure

Participants in this study were 686 full-time academicians from Malaysian RUs who have been working for more than one year in their current tenure. Academicians who are on sabbatical, maternity, medical or study leave throughout the study as well as academic staff who are seconded to the Ministry of Higher Education, trainee lecturers and tutors will be excluded from this study. Dimunová and Nagyova (2012) stated that employees with at least one year of working experience reported a significantly higher prevalence of burnout compared to the category of less than a year. They further claimed that this occurrence is due to the increased workload and job responsibilities of employees who continually disregard their personal psychological health. Hence, in this study, only full-time academicians from Malaysian RUs who have been working for more than one year are considered.

The sampling technique adopted in this study is purposive sampling due to the required responses from full-time academic staff of Malaysian RUs who are employed for more than one year. The use of purposive sampling is justified when a specific target group of people is needed for obtaining the required information (Israel, 2009; Sekaran and Bougie, 2013). As a result, purposive sampling is feasibly used in this study to

sample academic staff from Malaysian RUs because it is not possible to randomly sample a particular group of academic staff without specifying the needed criteria.

Meanwhile, the self-administered online questionnaire was adopted in data collection to attain responses for all variables in this present study. Foremost, the researchers visited the general websites of all five Malaysian RUs so that the contact lists with email addresses of all RU academicians were retrieved. An invitation email, which acts as an acknowledgement regarding the purpose of the study, together with the link of online questionnaire was then sent privately to all full-time RU academicians who have been working more than one year. Hence, the potential respondents were introduced with the purpose of study as well as the contents before accessing the study. There were also numbers of potential respondents who replied the e-mail to further clarify their eligibility as a respondent in this study before taking part in the online questionnaire. Therefore, these procedures ensure the accurate findings of the present study. For the online questionnaire, a cover letter was written on the first page to express the objective of the questionnaire, to convince the respondents of confidentiality of the data collected, to lead the respondents in answering the questionnaire, and to offer the contact number of the researchers. The respondents were requested to complete the online questionnaire within a half month based on their willingness. The researchers then, checked and recorded the responses through the submitted online questionnaire. Some follow-ups with the respondents were done by the researchers at the end of the month to check for the additional submitted responses.

In this study, participants consisted of 63.6% female and 36.4% male. In terms of age, the majority of the respondents are between 36 to 40 years old (21.4%), followed by 31–35 years old (21%), 41–45 years old (20.6%), 46–50 years old (14.3%), 51–55 years old (10.1%), 56–60 years old (8.6%), 25–30 years old (2.2%) and 61 years old and above (1.9%). Coming to RU, the majority of the respondents are the academicians from USM (23.2%), followed by UM (22.3%), UPM (18.7%), UTM (18.7%) and UKM (17.2%). Regarding the academic position, senior lecturer (59.3%) are the majority of the respondents, followed by the associate professor (20.4%), lecturer (9.9%), professor (8.9%) and others (1.5%).

Relating to the working experience as an academician, 181 respondents (26.4%) possess 1–5 years of working experience, followed by 148 respondents (21.6%) with 6–10 years of working experience, 135 respondents (19.7%) with 11–15 years of working experience, 124 respondents (18.1%) with 21 years of working experience and above and 98 respondents (14.3%) with 16 to 20 years of working experience. Coming to the employment in the present position, the majority of the respondents are holding their current position for 1–5 years (57.1%), followed by 6–10 years (26.5%), 11–15 years (8.9%), 16–20 years (4.5%) and 21 years and above (2.9%).

6 Instruments

Psychosocial safety climate: PSC questionnaire with Cronbach's alpha of 0.91 was measured using a 12-item measurement (e.g., "In my workplace, the management acts quickly to correct problems/issues that affect employees' psychological health") developed by Hall et al. (2010). The measurement was measured with a five-point Likert scale, ranging from 1 (*strongly disagree*) to 5 (*strongly agree*).

Challenge and Hindrance demands: These were each measured using a 5-item measurement developed by Cavanaugh et al. (2000) and LePine et al. (2004). Challenge demands (e.g., "Time pressure I experience") represent job responsibility, job complexity, job scope, time pressure and workload, whereas hindrance demands (e.g., 'The amount of red tape I need to go through to get my job done") represent role ambiguity, role conflict, organisational politics, hassles and red tape. The measurement was measured with a five-point Likert scale, ranging from 1 (*not at all*) to 5 (*to a very great extent*). The Cronbach's alpha claimed for the challenge and hindrance demands were 0.87 and 0.75, respectively (Cavanaugh et al., 2000; LePine et al., 2004).

Work engagement: We adopt a 3-item measurement (e.g., "At my work, I feel bursting with energy") developed by Schaufeli et al. (2017) to measure work engagement. The measurement was measured with a seven-point Likert scale, ranging from 1 (*never*) to 7 (*every day*). The Cronbach's alpha claimed for this measure was 0.95 (Schaufeli et al., 2017).

Burnout: This was measured using an 8-item measurement (e.g., "There are days when I feel tired before I arrive at work") developed by Demerouti et al. (2003). The measurement was measured with a five-point Likert scale, ranging from 1 (*strongly disagree*) to 5 (*strongly agree*). The Cronbach's alpha claimed for this measure was 0.87 (Demerouti et al., 2003).

7 Statistical analysis

SPSS version 25 software was used in this research to screen the data and to attain the descriptive statistics of the respondents. PLS-SEM was based in this research to test the measurement (validity and reliability of the measures) and structural (testing the hypothesised relationships) model by using the SmartPLS 3.0 software (Ringle et al., 2015). Furthermore, the bootstrapping method with 5000 resamples was adopted to examine the loadings and significance of path coefficients. Also, the mediating effects are examined concurrently as part of the extensive model via the employment of bootstrapping (Lee et al., 2011).

7.1 Measurement model

Firstly, convergent validity is examined as recommended by Hair et al. (2014) via checking the loadings, average variance extracted (AVE) and composite reliability. The rule of thumb for the standardised loadings should be more than 0.70, AVE more than 0.50 and composite reliability more than 0.70 (Hair et al., 2014). Based on Table 2, all loadings were greater than 0.70, the AVE was above 0.50 and the composite reliability was larger than 0.70. The results exhibited adequate convergence validity.

Next, discriminant validity is evaluated by comparing the square root of the AVE with the correlations (Fornell and Larcker, 1981). By referring to Table 3, the bolded diagonal square roots of the AVE are all larger than the values of the off-diagonal correlations. Hence, it is concluded that the measurements applied in this study showed good discriminant validity. Furthermore, the Heterotrait-Monotrait (HTMT) ratio of correlations technique, which is developed by Henseler et al. (2015), is also another method to evaluate discriminant validity. An issue of discriminant validity

is considered present when the HTMT value is larger than the $HTMT_{.85}$ *value of 0.85* (Kline, 2011) or $HTMT_{0.90}$ *value of 0.90* (Gold et al., 2001). Also, a lack of discriminant validity is identified when the value of 1 is straddled in between a confidence interval of HTMT values for the structural path. It is noted from Table 4 that all values are lower than the values of $HTMT_{0.90}$ and $HTMT_{0.85}$. Meanwhile, it is also noticed that all HTMT confidence intervals do not indicate a value of 1 on any of the constructs. As a result, these imply that discriminant validity is once again determined.

Table 2 Measurement model

Constructs	*Items*	*Loadings*	*AVE*	*Composite reliability*
Burnout	B1	0.749	0.531	0.849
	B2	0.790		
	B4	0.775		
	B5	0.612		
	B6	0.705		
Challenge demands (CD)	CD1	0.815	0.763	0.942
	CD2	0.872		
	CD3	0.901		
	CD4	0.902		
	CD5	0.875		
Hindrance demands (HD)	HD1	0.767	0.575	0.871
	HD2	0.808		
	HD3	0.807		
	HD4	0.684		
	HD5	0.717		
Psychosocial safety climate	PSC1	0.832	0.695	0.965
	PSC2	0.799		
	PSC3	0.861		
	PSC4	0.850		
	PSC5	0.878		
	PSC6	0.867		
	PSC7	0.874		
	PSC8	0.820		
	PSC9	0.760		
	PSC10	0.789		
	PSC11	0.814		
	PSC12	0.849		
Work engagement (WE)	WE1	0.822	0.755	0.902
	WE2	0.929		
	WE3	0.851		

Table 3 Discriminant validity using Fornell and Larcker criterion

	Burnout	*CD*	*HD*	*PSC*	*WE*
Burnout	**0.729**				
CD	0.548	**0.874**			
HD	0.456	0.392	**0.758**		
PSC	–0.388	–0.234	–0.345	**0.833**	
WE	–0.266	0.022	–0.174	0.248	**0.869**

The bolded diagonals represent the square root of the AVEs while the other entries represent the correlations.

Table 4 HTMT criterion

	Burnout	*CD*	*HD*	*PSC*
Burnout				
CD	0.647 $CI_{0.90}$ (0.592, 0.697)			
HD	0.564 $CI_{0.90}$ (0.496, 0.625)	0.452 $CI_{0.90}$ (0.390, 0.514)		
PSC	0.45 $CI_{0.90}$ (0.385, 0.511)	0.248 $CI_{0.90}$ (0.176, 0.312)	0.384 $CI_{0.90}$ (0.317, 0.448)	
WE	0.313 $CI_{0.90}$ (0.236, 0.383)	0.068 $CI_{0.90}$ (0.044, 0.082)	0.209 $CI_{0.90}$ (0.138, 0.283)	0.26 $CI_{0.90}$ (0.188, 0.332)

7.2 Structural model

After the measurement model was assessed, the structural model was examined next. As corresponding to PLS-SEM, five steps of assessments were used to inspect the structural model (Hair et al., 2014). The five steps are evaluation of collinearity (Step 1), followed by evaluation of the path coefficients (Step 2); evaluation of the R^2 values (Step 3); evaluation of the effect size (Step 4); and last but not least the evaluation of the predictive relevance Q^2 (Step 5). A bootstrapping procedure with a resample 5000 was run to test the hypotheses constructed for this study and the results are presented in Table 5. As shown in Table 5, all inner values for the involved study variables were above 5, it is thus concluded that there was no issue of multicollinearity in this study (Hair et al., 2014).

The R^2 for challenge demands was 0.055, for hindrance demands was 0.119, for work engagement was 0.085 and for burnout was 0.446, which were all acceptable based on Cohen's (1988) rule of thumb. Furthermore, it is realised from each individual structural path that PSC ($\beta = -0.170$, $p < 0.01$) and work engagement ($\beta = -0.200$, $p < 0.01$) were found to have a significant negative relationship with burnout. Meanwhile, challenge demands ($\beta = 0.437$, $p < 0.01$) and hindrance demands ($\beta = 0.191$, $p < 0.01$) were discovered to possess a significant positive relationship with burnout. In addition, it is noted that PSC ($\beta = 0.228$, $p < 0.01$) and challenge demands ($\beta = 0.133$, $p < 0.01$) were having a significant positive relationship with work engagement. On the other hand, hindrance demands ($\beta = -0.147$, $p < 0.01$) were shown to have a negative relationship with work engagement significantly. Besides, PSC was shown to have a significant

negative relationship with challenge demands ($\beta = -0.234$, $p < 0.01$) as well as with hindrance demands ($\beta = -0.345$, $p < 0.01$). Although the relationship between PSC and challenge demands was significant, H1 was not supported. This is because the direction of the relationship was discovered to be negative, which was the opposite of what had been hypothesised. Thus, all hypotheses of direct effects except H1 from this study were supported. By focusing on the effect size, f^2 of all direct effects, all obtained at least the small effect size of 0.02 except the direct effects from challenge demands and hindrance demands to work engagement (Cohen, 1988). Additionally, the Q^2 values were all larger than 0 and this implies that the model in this study is predictively relevant (Hair et al., 2014).

Table 5 Hypothesis testing for direct effects

Hypothesis	*Relationship*	*Std. beta*	*Std. error*	*t-value*	*Decision*	*VIF*	R^2	Q^2	f^2
H1	PSC → CD	–0.234	0.038	6.157**	Not Supported	1.000	0.055	0.039	0.058
H2	PSC → HD	–0.345	0.035	9.767**	Supported	1.000	0.119	0.065	0.135
H3	PSC → WE	0.228	0.040	5.662**	Supported	1.150	0.085	0.058	0.049
H5	CD → WE	0.133	0.043	3.111**	Supported	1.197			0.016
H6	HD → WE	–0.147	0.042	3.539**	Supported	1.285			0.018
H4	PSC → Burnout	–0.170	0.032	5.249**	Supported	1.207	0.446	0.225	0.043
H7	CD → Burnout	0.437	0.031	14.018**	Supported	1.127			0.284
H8	HD → Burnout	0.191	0.034	5.589**	Supported	1.309			0.050
H9	WE → Burnout	–0.200	0.030	6.767**	Supported	1.093			0.066

*$p < 0.05$, **$p < 0.01$.

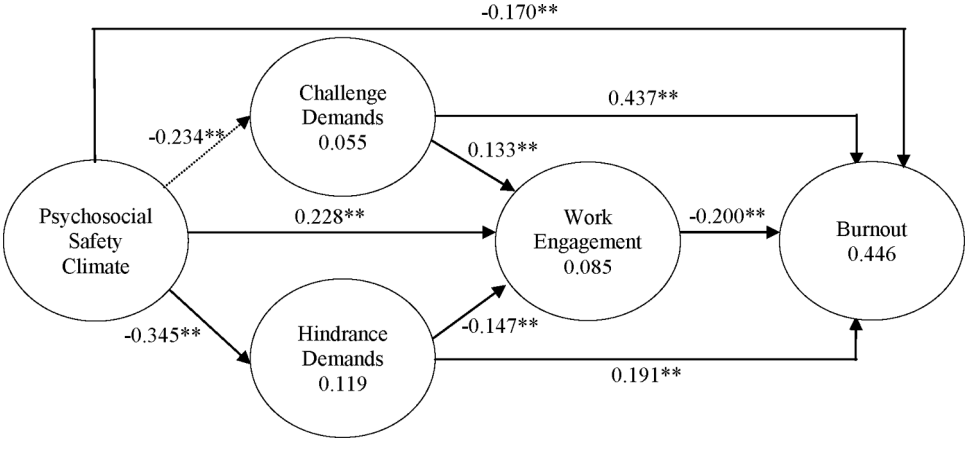
Next, the indirect effects of this study were also examined via a bootstrapping procedure with 5000 resamples and the results are demonstrated in Table 6. A specific mediating relationship is considered as significant when there is a significant t value as well as a confidence interval without a zero in between. Based on Table 6, it is seen that PSC ($\beta = -0.065$, $p < 0.01$) and hindrance demands ($\beta = 0.052$, $p < 0.01$) possessed a significant indirect effect on burnout, through work engagement as the mediator. However, challenge demands ($\beta = -0.057$, $p > 0.01$) were not found to have a significant effect on burnout, via work engagement as a mediator since there is a value of zero discovered to lie in between the respective confidence interval. Meanwhile, PSC ($\beta = -0.129$, $p < 0.01$) has a significant indirect effect on burnout, through challenge demands as the mediator. Nonetheless, PSC ($\beta = -0.022$, $p > 0.05$) was not identified to have a significant indirect effect on work engagement, through challenge demands as the mediator. On the other hand, it is also observed that PSC possesses a significant indirect effect on work engagement ($\beta = 0.061$, $p < 0.01$) and burnout ($\beta = -0.160$, $p < 0.01$) respectively, through hindrance demands as the mediator. Therefore, all hypotheses of indirect effects except H11 and H15 generated from this study were supported. Our final research model with path coefficients as well as the explained variance is exhibited in Figure 1.

Table 6 Hypothesis testing for indirect effects

Hypothesis	*Relationship*	*Beta*	*Std. Error*	*t value*	*LCL*	*UCL*	*Decision*
H10	PSC → WE → Burnout	–0.065	0.015	4.334**	–0.097	–0.038	Supported
H11	CD → WE → Burnout	–0.057	0.027	2.091*	–0.085	0.003	Not Supported
H12	HD → WE → Burnout	0.052	0.013	3.871**	0.030	0.084	Supported
H13	PSC → CD → Burnout	–0.129	0.024	5.397**	–0.177	–0.083	Supported
H14	PSC → HD → Burnout	–0.160	0.022	7.125**	–0.203	–0.115	Supported
H15	PSC → CD → WE	–0.022	0.025	0.880	–0.045	0.043	Not Supported
H16	PSC → HD → WE	0.061	0.016	3.853**	0.032	0.092	Supported

*$p < 0.05$, **$p < 0.01$.

Figure 1 Hypotheses testing



*$p < 0.05$, **$p < 0.01$.

8 Discussion

The objective of this study is to examine the effects of PSC, challenge demands, hindrance demands and work engagement on burnout level among Malaysian RU academicians. Besides, the study also aims to test the mediating roles of challenge demands, hindrance demands and work engagement on the relationships between the predictors and the burnout levels among academicians from Malaysia RUs. The results of this study found that PSC does not have a significant positive relationship with challenge demands, thus H1 is not supported. However, it is shown in the study that PSC is negatively and significantly related to challenge demands. Hence, this present finding projected discrepancies with the prior studies which unveiled that the benefits of PSC, which are perceived as a mechanism to cultivate a better working environment, were operationalised to possess a positive relationship with challenge job demands (Cavanaugh et al., 2000; LePine et al., 2005). These inconsistencies can be delineated through the

basic features of challenge demands that are indeed considered as job demands. It is further supported by a previous research which discovered that challenge demands could lead to the development of emotional exhaustion among employees (Yulita et al., 2014). Similarly, the COR theory (Hobfoll, 1989; Hobfoll and Shirom, 2001) indicates that challenge demands are one of the demands which lead to energy depletion since the resources are still being lost to cope with challenge demands (Hobfoll and Shirom, 2001). As a result, the setting of PSC in Malaysian RUs could reduce the characteristics of challenge demands among their academicians since its roles are to decrease any barrier at work that could place employees under stress (Yulita et al., 2014).

The relationship between PSC and hindrance demands was found to be negatively significant in the study, and H2 was supported. This is in line with Yulita et al. (2014) who uttered that the levels of hindrance demands can be decreased by PSC at team level. It also extends the findings of previous studies (Idris and Dollard, 2011; Idris et al., 2011, 2012) that PSC is negatively associated with job demands that prompt for unfavourable work outcomes, such as anger, burnout and depression, specifically on Malaysian workers. Hence, the current study provides the empirical evidences that the application of PSC in Malaysian RUs could help to reduce the characteristics of hindrance job demands that are imposed on RU academicians.

Meanwhile, the relationship between PSC and work engagement was found to be positively significant in the study, and this denotes that H3 was supported. This is in line with the study by Law et al. (2011) who proposed that PSC can support work engagement by lowering vulnerability to workplace psychosocial jeopardies, such as domineering and exasperation. Furthermore, this interpretation is consistent with the findings that the positive relationship between PSC and work engagement (Huyghebaert et al., 2018; Geisler et al., 2019) can help to improve the job performance (Idris et al., 2011). In respect to that, it is reasonable to make a statement that RU academicians are highly engaged to their jobs when the management of RUs apply PSC thoroughly in their universities.

In the study, H4 was also supported, where the relationship between PSC and burnout is negatively significant. This finding is further supported by Yulita et al. (2014) that PSC serves as a prominent guideline of an excellent working atmosphere by supplying feasible job demands and a high extent of job resources to deal with job demands and tasks at work. As a result, the psychological health and well-being of employees are given priority while a complacent and efficient team-work climate is cultivated (Mathieu and Taylor, 2007). This is consistent with the findings that a high extent of PSC reduces the level of burnout among employees (Heffernan et al., 2018; Huyghebaert et al., 2018; Mansour and Tremblay, 2019; Teoh and Kee, 2019) while poor PSC at a workplace lead to the development of burnout, depression and anger (Idris et al., 2011; Idris and Dollard, 2011; Law et al., 2011). Hence, when Malaysian RUs translate PSC into practices, RU academicians are less likely to encounter the feeling of burnout at the university.

On the other hand, challenge demands were found to be positively and significantly related to work engagement in the study, where H5 was supported. This finding is conforming with the previous studies which revealed that challenge job demands, such as workload, time constraint, cognitive demands, etc., are having positive association with work engagement (Bakker et al., 2005; Crawford et al., 2010; Van den Broeck et al., 2010; Kunte and Rungruang, 2019) over time (Mauno et al., 2007). Verbruggan (2009) clarified that employees are apt to feel stimulated in coping with challenge demands and

this provides them the chances to learn and grow. Consequently, employees are immersed happily in their work with the feeling of energy, dedication and enthusiasm (Verbruggan, 2009). Therefore, it is stressed that Malaysian RU academicians can be engaged better to their work through the promotion of challenge job demands.

It was found in the study that hindrance demands possess a negatively significant relationship with work engagement, which leads to the support of H6. This suggests that the present study is corresponding to the prior studies which claimed that hindrance demands, as in role vagueness, role conflict and etc., are possessing negative relationship with work engagement (Mauno et al., 2007; Lorente et al., 2008; Crawford et al., 2010; Van den Broeck et al., 2010; Geisler et al., 2019; Kunte and Rungruang, 2019; Riedl and Thomas, 2019). It is explained by Verbruggan (2009) that hindrance job demands tend to make the job burdensome for employees to feel engaged and this has weaken their feeling of enthusiasm and dedication towards their tasks and responsibilities. Hence, it is deduced that there is a great extent of work engagement among RU academicians through avoiding the features of hindrance job demands.

Besides, the results of this study showed that the relationship between challenge demands and burnout is positively significant, where H7 was supported. This scenario can be explained by employing the COR theory (Hobfoll, 1989; Hobfoll and Shirom, 2001) that challenge demands are still the demands at work which cause the depletion of energy within employees. Furthermore, it is stressed by the COR theory that the primary element of stress is due to the deficit of resources when coping with demands (Hobfoll and Shirom, 2001). Hence, this is in line with the previous studies which manifested that a greater extent of challenge demands contributes to the increment of emotional exhaustion level (LePine et al., 2004; Van den Broeck et al., 2010; Yulita et al., 2014; Abbas and Raja, 2019; Han et al., 2019). With that, it is concluded that RU academicians tend to suffer from burnout if they fail to cope with challenge demands at the university effectively and efficiently.

Similarly, H8 was supported in the study since the relationship between hindrance demands and burnout is positively significant. This situation is perfectly matched with the ideas of the COR theory (Hobfoll, 1989; Hobfoll and Shirom, 2001) that the vigorous loss of resources due to hindrance demands in one aspect of the task could prompt for slackening of resources preserve for coping with another aspect of job demands, thus inducing a loss spiral. Hence, the present study is consistent with the findings that the elements of hindrance demands, such as role conflict and emotional demands, lead to the development of burnout (Schaufeli and Bakker, 2004; Bakker et al., 2005; De Jonge and Dormann, 2006; Bakker and Demerouti, 2007; Peng et al., 2010; Idris et al., 2011; Pien et al., 2019; Riedl and Thomas, 2019; Abbas and Raja, 2019). Thus, it is wrapped up that a high level of hindrance demands in Malaysian RUs can drive their academicians to experience a greater level of burnout since more resources are needed to cope with the unfavourable demands.

Furthermore, the result in this study demonstrated that work engagement is negatively and significantly related to burnout, and this indicates that H9 was supported. Villavicencio-Ayub et al. (2015) argued that the exposure of job burnout can be reduced when the organisation cultivates positive behaviours of work engagement via providing chances for professional advancement, work acknowledgement, a favourable working environment, job security, work-life balance and an enchanting incentive system. This finding lends support to the prior studies which proclaimed that a better level of work engagement leads to a lower level of burnout prevalence (Taris, 2006;

Hultell and Gustavsson, 2010; Cole et al., 2012; Hakanen and Schaufeli, 2012; Perez-Fuentes et al., 2019; Ahmad et al., 2020). Thereupon, it is claimed that a greater level of work engagement in the university prepares RU academicians to experience a lower level of burnout due to the positive feelings of work engagement that hinder academicians from being exposed to burnout.

For the mediators in the study, the result exhibited that work engagement is a significant mediator on the relationship between PSC and burnout, therefore H10 was supported. This finding helps to develop on the past studies which found that work engagement mediates the relationship between PSC and work performance (Idris et al., 2015; Lee and Idris, 2017; Mansour and Tremblay, 2018). In conjunction with that, this finding suggests that the application of PSC in RUs will indirectly lead to a lower level of burnout among academicians. This is because a well-established PSC in the university will cause academic staff to feel that their psychological health and well-being are given priority. As a result, academicians keen to allot more resources in their work, which consecutively cultivating their work engagement levels in RUs. Consequently, RU academicians with elevated work engagement are less likely to experience burnout when performing their tasks and responsibilities. Therefore, it is shown that work engagement acts as a negative mediator between PSC and burnout.

Nonetheless, the finding of the study revealed that the indirect relationship between challenge demands and burnout is insignificant via work engagement, and this signals that H11 was not supported. The present finding is not in line with the past studies that work engagement can mediate the relationship between job resources and organisational outcomes, such as job performance (Idris et al., 2015) and turnover intention (Schaufeli and Bakker, 2004). The reason why challenge demands are not related to burnout via work engagement can be plausibly delineated by the fact that majority of the respondents in this study are in their current position for only 1–5 years (57.1%). The essential features of challenge demands in Malaysian RUs could turn to be work stressors when this category of academicians require more times and efforts to be familiarised with an equivalent level of job demands from their present position. Subsequently, these academicians tend to experience low level of work engagement due to the loss in feeling of enthusiasm and dedication. As a result, a higher level of burnout occurs among these academicians since there is absence of positive work engagement experience. With that, this signifies that a lower level of challenge demands in Malaysian RUs causes the reduction in work engagement level, which in turn promoting a higher level of burnout among academicians. Nonetheless, this contravenes with the direct relationship between challenge demands and burnout in the present study, where a low level of challenge demands is supposed to prompt for a reduced level of burnout. Thus, it is believed that work engagement in the current study does not mediate the relationship between challenge demands and burnout of RU academicians.

On the other hand, H12 was supported because the indirect relationship between hindrance demands and burnout is significant through work engagement. This finding also lends support to the study by Sulea et al. (2012) who found that work engagement partially mediates the relationship between interpersonal conflict at work, which is also considered as a job demand stressor (Spector and Jex, 1998), and counterproductive work behaviour. Hence, the finding recommends that the impediments developed by hindrance demands in RUs have caused academicians to be exhausted due to the immensely loss of energy and efforts to obtain the work targets. Thereupon, RU academicians are loss of enthusiasm and dedication towards their work and successively, their burnout levels are

raised due to the poor level of work engagement. Therefore, work engagement plays the role as a positive mediator between hindrance demands and burnout.

Meanwhile, challenge demands were shown to be a significant mediator on the relationship between PSC and burnout, and this indicates the support of H13. This result builds on the past research which identified that challenge job demands, particularly job responsibility (Cavanaugh et al., 2000; LePine et al., 2005), mediate the relationship between high-involvement human resource management and employees' feelings of energy at work (Foesenek, 2013). Therefore, this finding makes a case that Malaysian RUs with a high level of PSC could help to reduce the basic characteristics of challenge job demands, where the unfavourable effects of job demands are avoided and a better working environment is promoted. As a consequence, the job resources used to deal with job demands can be preserved, and RU academicians are thus less likely to be exposed to burnout. Hence, challenge demands act as a negative mediator between PSC and burnout.

Likewise, the indirect relationship between PSC and burnout was shown to be significant via hindrance demands in this study, and this gives support to H14. This result provides support to the previous studies which exhibited that emotional demands, which also act as hindrance demands (Aiello and Tesi, 2017), mediate the relationship between PSC and emotional exhaustion (Idris et al., 2011; Idris et al., 2014; Law et al., 2011; Yulita et al., 2014). In conjunction with that, this finding suggests that a great level of PSC in RUs can drive the RU management to decrease the features of hindrance demands so that the loss of resources due to unfavourable demands can be avoided. As a result, RU academicians are not likely to experience a certain level of burnout since their resources to perform their work are maintained and preserved. Thus, hindrance demands serve as a negative mediator between PSC and burnout.

In this study, challenge demands were revealed as an insignificant mediator on the relationship between PSC and work engagement, where H15 was not supported. The present finding does not lend support to the studies which claimed that job resources mediate the relationship between PSC and work engagement (Idris and Dollard, 2011; Idris et al., 2015), in spite of challenge demands are reasonably recognised as job resource by Verbruggan (2009). The reason for the non-significant indirect relationship in the current study is probably due to majority of the respondents are senior lecturers (59.3%). Previous studies had realised that senior lecturers tend to be assigned with more workload within a given deadline (Ghorpade et al., 2007; Kokkinos, 2007; Safaria et al., 2011) and consequently, the elements of challenge demands have turned into work stressors since excessive efforts are needed by senior lecturers to cope with their job demands. In conjunction with that, senior lecturers are not likely engaged with their work because they have lost the feeling of energy, dedication and enthusiasm due to the absence of challenge demands which provide them the opportunity to learn and grow (Verbruggan, 2009). Therefore, this indicates that a higher level of PSC tends to reduce the characteristics of challenge demands, which in turn decreasing the work engagement level among senior lecturers. However, this contradicts with the direct relationship between PSC and work engagement in the current study, where a higher level of PSC should induce a higher level of work engagement. Thus, it is convincing that challenge demands in the present study do not mediate the relationship between PSC and work engagement.

Last but not least, H16 in the study was supported since there is a significant indirect relationship between PSC and work engagement via hindrance demands. This current finding lends support to the study by Lee et al. (2017) who indicated that role ambiguity,

which is also a type of hindrance demand (Cavanaugh et al., 2000), mediates the relationship between task interdependence and work engagement. Hence, this finding advises that the application of PSC in RUs could lead the policy-makers of RUs to decrease the characteristics of hindrance demands so that the obstacles formed by the hindrance demands at work can be prevented. As a consequence, academicians are capable to manage their tasks and responsibilities well while enhancing their work engagement levels due to the positive feeling of enthusiasm and dedication to the jobs. Thus, hindrance demands present as the positive mediator between PSC and work engagement.

The study has given contributions, which are crucial to both academics and practitioners. For academics, empirical support is provided in this study for the application of the COR theory in explaining the burnout levels of RU academicians. The mediating roles of challenge demands, hindrance demands and work engagement have also been empirically supported in this study to smoothen the researchers in expanding the research model. For practitioners, this study should be beneficial to the RU management and policy-makers by stimulating them to reduce the stressors and to escalate the resources in RU working environment. Hence, this study is anticipated to give insights to Malaysian RUs on how PSC, which serves as a job resource, promotes a better working environment through job demands, which in turn enhancing the work engagement level and ultimately leading to minimum level of burnout among academicians. Therefore, directly and indirectly, in-depth PSC contexts (high commitment from management, priority, communication and participation for academicians' psychosocial health and safety) should result in improved performance. In terms of management perspective, the RU management or policy-makers may be beneficial with the application of PSC into the job design of academicians. The relevant and suitable KPIs can be developed for academicians based on the revamped job demands while achieving the vision and mission of RUs. This approach is critical to ensure the prevalence of burnout among academicians is at the minimum level. Moreover, this study also provides insights to practitioners on the implications of PSC, challenge demands and hindrance demands on work engagement. With that, the RU management can gather the ideas from this study regarding the way to increase the work engagement level among academicians through the manipulation of PSC, challenge demands and hindrance demands. Lastly, this study prepares the RU management with awareness whether elevating work engagement could help to reduce the burnout level among academicians. In conjunction with that, the RU management and policy-makers can identify the factors to dwindle the burnout levels and hence allowing them to take corrective steps in order to preserve the benefits of Malaysian RUs. In conclusion, this study could benefit the higher learning institutions through both academics and practical perspectives in apprehending the predictors of burnout levels so that the prevalence of burnout among RU academicians is managed and minimised.

9 Limitations

Foremost, the findings attained from this study may not be generalised to the academicians who are working in other types of higher education institutions since the sample for this study was merely collected from full-time academicians who have been working more than one year in Malaysian RUs, that are UM, USM, UPM, UKM and

UTM. Secondly, there were challenges during the data collection stage due to the lengthy items in the questionnaire. Consequently, the response rate is relatively low among RU academicians. Thirdly, an online questionnaire is used in this study, which is consigned with bias. Though a few measures have been taken during the development of a questionnaire to diminish common method bias, MacKenzie and Podsakoff (2012) claimed that it is impractical to develop survey research that is free of common method bias. Last but not least, cross-sectional analysis is used in this study and subsequently, the causality between the variables could not be intensely exhibited when data are collected at the same point of time (Sekaran and Bougie, 2013).

10 Suggestions for future research

Firstly, future research on burnout among academicians can be investigated on other non-research public universities, private universities, international universities, university colleges or even colleges that are located in Malaysia. Secondly, a longitudinal study on burnout of academicians is suggested to develop on the present study so that the causality between the variables adopted in this study is sufficiently presented. The third recommendation is revolving around the construct of PSC. A combination of PSC and other climates, such as safety climate, is suggested to be used in future research. A better understanding of the integration concept between PSC and safety climate is promoted when they are used to predict the psychological health and well-being of the respondents.

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