Abstract

Occupational stress has become a major concern for both employees and employers globally. Stress leads to a loss of interest among workers as well as unproductive and valueless outputs if not managed well. The education sector is one work setting dominated by stress. This comparative cross-sectional study aimed to determine the levels of depression, anxiety, and stress among academicians as well as their work-related stressors and coping strategies between a selected public university in Malaysia and a private university in Indonesia. A total of 82 academicians from universities in Malaysia and 52 from Indonesia were recruited using convenience sampling. Data was collected using a validated self-reported questionnaire via Google Forms. The prevalence of depression, anxiety, and stress among Malaysian academicians was 19.5%, 29.5%, and 12.2%, respectively. In contrast, the prevalence of depression, anxiety, and stress among Indonesian academicians was 15.7%, 33.3%, and 9.8%. Career development, research, teaching, and interpersonal relationships significantly contributed to stress at both universities (p-value<0.05). Participants from both universities reported using active coping, planning, venting, self-distraction, positive reframing, acceptance, and religion as coping strategies. In conclusion, determining depression, anxiety, and stress prevalence; major work-related stressors; and coping strategies are essential to maintaining the safety, health, and well-being of academicians, which eventually can encourage university administrations to provide support in enhancing their quality of life.

Keywords: academicians, coping, occupational, stress, work-related

Introduction

Stress poses a serious risk factor to the worker’s physical and mental condition, as well as an organization’s well-being.1 Approximately 12.5 million working days were lost in the United Kingdom in 2016 and 2017 due to stress, depression, or anxiety.2 The 2015 National Health Morbidity Survey (NHMS) findings reported that the prevalence of adult mental illnesses in Malaysia had risen two-fold over the past two decades to 29.2%.3 Furthermore, in 2019, the NHMS found that about half a million people had experienced depression.4 Depression is the most common mental condition affecting adults, and it frequently coexists with anxiety and stress. Most public academics see their work as stressful or extremely stressful.5 In Malaysia, public academics also face a high-stress level due to changes in the tertiary education sector. For example, five research universities in Malaysia compete for a better rank internationally to be the country’s top universities. This condition indirectly pushes academic staff to speed up their performance to reach this goal.6 Academics in these fields are expected to keep up with the pace of change and significantly contribute knowledge to solving human problems. In Malaysia, several studies have identified the prevalence of stress as 22.1% among academicians at public universities and 40% at private universities.6-7 Although another study involving 609 academicians from four public universities in Malaysia reported low-stress scores, these results showed that stress is significant among academicians.8

In Indonesia, higher education is dominated by private institutions. Due to a lack of space in public institutions, private universities nationwide serve more than 4.5 million students enrolled in higher education.9 The increase in the number of students enrolled in university may lead to increased workloads for academic staff. In addition to those activities, the government also demands that academicians be involved in high-pressure work activities.10

The data collection period for this study took place...
during the initial stage of the COVID-19 pandemic from February 2020 until June 2020, when the Movement Control Order (MCO) had just started. The Malaysian Government and its Ministry of Health (MOH) implemented the MCO on 18 March 2020 to manage disease spread and minimize COVID-19 mortalities. The Indonesian Government implemented a similar decree on 16 March 2020. Public institutions, including higher education institutions and schools, were urged to close due to COVID-19 to allow students to implement social distancing policies. However, the rapid adaptation period to the new norm, which necessitated teaching online, seemed impossible to switch seamlessly overnight, which could have influenced mental health.

A study conducted among teachers during the COVID-19 pandemic found that the percentages of respondents with mild, moderate, severe, and very severe stress accounted for 12.8%, 12%, 5.3%, and 2.5%, respectively. Furthermore, a study conducted among 70 medical university academicians reported a higher prevalence of depression (32.9%), anxiety (42.8%), and stress (40.0%) during COVID-19. Another study conducted among academicians during the work-from-home period of the COVID-19 pandemic reported that a lecturer’s stress level is positively correlated with time management, distractions, social isolation, focus, and technology. Thus, it is important to determine the depression, anxiety, and stress level among Malaysian and Indonesian academicians as well as identify the work-related factors and coping strategies to improve their safety, health, and well-being.

Method

This study was a comparative cross-sectional study design, utilizing a convenience sampling method. Study participants were recruited among the academicians at two selected universities on the east coast of Malaysia and Jakarta, Indonesia, respectively. The target population at both universities was selected within the following inclusion and exclusion criteria: (i) academicians who were working for more than 6 months; (ii) aged 18 years and above; (iii) excluding those who were on sabbatical, maternity, study, sick leave, and on leave for more than three months (throughout the study).

This study used an adapted questionnaire piloted among lecturers at Universiti Malaysia Terengganu, Malaysia. The questions were asked in English among Malaysian academicians. However, the questionnaire was back-to-back translated into Indonesian and underwent face validity to ensure suitability and comprehensibility among Indonesian academicians. The pre-tested and self-administered questionnaires consisted of 64 questions divided into four sections. Section A consisted of sociodemographic factors, and Section B consisted of work-related factors. In this section, the Stress Sources Questionnaire (SSQ) developed by Archibong and colleagues was utilized, and permission has been obtained from the authors.

The SSQ was used to assess the extent of stress in four work-related domains: interpersonal relationships, career development, research, and teaching. Each domain contained five items. The items were measured on a 4-point Likert scale ranging from “extremely stressful” to “not stressful.” Section C examined the psychosocial characteristics of the respondents, which consisted of twenty-one questions on depression, anxiety, and stress (DASS). The items were measured on a 4-point Likert scale ranging from “almost always” to “never.” Section D assessed the coping skills of respondents. The questions in this section were adapted from the Brief Coping Orientation to Problems Experienced (COPE) questionnaire.

Data was collected after ethical approval was obtained. A list of academicians’ names, emails, and departments was obtained from the Administrative Department, Registrar, and Dean’s office of both universities. All academic staff were invited via email to participate in the study and were given a week to consider. Then, an invitation letter, a set of questionnaires, a consent form, an information sheet created via Google Forms, and a copy of the permission letter to conduct this study were sent through email and WhatsApp. The questionnaires were able to be completed within 10 minutes. Google Forms was chosen as a platform due to the enforcement of the MCO and the distance learning implementation during the coronavirus disease 2019 (COVID-19) pandemic.

Statistical analysis was conducted using software for advanced statistical analysis. Descriptive statistics were used to illustrate the demographic profile of the academicians and coping strategies. A Mann–Whitney test was used to compare the stress scores between the academicians in both universities. Spearman’s Correlation test was used to correlate the stress score and score of work-related factors among the academicians.

Results

Table 1 shows the sociodemographic data of respondents from Malaysia and Indonesia universities. Out of 82 respondents at a university in Malaysia, the majority were female (58.5%), married (91.5%), and had master’s degrees (54.9%) as their highest education level, followed by a Ph.D. (39%). The respondents were mostly lecturers or senior lecturers (58.5%), and 42.7% held management posts at a university in Malaysia.

Similarly, out of the 51 respondents at a university in Indonesia, the majority were females (62.7%), married (86.3%), and had a master’s degree (88.2%) as their highest education level, while 11.8% had a doctoral de-
The prevalence of depression, anxiety, and stress was higher among Malaysian academicians than among Indonesian. Among the Malaysian academicians, the highest prevalence was anxiety (29.3%), followed by depression (15.7%) and stress (9.8%). A similar trend was reported among the Indonesian academicians: the prevalence of anxiety was highest (33.3%), followed by depression (15.7%), then stress (9.8%).

Table 2 shows the median differences in depression, anxiety, and stress scores between university in Malaysia and Indonesia. The depression score was significantly higher among Malaysian academicians (median score of 4, IQR = 2-8) compared to Indonesian (median score of 2, IQR = 0–6), p-value = 0.046.
Table 3 shows the correlation between stress scores and the score of work-related factors at both universities. In Malaysia, the findings showed that all work-related factors had a significant linear relationship with stress (p-value<0.05) except for career development (r = 0.185, p-value = 0.096). In Indonesia, all work-related factors had a significant linear relationship with stress (p-value<0.05). As the previous section’s findings showed no significant difference in stress scores between both universities academicians, the descending correlation trends for both populations were interpersonal relationship > teaching > research > career development.

Table 4 shows the coping strategies among respondents. This study found that the most used coping strategies at both universities were active coping, planning, venting, positive reframing, acceptance, and religion. However, humor was used only among Indonesian academicians as a medium to combat stress.

**Discussion**

Malaysian academicians had multiple roles besides being educators, including supervisors, researchers, and administrative workers, while simultaneously carrying out non-academic matters regarding their families and personal lives. Similarly, the Indonesian legislation concerning higher education, teachers, lecturers, and the national education system has clearly stated the roles and responsibilities of academicians at universities in Indonesia.18-20 That no significant differences were found in this study for both anxiety and stress scores between academicians of both universities may be due to the similarities in working relationships, job demands, organizational factors, and individual coping strategies.

**Table 2. Median Different of Depression, Anxiety, and Stress Scores between Malaysian and Indonesian Academicians**

<table>
<thead>
<tr>
<th>Variable</th>
<th>Median (IQR)</th>
<th>Z statistic</th>
<th>p-value*</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Malaysia</td>
<td>Indonesia</td>
<td></td>
</tr>
<tr>
<td>Depression score</td>
<td>4 (2.8)</td>
<td>2 (0-6)</td>
<td>-1.999</td>
</tr>
<tr>
<td>Anxiety score</td>
<td>4 (2.8)</td>
<td>4 (0-8)</td>
<td>-0.227</td>
</tr>
<tr>
<td>Stress score</td>
<td>10 (4-14)</td>
<td>8 (4-14)</td>
<td>0.112</td>
</tr>
</tbody>
</table>

Notes: Statistical test – Mann-Whitney test, *significant difference at p-value<0.05

**Table 3. Correlation between Stress Score and Score of Work-Related Factors**

<table>
<thead>
<tr>
<th>Variable</th>
<th>Stress Score</th>
<th>Malaysia (n = 82)</th>
<th>Indonesia (n = 51)</th>
<th>Total (n = 133)</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>r</td>
<td>p-value</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Career development</td>
<td>0.185</td>
<td>0.413</td>
<td>0.259</td>
<td></td>
</tr>
<tr>
<td>Research</td>
<td>0.283</td>
<td>0.424</td>
<td>0.320</td>
<td></td>
</tr>
<tr>
<td>Teaching</td>
<td>0.418</td>
<td>0.515</td>
<td>0.451</td>
<td></td>
</tr>
<tr>
<td>Interpersonal relationship</td>
<td>0.373</td>
<td>0.596</td>
<td>0.456</td>
<td></td>
</tr>
</tbody>
</table>

Notes: *Statistical test- Spearman’s Correlation test, *Significant difference at p-value<0.05

**Table 4. Coping Strategies among Academicians**

<table>
<thead>
<tr>
<th>Coping Strategy</th>
<th>Category</th>
<th>Frequency (%)</th>
<th>Malaysia</th>
<th>Indonesia</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Problem focused</td>
<td>Active coping</td>
<td>77 (93.9)</td>
<td>49 (96.1)</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Use of instrumental support</td>
<td>58 (70.7)</td>
<td>46 (90.2)</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Planning</td>
<td>78 (93.1)</td>
<td>49 (96.1)</td>
<td></td>
</tr>
<tr>
<td>Dysfunctional coping strategy</td>
<td>Self-distraction</td>
<td>74 (90.2)</td>
<td>49 (96.1)</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Denial</td>
<td>40 (48.8)</td>
<td>23 (45.1)</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Substance use</td>
<td>36 (43.9)</td>
<td>18 (35.3)</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Behavioral disengagement</td>
<td>67 (81.7)</td>
<td>43 (84.3)</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Venting</td>
<td>54 (65.9)</td>
<td>49 (96.1)</td>
<td></td>
</tr>
<tr>
<td>Emotion-focused</td>
<td>Emotional support</td>
<td>53 (64.6)</td>
<td>45 (88.2)</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Positive reframing</td>
<td>79 (96.3)</td>
<td>50 (98.0)</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Acceptance</td>
<td>78 (93.1)</td>
<td>49 (96.1)</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Humor</td>
<td>47 (57.3)</td>
<td>42 (82.4)</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Religion</td>
<td>77 (93.9)</td>
<td>50 (98.0)</td>
<td></td>
</tr>
</tbody>
</table>
Moreover, academicians at public or private institutions may experience similar anxiety in the workplace that may be influenced by the fear or dread of the higher management, colleagues, or an inconductive working environment. It is well known that work-related stress is a major cause of occupational ill health, poor productivity, and human error.21

The academicians at both universities in this study experienced stress arising from career development, followed by research, teaching, and interpersonal relationships. Regarding career development, the academicians would work under increasing pressure to meet the expectation to publish high-quality research in reputable journals to be promoted.22-23 However, even though they publish many papers, they might not yet be promoted due to the complexity of the promotion process. Another major stress component in career development was encountering obstacles in sourcing funds to further studies to the highest qualification (doctoral degree), which may result in delayed career development. Hence, the government needs to allocate adequate funds for academicians to further their studies and expand their profession to a higher position.

The second most stressful source of stress at both universities in this study was the research aspect, with a significant correlation, p-value<0.05. In order to produce good-quality publications, academicians need to secure research grants. Moreover, the cost to obtain up-to-date materials, support daily operations, and purchase appropriate equipment for the research study are very high. Such situations are applicable to a research university and to academicians in private universities who are encouraged not only to teach, but also to produce research outputs per the university management structure. Furthermore, during the COVID-19 pandemic, academicians working from home could not perform laboratory work due to the MCO.

Similarly, for both universities, a significant correlation was observed between teaching and stress scores pertaining to course content development. The academicians did not have enough time to develop the subject module before teaching.24 Moreover, due to the COVID-19 pandemic, traditional face-to-face teaching and learning switched to online learning, and academicians were required to work from home. The global crisis undoubtedly impacted their educator duties, as they faced the challenge of ensuring that no student fell behind while addressing their own personal duties, family matters, and dread surrounding COVID-19.13

The most stressful indices arising from interpersonal relationships were students, non-teaching staff, and colleagues. An increased number of students leads to an increased workload for educators. Previous studies claim that unfavorable student-to-lecturer ratios, student-relat-
taining academicians’ safety, health, and welfare. These findings should also encourage university management to provide support to enhance academicians’ quality of life by developing stress management seminars, cultivating a supportive work environment, and providing more research funding.

Abbreviations

Ethics Approval and Consent to Participate
This study was approved by the Human Research Ethics Committee (JEPEM) of Universiti Sains Malaysia (reference code: USM/JEPEM/19110728). Prior to data collection, consent was obtained to ensure voluntary involvement, and the confidentiality/anonymity of the respondents in this study was secured.

Competing Interest
The authors declare that there are no significant competing financial, professional, or personal interests that might have affected the performance or presentation of the work described in this manuscript.

Availability of Data and Materials
The dataset and materials are available to share upon a reasonable request to the corresponding author.

Authors’ Contribution
SMA and ATE conceptualized, designed, interpreted the data, and approved the final draft. NHR prepared the initial draft, collected, and analyzed the data. WSH collected the data. NM and TAEI approved the final draft.

Acknowledgment
The authors are thankful to all academicians who participated in this study.

References