International Journal of Learning, Teaching and Educational Research
Vol. 23, No. 2, pp. 113-144, February 2024
https://doi.org/10.26803/ijlter.23.2.6
Received Nov 22, 2023; Revised Feb 1, 2024; Accepted Feb 10, 2024

Testing the Healthy School Organisation Instrument (i-OS) and the Holistic Psychological Well-Being Model of School Organisations

Che Mohamad Padali Che Mat
National University of Malaysia
Bangi, Malaysia

Ku Suhaila Ku Johari
National University of Malaysia
Bangi, Malaysia

Mohd Izwan Mahmud
National University of Malaysia,
Bangi, Malaysia

Abstract. The purpose of this study is to test the validity of the healthy school organisation instrument (i-OS) and the holistic psychological well-being model of school organisations. A total of 500 teachers from 10 schools in the Klang Valley participated in the study. This instrument was created to assess four primary constructs: (i) the pressures placed on teachers' jobs in schools; (ii) the sources of teachers' employment in schools; (iii) the teachers' personal resources; and (iv) the teachers' overall psychological health in schools. The instrument's validity and reliability were examined using the Rasch model. The Rasch model was used because it is a more robust method than relying solely on Cronbach's alpha to gauge responder reliability. Furthermore, it was discovered that the school organisations' comprehensive psychological well-being model met the necessary fit index. The realm of study, theory, and practice will all benefit from this tool and model. The study's conclusions can also be applied to the creation of initiatives and programmes aimed at ensuring the wellbeing of educators and educational institutions.

Keywords: validity and reliability; rasch model; psychological well-being; school organisation; teacher job demands; sources of teacher employment; teachers' personal resources

1. Introduction

The teaching profession has seen significant transformation in the twenty-first century. Because of the mismanaged demands of their jobs, employees' health and

well-being are greatly impacted by this circumstance (Linda, I. V. et al., 2020). One of the professions most likely to experience work-related stress is education, according to recent studies conducted both domestically and abroad. According to a 2019 report by The American Institute of Stress, teachers are the most stressed out by today's issues, which puts them at a significant risk for health issues. According to a Universiti Putra Malaysia research, as many as 71.1% of Klang Valley teachers struggle with work-related stress brought on by a variety of elements in the school environment (Amin et al., 2019). According to a 2021 Ministry of Education Malaysia report presented to parliament, 4,360 educators applied for early retirement on the grounds of illness, workload, disinterest, family, and personal reasons. In order to manage advanced interventions, such as the development and prevention of teachers' health and well-being, there is a great need for current research to identify aspects of teachers' job demands, school organisational resources, personalities, and psychological well-being. The primary metric for determining the demands of the teachers' jobs, the resources available to the school, the personalities of the teachers, and the teachers' overall psychological well-being in this endeavour is anticipated to be the development of the teacher's psychological well-being instrument in the school organisation (i-OS). In addition, the construction of a new model of psychological well-being is to be developed holistically in the school organisation by examining the influence of the variables or constructs. Therefore, to ensure the instruments and models developed have high validity and reliability, the development needs to be carried out according to the appropriate construction and analysis processes.

The need for the construction of this instrument is seen in the theoretical gap as a result of the literature review. Based on a review of the literature related to the construct that affects the psychological well-being of teachers in schools, there is a theory and model that can explain the construct, which is the JD-R model (2004). This theory has been widely used by previous researchers to explain the organisational and psychological factors of employees. Among the studies are by Ramdhani, Y. N. (2018), Kim, S. & Wang, J. (2018), Ramdhani, G. F. & Sawitri, D. R. (2017), and Santoso, P. N. & Hartono, B. (2017). Most of the studies are from abroad and focus more on non-teaching career fields. Accordingly, researchers see a high need for the development of the JD-R theory in the field of education, particularly in studying the influence of organisational environmental factors on teacher psychology as suggested by Sidek, Z. (2021), Suhaimi & Muhamad, S. (2020), and Jose, S. A., Effendi, M., & Matore, E. M. (2021).

In addition, the results of the literature review also show that no instrument in the country measures organisational constructs affecting the psychological well-being of employees at work, especially teachers at schools. Most psychological well-being studies in the country use foreign instruments in the data collection process. Among the popular instruments used are the Ryff Psychological Well-Being Scale (1989), which measures psychological well-being with stress variables (Abdullah, H. S. L. & Madom, Z., 2006), self-esteem (Yasin, N., Manap, J., & Kassim, A. C., 2018), counselling needs (Ministry of Education Malaysia, 2019), work pressure (Lee F. L. & Surat, S., 2020), and organisational climate (Abdul A. J. & Mydin K. F., 2020).

Several validity and reliability studies have reported mixed results. There are studies that obtained the same six-factor structure as the model introduced by Ryff, C. D. (1989), such as those by Kállay, É., and Rus, C. (2014) and Amalia, S. (2016). There are also studies that obtained different findings, such as Musafiri et al. (2023) and Akmal, M. I. & Shahrazad, W. (2018). With this, it can be seen that the psychometric characteristics of the Psychological Well-Being Questionnaire (Ryff, 1989), which is popularly used by researchers in the country, are different from those of other countries. The tendency to use and adapt instruments from outside has caused various psychometric problems, such as context inconsistency and language problems, as well as inaccurate and biased item testing (Angelopoulos et al., 2002; Anik & Lydia, 2006; Primatika & Laily, 2010; Teddy, 2011).

Finally, methodological issues can be divided into three main aspects, namely the absence of expert review (Angelopoulos et al., 2002), sampling bias (HuiJuan, 2009; Primatika & Laily, 2010; Santa, 2012), as well as validity and reliability issues that are not deep (Bakare, 2014; Kanjanakaroon, 2012; Pasaribu, 2011; Thi, 2007). Methodological problems are often associated with the use of measurement theories that do not provide sufficient information. Most researchers use classical test theory (CTT) to show the relationship between the measured constructs and list the item discrimination index and item difficulty as conditions for the validity of their instrument. Cronbach's alpha index is used as a reference for reliability. Meanwhile, the researcher used the Rasch measurement model to deepen aspects of validity and reliability. This is due to the fact that this model analyses respondents in addition to items. For example, it tests the functionality of items based on item-respondent separation and reliability, identifies the dependent item based on the standardised residual correlation value, analyses appropriateness (fit) of items measuring the construct, and detects the polarity of items that measure constructs based on PTMEA CORR values.

The development of the i-OS instrument is carried out according to the 10 steps in the Miller et al. Model (2013) used for this study. The researcher divided the study into four stages, namely the design stage, the item development stage, the verification stage, and the profile formation stage. In this study, we are focusing on the validation stage. At this stage, information and data are analysed using the Rasch measurement model analysis in order to obtain psychometric characteristics as well as construct the validity and reliability of the instrument. In addition, the study also conducted research hypothesis model testing based on the JD-R model. The testing was conducted to see the influence of the variables of the JD-R model in Malaysian school organisations, especially teachers.

2. Literature Review

Each variable in this study is formed from a literature review related to past theories and models to see a phenomenon and provide guidance to the researcher in explaining a fact and its relationship with the study variable. Marican, S. (2005) states that a theory is a set of statements about variables that help predict the hypothesis of a study. Among the theories and models that are referenced in the

literature are the Job Demands-Resources (JD-R) theory, the psychological well-being theory by Bradburn (1969) and Ryff (1989), the psychological well-being model by Ryff (1989), Bill Hettle (1984), and Myers and Sweeney (2005).

Researchers in the twenty-first century have come to greatly value the Job Demands-Resources (JD-R) theory, which was first presented by Demerouti, Bakker, Nachreiner, & Schaufeli (2001). According to a popular hypothesis, the equilibrium of positive and negative employment characteristics—such as job resources and demands—determines the health and well-being of employees. Furthermore, the JD-R hypothesis is adaptable and appropriate for all professions. Schaufeli and Bakker amended the JD-R model in 2004, adding "well-being" or "work engagement" as mediators of the interaction between job demands and health problems, as well as job resources and work performance, in addition to "burnout," "considering burnout," and "worker well-being." According to the most recent JD-R theory, excessive job demands result in stress and health and psychological issues, yet high workforce resources (job resources) boost productivity and motivation (motivational processes). Furthermore, personal resources are employed as elements that will positively impact job demands and employees' psychological well-being.

2.1. Teacher job demands

According to Bakker and Demerouti (2007), job demands encompass physical, psychological, and social factors that necessitate employees' continual physical and psychological capabilities. An uncomfortable work atmosphere, role ambiguity, relationship issues between employers, employees, and customers, workload, and time pressure are some of the demands of the profession. The measurement of job demands and job resources does not occur in isolation; rather, these constructs are represented by other sub-variables. To quantify the construct of job demands, Lee and Ashforth (1996) suggest sub-variables such as role clarity, task load, role conflict, role stress, stressful episodes, work stress, etc. Furthermore, ambiguity, conflict, and task overload are suggested by Demerouti et al. (2001) and Alarcon (2011) as variables that reflect aspects of time constraints, customer relations, physical workload, and the physical environment of the business.

However, in the context of this study, the researcher used the latest definitions and recommendations by Demerouti et al. (2001) and Alarcon (2011) via two sub-constructs (overload and management of work instructions) to represent the construct of job demands. This is in line with the findings of domestic and foreign studies related to teacher workload factors, work instruction conflicts (Sari et al., 2022; Ramadhan et al., 2022; Ahmad et al., 2021; Royo, M. A. & Woo, S. F., 2010; Abu, B. & Aziz, M., 2010), teachers' work pressure (Suhaimi & Suhaimi, M. 2020), school environment factors (Jose, S. A., Effendi, M., & Matore, E. M., 2021), and role ambiguity factors (Ainsworth & Oldfield, 2019; Garwood et al., 2018; Wu et al., 2020), which affect the well-being of teachers in schools.

2.2. Teacher job resources

According to Bakker and Demerouti (2018), job resources are organisational assets with regard to their physical, psychological, and social characteristics that can lessen workload, aid in the accomplishment of organisational objectives, and foster the professional growth of employees. Autonomy, social support, role clarity, career prospects, competency improvement programmes, and facilities are some of the job resources available in the business. Social support is both a strong predictor and a substantial association between teachers' psychological well-being at school, according to a study by Mokhtar, S. (2018). Conversely, autonomy describes a teacher's ability to make decisions about their own teaching and learning so that they may adjust to the needs of their pupils and the circumstances in which they find themselves. This is consistent with the views of Rohani et al. (2017), who maintain that teachers who successfully integrate 21st-century Learning and Facilitation (PdPc) and who can modify course materials to better reflect students' real-world experiences will increase student engagement because these modifications give students' lives purpose. The next definition of facility resource is the availability of tangible resources within a facility to help teachers efficiently fulfil their roles and obligations. If these services are not made available, stress, depression, and conflict will have an adverse effect on teachers' psychological health at work. The interpretation of this meaning is in line with studies conducted by Royo, M. A. & Woo, S. F. (2010), Tajulashikin et al. (2013), and Shakeel et al. (2011), which found that facility resource limitations are one factor impacting teacher stress and pressure in school organisations.

2.3. Teachers' personal resources

Personal resources are positive self-evaluations associated with resilience, which is a person's capacity to manage and affect their surroundings, according to Bakker and Leiter (2010). Three types of personal resources include motivation, optimism, and self-efficacy. It is essential for teachers to have an open mind and be willing to embrace changes in the educational system in the school setting. This is due to the fact that every organisation will undergo changes based on demand, leadership, and time. According to Mascall et al. (2009), the development of diverse leadership styles can be influenced by the positive attitudes of educators. According to a Selcuk (2019) study, teachers' work performance—which includes their dedication to the organisation and their involvement in completing tasks—increases when their self-efficacy grows. Next, a teacher's motivation can impact the work environment and is a personal resource. According to a prior study by Antin and Kiflee (2018), highly motivated teachers are more likely to perform their jobs effectively, which lowers burden.

In this study, personal resources act as a mediator between job demands and job resources for holistic psychological well-being. Three sub-constructs representing the construct of personal resources, namely self-efficacy, motivation, and optimism, are believed to have a positive role in predicting work engagement and well-being at work (Bakker, Demerouti, & Sanz-Vergel, 2014), as well as reducing the effects of high job demands. Personal resources are reciprocal or have the same influence as job resources on work engagement (Bakker, Demerouti, & Sanz-Vergel, 2014).

2.4. The holistic psychological well-being of teachers

Next is the holistic psychological well-being variable, which functions as a dependent variable. This variable consists of six dimensions of well-being: emotional well-being, occupational well-being, physical well-being, relationship well-being, intellectual well-being, and spiritual well-being. The rationale for this variable is that it uses dimensions in three holistic models of psychological well-being, namely the Six Dimensions of Wellness by Bill Hettler (1984), the Six Factor Model of Psychological Well-Being by Carol Diane (Ryff, 1989), and The Indivisible Self: An Evidence-Based Model of Wellness by Jane E. Myers (Myers & Sweeney, 2005).

Subjective well-being, psychological well-being, and well-being at work are the three components of well-being, which is a concept of mental health (Page & Vella-Brodrick, 2009). Psychological well-being at work, according to Dagenais-Desmarais & Savoie (2012), is the representation of people's subjectively pleasant experiences at work, particularly from a eudemonic perspective, which might help them realise their positive potential there. A more focused psychological well-being that may lead to better results is psychological well-being at work. Additionally, they clarify that while psychological well-being and psychological well-being at work share the same conceptual framework, psychological well-being at work demonstrates how the concept of work and organisation is defined differently.

In the context of teacher work, McCallum and Price (2010) and Engels et al. (2004) describe the meaning of well-being as being formed through the experience of the workplace environment's positivity and positive emotions towards forming school harmony. In the conceptual framework of teacher well-being, well-being is formed holistically from various main dimensions, namely physical, social, emotional, cognitive, and spiritual (McCallum & Price, 2010). Through a positive work environment experience, well-being tends to be related to the active participation of teachers in physical activities, which stimulates positive thinking and establishes good social interaction in the workplace (Yin, Huang, & Wang, 2016). Teachers who are under constant stress at work are prone to unstable emotions, which can have an impact on both their personal and professional quality of work. (Collie and others, 2015). In a study published in 2020, Lee, L. F. investigates the connection between teachers' psychological health in SJKC Kulai District and work-related stress. The study's conclusions demonstrate a strong correlation between teachers' psychological health and work strain.

In this study, the holistic psychological well-being of teachers refers to the psychological well-being at work among teachers that is formed through an encouraging environment. It involves the formation of a school culture that is healthy and balanced in terms of emotional well-being, physical well-being, occupational well-being, mental well-being, relationship well-being, and spiritual well-being.

2.5. The relationship between job demands, job resources, personal resources, and teachers' psychological well-being

Numerous studies show that the demands of teaching in schools have an effect on how successfully instructors are able to perform their jobs (Spilt et al., 2011). According to research conducted in the nation, the psychological health of teachers is related to and influenced by the demands placed on them at work, including work pressure. Among these are the results of a study conducted by Lee L. F. (2020), which demonstrates a substantial association between teachers' psychological well-being and work strain. In a similar vein, studies conducted by Lim, N. M. (1998) demonstrate a strong correlation between stress and physical health. The past studies in the country show that there is a significant relationship and influence between the demands of teachers' work and the psychological and physical well-being of teachers.

Job resources can also be seen as having a direct relationship with *burnout.* If viewed separately, job resources have a direct relationship with one of the dimensions of burnout (Bakker et al., 2004). There is a study related to the relationship between job resources that shows that low employer support will increase the effect of burnout among employees (Yin et al., 2016). Teachers' emotional stability at work is also associated with support from administrators and colleagues in the school organisation. Their support has an important role for teachers because it can contribute to their intrinsic and extrinsic motivation and help the growth and development of their identity to achieve goals at work (Bakker, 2011; Hakanen et al., 2008). This support contributes to teachers' positive emotions, job satisfaction, involvement in the organisation, and psychological health (Frey et al., 2003). Therefore, the work demands faced by teachers in their jobs can be reduced with this social support. However, the lack of support can cause emotional injury and lead to mental health problems (Maslach et al., 1997). Teachers come to school with a sincere heart to help and encourage student learning. However, if the school environment does not support the teachers' duties or autonomy as teachers, their emotions will be dominated by negative feelings or instability at work (Hong & Aziah, 2015).

Stress from work demands and work environment conditions that interfere with teachers' enjoyment of work can be addressed and balanced when they have high personal resources, such as self-efficacy at work. Yin, Huang, and Wang (2016) state that the effectiveness of teachers who can take those actions is satisfactory because of cognitive control and their capability of affective evaluation, which makes life and work affect work well-being. This statement is supported by the study of Dicke et al. (2014) in the moderated mediation model, which found that a process of self-efficacy affected the teacher's emotional exhaustion when the teacher's effectiveness in class management was found to be low. The effects of this emotional exhaustion can have an impact, depending on the varying levels of teacher self-efficacy. Dick et al. (2014) also found that the influence of mediating factors has a high impact on the level of efficiency of teachers in classroom management, and this finding is in line with the study by Schwarzer & Hallum (2008). According to Mohamadi, F. S. & Asadzadeh, H. (2012), teacher efficacy is also very significant as a mediator variable because it influences student achievement.

The following Figure 1 depicts the model of the relationship between job demands, job resources, personal resources, and teachers' psychological well-being. It is based on the variable literature and the relationship between the variables mentioned above. This model was created to clarify the relationship between teachers' holistic psychological well-being and the demands and resources of their jobs, as well as the moderating role that teachers' personal resource variables play in this relationship.

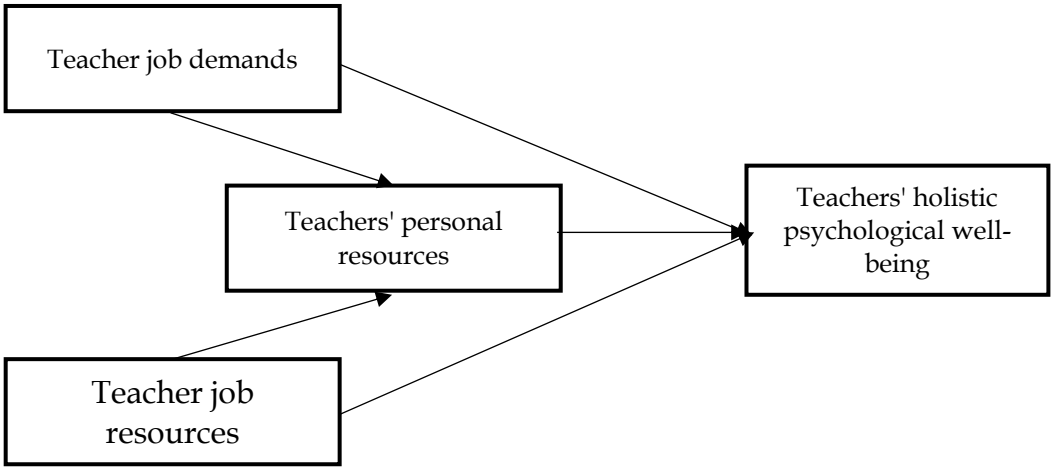


Figure 1. Relationship model between job demands, job resources, personal resources and teachers' psychological well-being

3. Research Objectives

The purpose of this research is to evaluate the produced instrument's validity and reliability. This study is the follow-up to the first, which involved item refining based on the results of the first pilot study. Through this study, the researcher assessed the items' functionality in terms of reliability and item-respondent separation once more, identified the dependent item using the standardised residual correlation value, ascertained the appropriateness (fit) of items measuring the construct, and detected the polarity of items that measure the constructs based on PTMEA CORR values. Next, the researcher also tested the holistic psychological well-being model of the school organisation by studying the relationship and influence of the constructs of job demands, job resources, personal resources, and teachers' holistic psychological well-being.

4. Methodology

4.1 Research design

This research is survey-based, employing quantitative techniques with questionnaires. The Rasch measurement model methodology will be used to report on the instrument validation. The i-OS device was used to gather quantitative data. This method is able to collect and analyse numerical data for the purpose of explaining the phenomenon being studied (Gay et al., 2012). The use of questionnaires has been fully utilised since this approach is able to obtain

information directly from the respondents. It was found to be suitable for studies with large samples and many study locations (Creswell, 2012; Denscombe, 2010).

4.2 Sample

In this study, the researcher used the proportional strata random sampling technique. Proportional stratified random sampling can improve statistical efficiency for sample selection, and it usually has better statistical efficiency than simple random sampling (Mahazi, 2016). This sampling technique is used because the population is not uniform or homogeneous (Noraini, 2010) in terms of the number of teachers and schools in each state, and it can ensure that each respondent has the opportunity to be selected in this study. Based on the total teacher population in this study of 80,065 people, the percentage for the 10 schools in the state (Selangor, WP Kuala Lumpur, and WP Putrajaya) involved is given fairly based on the population found in each state and the teacher population by the school. A sample of 500 teachers was selected from the total population of school teachers in Klang Valley, totalling 800,000. Based on the Rasch measurement model by Linacre and Wright (1994), a sample of 500 people or more would give a strong degree of confidence. While the purpose of data analysis is using SEM analysis, according to Hair et al. (2010), the minimum sample size used is 100 to 500 people, which is the appropriate size for the SEM analysis method.

4.3 Study instrument

Prior to the instrument testing phase, the Healthy School Organisation Instrument (i-OS) was created for this study. Part A (demographics), Part B (teacher job demands), Part C (teacher job resources), Part D (teachers' personal resources), and Part E (teachers' holistic psychological well-being) comprise the five (5) sections of the i-OS instrument. Furthermore, a total of 80 items are used to measure the four structures.

4.4 Data analysis

Analysis of the Rasch measurement model was used to ensure construct validity. The PTMEA CORR value was used to detect the polarity of the construct-measuring items, the standardised residual correlation value was used to identify the dependent item, and the data were analysed to check the reliability and separation of the items (respondents). Furthermore, data analysis was conducted to verify the study's structural equation model.

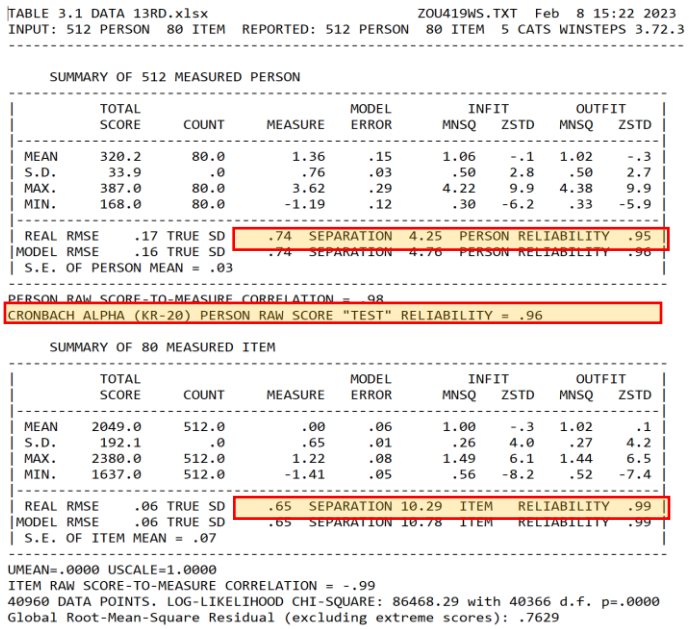
5. Results and Discussion

The researcher uses the Rasch measurement model approach to investigate and report on the overall item functionality of the instrument from the following perspectives: (i) item-respondent separation and reliability; (ii) polarity of construct-measuring items based on the PTMEA CORR value; (iii) appropriateness (fit) of construct-measuring items; and (iv) the dependent item based on the standardised residual correlation value. The results of testing the study's structural equation model and the correlation between the variables were also presented by the researcher.

5.1. Validation of i-OS instruments

5.1.1. Reliability and item separation

The reliability and separation indices for the second test are not significantly different from the findings of the first test. The reliability of individual abilities was recorded at 0.95, and the reliability of item difficulty increased to 0.99. The item reliability value for the i-OS instrument is high and strong enough to be accepted, as it exceeds 0.80 (Bond & Fox, 2015). This shows that these items are consistent when administered repeatedly to other groups of respondents. High item reliability also shows the adequacy of the item to measure what it should measure (Azrilah et al., 2013). As for Cronbach's alpha internal consistency value of 0.96, it is almost the same as in the first test (the pilot study).



```
TABLE 3.1 DATA 13RD.xlsx                    ZOU419WS.TXT  Feb  8 15:22 2023
INPUT: 512 PERSON  80 ITEM  REPORTED: 512 PERSON  80 ITEM  5 CATS WINSTEPS 3.72.3
-------------------------------------------------------------------------------

     SUMMARY OF 512 MEASURED PERSON
-------------------------------------------------------------------------------
|          TOTAL                        MODEL         INFIT        OUTFIT    |
|          SCORE     COUNT     MEASURE   ERROR      MNSQ   ZSTD   MNSQ   ZSTD |
|-----------------------------------------------------------------------------|
| MEAN     320.2      80.0        1.36     .15      1.06    -.1   1.02    -.3 |
| S.D.      33.9        .0         .76     .03       .50    2.8    .50    2.7 |
| MAX.     387.0      80.0        3.62     .29      4.22    9.9   4.38    9.9 |
| MIN.     168.0      80.0       -1.19     .12       .30   -6.2    .33   -5.9 |
|-----------------------------------------------------------------------------|
| REAL RMSE    .17 TRUE SD     .74  SEPARATION  4.25  PERSON RELIABILITY  .95 |
|MODEL RMSE    .16 TRUE SD     .74  SEPARATION  4.76  PERSON RELIABILITY  .96 |
| S.E. OF PERSON MEAN = .03                                                   |
-------------------------------------------------------------------------------
PERSON RAW SCORE-TO-MEASURE CORRELATION =  .98
CRONBACH ALPHA (KR-20) PERSON RAW SCORE "TEST" RELIABILITY = .96

     SUMMARY OF 80 MEASURED ITEM
-------------------------------------------------------------------------------
|          TOTAL                        MODEL         INFIT        OUTFIT    |
|          SCORE     COUNT     MEASURE   ERROR      MNSQ   ZSTD   MNSQ   ZSTD |
|-----------------------------------------------------------------------------|
| MEAN    2049.0     512.0         .00     .06      1.00    -.3   1.02     .1 |
| S.D.     192.1        .0         .65     .01       .26    4.0    .27    4.2 |
| MAX.    2380.0     512.0        1.22     .08      1.49    6.1   1.44    6.5 |
| MIN.    1637.0     512.0       -1.41     .05       .56   -8.2    .52   -7.4 |
|-----------------------------------------------------------------------------|
| REAL RMSE    .06 TRUE SD     .65  SEPARATION 10.29  ITEM   RELIABILITY  .99 |
|MODEL RMSE    .06 TRUE SD     .65  SEPARATION 10.78  ITEM   RELIABILITY  .99 |
| S.E. OF ITEM MEAN = .07                                                     |
-------------------------------------------------------------------------------
UMEAN=.0000 USCALE=1.0000
ITEM RAW SCORE-TO-MEASURE CORRELATION = -.99
40960 DATA POINTS. LOG-LIKELIHOOD CHI-SQUARE: 86468.29 with 40366 d.f. p=.0000
Global Root-Mean-Square Residual (excluding extreme scores): .7629
```

Figure 2. Individual - Item reliability and separation values for the overall construct of the i-OS instrument for the second test

The item isolation index clarifies why it is greater than two (Fox & Jones, 1998), demonstrating that there are enough participants in the sample to verify the instrument items' difficulty hierarchy. Additionally, demonstrating the instrument's ability to discriminate between individuals are individual separation indices. As seen in Figure 2, the item separation index recorded at this second test was 10.29, whereas the individual segregation index achieved was 4.25.

5.1.2. Polarity value via PTMEA CORR

It is ideal for the item polarity value (PTMEA CORR) to be positive and more than 0.3 logits (Bond & Fox, 2015; Wu & Adams, 2007). A high polarity value indicates that all items are moving in the direction of measuring the same sub-construct, and that the item measures the construct it is supposed to measure. The item polarity values and the i-OS instrument item compatibility values are displayed in Figure 3. This result demonstrates that, for each of the 80 items, the PTMEA values are positive and range in logit from 0.36 to 0.67.

TABLE 26.1 DATA 13RD.xlsx ZOU419WS.TXT Feb 8 15:22 2023
INPUT: 512 PERSON 80 ITEM REPORTED: 512 PERSON 80 ITEM 5 CATS WINSTEPS 3.72.3

PERSON: REAL SEP.: 4.25 REL.: .95 ... ITEM: REAL SEP.: 10.29 REL.: .99

ITEM STATISTICS: CORRELATION ORDER

ENTRY NUMBER	TOTAL SCORE	TOTAL COUNT	MEASURE	MODEL S.E.	INFIT MNSQ	INFIT ZSTD	OUTFIT MNSQ	OUTFIT ZSTD	PT-MEASURE CORR.	PT-MEASURE EXP.	EXACT MATCH OBS%	EXACT MATCH EXP%	ITEM
80	2307	512	-.97	.07	1.49	6.0	1.43	4.8	.36	.40	57.8	59.1	D80
32	1827	512	.73	.05	.93	-1.2	1.04	.7	.37	.53	44.5	43.8	B32
1	2365	512	-1.31	.08	.97	-.3	.96	-.5	.37	.36	68.6	66.4	A1
2	2365	512	-1.31	.08	.97	-.3	.96	-.5	.37	.36	68.6	66.4	A2
7	1933	512	.44	.05	1.43	6.1	1.41	5.9	.37	.51	30.7	45.2	A7
8	1933	512	.44	.05	1.43	6.1	1.41	5.9	.37	.51	30.7	45.2	A8
9	1933	512	.44	.05	1.43	6.1	1.41	5.9	.37	.51	30.7	45.2	A9
11	1933	512	.44	.05	1.43	6.1	1.41	5.9	.37	.51	30.7	45.2	A11
31	2106	512	-.12	.06	1.30	4.3	1.37	5.1	.37	.47	40.4	48.0	B31
33	1703	512	1.06	.05	1.01	.2	1.05	.9	.38	.54	39.5	43.1	B33
35	1703	512	1.06	.05	1.07	1.1	1.12	1.9	.38	.54	40.2	43.1	B35
3	2188	512	-.43	.06	1.18	2.6	1.26	3.5	.39	.45	50.4	51.8	A3
4	2188	512	-.43	.06	1.18	2.6	1.26	3.5	.39	.45	50.4	51.8	A4
5	2188	512	-.43	.06	1.18	2.6	1.26	3.5	.39	.45	50.4	51.8	A5
16	1637	512	1.22	.05	1.24	3.8	1.27	4.3	.39	.55	40.2	42.4	A16
18	1637	512	1.22	.05	1.24	3.8	1.27	4.3	.39	.55	40.2	42.4	B18
29	1697	512	1.07	.05	1.30	4.6	1.42	6.1	.39	.54	33.2	43.1	B29
30	1697	512	1.07	.05	1.30	4.6	1.42	6.1	.39	.54	33.2	43.1	B30
19	1661	512	1.16	.05	1.18	2.8	1.28	4.3	.40	.55	38.5	42.8	B19
62	1893	512	.55	.05	1.14	2.2	1.20	3.1	.41	.52	44.3	44.8	D62
27	1688	512	1.09	.05	1.35	5.2	1.44	6.5	.42	.54	30.1	43.1	B27
28	1688	512	1.09	.05	1.35	5.2	1.44	6.5	.42	.54	30.1	43.1	B28
78	2133	512	-.22	.06	1.25	3.6	1.25	3.5	.42	.46	52.5	49.3	D78
6	2096	512	-.08	.06	1.31	4.4	1.32	4.6	.42	.47	41.2	47.9	A6
10	2096	512	-.08	.06	1.31	4.4	1.32	4.6	.42	.47	41.2	47.9	A10
12	2096	512	-.08	.06	1.31	4.4	1.32	4.6	.42	.47	41.2	47.9	A12
13	2096	512	-.08	.06	1.31	4.4	1.32	4.6	.42	.47	41.2	47.9	A13
14	2096	512	-.08	.06	1.31	4.4	1.32	4.6	.42	.47	41.2	47.9	A14
15	2096	512	-.08	.06	1.31	4.4	1.32	4.6	.42	.47	41.2	47.9	A15
17	1750	512	.94	.05	1.10	1.6	1.15	2.3	.42	.54	44.5	43.5	B17
53	1858	512	.65	.05	1.01	.2	1.05	.8	.43	.52	53.7	44.3	D53
36	1889	512	.56	.05	1.07	1.2	1.16	2.5	.43	.52	42.4	44.8	B36
54	2109	512	-.13	.06	1.14	2.1	1.22	3.2	.44	.47	45.5	48.3	D54
58	1897	512	.54	.05	1.10	1.6	1.18	2.7	.44	.51	44.7	44.8	D58
59	1897	512	.54	.05	1.10	1.6	1.18	2.7	.44	.51	44.7	44.8	D59
48	1995	512	.25	.06	.97	-.4	1.00	.0	.45	.50	53.1	46.4	C48
34	1969	512	.33	.06	1.10	1.6	1.17	2.6	.45	.50	46.3	46.1	B34
56	1944	512	.40	.05	.99	-.1	1.04	.7	.45	.51	47.9	45.2	D56
72	1997	512	.24	.06	1.01	.2	.98	-.3	.46	.50	54.9	46.4	D72
26	1850	512	.67	.05	1.34	4.9	1.40	5.7	.46	.52	41.0	44.2	B26
20	2257	512	-.73	.07	1.07	1.1	1.21	2.8	.47	.42	66.4	55.0	B20
64	1960	512	.36	.05	.76	-4.1	.85	-2.6	.48	.50	56.4	45.9	D64
57	2114	512	-.15	.06	.94	-1.0	.97	-.5	.48	.47	53.3	48.3	D57
24	2114	512	-.15	.06	1.23	3.3	1.29	4.1	.49	.47	46.5	48.3	B24
61	2312	512	-1.00	.07	.79	-3.2	1.04	.6	.50	.39	70.5	59.7	D61
73	2201	512	-.48	.06	.89	-1.6	.87	-2.0	.50	.44	53.9	52.0	D73
76	2380	512	-1.41	.08	.90	-1.3	.72	-3.3	.52	.35	72.7	68.6	D76
22	2126	512	-.19	.06	1.01	.2	1.15	2.2	.52	.47	50.6	48.5	B22
70	2054	512	.06	.06	.80	-3.3	.82	-2.9	.53	.48	54.1	47.1	D70
25	2129	512	-.20	.06	1.11	1.6	1.17	2.4	.53	.46	50.4	48.5	B25
55	1983	512	.29	.06	.92	-1.3	.94	-1.0	.53	.50	52.0	46.2	D55
65	2036	512	.12	.06	.74	-4.4	.77	-3.8	.53	.49	57.2	47.0	D65
37	2244	512	-.67	.07	.85	-2.3	.82	-2.7	.53	.42	57.2	54.4	C37
69	1869	512	.62	.05	.75	-4.4	.80	-3.4	.54	.52	58.4	44.4	D69
21	2220	512	-.56	.07	.81	-3.0	.82	-2.8	.54	.43	66.6	53.0	B21
77	2370	512	-1.35	.08	.82	-2.4	.66	-4.3	.54	.36	69.9	67.2	D77
79	2292	512	-.90	.07	.77	-3.6	.70	-4.4	.55	.40	67.0	57.9	D79
60	2194	512	-.45	.06	.80	-3.2	.79	-3.3	.55	.44	59.8	51.9	D60
68	2108	512	-.13	.06	.67	-5.8	.71	-5.0	.55	.47	60.9	48.0	D68
38	1997	512	.24	.06	.97	-.5	1.00	.0	.55	.50	58.0	46.4	C38
23	2004	512	.22	.06	.91	-1.5	.92	-1.2	.56	.50	50.4	46.4	B23
71	2237	512	-.64	.07	.74	-4.2	.72	-4.3	.58	.43	57.2	54.0	D71
67	2193	512	-.45	.06	.63	-6.5	.66	-5.6	.58	.44	63.3	51.9	D67
39	2016	512	.18	.06	.70	-5.3	.78	-3.8	.59	.49	64.1	46.5	C39
74	2125	512	-.19	.06	.75	-4.2	.78	-3.6	.61	.47	62.5	48.5	D74
51	2269	512	-.78	.07	.71	-4.7	.64	-5.5	.61	.41	66.8	55.9	C51
63	2123	512	-.18	.06	.67	-5.7	.69	-5.3	.62	.47	57.4	48.4	D63
75	2191	512	-.44	.06	.71	-4.8	.72	-4.6	.63	.44	62.1	51.8	D75
50	2258	512	-.73	.07	.82	-2.8	.73	-4.0	.63	.42	65.8	55.1	C50
52	2237	512	-.64	.07	.69	-5.2	.65	-5.7	.63	.43	64.8	54.0	C52
40	1954	512	.37	.05	.61	-7.2	.65	-6.4	.63	.51	52.7	45.3	C40
43	1945	512	.40	.05	.66	-6.1	.70	-5.3	.63	.51	57.6	45.2	C43
41	2193	512	-.45	.06	.73	-4.5	.70	-4.9	.64	.44	58.8	51.9	C41
49	2169	512	-.35	.06	.61	-6.9	.59	-7.2	.65	.45	70.5	51.1	C49
47	1990	512	.26	.06	.62	-6.8	.64	-6.5	.65	.50	56.3	46.2	C47
44	2340	512	-1.16	.08	.58	-6.8	.52	-6.9	.65	.38	78.9	62.9	C44
66	2185	512	-.42	.06	.79	-3.4	.76	-3.9	.66	.45	58.0	51.7	D66
42	2293	512	-.49	.06	.73	-4.6	.71	-4.7	.66	.44	56.6	52.1	C42
45	2091	512	-.07	.06	.75	-4.2	.74	-4.4	.66	.47	58.2	47.6	C45
46	2107	512	-.12	.06	.56	-8.2	.59	-7.4	.67	.47	64.1	48.0	C46
MEAN	2049.0	512.0	.00	.06	1.00	-.3	1.02	.1			51.9	49.3	
S.D.	192.1	.0	.65	.01	.26	4.0	.27	4.2			11.6	5.9	

Figure 3. Item polarity values and i-OS instrument item compatibility values for the entire i-OS instrument construct for the second test

5.1.3. Appropriateness (fit) of items measuring the construct

With a value of 0.5 to 1.5 logits, the item's fit value—which is the product of infit and outfit mean square (MNSQ)—complies with the item's setting range (Boone et al., 2014; Sumintono & Widhiarso, 2014). Furthermore, the ZSTD outfit value must fall between -3 and +3. (Sumintono & Widhiarso, 2014). On the other hand, ZSTD value can be disregarded if MNSQ is adequate (Linacre, 2010). The MNSQ outfit value and the MNSQ infit value are sufficient, according to Sumintono, B. & Widhiarso (2015) and William et al. (2014), to guarantee that the objects created are suitable for measuring the construct. The MNSQ outfit value will therefore be prioritised for this investigation when determining the item's appropriateness. In determining whether to drop or refine an item based on the needs of the research and expert advice, the MNSQ infit value and ZSTD are also considered if the MNSQ outfit value does not match the criteria.

The analysis shows that all 80 items are in the compliance range of 0.5 to 1.5 logits, as in the statistical formulation of Figure 3. Therefore, it can be concluded that all 80 items for the i-OS instrument during the administration of the second test were better than the first. The infit MNSQ item values ranged from 0.56 to 1.49 logits, while the outfit MNSQ item values ranged from 0.52 to 1.43 logits.

5.1.4. Measurement of standardised residual correlations (standardised residual correlations)

One can determine if one item is reliant on other things or not by measuring the standardised residual correlation value. If the positive correlation coefficient is high, local reliance may develop. Linacre (2010) states that when the correlation between two things is greater than 0.7, it indicates that the items are not unique but rather interdependent. As a result, Linacre (2010) recommended that a single item be chosen for the measurement. He continued by saying that one of the components must be removed in order to create an instrument of high quality. The MNSQ value is used in item selection, and values that are near to 1.00 will be kept (Linacre, 2010).

The findings in Table 1 show 180 matching items with standardised residual correlation values ranging from 0.30 to 0.67. This range meets the condition of local independence, which is a correlation value of less than 0.70 (Linacre, 2010). The matching of other items in the i-OS instrument that are not listed still has a correlation value below 0.70 but is weak or less than the value of 0.30. This means that the items are not dependent on other items in the same construct.

Table 1. Standard value of the highest residual correlation on pairs of items

Correlation	Item	Item	Correlation	Item	Item
0.67	D76	D77	0.36	A2	A6
0.66	A16	B19	0.36	A1	A10
0.66	B18	B19	0.36	A2	A10
0.61	D77	D79	0.36	A1	A12
0.60	B20	B21	0.36	A2	A12
0.59	A16	B17	0.36	A1	A13
0.59	B17	B18	0.36	A2	A13
0.58	C45	C46	0.36	A1	A14
0.55	B34	B35	0.36	A2	A14
0.54	A6	A7	0.36	A1	A15
0.54	A6	A8	0.36	A2	A15
0.54	A6	A9	0.36	C40	C46
0.54	A7	A10	0.36	B32	B35
0.54	A8	A10	0.36	D68	D73
0.54	A9	A10	0.36	C42	D66
0.54	A6	A11	0.36	C37	C42
0.54	A10	A11	0.35	D62	D63
0.54	A7	A12	0.35	D64	D65
0.54	A8	A12	0.35	D72	D73
0.54	A9	A12	0.34	A1	A7

0.54	A11	A12	0.34	A2	A7
0.54	A7	A13	0.34	A1	A8
0.54	A8	A13	0.34	A2	A8
0.54	A9	A13	0.34	A1	A9
0.54	A11	A13	0.34	A2	A9
0.54	A7	A14	0.34	A1	A11
0.54	A8	A14	0.34	A2	A11
0.54	A9	A14	0.34	D70	D73
0.54	A11	A14	0.34	C50	D76
0.54	A7	A15	0.34	C45	C47
0.54	A8	A15	0.34	C40	C41
0.54	A9	A15	0.34	D65	D68
0.54	A11	A15	0.33	C45	D55
0.54	B17	B19	0.33	D68	D69
0.53	C38	C40	0.33	B19	D53
0.53	C39	C40	0.33	D71	D76
0.52	A1	A3	0.33	D67	D68
0.52	A2	A3	0.33	D64	D68
0.52	A1	A4	0.33	C46	C50
0.52	A2	A4	0.33	C47	D63
0.52	A1	A5	0.33	D77	D80
0.52	A2	A5	0.33	C49	D77
0.52	C50	C52	0.33	D67	D79
0.50	B27	B31	0.32	D67	D77
0.50	B28	B31	0.32	D78	D79
0.50	D76	D79	0.32	D73	D77
0.49	C50	C51	0.32	A16	B32
0.49	B29	B31	0.32	B18	B32
0.49	B30	B31	0.32	B22	D54
0.46	C45	C49	0.32	D70	D71
0.46	D69	D70	0.32	D61	D66
0.45	D78	D80	0.32	C49	D76
0.45	B20	D54	0.32	C46	D75
0.45	B23	B24	0.32	C50	D60
0.45	C51	C52	0.31	C42	D61
0.44	B25	B26	0.31	D66	D67
0.44	B20	B22	0.31	D62	D70
0.44	C38	C39	0.31	B31	B32
0.44	D63	D73	0.31	D55	D56
0.44	B33	B35	0.31	C38	D55
0.44	C49	C50	0.31	C44	D66
0.43	D75	D76	0.31	C45	C50
0.43	D71	D75	0.31	D63	D66
0.43	C41	C50	0.31	C44	D61
0.42	D53	D54	0.31	C52	D77
0.42	C49	C52	0.30	D56	D57

0.42	B23	B25	0.30	D62	D73
0.42	B21	D54	0.30	C48	D64
0.41	D68	D70	0.30	C45	D79
0.41	C41	C46	0.30	A3	A6
0.41	C46	C47	0.30	A4	A6
0.40	B32	B33	0.30	A5	A6
0.40	C42	C44	0.30	A3	A10
0.39	B23	B26	0.30	A4	A10
0.39	B24	B26	0.30	A5	A10
0.39	C40	C45	0.30	A3	A12
0.38	C41	C47	0.30	A4	A12
0.38	C46	C49	0.30	A5	A12
0.38	C48	C49	0.30	A3	A13
0.38	C43	C47	0.30	A4	A13
0.38	D63	D68	0.30	A5	A13
0.37	D71	D77	0.30	A3	A14
0.37	D57	D78	0.30	A4	A14
0.37	B33	B34	0.30	A5	A14
0.37	D77	D78	0.30	A3	A15
0.37	C51	D76	0.30	A4	A15
0.37	C41	C51	0.30	A5	A15
0.36	B17	B32	0.30	B22	B24
0.36	D75	D77	0.30	D71	D79
0.36	A1	A6	0.30	C38	C41

5.2. Structural equation model testing

A sketch of the regression model was created using AMOS software and linked the research data in SPSS with the regression model in AMOS. After that, data analysis was carried out using AMOS. The results of the SEM analysis are reported by explaining the appropriateness of the regression model proposed by the researcher and whether the exogenous variables (job demands, job resources, and personal resources) are significant predictors of the endogenous variables (psychological well-being) or vice versa. In addition, a correlation coefficient analysis between the exogenous variables (job demands, job resources, and personal resources) was conducted to see the strength of the correlation and influence between the variables. Finally, the results of the SEM analysis are explained by referring to when the variance in the endogenous variable (holistic psychological well-being) is predicted by the exogenous variable (job demands, job resources, and personal resources).

Figure 4 shows the structural equation model tested in this study to examine the correlation between the latent variables (factors). The structural model in this study is χ 2 = 55.058, df = 2.622, p = 0.000, RMSEA = 0.063, GFI = 0.972, AGFI = 0.939, TLI = 0.964, and CFI = 0.979. The fit index value of this model meets the six fit index conditions as suggested by Hair et al. (2019) in Table 2. He also stated that the use of four or five goodness-of-fit indices that meet the requirements is sufficient to assess the suitability of a model. Therefore, the fit of the index from

the SEM analysis given in Figure 4 shows that this model is suitable to be used in the Malaysian context to measure the relationship between teachers' job demands, teachers' job resources, teachers' personal resources, and teachers' holistic psychological well-being.

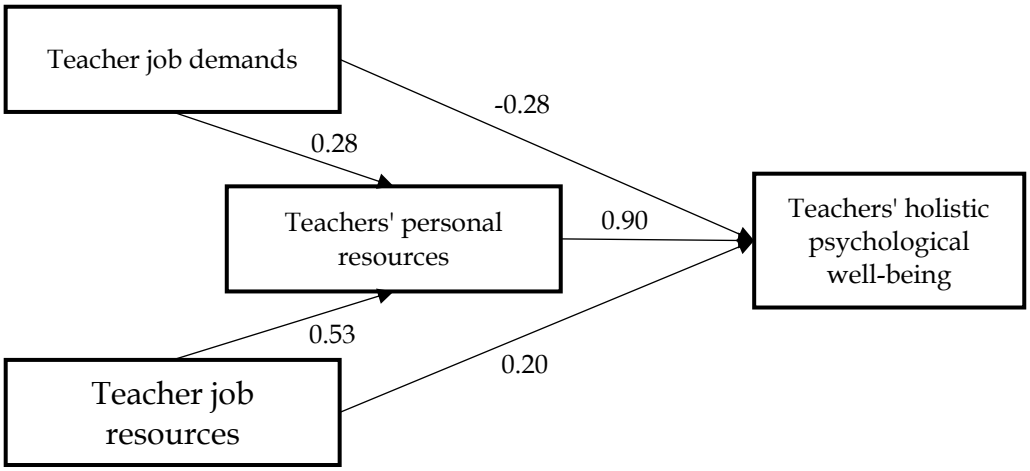


Figure 4. Structural model of the study

Table 2. Results and structural model index fit results

Index	Index terms	Results	Decision
χ 2 */Chi square*	Smaller is better	55,058	Meet
df	≥ 2.00	2.622	Not fulfilling
Probability	≤ 0.05	0.000	Not fulfilling
RMSEA	≤ 0.08	0.063	Meet
GFI	≥ 0.90	0.972	Meet
AGFI	≥ 0.90	0.939	Meet
TLI	≥ 0.95	0.964	Meet
CFI	≥ 0.95	0.979	Meet

Note: χ 2: Chi-square goodness of fit; df: Degrees of freedom; CFI: Comparative Fit Index; TLI: TuckerLewis Fit Index (TLI); RMSEA: Root Mean Square Error; GFI (Goodness-of-Fit statistic); AGFI (adjusted goodness-of-fit statistic)

Furthermore, based on the SEM findings, teachers' job demands explained as much as -28.2% of the variance for teachers' holistic psychological well-being and 28.2% for teachers' personal resources. Teachers' job resources explain as much as 20% of the variance for teachers' holistic psychological well-being and 52.6% for teachers' personal resources. Next, teachers' personal resources explained 89.9% of the variance in teachers' holistic psychological well-being. The standardised regression coefficients between constructs are shown in Table 3.

Table 3. Standardised regression coefficients

Parameters		Parameters	Estimate	P value	Relationship
Teachers' holistic psychological well-being	←	Teacher job demands	-0.282	0.00	Negative and Significant
Teachers' holistic psychological well-being	←	Teacher job resources	0.200	0.05	Positive and Significant
Teachers' holistic psychological well-being	←	Teachers' personal resources	0.899	0.00	Positive and Significant
Teachers' personal resources	←	Teacher job demands	0.282	0.00	Positive and Significant
Teachers' personal resources	←	Teacher job resources	0.526	0.00	Positive and Significant

Table 3 reveals four positive and significant relationships between teachers' job resources and their holistic psychological well-being: the relationship between teachers' job demands and their personal resources, the relationship between teachers' job resources and their personal resources, and the relationship between teachers' job resources and their holistic psychological well-being. Furthermore, there exists a noteworthy inverse correlation between the job obligations placed on educators and their overall psychological well-being.

The results of the study found no significant relationship between the job demands of teachers and their psychological well-being. This means that the job demands of teachers do not affect their psychological well-being. More clearly, the workload and management of task instructions that teachers face throughout the day at school do not contribute to the decline in the psychological well-being of teachers in Malaysia. This finding is in line with Sidek, Z. (2021), who found that the workload and management of student misbehaviour did not affect the well-being of teachers at school. This finding is also in line with the findings of researchers abroad (Andrea, S., 2015; Spilt et al., 2011; McCallum & Price, 2010; Wei & Abdullah, 2016; Ming Moy et al., 2014; Skaalvik & Skaalvik, 2018) who found that high job demands have decreased the well-being of teachers at work. Therefore, this study found that the workload and management of task instructions did not affect the overall psychological well-being of teachers.

Teachers' job demands were found to have a significant relationship with the mediating variables of personal resources. This shows that the job demands that teachers face in their daily work affect their personal resources at school. This finding supports the findings of Mardani et al. (2015) and Huang et al. (2016), in which the increase in work demands among teachers tends to have a negative influence on the decrease in efficiency. Teachers in a stressful work environment feel tired, pessimistic, and less effective in terms of teaching strategies, class management, and engaging students in teaching (Huang et al., 2019).

In addition, the findings also show that job resources have a significant relationship with the well-being of teachers at school. The social support system in employment resources shows a significant relationship between the psychological well-being of teachers and the social support system. This shows the psychological well-being of teachers is dependent on control over job resources that contribute to teacher's motivation at school. Studies have proven that positive social support systems, such as trust and appreciation for employees, are seen as significant in influencing employee behaviour and emotions, which ultimately have a positive impact on their work performance (Isa, K. et al., 2019). In addition, a study by Mokhtar, S. (2018) discovered that the psychological health of teachers in schools is predicted by and significantly correlated with social support.

This study has confirmed from the SEM analysis conducted that teachers' employment resources indicate social support from administrators and colleagues, and freedom of decision-making in teaching has a significant relationship with teachers' personal resources. Relationships between colleagues influence the increase or decrease in motivation in teaching and the quality of teacher work. This is due to the fact that peer support fosters sentiments of weariness, openness to new experiences, and confidence in one's capacity to carry out instructional tasks (Combee, 2014; Skaalvik & Skaalvik, 2009; Fiorilli et al., 2015). Furthermore, the study's conclusions revealed a substantial correlation between teachers' self-efficacy and drive to carry out innovative and comfortable teaching and learning sessions and the autonomy they are granted in organising and carrying out instruction in classrooms. Previous research has demonstrated a positive correlation between autonomy and self-efficacy, job satisfaction, empowerment, empowerment (Esfandiari & Kamali, 2016), and work environment (Salokangas & Wermke, 2020).

Furthermore, the study's research revealed that there is a fully mediated relationship between the demands of teachers' jobs and their psychological well-being and the mediation effect of their personal resources. The relationship between job demands and teachers' psychological well-being is mediated by the presence of personal resources. Teachers' motivation and self-efficacy are necessary to meet task requirements and complete specific tasks in the context of the school environment, as highlighted by Bandura (1977), Tschannen-Moran et al. (1998), and Tschannen-Moran & Hoy (2003). The present investigation's results are consistent with earlier research (Lee et al., 2011; Wahlstrom & Louis, 2008; Yin, Huang, & Lu, 2016; Sidek, Z., 2021). These studies emphasise the function of self-efficacy as a moderating element in the association between job demands and educators' psychological welfare.

Although certain results in this study indicate that job resources have a direct impact on teachers' psychological well-being, there is also a mediating role of personal resources between job resources and psychological well-being. This research demonstrates the connection between teachers' psychological health and job resources and personal resources. Through personal resources, such as the teacher's efficacy and motivation as an instructor, job resources from the social

support system and teacher autonomy also have a major indirect impact with the psychological well-being of teachers. The psychological health of teachers in educational institutions is significantly impacted by the interaction between job resources. Thus, the emotional well-being of educators and their level of job satisfaction at school are significantly influenced by the support they receive from administrators and peers. Teachers must sustain their motivation (personal resources) and zeal to work and complete daily responsibilities in the presence of social support (job resources) from administrators and colleagues. Consequently, the relationship's personal resources serve as a control mechanism for the calibre of the teachers' job and the preservation of their psychological health inside the school.

Using the JD-R model, which was first widely utilised in occupational fields with a high risk of health and safety, such as engineering and medicine, has been one of the research gaps that this study has filled. The study's findings indicate that this model can be used to examine how work demands and job resources affect teachers' psychological health in the field of education, particularly in the context of schools. The i-OS measurement items have been used to implement the Rasch measuring model based on the study's findings. As an alternative to existing psychological well-being measurement tools, the study has generated up to 80 new items that can be used to assess the holistic psychological well-being of teachers in school organisations. Users have more choices to use these measurement items more broadly because to the design of the i-OS. Ultimately, this research has successfully generated a structural model of the holistic psychological well-being of teachers in educational institutions. The sources and variables that are related to and have an impact on the psychological health of teachers in educational settings have been better understood and explained by this model. The demands of their jobs and the work environment have a big influence on teachers' psychological health at school.

Clearly, the findings of this study provide an explanation that the psychological well-being of teachers is very important in the work environment of teachers. The school administration and organisation should always work with the organisation's counsellor to monitor and evaluate the psychological well-being of teachers. Examining the level of psychological well-being of teachers is very important to be done routinely because a stable and healthy psychological well-being of teachers affects the academic achievement of students and their personalities. Therefore, the State Department of Education and the District Education Office specialising in the Psychology and Counselling Sector need to provide training or teacher professionalism development courses, such as motivational courses and stress management methods.

In summarising the results of the discussion of the study findings, the construction of the i-OS instrument has been proven to have good psychometric characteristics that can be used widely. When item analysis related to item and individual compatibility, item polarity, unidimensionality, and local independence were determined, they met the criteria set by the Rasch measurement model. Aspects of instrument reliability related to individual

reliability, item reliability, item isolation index, and individual isolation index were also examined and found to be at acceptable values and meet the appropriate criteria. In fact, this study also measured item difficulty and gender DIF. Next, this study also tested the holistic psychological well-being model of teachers in organisations using the i-OS instrument. Therefore, based on the research that has been conducted, it can be concluded that the i-OS instrument is valid and reliable to be used to measure the level of psychological well-being of teachers in school organisations as well as the influence between constructs.

6. Conclusion

Based on these results, the researcher concluded that while creating a new instrument for a study, the validity and reliability of the instrument should be taken into account as crucial factors. The i-OS instrument has good psychometric qualities to be used as a standard measuring tool to assess the overall psychological well-being of teachers in educational organisations, according to the validity and reliability assessments. In addition, evaluating the model's fit demonstrated a strong correlation between the variables and successfully obtained the fit index (Model Fit).

The use of the JD-R model, which was first extensively employed in professional domains with a high risk of health and safety, such as engineering and medicine, has been addressed in this work, which closes one research gap. The study's findings indicate that this model is appropriate for use in the field of education, particularly in schools, to investigate how job demands and resources affect educators' psychological health. Furthermore, the study's conclusions have been applied to the use of i-OS measuring items, implementing the Rasch measurement model. As an alternative to existing psychological well-being measurement tools, the study has generated up to 80 new items that can be used to assess the holistic psychological well-being of teachers in school organisations. Users have more choices to use these measurement items more broadly because to the design of the i-OS. Ultimately, this research has successfully generated a structural model of the holistic psychological well-being of teachers in educational institutions. The sources and variables that are related to and have an impact on the psychological health of teachers in schools have been better understood and explained by this model. The demands of the job and the everyday work environment have a significant effect on teachers' psychological health in the classroom.

7. References

Abdul A. J. & Mydin K. F. (2020). Pengaruh Iklim Organisasi Terhadap Kesejahteraan Guru Sekolah Menengah [The Influence of Organizational Climate on the Well-Being of Secondary School Teachers]. *International Journal of Multidisciplinary Conference on Education, Management and Technology*, Kuala Lumpur.

Abdullah, H. S. L. & Madom, Z. (2006). Indeks kesejahteraan psikologi remaja: tahap, kadar dan pengaruh latar belakang diri [Adolescent psychological well-being index: level, rate and influence of personal background]. *Journal of Education.*

Abu, B. & Aziz, M. (2010). *Stres Dalam Kalangan Guru Di Dua Buah Sekolah Menengah Kebangsaan Di Kawasan Skudai* [*Stress Among Teachers in Two National Secondary Schools in Skudai Area].* pp. 1-7.

Ahmad, J. M. (2021). Tugas akhir bimbingan belajar [Study guidance final task]. https://doi.org/10.31219/osf.io/6e2wd

Ainsworth, S. & Oldfield, J. (2019). *Quantifying teacher resilience: Context matters. Teaching and Teacher Education,* 82, 117–128. https://doi.org/10.1016/j.tate.2019.03.012

Akmal, M. I. & Shahrazad, W. (2018). Penerokaan Ciri-Ciri Psikometrik Skala Kesejahteraan Psikologi dalam Kalangan Sampel Malaysia [An Exploration of the Psychometric Characteristics of the Psychological Well-Being Scale in a Malaysian Sample]. *Malaysian Journal of Psychology* 32 (3) (2018).

Alarcon, G. M. (2011). A meta-analysis of burnout with job demands, resources, and attitudes. *Journal of vocational behavior*, *79* (2), 549-562. https://doi.org/10.1016/j.jvb.2011.03.007

Amalia, S. (2016). Analisa psikometrik alat ukur Ryff's Psychological Well-Being (RPWB) versi bahasa Indonesia: Studi pada lansia guna mengukur kesejahteraan dan kebahagiaan [Analyze Psychometrics of Ryff's Psychological Well-Being (RPWB) Indonesian version: Study on the elderly to measure well-being and happiness]. In *Asean Seminar 2nd Psychology & Humanity* (pp. 430-437).

Amin, N. B., Amir, A. M., & Ismail, S. F. (2019). Key Ferformance Indicators Tugas, Ganjaran Dan Prestasi Kerja Gru Di Sekolah Kerajaan [Key performance Indicators Tasks, Rewards and Gru Work Performance in Government Schools]. *Journal of Educational Leadership. 6* (4), 38-60.

Andrea, S. (2015). *Subjective well-being in New Zealand teachers: An examination of the role of psychological capital.* Master's Thesis. Albany: Massey University.

Angelopoulos, P. A., Houde, S. J. R. J., Thompson, M. M., McCreary, D. R., Blais, A. R., & Pasto, L. (2002). Canadian Forces training and mental preparation for adversity: Empirical review of Stoltz "Adversity Quotient (AQ) training for optimal response to adversity", a review of the AQ literature and supporting studies. Toronto, Canada. Retrieved from http://oai.dtic.mil/oai/oai?verb=getRecord&metadataPrefix=html&identifier=ADA408478

Anik, B. U, & Lydia, F. H. (2006). Kontribusi adversity quotient terhadap prestasi belajar siswa SMU program percepatan belajar di Jakarta [Contribution of adversity quotient on the learning performance of SMU students in the learning acceleration program in Jakarta]. *Journal Psychological Research,* 11 (2), 137–148.

Antin, A., & Kiflee, D. N. B. A. (2018). Pengaruh beban tugas dan motivasi terhadap keefisienan kerja guru sekolah menengah di Sabah [The influence of workload and motivation on the work efficiency of secondary school teachers in Sabah]. *Malaysian Journal of Social Sciences and Humanities (MJSSH), 3* (2), 77-84.

Azrilah, Aziz, A., Azlinah, Mohamed, NoorHabibah, Arshad, Sohaimi, Z., Azami, Z., Hamza, A. G., & Masodi, M. S. (2008). Application of Rasch Model in validating the construct of measurement instrument. *International Journal of Education and Information Technologies* 2(2): 105-112.

Bakare, B. M. (2014). Students' Adversity Quotient and related factors as predictors of academic performance in the West African senior school certificate examination in South-Western Nigeria. PhD Post Field Report. Nigeria. www.peaklearning.com/documents/PEAK_GRI_bakare.pdf

Bakker, A. & Leiter, M. (2010). *Work Engagement a Handbook of Essential Theory and Research.* New York: Psychology Press.

Bakker, A. B, & Demerouti, E. (2018). Multiple levels in job demands-resources theory: Implications for employee well-being and performance. In E. Diener, S. Oishi, & L. Tay (Eds.), *Handbook of well-being* (pp. 1–13). DEF Publishers.

Bakker, A. B, Demerouti, E., & Sanz-Vergel, A. I. (2014). Burnout and work engagement: The JD–R approach. Anna. *Rev. Organ. Psychol. Organ. Behav.*, *1* (1), 389-411. https://doi.org/10.1146/annurev-orgpsych-031413-091235

Bakker, A. B, Demerouti, E., & Verbeke, W. (2004). Using the job demands - resources model to predict burnout and performance. *Human Resource Management: Published in Cooperation with the School of Business Administration, The University of Michigan and in alliance with the Society of Human Resources Management*, *43* (1), 83-104. https://doi.org/10.1002/hrm.20004

Bakker, A. B. & Demerouti, E. (2007). The Job Demands Resources model: State of the art. *Journal of Managerial Psychology* 22(3): 309–328. https://doi.org/10.1108/02683940710733115

Bakker, A. B. (2011). An evidence-based model of work engagement. *Current directions in psychological science*, 20 (4), 265-269. https://doi.org/10.1177/0963721411414534

Bandura, A. (1977). Self-efficacy: Toward a unifying theory of behavioral change. *Psychological Review*, 84 (2), 191-215. https://doi.org/10.1037/0033-295X.84.2.191

Bond, T. G & Fox, C. M. (2015). *Applying the Rasch Model Fundamental Measurement in the Human Sciences.* 3rd edition. New York: Routledge.

Boone, W. J., Staver, J. R. & Melissa, S. Y. (2014). *Rasch Analysis in the Human Sciences.* Dordrecht: Springer.

Bradburn, N. M. (1969). The structure of psychological well-being.

Collie, R. J., Shapka, J. D., Perry, N. E., Martin, A. J. (2015). Teacher well-being: Exploring its components and a practice-oriented scale. *Journal of Psychoeducational Assessment.* 33 (8): 744-756. https://doi.org/10.1177/0734282915587990

Combee, S. W. (2014). *The Relationship Between Administrative Support and Teacher Efficacy in the Professional Life of Special Education Teachers.* Doctoral dissertation, Virginia Commonwealth University, Richmond, VA.

Creswell, J. W. (2012). *Educational research: planning, conducting, and evaluating quantitative and qualitative research (4th ed.).* Boston: Pearson Education.

Dagenais-Desmarais, V. D., & Savoie, A. (2012). What is psychological well-being, really? A grassroots approach from the organizational sciences. *Journal of Happiness Studies,* 13, 659–684. https://doi.org/10.1007s10902-011-9285-3

Demerouti, E., Bakker, A. B., Nachreiner, F., & Schaufeli, W. B. (2001). The job demands-resources model of burnout. *Journal of Applied Psychology, 86* (3), 499–512. https://doi.org/10.1037/0021-9010.86.3.499

Denscombe, M. (2010). *The Good Research: for small-scale social research projects (4th ed.)*. Glasgow: McGraw-Hill Education.

Dicke, T., Parker, P. D., Marsh, H. W., Kunter, M., Schmeck, A., & Leutner, D. (2014). Self-efficacy in classroom management, classroom disturbances, and emotional exhaustion: A moderated mediation analysis of teacher candidates. *Journal of Educational Psychology, 106* (2), 569–583. https://doi.org/10.1037/a0035504

Engels, N., Aelterman, A., Van Petegem, K., & Schepens, A. (2004). Factors which influence the well-being of pupils in Flemish secondary schools. *Educational Studies*, 30: 127–143. https://doi.org/10.1080/ 0305569032000159787

Esfandiari, R., & Kamali, M. (2016). On the relationship between job satisfaction, teacher burnout, and teacher autonomy. *Iranian Journal of Applied Language Studies, 8* (2), 73-98. https://doi.org/ 10.22111/IJALS.2016.3081

Fiorilli, C., Albanese, O., Gabola, P., & Pepe, A. (2017). Teachers' emotional competence and social support: Assessing the mediating role of teacher burnout. *Scandinavian journal of educational research*, *61* (2), 127-138. https://doi.org/10.1080/00313831.2015.1119722

Fox, C. M., & Jones, J. A. (1998). Uses of Rasch modeling in counseling psychology research. *Journal of Counseling Psychology, 45* (1), 30-45. https://doi.org/10.1037/0022-0167.45.1.30

Frey, D., Jonas, E., & Greitemeyer, T. (2003). Intervention as a major tool of a psychology of human strengths: Examples from organizational change and innovation. In LG Aspinwall & UM Staudinger (Eds.), *A psychology of human strengths: Fundamental questions and future directions for a positive psychology* (pp. 149–164). American Psychological Association. https://doi.org/10.1037/10566-011

Garwood, J. D., Werts, M. G., Varghese, C. & Gosey, L. (2018). Mixed-methods analysis of rural special educators' role stressors, behavior management and burnout. *Rural Special Education Quarterly, 37* (1), 30–43. https://doi.org/10.1177/8756870517745270

Gay, L. R., Mills, G. E., & Airasian, P. (2012). *Educational research: competencies for analysis and applications (10th ed.).* Upper Saddle River, New Jersey: Merrill Prentice Hall.

Hair, J. F., Black, W. C., Babin, B. J., & Anderson, R. E. (2010). *Multivariate data analysis (7th ed)*. New Jersey. Pearson Prentice Hall.

Hair, J. F., Risher, J. J., Sarstedt, M., & Ringle, C. M. (2019). When to use and how to report the results of PLS-SEM. *European business review, 31* (1), 2-24.

Hakanen, J. J., Schaufeli, W. B., & Ahola, K. (2008). The Job Demands-Resources model: A three-year cross-lagged study of burnout, depression, commitment, and work engagement. *Work & stress, 22* (3), 224-241. https://doi.org/10.1080/02678370802379432

Hettler, B. (1976). *Wellness concept to the uninitiated: Wellness promotion strategies. Annual National Wellness Conference*. Stevens Point, Wisconsin: Kendall/Hunt Publishing.

Hong, O. C., & Aziah, I. (2015). Sokongan pihak pengurusan sekolah terhadap tekanan kerja guru di sekolah kebangsaan dan sekolah jenis kebangsaan Cina [School management's support for teachers' work pressure in national schools and Chinese national-type schools]. *Journal of Educational Leadership.* April 2015, No. 2. Issue 2.

Hoy, Wayne, Hannum, John, & Tschannen-Moran, M. (2003). Organizational Climate and Student Achievement: A Parsimonious and Longitudinal View. *Journal of School Leadership*. http://dx.doi.org/10.1177/ 105268469800800401

Huang, S., Yin, H., & Lv, L. (2019). Job characteristics and teacher well-being: the mediation of teacher self-monitoring and teacher self-efficacy. *Educational psychology, 39* (3), 313-331.

HuiJuan, Z. (2009). *The adversity quotient and academic performance among colleges students at St. Joseph's College, Quezon City.* Bachelor Thesis. St. Joseph's College, New York, United States. Retrieved from http://www.peaklearning.com/documents/PEAK_GRI_huijuan.pdf

Isa, K., Tenah, S. S., Atim, A., & Jam, N. A. M. (2019). Leading happiness: Leadership and happiness at a workplace. *International Journal of Recent Technology and Engineering, 8* (3), 6551-6553.

Jose, S. A, Effendi, M., & Matore, EM (2021). Tinjauan literatur bersistematik: Faktor burnout dalam kalangan Guru [Systematic literature review: Burnout factors among teachers]. *Malaysian Journal of Social Sciences and Humanities (MJSSH)*, *6* (1), 168-186.

Kállay, É., & Rus, C. (2014). Psychometric properties of the 44-item version of Ryff's Psychological Well-Being Scale. *European Journal of Psychological Assessment.*

Kanjanakaroon, J. (2012). Relationship between adversity quotient and self-empowerment of students in schools under the jurisdiction of the office of the basic education commission. *The International Journal of Learning*, 18 (5), 1–13.

Kim, S., & Wang, J. (2018). The role of job demands–resources (JDR) between service workers' emotional labor and burnout: New directions for labor policy at local government. *International journal of environmental research and public health, 15* (12), 2894.

Lee, C. K. J., Zhang, Z., & Yin, H. B. (2011). A multilevel analysis of the impact of a professional learning community, faculty trust in colleagues and collective efficacy on teacher commitment to students. *Teaching and Teacher Education* 27 (2011) 820-830. https://doi.org/10.1016/j.tate.2011.01.006

Lee, F. L. & Surat, S. (2020). Hubungan Antara Tekanan Kerja Dengan Kesejahteraan Psikologi Dalam Kalangan Guru SJKC Di Daerah Kulai [The Relationship Between Work Stress and Psychological Well-Being in Among SJKC teachers in Kulai District]. *Proceedings – Malaysia International Convention on Education Research & Management (MICER)*. Universiti Kebangsaan Malaysia

Lee, R. T., & Ashforth, B. E. (1996). A meta-analytic examination of the correlates of the three dimensions of job burnout. *Journal of Applied Psychology, 81* (2), 123–133. https://doi.org/10.1037/0021-9010.81.2.123

Lim, N. M. (1998). Hubungan Tekanan dengan kesakitan fizikal dan peranan sokongan sosial sebagai perantara di kalangan pelajar [The relationship of stress with physical pain and the mediating role of social support among students]. *Scientific Training.* National University of Malaysia.

Linacre J. M. & Wright. (1994). *Sample size and item calibration (or person measure) stability. Rasch Measurement Transactions, 7(4)*, 328.

Linacre, J. M. (2010). *A User's Guide to Winsteps/Ministep Rasch-Model Computer Programs (3.91.0)*. *Chicago.*

Linda I. V., Stephen, N., Catherine, M., & David, H. (2020). Initial teacher education in England and the Covid-19 pandemic: challenges and opportunities, *Journal of Education for Teaching,* 46:4, 596-608. https://doi.org/ 10.1080/02607476.2020.1803051

Mahazi, S. H. (2016). *Komitmen kerjaya dan afektif sebagai pengantara hubungan antara faktor terpilih dengan tingkahlaku kewargaan organisasi guru baharu sekolah menengah di Selangor Malaysia [Career and affective commitment as relationship mediators between selected factors and new teachers' organizational citizenship behavior secondary school in Selangor Malaysia].* Doctor of Philosophy Thesis. February 2016. Universiti Putra Malaysia.

Mardani, N., Baghelani, E., & Azizi, R. (2015). Exploring the relationship between self-efficacy and burnout: the case of Iranian EFL teachers. Cumhuriyet University Faculty of Science. *Science Journal (CSJ),* Vol. 36, No: 3 Special Issue 2015. ISSN: 1300-1949

Marican, S. (2005). *Creating a positive work environment.* Messenger Publications.

Marican, S. (2009). *Social science research: a pragmatic approach.* Batu Caves: Edusystem Sdn . Bhd.

Mascall, B., Leithwood, K., Strauss, T., & Sacks, R. (2009). *The relationship between distributed leadership and teachers' academic optimism.* In A Harris (Ed.). Distributed leadership (pp. 81-100). Dordrecht, Netherlands: Springer Science+Business Media BV

Maslach, C., Jackson, S. E., & Leiter, M. P. (1997). *Maslach burnout inventory.* Scarecrow Education.

McCallum, F. & Price, D. (2010). Well teachers, well students. *Journal of Student Wellbeing* 4(1): 19-34. https://doi.org/10.21913/JSW.v4i1.599

Miller, L. A., McIntire, S. A., & Lovler, R. L. (2013). Foundations of psychological testing: A practical approach.

Ming, M., Victor, F., Hoe, C. H., Noran N. H., Buckley, B., Wark, P. A., Koh, D., Mesquita, BD., & Awang, MB. (2014). *Cohort study on clustering of lifestyle risk factors and understanding its association with stress on health and well-being among school teachers in Malaysia (CLUSTer) - a study protocol.* BMC Public Health. 14:611.

Ministry of Education Malaysia. (2019). *Laporan Statistik Perkhidmatan Kaunseling dan Psikologi KPM. Putrajaya [MOE Counseling and Psychological Services Statistical Report. Putrajaya].* Psychology and Counseling Division, Ministry of Education Malaysia.

Ministry of Education. (2021). *Kertas jawapan bertulis KPM kepada Parlimen [MoE's written answer paper to Parliament].* The Official Portal of the Ministry of Education Malaysia.

Mohamadi, F. S. & Asadzadeh, H. (2012). Testing the mediating role of teachers' self-efficacy beliefs in the relationship between sources of efficacy information and student achievement. *Asia Pacific Education Review.* 13:427-433. https://doi.org/10.1007/s12564-011-9203-8

Mokhtar, S. (2018). *Model Kesejahteraan Psikologi Berasaskan Ihsan Kendiri, Sokongan Sosial Dan Kesejahteraan Spiritual Dalam Konteks Guru Pendidikan Khas Masalah Pembelajaran [A Model of Psychological Well-Being Based on Self-Kindness, Support Social and Spiritual Wellbeing in the Context of Special Education Teachers Learning problems].* Doctoral Thesis. Universiti Sains Malaysia.

Musafiri, C. M., Saoke, V. O., Ndwiga, Z. N., & Githaiga, P. W. (2023). The christian religious education teachers' attitudes towards the five-stage lesson plan framework in Kenya: A gender-based analysis. *Heliyon*, *9* (8).

Myers, J. E., & Sweeney, T. J. (2005). Five factor wellness inventory.

Noraini, I. (2010). *Penyelidikan dalam pendidikan [Research in education].* Kuala Lumpur: McGraw-Hill (Malaysia) Sdn. Bhd.

Page, K. M., & Vella-Brodrick, D. A. (2009). The „what ", „ why " and „ how " of employee well-being: A new model. *Social Indicators Research,* 90, 441– 458. https://doi.org/10.1007/s11205-008-9270-3

Pasaribu, A. C. R. (2011). *The relationship between self-esteem and adversity intelligence study on HKBP Nommensen Medan University students*. VISION, 19 (1), 399–416.

Primatika, F. R., & Laily, M. (2010). Kewirausahaan dalam kaitannya dengan Adversity Quotien dan Emotional Quotien [Entrepreneurship in relation with Adversity Quotient and Emotional Quotient]. *Journal of Projective Psychology*, 5 (1), 52–64.

Ramadhan, M. I. (2022). Tugas Pengembangan dan Pengorganisasian Masyarakat [Community Development and Organization Tasks]. https://doi.org/10.31219/osf.io/apzwe

Ramdhani, G. F, & Sawitri, D. R. (2017). Hubungan antara dukungan organisasi dengan keterikatan kerja pada karyawan PT. X di Bogor [The relationship between organizational support and work engagement in PT employees. X in Bogor]. *Journal of empathy, 6* (1), 199-205.

Ramdhani, Y. N. (2018). *Pengaruh job demands-resources terhadap employee engagement pada staff account officer pt. x wilayah Jombang [The influence of job demands-resources on employee engagement on staff account officer pt. x Jombang region].* (Doctoral dissertation, Airlangga University).

Rohani, Hazri, & Mohammad, Z. (2017). Model Bersepadu Penerapan Kemahiran Abad ke- 21 dalam Pengajaran dan Pembelajaran [An Integrated Model of the Implementation of 21st Century Skills 21 in Teaching and Learning]. *Malaysian Education Journal*, 42 (1), 1–11.

Royo, M. A. & Woo, S. F. (2010). *Factors that induce work pressure (stress) among SJK(C) teachers: A study in three schools in the Federal Territory.* Unpublished Master's Thesis.

Ryff, C. D. (1989). Happiness is everything, or is it? Explorations on the meaning of psychological well-being. *Journal of personality and social psychology, 57* (6), 1069.

Salokangas, M., & Wermke, W. (2020). Unpacking Autonomy for Empirical Comparative Investigation. *Oxford Review of Education,* 46(5), 563–581. https://doi.org/10.1080/03054985.2020.1733514

Santa, E. S. (2012). *Hubungan antara adversity quotient dengan kinerja karyawan: studi kasus pada pegawai bank BCA Kcp Setiabudi, Bandung [The relationship between adversity quotient and performance employees: case study on BCA Kcp bank officers Setia budi, Bandung]*. Bachelor Thesis. Indonesian University of Education, West Java, Indonesia. Retrieved from http://a-research.upi.edu/skripsilist.php

Santoso, P. N, & Hartono, B. (2017). Pengaruh Job Demand-Resources Terhadap Burnout Pada Manajer Proyek Indonesia [The Influence of Job Demand-Resources on Burnout in Managers Indonesian project]. *Gadjah University Industrial Techniques National Seminar Mada: Yogyakarta, Indonesia*.

Sari, D. A., Octaviani, F., Putri, P.N., & Suswita, N. (2022). Keterampilan Guru dalam Mengelola Kelas Menurut Asmadawati [Teacher's Skills in Class Management According to Asmadawati]. *Journal Educational Management Reviews and Research.*

Schaufeli, W. B., & Bakker, A. B. (2004). Job demands, job resources, and their relationship with burnout and engagement: A multi - sample study. *Journal of Organizational Behavior: The International Journal of* Industrial*, Occupational and Organizational Psychology and Behavior*, *25* (3), 293-315.

Schwarzer, R. & Hallum, S. (2008). Perceived Teacher Self-Efficacy as a Predictor of Job Stress and Burnout: Mediation Analyses. *Applied psychology: An International Review* 57: 152 – 171. https://doi.org/10.1111/j.1464-0597. 2008. 00359.x

Selcuk, D. (2019). The role of self-efficacy in job satisfaction, organizational commitment, motivation and job involvement. *Eurasian Journal of Educational Research*. n85 p205224 2020.

Shakeel, S. M., Huhammad, Z., & Majed, R. (2011). Leading stress factors among school teachers (An empirical study of Pakistani school teachers). *World Review of Business Research. 1* (3), 179-191.

Shiau, W. L, Sarstedt, M., & Hair, J. F. (2019). Internet research using partial least squares structural equation modeling (PLS-SEM). *Internet Research. 29* (3), 398-406. https://doi.org/10.1108/IntR-10-2018-0447

Sidek, Z. (2021). *The relationship between job demands, workforce resources and professional efficacy on teachers' work well-being* (Doctoral dissertation, UKM, Bangi).

Skaalvik, E. M., & Skaalvik, S. (2009). Does school context matter? Relations with teacher burnout and job satisfaction. *Teaching and Teacher Education* 25: 518 – 524. https://doi.org/10.1016/j.tate.2008.12.006

Skaalvik, E. M., & Skaalvik, S. (2018). Job demands and job resources as predictors pf teacher motivation and well-being. *Journal of Social Psychology of Education November (2018),* Volume 21, Issue 5: pp. 1251-1275. https://doi.org/10.1007/s11218-018-9464-8

Spilt, J. L., Koomen, H. M. Y. & Thijs, J. T. (2011). Teacher Wellbeing: The Importance of Teacher–Student Relationships. *Educ Psychol Rev* 23, 457–477 (2011). https://doi.org/10.1007/s10648-011-9170-y

Sumintono, B. & Widhiarso, W. (2014). *Aplikasi Model Rasch untuk Penelitian Ilmu-ilmu Sosial [Rasch Model Application for Social Science Research].* Cimahi: Trim Komunikata Publishing House.

Tajulashikin, J., Fazura, M. N., & Ibrahim, M. B. (2013). Faktor-faktor Penentu Stres Dalam Kalangan Guru: Sekolah Rendah Mubaligh Di Kuala Lumpur [Factors Determining Stress Among Teachers: Missionary Primary School in Kuala Lumpur]. *Asia Pacific Journal of Curriculum & Teaching. 1* (2), 1-11.

Teddy, D. G. (2011*). Intensi berwirausaha siswa sekolah menengah kejuruan (SMK) Negeri 22 Jakarta: peran self-efficacy, LoC, risk taking behavior, EQ dan AQ [Intention high school student entrepreneurship vocational school (SMK) Negeri 22 Jakarta: the role of self-efficacy, LoC, risk taking behavior, EQ and AQ]*. Master's Thesis. Syarif Hidayatullah State Islamic University, Jakarta, Indonesia. Retrieved from http://repository.uinjkt.ac.id/dspace/handle/1234 56789/1783

Thi, E. L. (2007). *Adversity quotient in predicting job performance viewed through the perspective of the big five.* Master's Thesis. University of Oslo, Oslo, Norway. Retrieved from https://www.duo.uio.no/handle/10852/18313

Wahlstrom, K. L., & Louis, K. S. (2008). How teachers experience principal leadership: The roles of professional community, trust, efficacy, and shared responsibility. *Educational administration quarterly, 44* (4), 458-495. https://doi.org/10.1177/0013161X08321502

Wei, O. P., & Abdullah, A. G. K. (2016). Burnout and job satisfaction among teachers in Chinese independent secondary schools. *International Journal of Elementary Education* 5(5): 47-50.

William, J. B., John, R. S., & Melissa, S. Y. (2014). *Rasch Analysis in The Human Sciences.* New York, London: Springer Dordrecht Heidelberg.

Wu, H., Qiu, S., Dooley, L. M. & Ma, C. (2020). The relationship between challenge and hindrance stressors and emotional exhaustion: The moderating role of perceived servant leadership. *International Journal of Environmental Research and Public Health,* 17 (1), 282. https://doi.org/10.3390/ ijerph17010282.

Wu, M. & Adams, R. (2007). *Applying the Rasch Model to Psycho-Social Measurement: A Practical Approach.* Melbourne: Educational Measurement Solutions.

Yasin, N., Manap, J., & Kassim, AC (2018). *Pengaruh Penghargaan Kendiri Terhadap Kesejahteraan Psikologi Mualaf [The Influence of Self-Esteem on the Psychological Well-Being of Converts]. e-BANGI, 13* (3), 173-182.

Yin, H., Huang, S., & Wang, W. (2016). Work environment characteristics and teacher well-being: the mediation of emotion regulation strategies. *International Journal of Environmental Research and Public Health.* 2016, 13, 907. https://doi.org/10.3390/ijeerph 13090907

Appendix 1

INSTRUMEN KESEJAHTERAAN PSIKOLOGI GURU DI ORGANISASI SEKOLAH (i-OS)

Sukacita dimaklumkan bahawa saya sedang menjalankan satu kajian penyelidikan untuk memperoleh Ijazah Doktor Falsafah dalam bidang kaunseling di Fakulti Pendidikan, Universiti Kebangsaan Malaysia. Tajuk kajian ialah *"Pembinaan Instrumen Kesejahteraan Psikologi Guru di Organisasi Sekolah (i-OS)"*.

Instrumen ini adalah bertujuan untuk mengumpul maklumat berkaitan demografi guru sebagai responden kajian, tuntutan pekerjaan guru di sekolah, sumber perkerjaan guru di organisasi sekolah, sumber peribadi guru dan kesejahteraan psikologi guru di organisasi sekolah secara keseluruhan.

Adalah diyakini bahawa perkongsian Tuan/Puan/Cik sebagai responden amatlah penting dan berharga dalam kajian kesejahteraan psikologi guru di sekolah-sekolah. Melalui maklumat yang diperoleh dapat membantu perancangan dan pelaksanaan pembangunan profesional guru-guru untuk meningkatkan profesionalisme sebagai guru di sekolah.

Instrumen ini mungkin mengambil masa, oleh itu kesabaran yang tinggi daripada Tuan/Puan/Cik amatlah dihargai. Komitmen yang diberikan dengan bertindak sebagai responden dalam kajian ini diucapkan ribuan terima kasih. Adalah diharapkan agar semua soalan dijawab dengan jujur dan ikhlas kerana jawapan yang bakal diberikan daripada anda amatlah penting bagi menjadikan kajian ini signifikan dalam kesarjanaan ilmu dan amalan. Maklumat yang diberikan dalam soal selidik ini akan **DIRAHSIAKAN** dan hanyalah digunakan untuk tujuan kajian ini sahaja.

Kerjasama serta penglibatan Tuan/Puan/Cik dalam kajian ini amat dihargai dan didahului dengan ucapan terima kasih. Jika terdapat sebarang pertanyaan berkaitan kajian ini, sila hubungi:

Che Mohamad Padali b. Che Mat
Fakulti Pendidikan
Universiti Kebangsaan Malaysia
Tel: 012-3749081
emel: cmfadli@gmail.com

BAHAGIAN A: DEMOGRAFI

Nama sekolah:				
Jantina :	☐ Lelaki	☐ Perempuan		
Umur (tahun):	☐ 25 - 34	☐ 35 - 44	45 dan keatas	
Kaum:	☐ Melayu	☐ Cina	☐ India	☐ Lain-lain
Tempoh pengalaman sebagai guru (tahun):	☐ Kurang 1 tahun	☐ 1 - 10	☐ 11 - 20	☐ 21 dan keatas
Tempoh berada di sekolah sekarang (tahun):	☐ Kurang 1 tahun	☐ 1 - 10	☐ 11 - 20	☐ 21 dan keatas

SKALA BILANGAN KEKERAPAN 1 KALI, 2 KALI, 3 KALI, 4 KALI, 5 KALI DAN LEBIH						
BIL	**PERNYATAAN**	**1 KALI**	**2 KALI**	**3 KALI**	**4 KALI**	**5 ≥ KALI**
BAHAGIAN B: TUNTUTAN PEKERJAAN						
Bebanan Tugas						
1	Kekerapan menjalankan tugas perkeranian di sekolah dalam tempoh sebulan. *(masuk data, laporan dokumentasi, minit mesyuarat, dll)*					
2	Kekerapan menjalankan tugas sebagai jawatankuasa dibawah pengurusan Kurikulum/ HEM/ Kokurikulum/ PIBG dalam tempoh sebulan.					
3	Kekerapan dijemput untuk terlibat dengan aktiviti luar dalam tempoh setahun. *(KPM, JPN, PPD, dan Agensi luar)*					
4	Kekerapan sebagai guru ganti dalam tempoh seminggu					
5	Kekerapan mendapat tugasan *ad-hoc* dalam sebulan					

SKALA PESETUJUAN **STS** (sangat tidak setuju); **TS** (tidak setuju); **SDS**(sederhana setuju); **S** (setuju); **SS** (sangat setuju)						
BIL	**PERNYATAAN**	**STS**	**TS**	**SDS**	**S**	**SS**
6	Masa saya lebih banyak diperuntukkan untuk tugas-tugas perkeranian.					
7	Masa saya lebih banyak diperuntukkan untuk tugas pengurusan sekolah.					
8	Saya rasa tertekan jika tidak dapat menghabiskan sukatan pembelajaran.					
9	Saya selalu pulang lewat untuk siapkan kerja hakiki.					
10	Saya tertekan dengan karenah ibu bapa/ penjaga murid.					
11	Tugas luar daripada akademik mengganggu tumpuan saya terhadap peningkatan akademik murid.					
Pengurusan dan Arahan tugas						
12	Saya keliru dengan arahan pihak pentadbir.					
13	Pihak pentadbir membuat agihan tugas secara tidak adil.					

SKALA PESETUJUAN **STS** (sangat tidak setuju); **TS** (tidak setuju); **SDS**(sederhana setuju); **S** (setuju); **SS** (sangat setuju)						
BIL	**PERNYATAAN**	**STS**	**TS**	**SDS**	**S**	**SS**
14	Saya tertekan apabila diarahkan untuk mengajar subjek bukan opsyen.					
15	Saya tertekan dengan aktiviti sekolah pada hujung minggu.					
16	Saya tertekan apabila masa yang diberi tidak mencukupi untuk menyiapkan sesuatu tugasan yang diberi.					
BAHAGIAN C: SUMBER PEKERJAAN (ORGANISASI)						
Sokongan Sosial						
17	Saya mendapat bimbingan daripada pihak pentadbir.					
18	Saya mendapat penghargaan daripada pihak pentadbir.					
19	Saya diberi peluang oleh pihak pentadbir memberi pendapat.					
20	Saya mempunyai hubungan baik dengan rakan sekerja.					
21	Rakan sekerja menghormati saya.					
22	Saya mendapat bimbingan daripada rakan sekerja.					
Autonomi						
23	Saya diberi peluang dalam membuat keputusan berkaitan pengajaran.					
24	Saya diberi kebebasan dalam merancang aktiviti pengajaran.					
25	Saya diberi kebebasan dalam menentukan gaya pengajaran.					
26	Saya diberi kebebasan menentukan sasaran pencapaian murid.					
Kemudahan sumber/ fasiliti						
27	Bilik darjah saya mempunyai kemudahan yang baik.					
28	Bilik guru saya mempunyai kemudahan yang baik.					
29	Sekolah saya mempunyai kemudahan persekitaran yang baik.					
30	Capaian internet di sekolah saya berada dalam keadaan yang baik.					
31	Terdapat kemudahan bahan pengajaran disediakan.					
Peluang Kerjaya						
32	Pihak sekolah menganjurkan program latihan kepada guru-guru.					
33	Saya berpeluang terlibat dengan program latihan di peringkat PPD, JPN dan KPM.					
34	Pihak pentadbir menyokong hasrat guru-guru yang ingin melanjutkan pengajian.					

SKALA PESETUJUAN **STS** (sangat tidak setuju); **TS** (tidak setuju); **SDS**(sederhana setuju); **S** (setuju); **SS** (sangat setuju)						
BIL	**PERNYATAAN**	**STS**	**TS**	**SDS**	**S**	**SS**
35	Saya diberi penjelasan tentang laluan kerjaya keguruan.					
36	Ramai rakan sekerja saya berpeluang mendapat tawaran kenaikan pangkat.					
BAHAGIAN D: SUMBER PERIBADI						
Efikasi Kendiri						
37	Saya yakin dengan kelebihan diri untuk mencapai matlamat.					
38	Saya boleh teruskan kerja walaupun tugasan masih banyak.					
39	Saya bersedia menerima sebarang perubahan.					
40	Saya boleh menguruskan apa sahaja situasi yang mendatang.					
41	Saya boleh berjaya jika berusaha dengan gigih.					
42	Saya memastikan penjelasan yang diberi tentang sesuatu perkara tidak tersasar daripada matlamat sebenar.					
Optimistik						
43	Saya menjangkakan banyak peluang yang boleh saya perolehi dari pekerjaan saya.					
44	Saya mampu menyesuaikan diri dengan perubahan semasa.					
45	Saya berfikiran positif walaupun berada dalam keadaan sukar.					
46	Walaupun menghadapi cabaran dalam kerja, saya percaya semua cabaran ini meningkatkan kemahiran saya.					
47	Saya yakin dapat berkembang dalam kerjaya ini di masa hadapan.					
Motivasi						
48	Saya menyiapkan tugasan tepat pada waktunya.					
49	Saya jelas dengan matlamat pekerjaan saya.					
50	Saya mencapai kepuasan apabila dapat melaksanakan tugasan.					
51	Saya ingin lebih cemerlang dalam pekerjaan.					
52	Saya mengutamakan kualiti dalam pekerjaan.					
BAHAGIAN E: KESEJAHTERAAN PSIKOLOGI						
Kesejahteraan Emosi						
53	Saya berupaya menyatakan perasaan yang saya alami.					
54	Saya seronok bekerja bersama rakan sekerja sekarang.					

SKALA PESETUJUAN **STS** (sangat tidak setuju); **TS** (tidak setuju); **SDS**(sederhana setuju); **S** (setuju); **SS** (sangat setuju)						
BIL	**PERNYATAAN**	**STS**	**TS**	**SDS**	**S**	**SS**
55	Saya boleh mengawal perasaan marah dalam situasi tegang (stres).					
56	Saya menenang diri dengan menarik nafas berulang kali.					
57	Saya mengelak berada dalam situasi tegang agar emosi tidak terganggu.					
Kesejahteraan Fizikal						
58	Saya mempunyai badan yang sihat menjalankan tugas.					
59	Saya menjaga waktu makan walaupun sibuk dengan tugasan kerja.					
60	Saya pastikan keadaan ruang kerja saya bersih.					
61	Saya suka tempat kerja yang bebas asap rokok.					
62	Saya melakukan aktiviti fizikal setelah duduk terlalu lama di tempat kerja.					
Kesejahteraan Pekerjaan						
63	Tugasan mengajar menggalakkan saya mengaplikasi pelbagai kemahiran.					
64	Saya berpuashati dengan hasil kerja saya sekarang.					
65	Saya bangga dengan pencapaian murid saya.					
66	Profesion keguruan memberi pengiktirafan terhadap kebolehan diri saya.					
67	Profesion keguruan sesuai dengan diri saya.					
Kesejahteraan Intelektual						
68	Saya mendapatkan maklumat terlebih dahulu sebelum mengeluarkan pendapat.					
69	Saya menghasilkan idea baharu dalam kerjaya.					
70	Saya membaca untuk meningkatkan pengetahuan berkaitan tugasan.					
Kesejahteraan Sosial						
71	Saya mesra dengan murid.					
72	Saya berhubungan dengan ibu bapa berkaitan murid.					
73	Saya lebih senang bercakap secara bersemuka.					
74	Saya mempunyai hubungan yang baik dengan pihak pentadbir.					
75	Saya selesa mendengar perkongsian orang lain.					

SKALA PESETUJUAN **STS** (sangat tidak setuju); **TS** (tidak setuju); **SDS**(sederhana setuju); **S** (setuju); **SS** (sangat setuju)						
BIL	**PERNYATAAN**	**STS**	**TS**	**SDS**	**S**	**SS**
Kesejahteraan Spiritual						
76	Saya menganggap pekerjaan adalah suatu tanggungjawab.					
77	Saya mengamalkan etika sebagai seorang guru.					
78	Saya tidak suka bercakap tentang keburukan individu lain.					
79	Saya akur dengan arahan kerja.					
80	Saya tidak menyalah guna kemudahan sekolah untuk tujuan peribadi.					

Terima kasih atas kerjasama anda semua…