THE VALIDATION OF 'SELF-IE' MODULE AS ORGANIZATIONAL **COUNSELLING INTERVENTION TO ENHANCE SELF-CHANGE OF** MALAYSIAN LOW-PERFORMING PUBLIC SERVANTS

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ABSTRACT:

This pilot study was carried out in order to validate the reliability of the instrument used to measure the self-change of low performance public service officers by using a questionnaire that had been developed known as the Personal Wellness Ouestionnaire. This instrument consisted of 84 items divided into six sections, section A was demographics and sections B, C, D, E and F consisted of five sub-constructs of self-change namely emotional, psycho-spiritual, social, cognitive, and behavioural adjustment. A total of 30 low-performing public service officers at a ministry in Putrajaya were involved in the piloting. The measurement of Rasch Model version 3.72.3 was also used to obtain item reliability value of 0.89 and respondent reliability of 0.95 for this instrument. This indicated that the items used were very good and in effective condition with a high level of consistency and can be used in actual research. The final analysis found that 24 items were removed because they did not meet the criteria, did not match the correct constructs and did not comply with the criteria set by the researchers. The final instrument showed a total of 51 appropriate items for measuring the five sub-constructs of self-change.

Keywords:

Organizational counseling, pilot study, public servants, SELF-IE module, Malaysia. Article Received: 18 October 2020, Revised: 3 November 2020, Accepted: 24 December 2020

INTRODUCTION

Civil servants in Malaysia faced various issues in terms of human development which leads to a low level of commitment among some of them (Nwabah et al., 2020). Nowadays, current changes in society such as higher income and living rates, highly educated societies, and diverse customer demands, subsequently urging the public sector to provide better quality services in terms of broader options and flexibility (Marsidi & Latip, 2007). Therefore, it was important for counseling services to be established in the workplace. Abu Bakar (2014) stated that among the core goals of counseling services is to encourage changes in client behavior, help client make decisions, form clients' coping skills, rationalize client's minds and help clients improve relationships with others. Circular Letter No. 4/1998 had been issued by the Malaysian Public Service Department stating that counseling psychological and intervention services were highly emphasized and given much attention in order to improve the service quality of the public service officer. Therefore, the need to

implement this intervention in the workplace requires support and involvement of management at all levels.

Emotional stability, psycho-spiritual, social skills, cognitive and behavioral adjustment, if unbalanced, could affect the quality of service of an employee. This can be solved if the educational program includes such sections to form cognitive competence and problem-solving skills of students (Kassymova et al., 2020b; Triyono et al., 2020). The educational program should be properly planned in order to develop young learners in order to serve and benefit society (Kassymova et al., 2020a). Therefore, they needed to be improved to enhance their work performance (Bokti & Talib, 2010; Milliman, Czaplewski, & Ferguson, 2000; Querstret et al., 2015; Tenney, Poole, & Diener, 2016). Therefore, there was a necessity to develop an instrument to measure the five subconstructs in order to measure the selfimprovement of these low performing officers. For that reason, the pilot study was conducted to test the reliability of instruments that had been

adapted and developed in order to see the suitability and to detect any weaknesses. Through this pilot study, the researcher performs the functionality check on the items as a whole and each individual item from the aspect of reliability.

METHODOLOGY

This descriptive study aimed to obtain the reliability of the instruments. There were 75 items in this instrument that were divided into two sections, namely section A for demographic which contained 9 items and sections B, C, D, E and F which were further divided into 5 sub-constructs of self-change, which were emotional stability, psycho-spiritual, social skills, cognitive and behavioural adjustments. The instrument used was a questionnaire adapted by researchers from Psychology Management Division, Public Service Department. Thirty people involved were participants of the Personal Wellbeing Program organized by a ministry in Putrajaya in which the respondents had the same characteristics as the actual respondents chosen by the researcher that were those with Annual Performance Score Report of 60% and below.

The Rasch Model measurement is used and aimed to determine the reliability of an

instrument. In this pilot study, the researchers used the Rasch Measurement Model to test the reliability of items and respondents and for the removal of inappropriate items in the study. for this However. paper, Rasch's model measurement approach was also used to examine reliability of questionnaire instrument the developed through quantitative data collection in the pilot study. Normally, the reliability of an item was only seen through Alpha Cronbach (α) value for the entire instrument.

RESULTS

A total of 30 respondents answered this questionnaire, those who were involved in the Personal Wellbeing Program conducted for three days and two nights, similar to the actual program which would be conducted for 20 hours. After the data were collected, the data were analysed descriptively and the minimum value used in this analysis was the Rasch Measurement Model approach, researchers perform item functionality checks in term of reliability and item-respondents differentiation and removal of items. The explanation for each item functionality check was as follow.

-	
Alpha-Cronbach(α) Score	Reliability
0.9 – 1.0	Very good and effective with high degree of consistency
0.7 - 0.8	Good and acceptable
0.6 - 0.7	Acceptable
<0.6	Item need to be repaired
<0.5	Item needs to be removed

Table 2: Interpretation of *Alpha-Cronbach* (α) **Scores** (Bond & Fox, 2007).

In order to determine item reliability for instruments, Rasch measurement model approach was used by referring to the reliability and differentiation of items. The findings of the analysis showed that the reliability value obtained based on Alpha Cronbach (α) value was 0.95 as in Table 3. This clearly demonstrated that the instruments were very good and effective with a high level of consistency and thus could be used in the actual research.

 Table 3: The Reliability Value (Alpha Cronbach (α)) for the Pilot Study

PERSON RAW SCORE-TO-MEASURE CORRELATION = 1.00 CRONBACH ALPHA (KR-20) PERSON RAW SCORE RELIABILITY =.95 An analysis of the instrument was also performed on the whole by looking at the reliability and differentiation of items and respondents. Table 4 showed the reliability and differentiation of items in which the item's reliability value was 0.89, while the item separation value was 2.78 when rounded-up became 3.0. Based on item reliability, the value of 0.87 indicated that it was in good condition and acceptable (Bond & Fox, 2007). Whereas the separation value of the item was 2.62 and if rounded up, it was equal to 3.0. According to Linacre (2005), the value of good separation index was greater than 2.0.

Table 4: Reliability and Differentiation Valueof Items for the entire Instrument Constructs.

	TOTAL SCORE	COUNT	MEASURE	MODEL ERROR	INF	IT	OUTFI	
					MNSQ	ZSTD	MNSQ	ZSTD
MEAN	125.6	30.0	.00	.40	1.00	.0	.97	1
S.D	7.4	.0	1.19	.02	.27	1.0	.34	1.
MAX.	143.0	30.0	2.27	.47	1.47	1.6	1.74	2.2
MIN.	110.0	30.0	-2.96	.34	.52	23	.39	2.
REAL R	MSE		.42 TRUE SD	1.11 SEPA	RATION	ITEM	RELIA	ABILITY
					2.62		.8	
MODEL	RMSE		.40 TRUE SD	1.12 SEPA	ARATION 2.78	ITEM	RELIABILIT .8	
S.E OF	ITEM MEA	N .17		L		1	n	

Meanwhile, based on table 5, the reliability value of the respondent was 0.95 and the respondent's separation value was 4.15. This showed the reliability of the respondents was very high and it was good because Bond and Fox (2007) stated that the confidence value exceeded 0.80 was good and strong. While the separation value of the respondents showed a good value for the degree of difficulty of the item, which corresponded to the statement of Linacre (2005) which considered the separation value exceeding 2.0 was a good value.

	Total Score	Count	Measure	Model Error	Infit		Outfit	
	beore				MNSQ	ZSTD	MNSQ	ZSTD
MEAN	213.5	51.0	2.38	.31	.99	2	.97	3
S.D	14.4	.0	1.32	.02	.48	2.1	.50	1.9
MAX.	244.0	51.0	5.39	.37	2.25	3.8	2.31	3.7
MIN.	175.0	51.0	68	.24	.36	-3.4	.33	3.3
REAL F	MSE	.33	TRUE SD	1.27 SEPARATION 3.81		PERSO N	RELIABILITY .94 RELIABILITY .92	
MODEI	RMSE	.31	TRUE SD	1.28 SEPARATION 4.15		PERSO N		

Table 5: Reliability and Differentiation Value

of Respondents for the Overall Instrument

The Point Measure Correlation (PTMEA CORR) value to detect the polarity of the item was intended to test the extent to which construction of the constructs achieved its goals. If the value found in the PTMEA CORR part was a positive (+) value, it indicated that the item measured the constructs as intended (Bond & Fox. 2007). Conversely, if the value was negative (-) the developed item did not measure the constructs as intended. Therefore, the item needed to be removed or revised as the item did not point to the question or was difficult to answer by the respondent. Based on table 6, there were three items that had negative values of B1, E58 and F65. For the rest, the PTMEA CORR value was positive and it showed that the item measured the constructs you want to measure. Thus, there were three items needed to be removed from the entire 75 items in the questionnaire (PWQ). While the value of PTMEA CORR was positive, there were five lowest positive values for B2 (0.05), B10 (0.05), D33 (0.06), F62 (0.04) and F69 (0.05). This value should also be noted because it was likely that the item was difficult to answer by the respondent (Hasan, 2011). Therefore, the items needed to be revised. The findings showed that positive items in the questionnaire were moving in one direction with constructs and able to measure constructs and did not conflict with the constructs to be measured. If the value of PTMEA CORR was high, then the item was able to differentiate the ability between respondents who answered this questionnaire.

Entry Number	Point Measure Corr	Item	Entry Number	Point Measure Corr	Item	Entry Number	Point Measure Corr	Item
1	-0.2	B1	26	0.69	C26	51	0.74	E51
2	0.05	B2	27	0.32	C27	52	0.73	E52
3	0.41	B3	28	0.33	C28	53	0.71	E53
4	0.12	B4	29	0.17	C29	54	0.52	E54
5	0.39	B5	30	0.52	C30	55	0.75	E55
6	0.48	B6	31	0.19	D31	56	0.72	E56
7	0.3	B7	32	0.37	D32	57	0.69	E57
8	0.61	B8	33	0.06	D33	58	-0.14	E58
9	0.41	B9	34	0.45	D34	59	0.12	E59
10	0.05	B10	35	0.38	D35	60	0.09	E60
11	0.42	B11	36	0.53	D36	61	0.32	F61
12	0.36	B12	37	0.63	D37	62	0.04	F62
13	0.22	B13	38	0.67	D38	63	0.4	F63
14	0.38	B14	39	0.48	D39	64	0.27	F64
15	0.52	B15	40	0.64	D40	65	-0.01	F65
16	0.53	C16	41	0.59	D41	66	0.14	F66
17	0.51	C17	42	0.66	D42	67	0.22	F67
18	0.51	C18	43	0.56	D43	68	0.26	F68
19	0.48	C19	44	0.59	D44	69	0.05	F69
20	0.7	C20	45	0.62	D45	70	0.3	F70
21	0.43	C21	46	0.6	E46	71	0.22	F71
22	0.68	C22	47	0.71	E47	72	0.21	F72

Table 6: Point Measure Correlation (PTMEA CORR) Value.

In addition, the suitability (fit) of items in measuring constructs could also be seen through the values of MNSQ infit and MNSQ outfit. MNSQ's outfit and infit value should be within a range of 0.6 to 1.4 in order to ensure the built items were suitable for measuring the constructs. The MNSQ value should be between 0.6 and 1.4, if the logit value exceeds 1.4 it means the item was misleading and needed to be viewed again. If MNSQ value was less than 0.6, this means that the item was too easily expected by the respondent (Linacre, 2014). In addition, the value of ZSTD outfit and infit should be between -2 and +2(Bond & Fox, 2007)however, if the value of the MNSQ outfit and infit was acceptable, then the ZSTD index might be ignored (Linacre, 2014).

Table 6 showed the misfit order which displayed items that had MNSQ highest and MNSQ lowest values from the statistical item analysis of misfit order.

Based on table 7, there were 27 items that were within the prescribed range and they needed to be revised or removed. Items exceeding the value of 1.40 in the MNSQ outfit were A10 (3.43), A1 (3.30), A2 (2.82), B18 (2.49), D58 (2.61), E62 (1.76), D59 (1.54), E68 (1.58), A15 (1.48), A5 (1.47), E64 (1.51), E66 (1.45), A9 (1.48), B28 (1.47) and D54 (1.41). Conversely, the value less than 0.6 were D47 (0.49), E73 (0.59), B25 (0.57), C42 (0.57), D53 (0.55), D51 (0.54), B20 (0.52), C43 (0.51), D50 (0.50), E63 (0.49), C40 (0.42), B26 (0.35), C44 (0.44), C45 (0.41), D55 (0.41), and C36 (0.31).

Therefore, based on the table below, 38 items needed to be revised / removed. There were eight items that were not within the PTMEA CORR range. There were 16 items removed because they did not accurately measure the constructs. In addition, 14 items had been revised by looking at the needs of the researchers and expert views. After the analysis, 51 items fulfilled the purpose of constructs to be investigated by researchers.

	-	5					
Entry Number	INI	FIT	<i>OU</i>	T FIT	Point Measure Corr	Items	
	MNSQ	ZSTD	MNSQ	ZSTD			
1	2.45	3.2	3.3	4.5	-0.2	B1	
2	2.16	4.3	2.82	5	0.05	B2	
3	0.8	-0.5	0.84	-0.4	0.41	B3	
4	1.18	0.6	1.25	0.8	0.12	B 4	
5	1.51	1.7	1.47	1.6	0.39	B5	
6	0.89	-0.2	0.89	-0.2	0.48	B6	
7	0.92	-0.1	1.05	0.3	0.3	B7	
8	0.98	0.1	1.06	0.3	0.61	B8	
9	1.42	1.2	1.48	1.3	0.41	B9	
10	2.7	3.5	3.43	4.5	0.05	B10	
11	0.73	-0.7	0.74	-0.7	0.42	B11	
12	0.86	-0.3	0.89	-0.2	0.36	B12	
13	0.98	0.1	1.02	0.2	0.22	B13	
14	1.04	0.3	1.09	0.5	0.38	B14	
15	1.58	1.9	1.08	0.4	0.52	B15	
16	1.19	0.9	1.08	0.4	0.53	C16	
17	0.78	- 1	0.67	-1.1	0.51	C17	
18	2.68	5.2	2.49	4.6	0.51	C18	
19	0.81	-0.9	0.71	-1	0.48	C19	
20	0.53	-2.3	0.52	-2.3	0.7	C20	

Table 7: Item Fit Based on MNSQ Value.

Once the data was analysed, all items and instruments underwent revisions in order to achieve the validity and reliability standards of the instruments based on the RaschMeasurement Model. Although all the items were analysed by SPSS version 23, however, the instrument was supported and strengthen by using the Rasch Measurement Model in terms of item reliability, respondents' reliability, respondents' differentiation and item differentiation as well as item removal. Based on data analysis conducted, 24 items did not meet the requirements of the analysis that had been determined and needed to be rejected.

RATINGS SCALE AND CATEGORY COMPATIBILITY

When using the Rasch analysis application, the rating scale worked to form a category. This category could be used for multiple choice questions or Likert scales. In this questionnaire, five-point Likert scales were used:

- 1. Strongly disagree
- 2. Disagree
- 3. Somewhat disagree
- 4. Agree
- 5. Strongly agree

Table 8: Summary of Category Structure

Category	Score	Observed	Observed	Sample	Infit	Outfit	Structure	Category	
Label		Count	Average	Expect	Mnsq	Mnsq	Calibration	Measure	
2	2	10	1	-1.30	.87	.65	NONE	(-4.02)	2
3	3	122	8	.40	1.13	1.13	-2.82	-1.88	3
4	4	970	63	1.94	1.02	.99	1.93	1.43	4
5	5	428	28	4.01	.93	.81	3.75	(4.86)	5

Table 8 showed the five-point Likert scale of the categories according to the sequence of 1 to 5 that were 1, 8, 63 and 28. Therefore, through the table above, the difference in the structure calibration between the scale and the range was to be 1.4 < y < 5. For example, 2 to 3 = none, 3 to 4 = 1.89, and 4 to 5 = 2.82. This means that the scale in this questionnaire was understood and can be maintained using five-point Likert scales.

Figure 1 showed the category curve for the threshold, in which the segments represented by the categories were broad and have a large boundary.

CATEGORY PROBABILITIES: MODES -Structure measures at intersections

P -+++++++
R 1.0 + +
0
B 22
A 22 444444
B .8 + 22 444 444 5+
I 2 44 44 5
L 22 4 4 55
I 2 4 44 5
T .6 + 2 44 4 5 +
Y 2 3333333 4 4 5
.5 + 2 33 334 ** +
O 3* 43 5 4
F .4 + 3 2 4 33 5 4 +
33 22 4 3 5 4
R 3 2 4 3 55 44
E 33 244 33 5 4
S .2 + 33 422 33 55 4+
P 33 44 2 33 55
O 33 44 222 333555
N 44444 2222 555555333333
$S \ .0 + ******555555555555555555555555555555$
Е -++-

PERSON [MINUS] ITEM MEASURE Figure 1: Probability Category Curve: Structure Measure

DISCUSSION AND CONCLUSION

Rasch techniques had greatly impacted the manner in which social science research made use of tests and surveys. The Rasch Model framework offered procedures for constructing and revising social science measurement instruments and documenting measurement properties of instruments (e.g., reliability, construct validity). Rasch techniques also enabled researchers to make critical corrections when using raw test score data or survey data. Specifically, Rasch techniques allowed nonlinear raw data to be converted to a linear scale, which then could be evaluated through the use of parametric statistical tests. In addition to the examples provided in earlier, there were Rasch steps that could be used to investigate additional important instrumentation issues (e.g., step ordering/step disordering, item reliability, person reliability, differential item functioning, and differential test functioning) (Boone, 2016).

Based on this pilot study, it could be concluded that the validity and reliability were an important aspect that should be emphasized in evaluating an instrument whether it was new or adapted before it was used in the field of real research. Based on the analysis, the 24 items removed were the items that had doubtful reliability. Therefore, based on the reliability test, this instrument was good in quality and appropriate to be used by psychological officers in ministries, departments or in the private sector to measure the self-change through five subconstructs namely the emotional stability, psychospiritual, social skills, cognitive and behavioural adjustments for low-performing civil service officers.

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- [1] Abu Bakar, A. Y. (2014). Smart and talented counseling services: Universiti Kebangsaan Malaysia.
- [2] Bokti, N. L. M., & Talib, M. A. (2010). Work stress, motivation and job satisfaction of the royal malaysian navy fleet. Journal of Humanity, 15, 56–57.
- [3] Bond, T. G., Fox, C. M., Kathryn, C., & Lacey, H. (2007). Applying the rasch model: Fundamental measurement in the human sciences (2nd ed.). Mahwah New Jersey: Lawrence Erlbaum.
- [4] Boone, W. J. (2016). Rasch analysis for instrument development : Why. When and How ?, Life Science Education, Vol. 15(5), p. 1–7. https://doi.org/10.1187/cbe.16-04-0148.
- A. [5] Hasan, (2011). Kesahan dan kebolehpercayaan item penilaian pembimbing dalam pembelajaran berasaskan kerja (pbk) menggunakan pengukuran model rasch. Usm. Psychometrics Centre. Mimos & Malaysian Examination Syndicate, Moe.
- [6] Kassymova, G., Akhmetova, A., Baibekova, М., Kalniyazova, A., Mazhinov, B., & Mussina, S. (2020b). Elearning environments and problem-based Journal learning. International of Science Advanced and Technology, 29(7s), 346 - 356.
- Kassymova, G., Kassymova, A., N., [7] Kosherbayeva, B., M., Triyono, O. S., Sangilbayevd, A. I., & Akhmetova. (2020a). Formation of cognitive competence based on the e-learning Journal system. International of Innovation, Creativity and Change, 13(12), 352-370.
- [8] Linacre, J. M. (2014). Winsteps & Facets. University of Sydney Australia.
- [9] Linacre, J. M. (2005). Measurement, Meaning and Morality.Pacific Rim Objective Measurement Symposium

(PROMS) &International Symposium On Measurement & Evaluation (ISME).

- [10] Marsidi, A., & Latip, A. H. (2007). Factors affecting the commitment of workers in lay organizations. Journal of Humanity, 56–64.
- [11] Milliman, J., Czaplewski, A. J., & Ferguson, J. (2000). Empirical assessment workplace spirituality and employee work attitudes an exploratory.
- [12] Nwabah, N. I., Oluwaleyimu, O. O., Ihenskhien, I., & Oshio, L. E. (2020). Human capital development and education: A strategy for sustainable income among university undergraduates in edo and lagos States, Nigeria. Asian Journal of Vocational Education and Humanities, Vol. 1(1), 8-15.
- [13] Querstret, D., Cropley, M., Kruger, P., Heron, R., Querstret, D., Cropley, M., & Querstret, D. (2015). Assessing the effect of a cognitive behaviour. Therapy (CBT) -based workshop on work-related rumination , fatigue , and sleep, 0643(October).
- [14] Tenney, E. R., Poole, J. M., & Diener, E.
 (2016). Research in organizational behavior does positivity enhance work performance? why, when, and what we don't know. Research in Organizational Behavior, 36, 27-46.
- [15] Triyono, B. M., Mohib, N., Kassymova, G. K., Pratama, G. N. I. P., Adinda, D., & Arpentieva, M. R. (2020). The profile improvement of vocational school teachers' competencies. Vysshee Obrazovanie v Rossii = Higher Education in Russia, 29(2), 151-158.