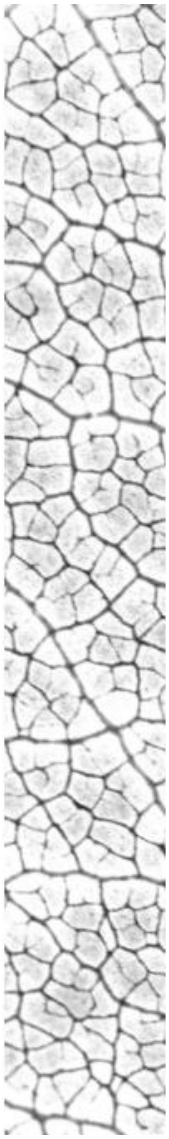

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A validity of accountability among guidance and counseling teachers for students at risk of dropping out intervention program instruments

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Abstract
Students at risk of dropping out intervention program are a proactive step taken by Ministry of Education Malaysia (MOE) (2018) in addressing the problem. Guidance and counseling teachers has been given responsibility as a planner and executor in this program. This study using quantitative approach which is a survey of 100 respondents among the guidance and counseling teachers who teach in secondary school only. The purpose of this study is to validate the instrument of Accountability among Guidance and Counseling Teachers for Students at Risk of Dropping out Intervention Program based on four components which are Define; Manage; Deliver and; Assess using Exploratory Factor Analysis (*EFA*). The EFA results found that all factor loadings were greater than 0.55 meaning that all items were received and no items were dropped. Based on the analysis performed, it can be concluded that the instrument used has a good degree of validity in determining the accountability among guidance and counseling teachers in secondary schools in implementation Students at Risk of Dropping out Intervention Program.

Keywords: validity, Exploratory Factor Analysis (EFA), students at risk of dropping out intervention program, accountability, guidance and counseling teachers, secondary schools

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INTRODUCTION

Student enrollment rates during the transition from primary school to secondary school are worrying. Based on statistics obtained from the Ministry of Education Malaysia, (MOE) (2019), primary school enrollment in 2018 reached 97.8% while upper secondary school 87.2% showed a difference of 10.6%. Meanwhile, the transition from form three to form four also showed a significant gap of 8.1% from 95.3% (lower middle) to 87.2% (upper secondary) (MOE, 2019). Implementation of Students at Risk of Dropping out Intervention Program is an appropriate step taken by the MOE in addressing these issues as the guidance and counseling teachers has been given the role and responsibility of planning and implementing this intervention program.

Students at risk of dropping out are students who are in the education system (school) but have a high probability of leaving the system before the end of their education (MOE, 2018). McKee and Caldarella (2016) state that at-risk students are more likely to succeed in school if appropriate intervention is provided starting from the early stages of entering high school. Therefore, the role of counselors especially in high school is significant in meeting the needs of students by implementing a comprehensive counseling program for students benefit (Camelford & Ebrahim, 2017).

Therefore, the identification of accountability among guidance and counseling through this program should be implemented so that students benefit from the counseling program received (Studer, 2015) while also enhancing guidance and counselling teacher professional identity (Erford, 2015).

PROBLEM STATEMENT

The practice of accountability among school counselors has been discussed for a long time (Baker, 2012; Gysbers, 2004) in fact, Gysbers (2004) argues that accountability is not just a requirement of a counselor but it's a must for a counselor. This is in line with Erford (2015) who explains that accountability in guidance and counseling services has become significant in the era of evidence-based practice.

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American School Counseling Association [ASCA] (2019; 2012) stated that identifying the effectiveness of the program, noting improvements in planning and implementation, and demonstrating student change after participating in the school counseling program were part of the accountability process. However, in Malaysia studies of accountability among guidance and counselling teacher are very limited. Guidance and counseling services have also not shown excellence despite having been introduced in schools in Malaysia for half a century (Abdul Malek, Nor Junainah and Azizah, 2013). This is due to a number of guidance and counselling teachers who do not perform their duties and services effectively (Tengku Elmi Azlina & Noriah, 2014). In line with this, accountability is seen as a catalyst for increasing the credibility of school counselors (Gysbers, 2010).

Educational Planning and Research Division, Ministry of Education Malaysia (2016) reports that students at risk of dropping out in 2016 were 9386 and 402 of them were high risk of dropping out which covers 4.3%. This indicates the need for effective intervention to address these issues. In this context, guidance and counselling teacher plays an important role in finding the best approach to helping students at risk of dropping out (Azlin Norhaini, Suria Huszaini, Ummi Salamah and Intan Farahana, 2015) through the accountability among guidance and counseling teachers for students at risk of dropping out intervention program that explore from the beginning which is defining components to the assessing components.

However, based on a search of instruments of accountability in the guidance and counseling services in Malaysia, it has not been found. Therefore, the construction of this instrument is based on a conceptual framework built in reference to the ASCA National Model (ASCA, 2019; 2012), the Management and Counseling Services Management Model (Mad Islaihi, 2017; KPM, 2015) and the MEASURE Model developed by Stone and Dahir (2004). In addition, items are also constructed with reference to the following research documents and frameworks: i) Students At Risk Dropping Out Module For Primary and Secondary School Risk Module: Focused Counseling Highlighting of Excellence (SUDI) (KPM, 2019); ii) Students At Risk Dropping Out Guidelines (KPM, 2018); iii) School Counselor Accountability Practices Questionnaire (SCAPQ) instrument (Budenz, 2012; Topdemir, 2010; Edwards, 2009).

Therefore, Implementation of Students at Risk of Dropping out Intervention Program needs to be identified in order for guidance and counselling teachers to help students at risk of dropping out and to prove that guidance and counselling teachers can fulfill the responsibilities and trust given to them (Malek, 2007) through the instrument developed by researchers. While guidance and counseling services benefit through accountability as a study conducted by Paolini (2015) explains that school counselors involved in accountability measures can help students achieve more positive outcomes than counselors who do not practice accountability measures.

Table 1. Part B

Component	Total of Items
Define	9
Manage	14
Deliver	9
Assess	13

Table 2. Likert Scale

Skor	Tahap
1	Always
2	Often
3	Sometimes
4	Rarely
5	Never

OBJECTIVE

Specifically, this study aimed to:

(i) Validate the instruments of Accountability among Guidance and Counseling Teachers for Students at Risk of Dropping out Intervention Program

(ii) Identify constructs the instruments of Accountability among Guidance and Counseling Teachers for Students at Risk of Dropping out Intervention Program

METHOD

This study uses a quantitative approach which is a survey study using questionnaire as a research instrument. This selection is consistent with the researcher's desire for comprehensive information and the use of large sample sizes (Chua, 2014; Ary, Jacobs & Asghar, 2002).

Population and Sample

The study was conducted at a national high school in Perak and Kedah. A total of 100 guidance and counseling teachers were selected as respondents of the study. This number is sufficient because the number of samples required to perform the EFA is at least 100 samples as suggested by Hair et al (2010).

Instrument of Study

Data were obtained using questionnaires consisting of two sections, Part A and Part B (**Table 1**). Part A is made up of demographic factors, while Part B is made up of four components: Define; Manage; Deliver and; Assess. Each item in each construct was measured using a 5-point Likert Scale (**Table 2**).

Data Analysis

To determine the validity of the instrument construct, the researcher performed Exploratory Factor Analysis (EFA) to measure the suitability of each item in the construct before the instrument was used in the actual study. Subsequently, reliability analysis was performed

Table 3. EFA Criteria Guide

Indicators	***Cut-off Value***	**Sources**
Kesesuaian data untuk analisis faktor		
• *Keiser-Meyer-Olkin* (KMO)	The suggested value is > 0.06	Hair et al. (2010)
• *Bartlett's Test of Sphericity*	Significant value α=0.05	Hair et al. (2010)
Anti-Image Correlation: Measure of Sampling Adequacy (MSA)	≥ 0.50	Hair et al. (2010)
Item Suitability *Communalities* – variables identified as low values will be dropped.	≥ 0.30	Tabachnick & Fidell (2007)
Convergent validity • Factor loadings Sample size / Suitable factor loading 85 / 0.60 100 / 0.55 120 / 0.50 * The study involved 100 respondents, so the value of the factor loading used was ≥ 0.55.	Low => drop	Hair et al. (2010)

Table 4. KMO and Bartlett Test

KMO and Bartlett's Test		
Kaiser-Meyer-Olkin Measure of Sampling Adequacy.		0.781
Bartlett's Test of Sphericity	Approx. Chi-Square	6831.619
	df	2145
	Sig.	.000

once again to measure the internal consistency of each item in the scale used for theoretical construction measurement. Data were analyzed using SPSS 23 software.

CONSTRUCT VALIDITY

Factor Analysis is a commonly used approach by most researchers both in Malaysia and abroad (Mohammad Rahim & Khaidzir, 2017). Factor Analysis is divided into two types: Exploratory Factor Analysis (EFA) and Confirmatory Factor Analysis (CFA) but the researcher only conducted EFA in this study. In particular, the EFA was conducted to validate all the components of this survey. To describe the EFA output, some of the procedures involved are shown in **Table 3**.

FINDINGS

Two important tests need to be done first, namely Kaiser-Meyer-Olkin (KMO) and Bartlett's Test of Sphericity before factor analysis is performed. From **Table 4**, the KMO test results show that the value of 0.781 is obtained which is greater than 0.60. This shows that the sample used is sufficient.

Daripada Jadual 4, hasil ujian KMO menunjukkan nilai 0.781 diperolehi iaitu melebihi nilai 0.60. Ini menunjukkan sampel yang digunakan adalah mencukupi. The value obtained for Bartlett's Test of Sphericity is 0.00, which is a mean value of less than 0.05 indicating that there is a relationship between at least some sub-scales and that the data are appropriate for performing EFA.

Exploration Factor Analysis (EFA) for Defining Components

This EFA procedure is performed on nine items for the Define component and produces a KMO value of 0.835. This KMO adequacy value indicates that the existing data are suitable for Principal Component Analysis (PCA) component analysis. Bartlett's Test of Sphericity was also significant (p <0.05) indicating that the relationship between items was adequate for EFA. The results of the anti image correlation show that all items above the value of 0.50 indicate that there is a correlation between the items and do not need to be dropped.

All items measuring the Define component (Define) had a value of communalities greater than 0.30 which ranged from 0.472 to 0.695 while indicating that all the items represented the variables well (Ramlee, Jamal @ Nordin & Marinah, 2016). Eigenvalues are the sum of the variances explained for each factor. Based on the eigenvalues above 1 for guidance, the EFA extraction performed on the nine items for the Define component succeeded in forming two factors that contributed 63.221% of the overall variance change for the Defining Component.

The rotated component varimax method or varimax rotation is used because it reduces the number of complex variables and increases the expected yield of its structure. Overall, the value of the items in the Define component is greater than 0.55 based on a sample of 100 people. The EFA Results Results for these Defining components can be referenced in **Table 5**.

Exploration Factor Analysis (EFA) for Manage Components

The EFA procedure was continued on component B involving 14 items. The obtained KMO value is 0.889 and greater than 0.6 indicates that these items are suitable for PCA analysis. Bartlett's Test of Sphericity was also significant (p <0.05) indicating that the relationship between items was adequate for EFA. For anti-image correlation values, all items exceeded the value of 0.50 (Hair et al. 2010) meaning that no items were removed before PCA was performed.

The value of communalities shows the ratio of variance explained by the factor and for component B the value obtained is from 0.401 to 0.795 while showing

Table 5. Exploration Factor Analysis (EFA) For Define Components

Kaiser Meyer-Olkin (KMO)	0.835		
Bartlett's Test of Sphericity	x^2= 429.449, p< .000		
Item	**Factor Loading (N=100)**	***Communalities***	***Anti-image correlation***
Component A: Define			
A.1.1 menyesuaikan matlamat PIMBC dengan keperluan sekolah.	0.807	0.653	0.842
A.1.2 merancang PIMBC.	0.642	0.695	0.861
A.1.3 melaksanakan PIMBC.	0.604	0.645	0.867
A.1.4 menggunakan carta alir perlaksanaan mengurus murid berisiko cicir yang disediakan oleh pihak KPM.	0.752	0.655	0.828
A.1.5 meletakkan isu murid berisiko cicir sebagai fokus utama dalam pengendalian sesi kaunseling.	0.773	0.652	0.865
A.1.6 melaksanakan PIMBC dalam program kaunseling berfokus.	0.811	0.668	0.800
A.1.7 merujuk Kod Etika Perkhidmatan Bimbingan dan Kaunseling sebagai pertimbangan dalam menjalankan tugas.	0.659	0.472	0.819
A.1.8 merujuk Garis Panduan Murid Berisiko Cicir.	0.779	0.668	0.799
A.1.9 merujuk Manual Pengurusan Pencegahan dan Intervensi Murid Cicir: Serlahkan Keunggulan Diri (SUDI 2.0).	0.690	0.583	0.835
Cumulative % of variance	63.221%		

Table 6. Exploration Factor Analysis (EFA) For Components Manage

Kaiser Meyer-Olkin (KMO)	0.889		
Bartlett's Test of Sphericity	x^2= 1001.760, p< .000		
Items	**Factor Loading (N=100)**	***Communalities***	***Anti-image correlation***
Component B: Manage			
B.2.1 menerima saringan nama murid berisiko cicir daripada Pejabat Pendidikan Daerah (PPD).	.786	.619	.799
B.2.2 memperoleh maklumat skor kriteria murid berisiko cicir daripada guru kelas/guru tingkatan.	0.570	.401	.869
B.2.3 mengesan murid berisiko cicir berdasarkan maklumat daripada pelbagai sumber.	.618	.644	.923
B.2.4 menggunakan kaedah sendiri dalam menentukan faktor murid berisiko cicir.	.863	.754	.767
B.2.5 mengetahui huraian skor instrumen kriteria murid berisiko cicir.	.644	.668	.903
B.3.1 menggunakan skor kriteria murid berisiko cicir untuk menentukan fokus program.	.572	.667	.891
B.3.2 membahagikan murid berisiko cicir mengikut fokus program.	.609	.732	.911
B.3.3 membina objektif program berdasarkan maklumat skor kriteria murid berisiko cicir.	.588	.767	.883
B.3.4 menyediakan perancangan pelaksanaan PIMBC.	.717	.752	.940
B.3.5 berbincang dengan pihak pentadbiran.	.835	.782	.860
B.3.6. mendapatkan kelulusan pihak pentadbiran sebelum melaksanakan PIMBC.	.850	.779	.867
B.3.7 berbincang dengan jawatankuasa yang telah dilantik.	.883	.795	.945
B.3.8 menggunakan maklumat berkaitan sebagai penanda aras program. Contohnya: Pada tahun 2018, 5% murid telah dikesan tidak hadir ke sekolah melebihi 41 hari tidak berturut-turut.	.797	.708	.853
B.3.9 meletakkan matlamat selaras dengan penanda aras program yang digunakan. Contohnya: Mengurangkan kadar murid tidak hadir ke sekolah 41 hari tidak berturut-turut dari 5% pada tahun 2018 kepada 2% pada tahun 2019.	.822	.713	.878
Cumulative % of variance	69.872%		

that all the items represent the variables well (Ramlee, Jamal @ Nordin & Marinah, 2016). Furthermore, the EFA procedure yielded three factors with an eigenvalue greater than 1 and explained 69.872% of the total variance.

Based on the rotated component varimax based on a load factor of over 0.55 (Hair et al., 2010) for a sample of 100, all items reached a minimum value of between 0.570 and 0.883. The following table shows the EFA findings for the Manage Components.

Exploration Factor Analysis (EFA) for Deliver Components

The KMO value of the Deliver component containing nine items was 0.827 meeting the minimum recommended criteria while the Bartlett's Test of Sphericity test value was statistically significant (p <0.05). For anti-image correlation values, all items exceeded the value of 0.50 (Hair et al. 2010), meaning no items were removed before PCA was implemented.

The value of communalities obtained ranged from 0.593 to 0.754 while indicating that the items involved represented the variables well. Further, the EFA procedure yielded two factors with an eigenvalue greater than 1 that obtained 67.006% of the total variance. The results of the rotated component varimax analysis of all items reached a minimum value of 0.55 where the lowest value was obtained between 0.600 to 0.754. The following shows the EFA findings for the Manage Components in **Table 7**.

Exploratory Factor Analysis (EFA) for Assess Components

The KMO value of component D was 0.866 value that meets the recommended value. Whereas Bartlett's Test of Sphericity was significant (p <0.05) indicating that there was a relationship between at least sub-scales and data fit for factor analysis. Anti image correlation shows all values greater than 0.50 (Hair et al., 2010). All items exceeding the value of 0.50 (Hair et al. 2010) mean that the items have strong relationship with other variables (Mohammad Rahim & Khaidzir, 2017).

The value of communalities obtained ranged from 0.583 to 0.845. This value is greater than 0.50 and large communalities indicate that there is a strong influence of stacked constructions (Zainol Mustafaa, Wong Wai

Table 7. Exploration Factor Analysis (EFA) For Deliver Components

Kaiser Meyer-Olkin (KMO)	0.827		
Bartlett's Test of Sphericity	x^2= 472.594, p< .000		
Items	**Factor Loading (N=100)**	***Communalities***	***Anti-image correlation***
Component C: Deliver			
C.4.1 bekerjasama dengan pihak sekolah dalam program intervensi yang dilaksanakan.	.855	.734	.746
C.4.2 bekerjasama dengan pihak berkepentingan luar dalam aktiviti yang dilaksanakan.	.696	.637	.845
C.4.3 melibatkan murid yang terpilih dalam program khas yang bersesuaian.	.717	.600	.922
C.4.4 menjalankan sesi kaunseling individu secara berterusan kepada murid yang terlibat.	.793	.744	.830
C.4.5 menjalankan sesi kaunseling kelompok secara berterusan kepada murid yang terlibat.	.729	.593	.783
C.4.6 membuat lawatan ke rumah murid yang terlibat.	.769	.686	.870
C.4.7 melibatkan ibu bapa dalam pelaksanaan program intervensi.	.864	.754	.739
C.4.8 memberi fokus terhadap pembangunan kerjaya dengan melibatkan pelbagai pihak yang berkaitan.	.775	.689	.852
C.4.9 memberi fokus terhadap kemahiran kehidupan. Contohnya, kemahiran kognitif, kemahiran kesejahteraan, kemahiran sosial dan kemahiran interpersonal.	.672	.594	.859
Cumulative % of variance	67.006%		

Table 8. Exploration Factor Analysis (EFA) For Estimating Components Assess

Kaiser Meyer-Olkin (KMO)	0.866		
Ujian kesferaan Bartlett (Bartlett's Test of Sphericity)	x^2= 904.758, p< 0.000		
Items	**Factor Loading (N=100)**	**Communalities**	**Anti-image correlation**
Component D: Assess			
D.5.1 mengenal pasti faktor risiko yang berjaya ditangani.	.632	.583	.746
D.5.2 membandingkan rekod sebelum program dengan rekod selepas pelaksanaan program intervensi.	.808	.712	.891
D.5.3 mengenal pasti strategi pelaksanaan yang berkesan.	.747	.737	.870
D.5.4 mengetahui penambahbaikan yang perlu dilakukan untuk program intervensi akan datang.	.664	.697	.920
D.5.5 menggunakan pelbagai kaedah yang sesuai untuk pengumpulan data.	.754	.770	.860
D.5.6 menggunakan data proses iaitu berkaitan perkhidmatan yang ditawarkan. Contohnya: mengendalikan lima kumpulan kaunseling kelompok sebanyak lapan sesi bagi setiap kumpulan mengenai hala tuju kerjaya.	.858	.802	.844
D.5.7 menggunakan data persepsi iaitu berkaitan sikap, kemahiran atau pengetahuan yang diperolehi. contoh: 85% murid dapat mengenal pasti langkah-langkah dalam menguruskan stres.	.839	.845	.857
D.5.8 menggunakan dapatan data iaitu mendapatkan perubahan murid hasil daripada program intervensi yang diterima. Contohnya: kadar kehadiran penuh peserta PIMBC meningkat sebanyak 10%.	.676	.642	.861
D.6.1 menyediakan laporan program berdasarkan borang penilaian impak PIMBCa.	.655	.694	.879
D.6.2 menghantar laporan PIMBCa kepada pihak berkaitan.	.825	.741	.831
D.6.3 melaporkan hasil dapatan sebenar program intervensi.	.720	.698	.833
D.6.4 menyediakan laporan program berdasarkan format sendiri	.737	.606	.825
D.6.5 pelaporan dihantar kepada pihak pentadbir sahaja	.787	.653	.775
Cumulative % of variance	70.611		

Linga and Mohd Rashid, 2013). Eigenvalues are the sum of the variances explained for each factor. Therefore, from the factor analysis three factors were extracted and the variance explained by the three factors was 70.611%. Based on a load factor value greater than 0.55 (Hair et al., 2010) for a sample of 100, all items reached a minimum value of between 0.632 and 0.858 in the rotated component varimax. The following table shows the EFA findings for the Assess Components.

DISCUSSION AND CONCLUSION

The factor analysis procedure of this study met the criteria set by Hair et al., (2010). The EFA results for the define components, the manage components, the delivere components and the assess components indicate that no items have been dropped. This study contributed to the knowledge as it successfully explored and validated components that were the determinants of accountability among guidance and counseling teachers for students at risk of dropping out intervention program.

This means that the components contained in this instrument are appropriate and represent the definition of construction based on the items being built. As for the defining component, these program goals are linked to the school's mission in addressing these at-risk students. Guidance and counseling teacher should also follow the guidelines contained in the Guidelines for Counseling and Counseling Services (KPM, 2015), Students At Risk Dropping Out Guidelines (KPM, 2018) and; Students At Risk Dropping Out Module For Primary and Secondary School Risk Module: Focused Counseling Highlighting of Excellence (SUDI) (KPM, 2019). The mission of each guidance and counseling teacher is visible through each item that can represent the Define component. This is because based on the validity of the construct through EFA all the items achieved the minimum required.

In the manage component, four aspects are emphasized: (i) the guidance and counseling teacher receives a complete score on student at risk dropping out from the related party; (ii) the focus of the intervention program covers the rational, goals, objectives and four focus of teacher guidance and counseling services (development of student self-esteem, student self-improvement, student and psychosocial career education and student mental well-being); (iii) program planning is based on program

procedures and guidance and counseling activities; and (iv) focused counseling program. Thus, the items contained in this component were able to measure these four aspects based on the validity of the construct validated.

Further to the deliver component, the built-in items will be able to identify strategies used by GBK based on direct service to students covering aspects of instruction, assessment and counseling and counseling. For indirect service to students covers aspects of referral, consultation and collaboration. All nine of these items represent this component based on the EFA value obtained.

The last component, the appraisal component, the built-in item has also been able to measure the following aspects: mitigated risk factors (MOE, 2018); effectiveness (KPM, 2018; ASCA, 2019); and improvement in planning and implementation stages (KPM, 2018; ASCA, 2019). The EFA value obtained exceeds the minimum required.

This study contributes to the research methodological aspects of the validity of instrument construction through Factor Exploration Analysis (EFA). This instrument has successfully measured each component based on the built-in items. In this regard, the findings of this study can serve as a starting point for future studies in the study of the effectiveness of program implementation conducted by guidance and counseling teachers in primary and secondary schools.

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