Journal of Social Science and Humanities, 1 (1): 01-05, 2018
e-ISSN: 2600 - 9056

DOI: 10.26666/rmp.jssh.2018.1.1

Exploration of Constructs of Best Practices in Sports Risk Management for Autism Individuals

Fatimah Mustaffa and Mohamad @ Mohd. Sadek Mustaffa
Institut Pendidikan Guru Kampus Perempuan Melayu, Jalan Maktab 75900, Melaka Malaysia and Universiti Teknologi Mara, Shah Alam, Malaysia.

Abstract: Exploration of Constructs of Best Practices in Sports Risk Management for Autism Individuals (ECBP-ASRM) is built to identify the best practices for sports risk management among Autism sports instructors in Malaysia for building instruments ECBP-ASRM. This study will also confirm whether the resulting constructs are a factor in determining the criteria ECBP-ASRM. In determining the construct, Classic Test Theory (CTT) using qualitative methods with two approaches are used - (i) based on the analysis of the document by making literature review and (ii) interviews. *In determining the* factor, analysis using the Primary Component Analysis on residuals, Rasch model is used in this study to ascertain and to validate the constructs or factors. It seeks to determine the construction of the construct and to identify the possibility of other factors that may affect the construct. This study is necessary as there is no ECBP-ASRM model at the Special Needs Education School, Ministry of Education Malaysia. The methodology of this study was carried out on a quality basis through the analysis of documents. The findings show that the ECBP-ASRM construct is an introduction, presentation, participation and feedback. ECBP-ASRM is important because it ensures that sport programs for autism people is safe.

Key words: *Best Practice, Sports risk management and Autism*

INTRODUCTION

All sports activities are risky, sports for autism individuals are riskier as these autism individuals experience communication problems. There should be a standardized approach to minimize the risk of sports programs to autism individuals. Therefore, it is necessary to establish a standard ECBP-ASRM instrument. An instrument with good reliability and validity characteristics should be produced to determine the ECBP-ASRM trainer Institute of Teacher Education (ITE). *Special Olympics Coaching Guide* [1] explains that, risk management is a method of identifying risks, developing and implementing programs to protect organizations and avoiding losses. Coaches have a primary responsibility to reduce the risk of participation for athletes involved in guided sports. Trainer risk management competencies involve knowledge and skills [1-5] covering aspects of preparation, equipment and environment, teaching and competition, athlete group, assessment, supervision, risk and emergency action model need to be robust and perfect. Risk management best practices should be the practice for coaches to create safe sports situations for autism individuals and to protect the coaches from being prosecuted in court for negligence. In addition, there are some aspects of safety such as general safety, personal safety and friends as well as the safety of equipment and facilities [6-8] are important and to ensure the work environment and the environment of organized and safe sports activities to avoid accidental events resulting in injuries and losses [9-11]. As there is no standard best practices for sport risk management instrument, researchers will conduct research and work to produce ECBP-ASRM instruments for ITE coaches to use which expertise in autism individuals in Malaysia.

RESEARCH OBJECTIVES

This study aims to produce an ECBP-ASRM instrument among ITE trainers in Malaysia with reliability, validity and generating respondents profile using the Rasch model.

METHODOLOGY

The ECBP-ASRM instrument involves several stages of construction where each stage is the most important aspect of obtaining validity and reliability as well as generating the profile of respondents. The construction of the instrument involves a series of steps in which the researcher divides into three important parts which is the design phase, the construction phase,

Corresponding Author: Fatimah Mustaffa Institut Pendidikan Guru Kampus Perempuan Melayu, Jalan Maktab 75900, Melaka, Malaysia and Universiti Teknologi Mara, Shah Alam, Malaysia. 0197175714

as well as the confirming the instrument phase [12]. The instrument design phase involves the purpose of instrument construction, to determine the instrument contents, determining the constructs and substructures. In determining the content of constructs and sub-subversions, the four constructs of ECBP-ASRM are introducing, presentation, participation and feedback, constructing analytical data for each sub construct of selected constructs as a result of library research. The second phase is used in the construction of the ECBP-ASRM instrument is writing, judgment of five experts panel are required to confirm constructs as well as sub built, and finally review the items. The final construction phase in the construction of the ECBP-ASRM instrument is the verification phase in which it involves pilot studies. Pilot study was conducted based on a predetermined population, all study samples (32 respondent) consisting of special education coaches of the Malaysian Teachers Education Institute who has expertise with autism individuals. In this pilot study the researcher uses all the sample (purpose sampling) as used by Jones [13]. The findings of the pilot study, reliability analysis was analyzed using the Rasch model which is an interesting and clear model in looking at the relationship between human beings and the observed actions as well as to evaluate, validity analysis, resulting in a student profile of problem solving styles based on item maps after the findings were obtained from the analysis of the study [14-16].

RESEARCH RESULTS AND DISCUSSION

Criteria for the validity of the ECBP-ASRM instrument

Table 1 below shows the criteria to be considered in determining the validity of the built-in ECBP-ASRM instrument. According to Wright and Stone [17], the conditions required to determine the validity of the instrument were - (i) the use of research items that can measure the respondents as well as the constructed constructs, as well as that the instrument is necessary to differentiate the study respondents. (ii) has the suitability of the item corresponding to the measurement to be measured. (iii) has the suitability of the item corresponding to the measurement to be measured. According to Bond and Fox [14] for instruments surveying using unencumbered rating scales, this is because the harassment-free instruments facilitate the survey respondents to choose the desired answers, and there will be similar probabilities for an individual selected category. (iv) unidimensional validity should also be implemented to ensure that the measurements are in one direction only [18-19].

Table 1 Validity criteria in ECBP-ASRM instruments

Criteria	Statistics Info	Decision
Validity of items Item = 138	a. Item polarity b. item incompatibility c. PCA	All items show a positive PTMEA CORR value> 0.15. All items show infit square mean infinity and outfit between 0.6 to 1.4. The Rasch dimension recorded the variance of 50.9% equal to the model of 50.9%
Respondent profile	The respondents' distribution answers the question items built in the ECBP-ASRM instrument	62.5% of respondents gave high approval to construct. 37.5% respondents gave low consent to construct.

Reliability Index Instrument ECBP-ASRM

Table 2 below shows the reliability index of the ECBP-ASRM instruments for the respondents as well as the research items that have been implemented. The reliability value of the respondents is 0.91 and 0.84 items which according to Bond and Fox (2007), the reliability value which exceeds 0.80 is strongly accepted. The results of the analysis show that both values indicate that the questionnaire has strong reliability to be used to measure and identify ECBP-ASRM special education coaches with autism expertise ITE in Malaysia.

Table 2: Individual reliability and isolation as well as ECBP-ASRM study items.

RESPONDEN		ITEMS	
reliability	Separation	reliability	Separation
0.99	9.54	0.75	2.00
Alpha cronbach= 0.99			

In addition, researchers also look at the value of separation obtained from the analysis. According to Linacre [18] the value of separation of respondents' capabilities in the study. The ECBP-ASRM instrument not only has good reliability but also the value of individual separation index 9.54 as well as the 2.00 high item indicates that it is able to exclude respondents.

Fig 1 *Rating Scale Instrument Quality Criteria.* Fisher, W.P.Jr (2007) [20]

Criteria	*Poor*	*Fair*	*Good*	*Very Good*	*Excellent*
Person & Item Reliability	<0.67	0.67 – 0.8	0.81 – 0.9	0.91 – 0.94	> 0.94

If referring to the alpha cronbach value, the reliability value through the person's raw score reliability is 0.99. Alpha value shows good reliability when alpha minimum value is 0.90 [21]. According to Pallant [22] for a newly built or initial research instrument, the acceptable alpha value is 0.6. This finding shows that the built-in instrument has high reliability and acceptance.

Reliability of Construct Instruments ECBP-ASRM

Table 4 below shows the reliability and separation index for each construct obtained. Each construct recorded a high reliability value according to Bond and Fox [14] the reliability value exceeding the value of 0.80 was strongly accepted. The respondents' separation index showed that there were 2 identical capabilities identified and Linacre [23] stated that good separation was at or above 2.0.

Table 4: Value of reliability and value of separation ECBP-ASRM constructs

Constructs	Reliability		Separation	
	respondent	items	respondent	items
Introduction	0.99	0.75	9.54	2.00
Presentation	0.99	0.75	9.54	2.00
Participation	0.99	0.75	9.54	2.00
Feedback	0.99	0.75	9.54	2.00

Instrument Validity.

According to Linacre [24] the validity of the item can be determined using the Rasch model because of the program output analysis. The output that is considered is the polarity of the item, by looking at the PTMEA CORR. In addition, other values are also considered for example individual maps, item conformity, and unidimensional isolation.

i. Item Polarity

A total of 138 ECBP-ASRM items showed a positive PTMEA CORR value. Positive PTMEA CORR value (+ ve) proves this ECBP-ASRM item can measure the constructs to be measured. If the PTMEA CORR value is negative (-ve), the item needs attention to drop or repair.

Table 5: Item Polarity

INPUT: 32 Person 138 Item MEASURED: 32 Person 138 Item 10 CATS WINSTEPS 3.69.1.11

Person: REAL SEP.: 9.54 REL.: .99 ... Item: REAL SEP.: 1.71 REL.: .75

Item STATISTICS: CORRELATION ORDER

ENTRY NUMBER	TOTAL SCORE	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
138	131	32	-.93	.32	4.94	7.5	4.00	6.1	.15	.64	46.9	62.7	KS9
23	128	32	-.63	.32	.94	-.1	.92	-.2	.42	.65	62.5	64.2	DJ1
21	123	32	-.14	.31	1.68	2.2	1.87	2.6	.43	.67	53.1	65.2	PK8
11	143	32	-2.09	.28	1.02	.2	1.24	.8	.48	.61	53.1	64.5	LT11
58	125	32	-.33	.31	2.48	4.0	2.42	3.8	.50	.67	43.8	64.9	ARW12
112	127	32	-.53	.32	1.24	.9	1.21	.8	.52	.66	62.5	64.5	APS6
24	126	32	-.43	.31	1.02	.2	1.00	.1	.53	.66	59.4	64.8	DJ2
13	140	32	-1.84	.30	.92	.0	1.04	.2	.54	.61	56.3	63.2	LT13
15	135	32	-1.34	.32	1.16	.6	1.13	.5	.54	.63	59.4	63.5	PK2
10	139	32	-1.74	.31	.98	.1	1.00	.1	.54	.62	62.5	64.8	LT10
8	125	32	-.33	.31	1.52	1.8	1.72	2.2	.55	.67	68.8	64.9	LT8
34	108	32	1.18	.28	1.24	.9	1.17	.7	.56	.71	50.0	59.9	PI3
70	125	32	-.33	.31	1.26	1.0	1.32	1.2	.56	.67	65.6	64.9	T3
28	127	32	-.53	.32	1.06	.3	1.01	.1	.57	.66	68.8	64.5	DJ6
12	135	32	-1.34	.32	1.00	.1	1.02	.2	.57	.63	59.4	63.5	LT12
69	121	32	.05	.31	1.22	.9	1.40	1.4	.58	.68	59.4	64.2	T2
27	113	32	.77	.29	1.73	2.3	1.68	2.1	.58	.70	50.0	61.4	DJ5
103	114	32	.68	.29	1.20	.8	1.19	.7	.59	.70	56.3	61.5	L5
83	122	32	-.04	.31	1.22	.9	1.23	.9	.59	.68	56.3	65.1	PKP9
74	116	32	.51	.30	1.93	2.8	2.25	3.4	.59	.70	65.6	62.3	T7
45	121	32	.05	.31	.87	-.4	.81	-.6	.59	.68	78.1	64.2	DI7
110	124	32	-.23	.31	1.73	2.3	1.87	2.6	.59	.67	65.6	65.1	APS4
35	116	32	.51	.30	1.26	1.0	1.28	1.0	.60	.70	53.1	62.3	PI4
84	119	32	.24	.30	2.23	3.5	2.13	3.2	.60	.69	56.3	63.6	PKP10
114	116	32	.51	.30	.92	-.2	.96	-.1	.60	.70	75.0	62.3	KP1
22	135	32	-1.34	.32	1.21	.7	1.25	.9	.60	.63	62.5	63.5	PK9
121	116	32	.51	.30	1.83	2.5	1.45	1.5	.61	.70	71.9	62.3	KP8
82	117	32	.42	.30	1.04	.3	1.07	.4	.61	.69	56.3	62.7	PKP8
117	115	32	.60	.30	.94	-.1	.93	-.2	.61	.70	65.6	61.6	KP4
54	126	32	-.43	.31	.97	.0	.86	-.4	.62	.66	71.9	64.8	ARW8
68	116	32	.51	.30	1.30	1.1	1.46	1.5	.62	.70	56.3	62.3	T1
6	137	32	-1.55	.32	1.10	.4	1.19	.7	.62	.62	59.4	64.2	LT6
33	110	32	1.02	.29	1.32	1.1	1.30	1.1	.62	.71	56.3	59.9	PI2
5	130	32	-.83	.32	1.32	1.1	1.43	1.4	.62	.65	59.4	63.2	LT5
39	116	32	.51	.30	1.14	.6	.97	.0	.62	.70	78.1	62.3	DI1
76	117	32	.42	.30	1.06	.3	1.07	.4	.63	.69	53.1	62.7	PKP2
111	130	32	-.83	.32	1.28	1.0	1.23	.8	.63	.65	62.5	63.2	APS5
9	134	32	-1.24	.32	.83	-.4	.83	-.5	.63	.63	65.6	63.3	LT9
4	130	32	-.83	.32	1.17	.7	1.15	.6	.63	.65	65.6	63.2	LT4
14	129	32	-.73	.32	.90	-.3	.95	-.1	.63	.65	65.6	63.8	PK1
1	122	32	-.04	.31	.98	.0	.96	-.1	.63	.68	68.8	65.1	LT1
31	118	32	.33	.30	1.26	1.0	1.43	1.5	.63	.69	68.8	63.0	DJ9
16	127	32	-.53	.32	1.09	.4	1.11	.5	.64	.66	62.5	64.5	PK3
59	126	32	-.43	.31	1.22	.9	1.21	.8	.64	.66	59.4	64.8	ARW13
104	119	32	.24	.30	.97	.0	1.03	.2	.64	.69	68.8	63.6	L6
57	114	32	.68	.29	1.62	2.0	1.40	1.4	.64	.70	75.0	61.5	ARW11
56	110	32	1.02	.29	1.46	1.6	1.33	1.2	.64	.71	65.6	59.9	ARW10
30	109	32	1.10	.28	1.49	1.7	1.48	1.6	.64	.71	46.9	59.8	DJ8
26	124	32	-.23	.31	1.11	.5	1.13	.5	.65	.67	62.5	65.1	DJ4
37	117	32	.42	.30	1.32	1.1	1.33	1.2	.65	.69	50.0	62.7	PI6
47	117	32	.42	.30	1.23	.9	1.16	.7	.65	.69	65.6	62.7	ARW1
19	140	32	-1.84	.30	.64	-.7	.75	-.8	.66	.61	75.0	63.2	PK6
29	129	32	-.73	.32	.90	-.3	.92	-.2	.66	.65	71.9	63.8	DJ7
105	108	32	1.18	.28	1.15	.6	1.22	.8	.66	.71	62.5	59.9	L7
40	119	32	.24	.30	1.25	.9	1.12	.5	.66	.69	75.0	63.6	DI2
81	118	32	.33	.30	.91	-.2	.86	-.4	.66	.69	68.8	63.0	PKP7
25	126	32	-.43	.31	.79	-.8	.75	-.9	.66	.66	71.9	64.8	DJ3
41	119	32	.24	.30	1.16	.7	1.00	.1	.67	.69	81.3	63.6	DI3
71	123	32	-.14	.31	.98	.0	1.06	.3	.67	.67	71.9	65.2	T4
131	126	32	-.43	.31	1.02	.2	1.00	.1	.68	.66	65.6	64.8	KS2
20	133	32	-1.14	.32	1.01	.1	.99	.1	.68	.64	59.4	63.4	PK7
124	117	32	.42	.30	.77	-.8	.79	-.7	.68	.69	68.8	62.7	KK3
135	124	32	-.23	.31	.88	-.4	.88	-.4	.68	.67	71.9	65.1	KS6
62	126	32	-.43	.31	1.10	.4	1.11	.5	.68	.66	59.4	64.8	ARW16
7	134	32	-1.24	.32	1.14	.5	1.17	.6	.68	.63	46.9	63.3	LT7
98	125	32	-.33	.31	1.35	1.3	1.40	1.4	.69	.67	50.0	64.9	P14
42	119	32	.24	.30	.96	-.1	.95	-.1	.69	.69	78.1	63.6	DI4
18	131	32	-.93	.32	1.18	.7	1.19	.7	.69	.64	53.1	62.7	PK5
75	125	32	-.33	.31	.88	-.4	.89	-.3	.69	.67	62.5	64.9	PKP1
136	123	32	-.14	.31	1.11	.5	1.10	.4	.69	.67	68.8	65.2	KS7
137	125	32	-.33	.31	1.07	.4	.96	.0	.70	.67	65.6	64.9	KS8
97	121	32	.05	.31	1.03	.2	1.03	.2	.70	.68	65.6	64.2	P13
87	119	32	.24	.30	.93	-.2	.99	.1	.70	.69	65.6	63.6	P3
102	114	32	.68	.29	.93	-.2	.86	-.4	.70	.70	71.9	61.5	L4
80	118	32	.33	.30	.95	-.1	.84	-.5	.70	.69	59.4	63.0	PKP6
119	118	32	.33	.30	.92	-.2	.84	-.5	.70	.69	65.6	63.0	KP6
63	125	32	-.33	.31	.71	-1.1	.71	-1.1	.70	.67	75.0	64.9	K1
46	123	32	-.14	.31	1.02	.2	.95	-.1	.70	.67	68.8	65.2	DI8
130	123	32	-.14	.31	.98	.0	.96	.0	.71	.67	68.8	65.2	KS1
3	125	32	-.33	.31	1.35	1.3	1.48	1.6	.71	.67	59.4	64.9	LT3
134	125	32	-.33	.31	.91	-.3	.84	-.5	.71	.67	68.8	64.9	KS5
73	123	32	-.14	.31	.97	.0	1.10	.4	.71	.67	71.9	65.2	T6
64	122	32	-.04	.31	.68	-1.2	.60	-1.6	.71	.68	81.3	65.1	K2
17	132	32	-1.03	.32	.85	-.4	.83	-.5	.72	.64	71.9	63.2	PK4
79	120	32	.15	.30	1.05	.3	.98	.0	.72	.68	56.3	63.7	PKP5
88	117	32	.42	.30	.55	-1.9	.54	-1.9	.72	.69	81.3	62.7	P4
118	118	32	.33	.30	.98	.0	.92	-.2	.73	.69	65.6	63.0	KP5
129	121	32	.05	.31	.64	-1.4	.61	-1.5	.73	.68	75.0	64.2	KK8
72	122	32	-.04	.31	.98	.0	1.03	.2	.73	.68	75.0	65.1	T5
86	115	32	.60	.30	.66	-1.3	.68	-1.2	.73	.70	68.8	61.6	P2
125	117	32	.42	.30	.71	-1.1	.77	-.8	.73	.69	71.9	62.7	KK4
78	117	32	.42	.30	.89	-.3	.80	-.7	.73	.69	62.5	62.7	PKP4
91	113	32	.77	.29	.98	.0	1.07	.4	.74	.70	65.6	61.4	P7
60	126	32	-.43	.31	1.35	1.3	1.27	1.0	.74	.66	53.1	64.8	ARW14
106	109	32	1.10	.28	.80	-.7	.81	-.7	.75	.71	56.3	59.8	L8
92	118	32	.33	.30	.83	-.6	.78	-.7	.75	.69	75.0	63.0	P8
43	119	32	.24	.30	.68	-1.2	.62	-1.5	.76	.69	78.1	63.6	DI5
101	116	32	.51	.30	.68	-1.2	.60	-1.6	.76	.70	75.0	62.3	L3
36	109	32	1.10	.28	.93	-.2	.96	-.1	.76	.71	56.3	59.8	PI5
96	121	32	.05	.31	.52	-2.0	.55	-1.8	.76	.68	87.5	64.2	P12
61	125	32	-.33	.31	.74	-1.0	.79	-.7	.76	.67	68.8	64.9	ARW15
126	118	32	.33	.30	.57	-1.8	.56	-1.8	.76	.69	65.6	63.0	KK5
127	117	32	.42	.30	.49	-2.2	.47	-2.3	.76	.69	75.0	62.7	KK6
128	116	32	.51	.30	.51	-2.1	.49	-2.2	.76	.70	75.0	62.3	KK7
107	126	32	-.43	.31	.79	-.8	.77	-.8	.76	.66	71.9	64.8	APS1
67	120	32	.15	.30	.61	-1.5	.59	-1.6	.76	.68	68.8	63.7	K5
32	118	32	.33	.30	.85	-.5	.91	-.2	.77	.69	71.9	63.0	PI1
51	116	32	.51	.30	.78	-.8	.76	-.8	.77	.70	78.1	62.3	ARW5
53	118	32	.33	.30	.53	-2.0	.50	-2.1	.78	.69	78.1	63.0	ARW7
2	125	32	-.33	.31	.88	-.4	.96	-.1	.78	.67	62.5	64.9	LT2
113	122	32	-.04	.31	.75	-.9	.82	-.6	.78	.68	65.6	65.1	APS7
132	121	32	.05	.31	.72	-1.0	.75	-.9	.78	.68	75.0	64.2	KS3
66	121	32	.05	.31	.50	-2.2	.50	-2.1	.78	.68	75.0	64.2	K4
133	116	32	.51	.30	.85	-.5	.84	-.5	.78	.70	62.5	62.3	KS4
109	123	32	-.14	.31	.77	-.8	.78	-.8	.78	.67	68.8	65.2	APS3
77	115	32	.60	.30	.80	-.7	.75	-.9	.79	.70	62.5	61.6	PKP3
55	120	32	.15	.30	.75	-.9	.79	-.7	.79	.68	68.8	63.7	ARW9
44	125	32	-.33	.31	.78	-.8	.77	-.8	.79	.67	68.8	64.9	DI6
65	121	32	.05	.31	.46	-2.4	.49	-2.2	.79	.68	81.3	64.2	K3
120	118	32	.33	.30	.62	-1.5	.58	-1.7	.79	.69	71.9	63.0	KP7
48	119	32	.24	.30	.56	-1.8	.53	-1.9	.79	.69	78.1	63.6	ARW2
108	122	32	-.04	.31	.93	-.2	.93	-.2	.80	.68	59.4	65.1	APS2
89	115	32	.60	.30	.64	-1.4	.64	-1.4	.81	.70	68.8	61.6	P5
49	117	32	.42	.30	.95	-.1	.79	-.7	.81	.69	71.9	62.7	ARW3
123	117	32	.42	.30	.52	-2.1	.47	-2.3	.81	.69	68.8	62.7	KK2
90	112	32	.85	.29	.49	-2.2	.58	-1.7	.81	.71	84.4	60.6	P6
50	119	32	.24	.30	.60	-1.6	.50	-2.1	.82	.69	78.1	63.6	ARW4
52	117	32	.42	.30	.52	-2.0	.45	-2.4	.82	.69	75.0	62.7	ARW6
93	119	32	.24	.30	.50	-2.1	.50	-2.1	.82	.69	78.1	63.6	P9
38	118	32	.33	.30	1.40	1.4	1.34	1.2	.82	.69	46.9	63.0	PI7
100	118	32	.33	.30	.75	-.9	.78	-.8	.83	.69	65.6	63.0	L2
115	114	32	.68	.29	.42	-2.6	.38	-2.9	.83	.70	81.3	61.5	KP2
95	120	32	.15	.30	.73	-1.0	.74	-.9	.83	.68	75.0	63.7	P11
85	113	32	.77	.29	.45	-2.5	.48	-2.2	.84	.70	75.0	61.4	P1
99	118	32	.33	.30	.60	-1.6	.59	-1.6	.84	.69	78.1	63.0	L1
94	117	32	.42	.30	.38	-2.9	.37	-2.9	.84	.69	81.3	62.7	P10
116	115	32	.60	.30	.35	-3.1	.31	-3.4	.85	.70	87.5	61.6	KP3
122	119	32	.24	.30	.58	-1.7	.54	-1.9	.85	.69	71.9	63.6	KK1
MEAN	121.3	32.0	.00	.30	1.01	-.1	1.00	-.1			66.6	63.4	
S.D.	6.8	.0	.65	.01	.49	1.4	.44	1.4			9.2	1.4	

Analysis findings show the ECBP-ASRM instrument items of PTMEA CORR values all positive, indicating that no items in the ECBP-ASRM instrument were dropped or discarded. The lowest PTMEA CORR value is 0.15 for KS 9 item and highest value 0.85 i.e. KK1 item. The high value of PTMEA CORR indicates that the item is more capable of distinguishing respondents, whereas it is negative or zero indicates that the link between the respondents is contrary to the constructed variables or constructions [24]. This proves that the developed item can measure constructed constructs.

ii. Item Suitability

Item suitability is very important in the ECBP-ASRM instrument, as it determines the suitability of the item, the validity of each item can be determined. In determining the suitability of the item, Bond and Fox [14] explain that the value of MNSQ's outfit squared mean of each item and respondent should lie within the range of 0.6 to 1.4.

Table 6 Suitability of ECBP-ASRM instrument items

INPUT: 32 Person 138 Item MEASURED: 32 Person 138 Item 10 CATS WINSTEPS 3.69.1.11

Person: REAL SEP.: 9.54 REL.: .99 ... Item: REAL SEP.: 1.71 REL.: .75

Item STATISTICS: MISFIT ORDER

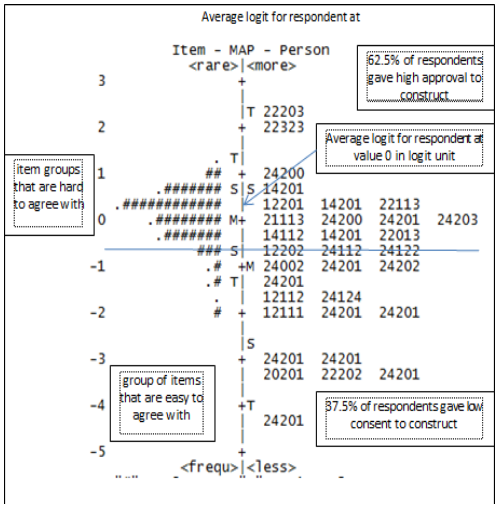
ENTRY NUMBER	TOTAL SCORE	COUNT	MEASURE	MODEL S.E.	INFIT MNSQ	INFIT ZSTD	OUTFIT MNSQ	OUTFIT ZSTD	PT-MEASURE CORR.	PT-MEASURE EXP.	EXACT MATCH OBS%	EXACT MATCH EXP%	Item
38	118	32	.33	.30	1.40	1.4	1.34	1.2	i .82	.69	46.9	63.0	PI7
98	125	32	-.33	.31	1.35	1.3	1.40	1.4	R .69	.67	50.0	64.9	P14
69	121	32	.05	.31	1.22	.9	1.40	1.4	S .58	.68	59.4	64.2	T2
60	126	32	-.43	.31	1.35	1.3	1.27	1.0	T .74	.66	53.1	64.8	ARW14
37	117	32	.42	.30	1.32	1.1	1.33	1.2	u .65	.69	50.0	62.7	PI6
70	125	32	-.33	.31	1.26	1.0	1.32	1.2	V .56	.67	65.6	64.9	T3
33	110	32	1.02	.29	1.32	1.1	1.30	1.1	w .62	.71	56.3	59.9	PI2
111	130	32	-.83	.32	1.28	1.0	1.23	.8	x .63	.65	62.5	63.2	APS5
35	116	32	.51	.30	1.26	1.0	1.28	1.0	y .60	.70	53.1	62.3	PI4
22	135	32	-1.34	.32	1.21	.7	1.25	.9	z .60	.63	62.5	63.5	PK9
40	119	32	.24	.30	1.25	.9	1.12	.5	.66	.69	75.0	63.6	DI2
34	108	32	1.18	.28	1.24	.9	1.17	.7	.56	.71	50.0	59.9	PI3
112	127	32	-.53	.32	1.24	.9	1.21	.8	.52	.66	62.5	64.5	APS6
11	143	32	-2.09	.28	1.02	.2	1.24	.8	.48	.61	53.1	64.5	LT11
83	122	32	-.04	.31	1.23	.9	1.23	.9	.59	.68	56.3	65.1	PKP9
47	117	32	.42	.30	1.23	.9	1.16	.7	.65	.69	65.6	62.7	ARW1
59	126	32	-.43	.31	1.22	.9	1.21	.8	.64	.66	59.4	64.8	ARW13
105	108	32	1.18	.28	1.15	.6	1.22	.8	.66	.71	62.5	59.9	L7
BETTER FITTING OMITTED													
49	117	32	.42	.30	.95	-.1	.79	-.7	.81	.69	71.9	62.7	ARW3
78	117	32	.42	.30	.89	-.3	.80	-.7	.73	.69	62.5	62.7	PKP4
92	118	32	.33	.30	.83	-.6	.78	-.7	.75	.69	75.0	63.0	P8
113	122	32	-.04	.31	.75	-.9	.82	-.6	.78	.68	65.6	65.1	APS7
106	109	32	1.10	.28	.80	-.7	.81	-.7	.75	.71	56.3	59.8	L8
77	115	32	.60	.30	.80	-.7	.75	-.9	.79	.70	62.5	61.6	PKP3
55	120	32	.15	.30	.75	-.9	.79	-.7	.79	.68	68.8	63.7	ARW9
61	125	32	-.33	.31	.74	-1.0	.79	-.7	.76	.67	68.8	64.9	ARW15
124	117	32	.42	.30	.77	-.8	.79	-.7	.68	.69	68.8	62.7	KK3
25	126	32	-.43	.31	.79	-.8	.75	-.9	.66	.66	71.9	64.8	DI3
107	126	32	-.43	.31	.79	-.8	.77	-.8	.76	.66	71.9	64.8	APS1
51	116	32	.51	.30	.78	-.8	.76	-.8	.77	.70	78.1	62.3	ARW5
100	118	32	.33	.30	.75	-.9	.78	-.8	.83	.69	65.6	63.0	L2
44	125	32	-.33	.31	.78	-.8	.77	-.8	.79	.67	68.8	64.9	DI6
109	123	32	-.14	.31	.77	-.8	.78	-.8	.78	.67	68.8	65.2	APS3
125	117	32	.42	.30	.71	-1.1	.77	-.8	.73	.69	71.9	62.7	KK4
19	140	32	-1.84	.30	.64	-.7	.75	-.8	.66	.61	75.0	63.2	PK6
132	121	32	.05	.31	.72	-1.0	.75	-.9	.78	.68	75.0	64.2	KS3
95	120	32	.15	.30	.73	-1.0	.74	-.9	.83	.68	75.0	63.7	P11
63	125	32	-.33	.31	.71	-1.1	.71	-1.1	.70	.67	75.0	64.9	K1
43	119	32	.24	.30	.68	-1.2	.62	-1.5	.76	.69	78.1	63.6	DI5
86	115	32	.60	.30	.66	-1.4	.68	-1.2	.73	.70	68.8	61.6	P2
64	122	32	-.04	.31	.68	-1.2	.60	-1.6	z .71	.68	81.3	65.1	K2
101	116	32	.51	.30	.68	-1.2	.60	-1.6	y .76	.70	75.0	62.3	L3
MEAN	121.3	32.0	.00	.30	1.01	-.1	1.00	-.1			66.6	63.4	
S.D.	6.8	.0	.65	.01	.49	1.4	.44	1.4			9.2	1.4	

The findings of the study as shown in Table 6 above show that the mean value of the squared-out items is 0.60 to 1.40. This explains the ECBP-ASRM item is fit because the value of the item's outfit is within the range. If an item has a MNSQ value of more than 1.4, this explains the item is misleading and if the item has a MNSQ value of less than 0.6, this explains the item is too easy to expect.

ii. Respondent profile based on item distribution difficulty.

The item / respondent map in the diagram above shows whether the instrument is built according to the respondent's ability to give consent (answer). In the above map, the respondents' position is marked with a '#' note and the item is specified as an item code. The letter 'M' on the left side of the map shows the average logit for the respondent and on the right is the average logit of the item. The letter 'S' means a standard deviation of item / respondent and 'T' indicates two standard deviation of item / respondent.

Fig 2 The distribution of item difficulty and respondent's ability



The findings show that 62.5% respondents agree with all the questions raised to them. While 37.5% respondents almost disagree with the raised questions. Based on the item / respondent map shows all the items can be agreed that is easy to be approached by the respondent. However, the item distribution shows the item's difficulty level is almost unbalanced that there are items that are difficult and easy to agree.

According to Wright and Stone [25], the assessment of the extent to which the items have interpreted a construct with an increased intensity rate can be determined by assessing how far the estimated degree of item caliber estimation exceeds the standard error of the items. They also assert that something constructs, or variables can be considered successful in interpretation only when the items are well-distributed. When two items overlap with very few degrees of difference, they cannot be considered as measuring something different.

Figure 1, shows the sub constructions of risk management practices as interpreted by the instrument items. From Figure 1, it can be noted that items overlap along this logit continuum. The overlay between the items indicates the size of the area along the line of the variable which is not defined by the existing items.

iii. Unidimensional

Unidimensional is the most important consideration in the construction of a test or as a measurement tool to ensure the instrument is unidimensional [19, 26]. To ensure that the instrument is unidimensional, the value of the variance should exceed 40% and the percentage of first contrast unexplained variance is less than 10%.

Table 7 Standardized residual variants (in eigenvalue units)

Table of STANDARDIZED RESIDUAL variance (in Eigenvalue units)

		Empirical		Modeled
Total raw variance in observations	=	280.8	100.0%	100.0%
Raw variance explained by measures	=	142.8	50.9%	50.9%
Raw variance explained by persons	=	94.3	33.6%	33.6%
Raw variance explained by items	=	48.5	17.3%	17.3%
Raw unexplained variance (total)	=	138.0	49.1% 100.0%	49.1%
Unexplned variance in 1st contrast	=	15.6	5.6% 11.3%	
Unexplned variance in 2nd contrast	=	13.3	4.7% 9.6%	
Unexplned variance in 3rd contrast	=	11.7	4.2% 8.5%	
Unexplned variance in 4th contrast	=	9.7	3.5% 7.1%	
Unexplned variance in 5th contrast	=	9.0	3.2% 6.5%	

Based on Table 7, the raw variance value explained by measures is 50.9 for the empirical value and is equivalent to the model value of 50.9%. the noise level measured is also 5.6%. This value is far from the maximum controlled limit of 10% [26]. The findings of the study explain the ECBP-ASRM instrument is unidimensional because it has fulfilled the criteria set by the Rasch measurement model.

CONCLUSION

The study shows that the ECBP-ASRM instrument has good validity and reliability. The analysis has also found that every constructed construct was able to measure the risk management practices of coaches from the Malaysian Institute of Teacher Education. Once improvements have been made to the instruments being built, the ECBP-ASRM instrument is able to measure each construct more clearly. This proves by increasing the reliability of both individuals and items. This study contributes significantly to the competency of the coach in sports risk management. ECBP-ASRM can be used by any party to implement sports risk management practices of special education with autism expertise ITE in Malaysia.

REFERENCES

[1] SOCG (2003). Special Olympic Coaching Guide: Sport Safety and Risk management for coaches. General Section, USA.

[2] ACICR (2008). Safety Guidelines for Physical Activity in Alberta Schools. Canada: Alberta Centre for Injury Centre and Research.

[3] Liu, C.Y. (2008). A study of the Relationship between Coach Leadership Behaviour and Junior Tennis Players' Satisfaction. United States Sport Academy: Thesis Ph.D.

[4] Zimmerman, E.P. (2007) Risk Management Practice of Collegiate Athletic Trainers: An Examination of Policies and Procedures. University Huntington, West Virginia: Thesis Ph.D.

[5] Lachapelle, C.F. (2004). The Risk and Safety Practices in Youth Baseball and Softball. The Florida State University: Tesis Ph.D.

[6] Nord, N., & Moore, T.H. (2008). CPSC Releases the "Top Five Hidden Home Hazards "Popular Magnetic Toys on the List of Deadly Dangers. Consumer Product Safety Review WINTER 2008.Vol. 12(1). 1-2

[7] Sulaiman, S.B. (2010). HBEF3403 Pengurusan Sukan dalam Pendidikan Jasmani. Selangor: Open University Malaysia.

[8] Harun, M. T. et.al. (2012). HBPE1203 Kecergasan Fizikal. Selangor: Open University Malaysia.

[9] Teng Boon Tong (2005). Pendidikan Jasmani dan Pendidikan Kesihatan. Kursus Diploma Perguruan Malaysia. Selangor: Longman.

[10] Che Lah, N. (2007). HBPE3203 Pendidikan Luar. Selangor: Open University Malaysia

[11] Daroji, I & Chia, C.M. (2012). Pendidikan Luar. Selangor: Multimedia.

[12] Cohen, R. J. and Swerdlik, M. E. (2010). Psychological Testing and Assessment: An Introduction to Test and Measurement. (6th ed.). Boston: McGraw-Hill.

[13] Jones, H. (2009). Introducing Neuroeducational Research: Neuroscience, Education and the Brain from Contexts to Practice. Abingdon: Routledge.

[14] Bond, T. G. and Fox, C. M. (2007). Applying the Rasch Model: Fundamental Measurement in the Human Sciences. (2nd ed.). New Jersey: Lawrence Erlbaum Associates.

[15] Lopez, W. (1996). Communication Validity and Rating Scaler. Rasch Measurement Transaction. 10, 482 - 483.

[16] Rasch, G. (1980). Probabilistic Models for Some Intelligence and Attainment Tests. Chicago: The University of Chicago Press.

[17] Wright, B. D. and Stone, M. H. (2004). Making Measures. Chicago, IL: The Phaneron Press.

[18] Linacre, J. M. (2006). Item Discrimination and Rasch-Andrich Thresholds. Rasch Measurement Transaction. 20 (1),1054.

[19] Linacre, J.M. (2010). A user's guide to WINSTEPS: Rasch-model computer program. Beaverton: Oregon.

[20] Fisher W.P, Jr.(2007). Rasch Measurement and the R Statistics Environment, Rasch Measurement Transactions.

[21] Hopkins, K.D. (1998). Education and psychological measurement and evaluation. 8th edition. Boston: Ally Bacon.

[22] Pallant, J. (2001). SPSS survival manual: A step by step guide to data analysis using SPSS for windows. Version 10. Illinois: Allen & Unwin.

[23] Linacre, J.M. (2005). Test validity and Rasch measurement: construct. content, etc. Rasch Measurement Transactions. 18:1 p.970-971.

[24] Linacre, J.M. (2010). Win steps® Rasch Measurement Computer Program User's Guide. Beaverton, Oregon: Winsteps.com

[25] Wright, B.D. & Stone, M.H. (1979). Best Test Design, Rasch Measurement. Chicago: MESA Press.

[26] Abdul Aziz, A. (2010). Rasch Measurement Fundamentals: Scale Construct and Measurement Structure. Kuala Lumpur: Integrated Advance Publishing.