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THE RELIABILITY OF STRUCTURED INTERVIEWS: COMPETENCY RATING INTERVIEWS AS A CASE IN POINT

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Knowledge creation for practical solutions

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CRITICISM OFTEN LEVELED AT INTERVIEWS IN GENERAL:

- ❖ **“conversation with a purposesuccess of this technique depends partly on the skill of the interviewer”
Cascio & Aguinis, 2005**
- ❖ **“the bald conclusion from all the empirical evidence is that the interview as typically used is not much good as a selection device.” Morgan as quoted by Torrington & Hall, 1995**
- ❖ **“Decisions may be made on the basis of first impressions, ..”**

- ❖ **“Interviewers use the own preferences, prejudices and stereotypes in rating people”**
- ❖ **“Interviewers will take more note of negative than positive information...” Bergh & Theron, 1999**
- ❖ **“Most research on intra-interviewer reliability indicates that interviewers are consistent...” Muchinsky, Kriek & Schreuder, 1998**
- ❖ **“...This is not always true for inter-interviewer reliability.” Muchinsky, Kriek & Schreuder, 1998**

CRUDE GENERALIZATIONS:

- often throwing baby out with the bath water
- do not distinguish between types of interviews

TYPES OF INTERVIEWS

Structured:

- Clearly defined interview schedule
- Specific content
- Specific order of questions

TYPES OF INTERVIEWS continued

Semi-structured:

- some broad scheme or structure

Unstructured:

- no particular schedule
- lack of structure and order

TYPES OF STRUCTURED INTERVIEWS:

- **Situational interviews (outcome)**
- **Performance rating interviews (outcome)**
- **Competency rating interviews (input)**

COMPETENCY RATING INTERVIEWS

- Competencies specified or defined
- Rating scales defined (anchors described)
- Trained raters

OBJECTIVE OF THE STUDY:

- ❖ to validate the 27 functional and 14 interpersonal competencies by conducting factor and reliability analyses on the competency data sets
- ❖ will address the construct validity (more specifically the factorial validity) of the functional and interpersonal competencies.

RESEARCH DESIGN

Sample

170 applicants for a customer service position in a commercial bank

Measuring instrument

Competency Rating Interview:

- ➔ **27 Functional competencies**
- ➔ **14 Interpersonal competencies**
- ➔ **ratings on all competencies**

RESEARCH PROCEDURE

- ◆ 7 raters trained to conduct interviews and rate applicants
- ◆ Applicants were rated by different raters

RESULTS : Table 1

Initial Eigenvalues of the unreduced functional competency inter-correlation matrix

Total Variance Explained									
Factor	Initial Eigenvalues			Extraction Sums of Squared Loadings			Rotation Sums of Squared Loadings(a)		
	Total	% of Variance	Cumulative %	Total	% of Variance	Cumulative %	Total	% of Variance	Cumulative %
1	14.374	53.235	53.235	13.987	51.804	51.804	12.821		
2	1.355	5.019	58.254	.995	3.686	55.490	2.086		
3	1.186	4.391	62.646	.719	2.663	58.153	12.061		
Extraction Method: Principal Axis Factoring.									
a When factors are correlated, sums of squared loadings cannot be added to obtain a total variance.									

RESULTS : Table 2

The Kaiser-Meyer-Olkin measure of sampling adequacy and the Bartlett's test

KMO and Bartlett's Test		
Kaiser-Meyer-Olkin Measure of Sampling Adequacy		0.943
Bartlett's Test of Sphericity	Approx. Chi-Square	3336.410
	Df	351
	Sig.	0.000

RESULTS : Table 3

Inter-correlation of the three extracted factors

Factor Correlation Matrix			
Factor	1	2	3
1	1.000	0.217	0.779
2	0.217	1.000	0.214
3	0.779	0.214	1.000

Extraction Method: Principal Axis Factoring.
Rotation Method: Oblimin with Kaiser Normalization

RESULTS : Table 4

Eigenvalues of the sub-score inter-correlation matrix

Total Variance Explained						
Factor	Initial Eigenvalues			Extraction Sums of Squared Loadings		
	Total	% of Variance	Cumulative %	Total	% of Variance	Cumulative %
1	2.524	84.137	84.137	2.309	76.973	76.973
2	.335	11.153	95.290			
3	.141	4.710	100.000			

Extraction Method: Principal Axis Factoring

RESULTS : Table 5

The Kaiser-Meyer-Olkin measure of sampling adequacy and the Bartlett's test

KMO and Bartlett's Test		
Kaiser-Meyer-Olkin Measure of Sampling Adequacy		0.716
Bartlett's Test of Sphericity	Approx. Chi-Square	355.377
	Df	3
	Sig.	0.000

RESULTS : Table 6

Factor loadings on the single extracted factor

Factor Matrix (a)	
	Factor
	1
FACTOR3 = MEAN(FC9 FC11 FC13 FC14 FC15 FC16 FC17 FC18 FC19 FC20 FC22 FC24 FC27)	.961
FACTOR1 = MEAN(FC1 FC2 FC3 FC4 FC5 FC6 FC7 FC8 FC10 FC12 FC21 FC23)	.886
FACTOR2 = MEAN (FC25, FC26)	.775
Extraction Method: Principal Factoring.	
a 1 factors extracted. 11 iterations required.	

RESULTS : Table 7.1



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Dimension – Total score reliabilities on the 27 functional competencies

	Scale Mean if dimension Deleted	Scale Variance if dimension Deleted	Corrected dimension- Total Correlation	Cronbach's Alpha if dimension Deleted
FC1 Ability to identify customer needs & expectations	88.396	132.640	.780	.963
FC2 Ability to identify customer dissatisfaction & initiate action at branch level	88.456	130.439	.830	.962
FC3 Ability to critically check facts & data make rational judgments based on facts	88.557	130.688	.776	.963
FC4 Ability to remain calm, objective & self-controlled under pressure	88.465	133.523	.613	.964
FC5 Ability to make decisions confidently	88.585	130.711	.712	.963
FC6 Ability to remove irate client form public eye	88.392	135.753	.559	.964
FC7 Ability to listen to customers & ask the right questions	88.411	131.782	.762	.963
FC8 Ability to explain various products & services of ABSA	88.427	133.034	.706	.963
FC9 Ability to welcome & direct customers to appropriate service area	88.130	135.800	.703	.964
FC10 Ability to build rapport with customers	88.272	133.999	.764	.963
FC11 Ability to comply with ABSA service standards, policies & Code of Banking Practice	88.225	136.766	.586	.964
FC12 Ability to speak clearly	88.241	134.681	.639	.964
FC13 Ability to build effective working relationships with frontline staff	88.468	134.652	.656	.964

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RESULTS : Table 7.2



Dimension – Total score reliabilities on the 27 functional competencies

	Scale Mean if dimension Deleted	Scale Variance if dimension Deleted	Corrected dimension- Total Correlation	Cronbach's Alpha if dimension Deleted
FC14 Ability to provide constant & relevant feedback to management team	88.579	132.317	.680	.964
FC15 Ability to act as brand custodian in the branch	88.487	130.525	.813	.963
FC 16 Ability to manage QTV as prescribed	88.241	138.442	.443	.965
FC17 Knowledge of customers	88.320	134.529	.732	.963
FC18 Knowledge of Floor Management Processes	88.491	132.801	.759	.963
Fc19 Ability to stay up-to-date with community issues	88.551	132.771	.641	.964
FC20 Ability to manage the flow of customers	88.427	133.235	.769	.963
FC21 Ability to identify clients needs & expectations	88.373	132.474	.828	.963
FC22 Ability to proactively action opportunities	88.722	128.154	.810	.963
FC23 Ability to apply advisory knowledge of processes	88.582	130.796	.778	.963
FC24 Ability to show commitment to organization & task completion	88.234	135.458	.620	.964
FC25 Ability to act as role model in building ABSA's image	88.446	132.215	.744	.963
FC26 Ability to portray a professional image face-to-face	88.266	134.843	.657	.964
FC27 Ability to ensure continuity of role during absence	88.481	135.958	.529	.965

Reliability Statistics	
Cronbach's Alpha	N of Items
0.965	27

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RESULTS : Table 8

Initial Eigenvalues of the unreduced Interpersonal competency inter-correlation matrix

Total Variance Explained									
Factor	Initial Eigenvalues			Extraction Sums of Squared Loadings			Rotation Sums of Squared Loadings(a)		
	Total	% of Variance	Cumulative %	Total	% of Variance	Cumulative %	Total	% of Variance	Cumulative %
1	8.150	58.212	58.212	7.777	55.548	55.548	7.462		
2	1.202	8.587	66.798	.922	6.583	62.131	4.631		
Extraction Method: Principal Axis Factoring.									
a When factors are correlated, sums of squared loadings cannot be added to obtain a total variance.									

RESULTS : Table 9

The Kaiser-Meyer-Olkin measure of sampling adequacy and the Bartlett's test

KMO and Bartlett's Test		
Kaiser-Meyer-Olkin Measure of Sampling Adequacy		0.927
Bartlett's Test of Sphericity	Approx. Chi-Square	1792.600
	Df	91
	Sig.	0.000

RESULTS : Table 10

Inter-correlation of the two extracted factors

Factor Correlation Matrix		
Factor	1	2
1	1.000	0.573
2	0.573	1.000

Extraction Method' Principal Axis Factoring.
Rotation Method: Oblimin with Kaiser Normalization

RESULTS : Table 11

Eigenvalues of the sub-score inter-correlation matrix

Total Variance Explained						
Factor	Initial Eigenvalues			Extraction Sums of Squared Loadings		
	Total	% of Variance	Cumulative %	Total	% of Variance	Cumulative %
1	1.634	81.701	81.701	1.266	63.312	63.312
2	0.366	18.299	100.000			
Extraction Method: Principal Axis Factoring						

RESULTS : Table 12



Factor loadings on the single extracted factor

Factor Matrix (a)	
	Factor
	1
FACTOR2 = MEAN(Empathy, InterpersonalSensitivity)	0.796
FACTOR1 = MEAN(Integrating, Insight, EnvironmentalSensitivity, Adaptability, Independence, Resilience, OralComm...)	0.796
Extraction Method: Principal Factoring.	
a 1 factors extracted. 8 iterations required.	

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RESULTS : Table 13

Dimension – total score reliabilities on the 14 Interpersonal competencies

	Scale Mean if dimension Deleted	Scale Variance if dimension Deleted	Corrected dimension-Total Correlation	Cronbach's Alpha if dimension Deleted
Integrating	43.5059	40.112	0.774	0.937
Insight	43.5529	39.462	0.786	0.937
Environmental Sensitivity	43.3382	40.321	0.757	0.938
Adaptability	43.5735	40.446	0.730	0.938
Independence	43.5147	39.670	0.707	0.939
Resilience	43.4176	41.191	0.588	0.942
Empathy	43.2529	41.329	0.628	0.941
Oral Communication	43.2029	41.735	0.669	0.940
Interpersonal Sensitivity	43.2912	40.952	0.657	0.940
Impact	43.5412	40.199	0.709	0.939
Rapport Building	43.2235	41.133	0.765	0.938
Conflict Resolution	43.6176	39.584	0.804	0.936
Customer Focus	43.0588	41.269	0.765	0.938
Enthusiasm	43.0471	41.137	0.699	0.939

Cronbach's Alpha	Cronbach's Alpha Based on Standardized Items	N of Items
0.943	0.944	14

DISCUSSION

27 Functional competencies


– single factor – Cronbach Alpha = 0,965

- individual competencies' dimension – total score correlations vary from 0,443 – 0,830
- individual competencies' reliabilities range from 0,962 – 0,965

14 Interpersonal competencies

– single factor – Cronbach Alpha = 0, 944

- individual competencies' dimension – total score correlations vary from 0,588 – 0,804
- individual competencies' reliabilities range from 0,936 – 0,942



Evidence of rater errors – stringency or leniency errors (by two of 7 raters)

CONCLUSIONS

- ✦ **Competency Ratings Interviews are reliable – small proportion of error variance**
- ✦ **Can be used for selection purposes if raters are trained**
- ✦ **Can be used if time pressure does not allow for full assessment centre**

RECOMMENDATIONS

- ◆ **More research on inter-rater reliabilities**
- ◆ **Use of 360° competency ratings in future?**