

Procedures used in Developing and Validating the Quality of Life Scale in the Context of the Ethno-Political Conflicts in Mathare and Kibra, Nairobi City County-Kenya

Justus Musya

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Abstract

Introduction-The proper place to begin any analysis on ethnic conflicts is the partisan governance systems in which ruling elite favour some ethnic groups at the expense of others. Since the 1960s, the national executive in Kenya has had the exclusive power to grant or deny economic resources to ethnic groups that were deemed to be disloyal (Murithi, 1997). The Kenyatta Government (1963-1978) applied this political ideology towards the Luo Community and the Moi Government (1978-2002) marginalised the Kikuyu community (Laaksol, 2007; CIPEV, 2008). The discriminatory allocation of resources by the executive influenced a heightened sense of ethnic consciousness among ethnic communities. Even with the return of multi-party politics, ethnic groups that perceived themselves as the out-group sought to win over state power to enable a fairer distribution of public goods and service (Alesina Ferreira, 2004). This political culture occasioned the in-group and out-group mentality in politics and socio-and economic phenomenon.

Index terms—

he proper place to begin any analysis on ethnic conflicts is the partisan governance systems in which ruling elite favour some ethnic groups at the expense of others. Since the 1960s, the national executive in Kenya has had the exclusive power to grant or deny economic resources to ethnic groups that were deemed to be disloyal ??Murithi, 1997). The Kenyatta Government ??1963) ??1964) ??1965) ??1966) ??1967) ??1968) ??1969) ??1970) ??1971) ??1972) ??1973) ??1974) ??1975) ??1976) ??1977) ??1978) applied this political ideology towards the Luo Community and the Moi Government marginalised the Kikuyu community ??Laaksol, 2007; ??IPEV, 2008). The discriminatory allocation of resources by the executive influenced a heightened sense of ethnic consciousness among ethnic communities. Even with the return of multi-party politics, ethnic groups that perceived themselves as the out-group sought to win over state power to enable a fairer distribution of public goods and service ??Alesina & Ferreira, 2004). This political culture occasioned the ingroup and out-group mentality in politics and socio-and economic phenomenon.

The in-group and out-group dynamic has framed conflicts in the informal settlements of Nairobi (Okombo & Sana, 2010). Ethno-political conflicts have tended to coincide with periods of electioneering.

Research suggests the episodic nature of the conflicts during electoral cycles, such as 1992 and 1997, issued chiefly from a rent dispute, involving tenants and property owners. The conflict in 2001, for example, saw tenants who were mostly from the Luo community effect a rent boycott to protest the high rents charged by the property owners, who were mainly from the Kikuyu community. The Luo community felt exploited by the Kikuyu property owners who they acquire charged them high rents for dwelling structures built on irregularly acquired public land, which the latter obtained from state authorities due to their ethnicity (Law Society of Kenya, 2002). The ethno-political conflicts in Mathare and Kibera has been attributed to social and economic imbalances between and among ethnic groups. Groups that have a lower standard of living have tended to relate

Author: e-mail: musyajustus@gmail.com their backward circumstances to their political affiliations ??Shilloh, 2008). Political elites have used such socio-economic imbalances or quality of life differences as campaign platforms

on which to engage in legitimate and illegitimate forms of political action. For instance, statements by politicians, before and during a rent dispute, which pitted the Luo community (tenants) and the Kikuyu property owners energized the conflict. Weeks of brutal fights tenants and youth, hired by property owners to effect evictions for non-payment of rent, left many seriously injured, hundred displaced, and tens of fatalities (Shilloh, 2008).

A central plank of the instrumentalist theory is that communities that form the in-group would generally enjoy a higher quality of life compared to those in the "out-group. Horizontal inequalities generate resentment and hatred by the in-group towards the out-groups. The perception of discrimination by the state generates ethnic grievances, which political elite have manipulated to score political goals, including mobilizing communities for legitimate expressions of disaffection, such as through elections. At another level, however, elites have used the sense of discrimination as a motive to engage in illegitimate forms of protest, including sponsoring ethnic militia to engage in violence. Establishing this differentiation in living standards, between these groups, is basic to establishing the theoretical and empirical validity of the instrumentalist theory in any context. Accordingly, scales that can estimate quality of life of ingroups and out-groups in theatres of conflict would be immensely useful in explaining the causal mechanism of ethno-political conflicts.

Since social and economic imbalances are instrumental to the ethno-political violence in Mathare and Kibera (Kinyanjui & Mutsotso, 2002; Okombo and Sana, 2010), it makes sense to develop scales that researchers can use to estimate quality of life among ingroups and out-groups. In this connection, too, understanding the dimensions of quality of life that are most influential in shaping conflict attitudes among ethnic groups is helpful too. This effort requires the development of scales that allow the quantification of the social and economic status of groups that have tended to be in conflict. This effort is in line with Herera (2004) call to researchers, in the sprouting field of conflict studies, to operationalise ethnic identity and show how this identity shapes conflict behaviour.

In the literature, measurement problems have led to inconsistent results. Differences in living standards should use as a unity of analysis, groups rather than individuals, hence the distinction made in the literature between vertical and horizontal inequalities, with the latter applying to ethnic groups as a whole and not just to individuals within groups. The researcher followed the lead of Frances Stewart (2000), who argued that what ought to be assessed is horizontal inequalities; after all, ethnic conflict by definition is a group, rather than an individual enterprise. Horizontal inequalities then ought to be the basis of analysing the role of inequalities in ethno-political conflicts.

An emerging strand of literature, which uses horizontal inequalities, has shown strong connections between horizontal inequality and the onset of ethnic conflict. Furthermore, the researcher's intuition is that it is not the severity of inequalities per se that contribute to ethnic conflict, but rather, it is the comparisons ethnic groups make about their quality of life, vis a vis other groups, that are likely to render horizontal inequalities instrumental to conflict.

1 II. Goals of the Study

The goals of this study were to undertake an exploratory factor analysis to identify the latent factors associated with quality of life, to undertake a confirmatory factor analysis to determine whether the model identified had construct validity and composite reliability, and to do an invariance test to assess whether the CFA model was consistent among the in-group and out-group and identify possible substantial differences.

2 III. Methods used in the Study

3 a) Respondents

The study area had a total household population of 149, 658-62729 in the seven villages of Kibra and 86, 929 in the six villages of Mathare. Sampling weighting was done and this meant that villages with a larger population of households had a large sample size. A sample of 766 respondents was identified using proportional and systematic sampling procedures. The sample was equally divided between respondents living in Mathare (n=383) and Kibra (N=383). Eligible respondents were those who had voted in the 2007 national and presidential elections and who were heads of households.

The three major ethnic communities, Kikuyu, Luo, and Luhya formed (73.5%) of all people living in the study area. The other 18 ethnic communities in the study area formed (26.5%) of the population. Ethnicity is the impetus of Kenya's competitive politics (Kimenyi and Romero, 2008). If so, ethnic groups that mainly voted for the incumbent president can be deemed to be the ingroup and the ethnic groups that mainly voted for the opposition party or opposition leaders can be deemed as the out-group. About 85% of the Kikuyu community in the study area voted for Mwai Kibaki and (75%) of the Luo community voted for Raila Odinga. Among the Luhya community, about (60%) voted for Raila Odinga and (24%) voted for Mwai Kibaki. Using the 2007 national election as a case, the in-group would be the ethnic community to which the incumbent belonged or the ethnic communities that are otherwise privileged, perceived to benefit more from state actions than other communities. The ethnic groups with a long history of conflict in Mathare and Kibra are the Luo and the Kikuyu. The cause of disagreement has been the property owner and tenant conflict, a conflict that has been characterised by landowners who are mainly Kikuyu and tenants who are mainly Luo and Luhya: these communities as those most likely to be poor and to have resource-based grievances (CIPEV, 2008). The breakdown of ethnic group in the study area per the three major ethnic groupings was thus as follows: (1) the in-group, (2) the out-group,

and (3) other-group. The in-group was the largest group (n=296; 38.69%) followed by the out-group (n=269; 35.11%). The othergroup form a sizeable chunk of respondents (n=202; 27.4%). Included in the other-group were five respondents who declined to identify their ethnicity.

4 b) Item Selection

Items selection was from the literature on horizontal inequalities. Stewart(2008) has analysed the problem of social and economic inequalities in Kenya between 1993-2000, inequalities that are pronounced in Nyanza, Western, and Coast provinces. These regions fared rather badly, in comparative terms, to the Central province about infant mortality, health access, secondary school enrolment, and per caput outlays on infrastructure (roads), and asset ownership. Central and Nairobi provinces, where most Kikuyu people live (the presumed in-group), were the most advantaged regions in the republic in socio-economic terms. In making comparative analysis, Stewart several indices, including the availability of potable water, scope of rural electrification, and level of secondary enrolment.

Horizontal inequalities arise because of marginalisation of some communities on areas such as health and education. It implicates questions about livelihoods, standard of living, and social mobility (Chronic Poverty Advisory Network, 2014).Horizontal inequalities could be assessed too through constructs such as social power, "voice". The following 16 indicators were used to conceptualise quality of life, implicating as they do estimates of quality of life, likelihood of social mobility, and community tagging in developmental terms(Chronic Poverty Advisory Network, 2014).Another important indicator of standard of living is personal safety or security (Barrientos, 2003).The original list of indicators of quality of life differences was presented to content experts for scrutiny and validation 1 . The Quality of Life Scale was made up of 15 items. The proportion of missing data was (n=7, 0.05%). Data imputation was effected based on the median score. The initial Cronbach alpha test showed that the items had acceptable interrelatedness ($\alpha=0.91$, 16 items), an excellent score (George and Mallery, 2003). The items with the highest inter correlations were: "Felt Safe in your Village" (0.725), "Felt Proud about your Life" (0.713), and "Had Electrical Power in your House" (0.683), and "Satisfied with the Quality of Health Services (0.681). These items point to items to the items that would be most helpful in making sense of deprivation (Klasen, 2000).

Exploratory factors analysis was done using the Statistical Package for Social Sciences (SPSS Version 23). In this study, I followed Costello and Osborne (2005) suggestion that "data and the literature supports the argument (that is, results that will be generalizable to other samples and would reflect the nature of the population) will be achieved using a true factor analysis extraction method. The authors recommend the use maximum likelihood mode of extraction and oblique rotation methods, such as direct oblimin.

In exploratory factor analysis, the Kaiser-Meyer-Olkin measure of sampling adequacy was 0.919 and the Bartlett's Test of Sphericity was significant ($\chi^2 = (105) = 6790.925$ $p < 0.05$). The factorability of the Quality of Life Scale was established. Both the scree test and the >1 eigen value test suggested a three-point model should be used. My initial hunch was that a four-point model would be produced: 1) access to basic services, 2 (affordability of basic needs, 3) voice and power in the community, and 4) ability to save and invest. Parallel analysis suggested a five-factor model RMSEA (0.1, 0.061-.079) and TLI (0.9). It enriched my hypothesised model by revealing another dimension of quality of life. A latent indicator emerged that could be estimated using: satisfaction with quality of sanitation, satisfaction with quality of water, and ease/difficulty of making ends meet. From parallel analysis, I supposed the following latent factors: 1) voice and power in the community, affordability of basic needs, 2) ability to save and invest, and 3) access to basic services, and 4) human welfare services. Another dimension of quality of life emerged. It put together the indicators ease of making ends meet and access to water and good sanitation. Respondents who had poor sanitation, lacked access to potable water and struggled to make ends meet were not only likely to living in form of severer deprivation but also in a defined spatial environment. Given the prevalence of ethnically homogenous living arrangements in villages in Mathare and Kibra, this fifth latent factors seemed worth exploring. Consequently, the five and three-factor models were tested.

5 d) Five factor Model

In the pattern matrix for the five-factor model, the notable indicators were: Factor 1 "You found of energy for cooking affordable are in bold" (0.78), "House was comfortable to live in"(0.723), and "Had electric power in your house" (0.67). Factor 1 could be called affordability of basic needs. The indicators that explained the highest variation were you found energy for cooking affordable and house was comfortable to live in.

Factor 2 People of your ethnic group respected (0.985), "Had a voice in matters that affected you in the village" (.638), "Felt proud about your life" (0.631). Factor 2 could be called voice and power in the community. Its highest indicators were People of your ethnic group respected and you had a voice in matters that affected you in the village. Factor 3 "Could spend some of your money buying assets" (.861), Could spend some of your income making investments (.792), "Could save some of your income in making savings (0.61). Factor 3 was named ability to save and invest. The highest indicators were could spend some of your money buying assets and could spend some of your money-making investments. Factor 4 "Satisfied with quality of sanitation (0.688), Satisfied with supply of water (0.63), Found it easy to make ends meet most of the time (.51). Factor 4 could be called access

to basic services. Its indicators were Satisfied with quality of sanitation and Satisfied with supply of water.); Factor 5 "Satisfied with quality of health services (0.91) and Satisfied with quality of education (0.74). Factor 5 was called access to basic services. Its highest indicators were quality of health services and satisfied with quality of education. This five-point model was subject to confirmatory factor analysis.

Using the maximum likelihood estimator, confirmatory factor analysis yielded the following results: $\chi^2 = 657.814$ ($df=94$, $p=.067$, $Cmin/df=6.99$), SRMR initial, 0.054, RMSEA initial, 0.089 (CI 90, .0082, .095), ρ close, 0.00, CFI initial =.917, NFI initial =0.915. Localised areas of strain were detected, necessitating the deletion of item 13. This was an acceptable fit, based on RMSEA, CFI, and SRMR. Several areas of localised strain were observed, including the relationships between QL13 and QL 14 (4.0), QL13 and QL13 and 15 (3.9), and QL 13 and QL5 (4.6). Besides Item 13 had a low loading (0.53); thus, it was deleted. Addressing other localised areas of strain necessitated QL, 13, 2, and QL6. Additionally, some modification indices were effected between e1 felt proud about your life and e2 (MI=6) and e10 and e11 people of your ethnic group were respected (MI=7). These moves were logically defensible, given the conceptual relatedness of affected indicators. The final goodness of fit indices were as follows: $\chi^2 = 67.5$ ($df=22$, $p=.09$, $Cmin/df=3.0$), SRMR modified, 0.03, RMSEA modified, 0.00 (CI 90, .00, .050), ρ close, 0.95, CFI modified =1, NFI modified =0.93. These fit indices were good. However, a problem arose regarding the discriminant validity of latent factor 1 and 2. The covariance between these factors was high (0.82).

6 e) The three-factor model

This model was suggested by both the scree test and the Eigen value >1 was examined. Factor 1 could be named "Social and Physical Wellbeing, Factor 2 "Disposable Income", and Factor 3 Living Standards. This model was subjected to confirmatory factor analysis. Covariances would exist between e1 satisfaction with health services and education e2(Chronic Poverty Advisory Network, 2014) and between e3 "People of your ethnic group respected" and e4 "Felt proud about your life"(Chronic Poverty Advisory Network, 2014), and e9 "You took three means a day" and e10 "Found it Easy to Make Ends Meet Most of the Time" (Klasen, 2000).

The initial goodness of fit indices were as follows: $\chi^2 = 568.39$ ($df=70$, $p=.000$, $Cmin/df=8.1$), SRMR initial, 0.05, RMSEA initial, 0.096 (CI 90, .0089, 0.1), ρ close, 0.00, CFI initial =.911, NFI initial =0.9. Several areas of localised strain were observed, including QL4-QL1 (5.1), QL4-QL13 (2.6), QL3-QL13, (4.6), and QL11-6 (2.8). Several indicators were deleted. The final goodness of fit indices were as follows: $\chi^2 = 67.5$ ($df=22$, $p=.09$, $Cmin/df=3.0$), SRMR modified, 0.03, RMSEA modified, 0.052 (CI 90, .038, .066), ρ close, 0.384, CFI modified =.987, NFI modified =0.98. The indicators of latent factor "Social and Physical Wellbeing" suggests the measurement of wellbeing would be across several dimensions, with the core ones being physical health and wellbeing and sense of individual autonomy and competence-a sense of value and/or worthlessness (da Corta & Magongo, 2013). A critical component of factor 1 was the group sense of being respected/disrespected. For factor 2, horizontal inequalities would manifest as disparities in income, which has immediate consequences of levels of assets. In this regard, the ability or otherwise in making savings or procuring assets (Hulme & McCKay, 2005). Factor 3 estimated the living standards of respondents with comfort of their houses and access to power representing the key indicators. Access to electricity and nutrition is understood as basic to defining and escaping poverty (Ahmed, Hill, & Naeem, 2013). In an earlier section on exploratory factor analysis, factor 1, emerged as by far the most influential component of quality of life, accounting for 42% of variance. This suggests quality of life differences in Mathare and Kibra can be examined mainly through the lens of physical and social wellbeing. If horizontal inequalities are basic to ethno-political conflict, then it grows out of offences to sense of individual and group pride and dignity.

An invariance test was done to ascertain if the factor structure was applicable across ethnic groups, especially the in-group and out-groups. The scale thus satisfied the thresholds for composite reliability as well both convergent and discriminant validity

7 IV. Conclusion

This study has broadened our understanding on what needs paying attention to when thinking of quality of life differences between in-groups and out-groups in Mathare and Kibra. The three dimensions of quality of life have been revealed. Weighted, it is the latent factor social and personal wellbeing that captures the bulk of the contrast quality of life differences. The indicators "Felt Proud about Your Life" and "People of Your Ethnic Group Were Respected" are notable in this regard.

The forensic exercise of comparing living standards between the in-group and out-groups can be problematic in a theoretical sense. The chain of violence begins, the literature holds, when there are slight differences in living standards between ethnic groups, a situation that would likely be true for groups living in informal settlements (Østby, 2009). The scales developed need to be tested in other urban settings that are like the one in Mathare and Kibra. The scales could be modified and made useful to other theatres of conflict in slum areas of Kenya. There is need to ascertain if the scale would be useful in understanding the onset of ethno-political conflicts in settings that are not limited to a presidential election.

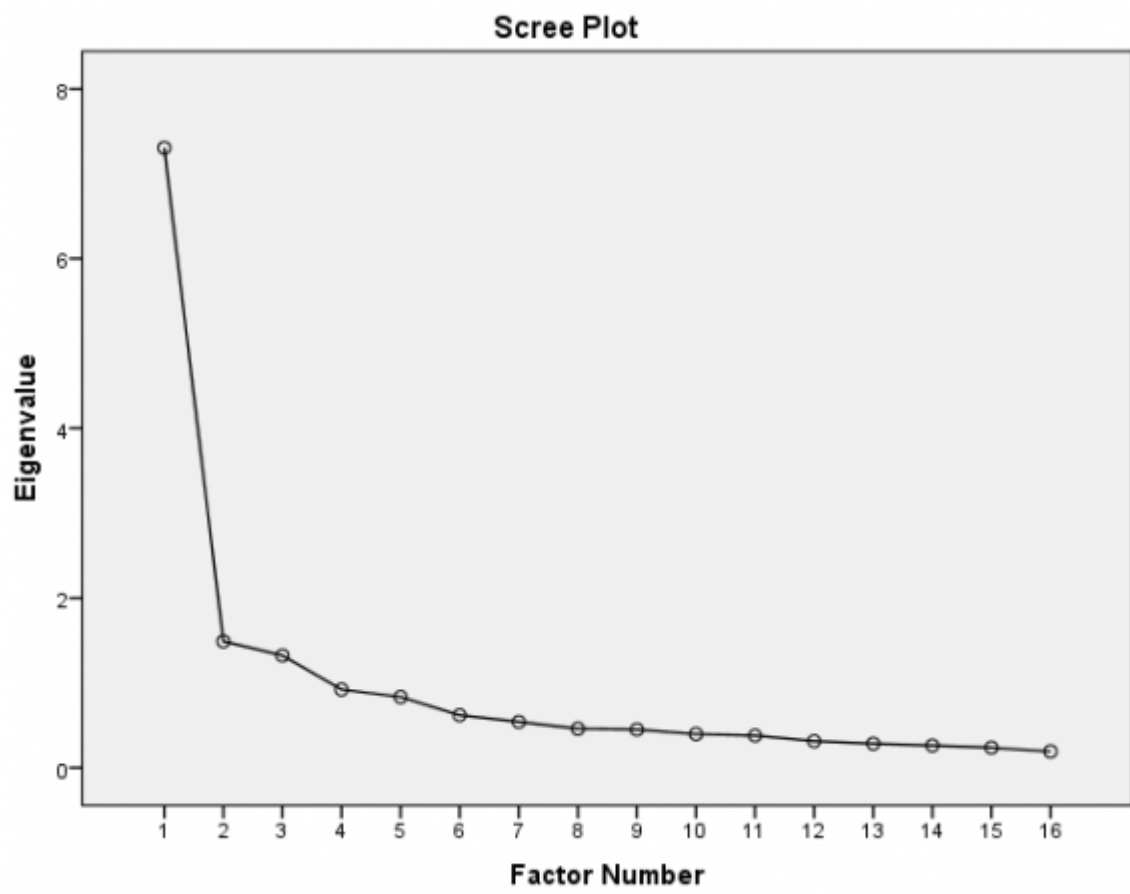
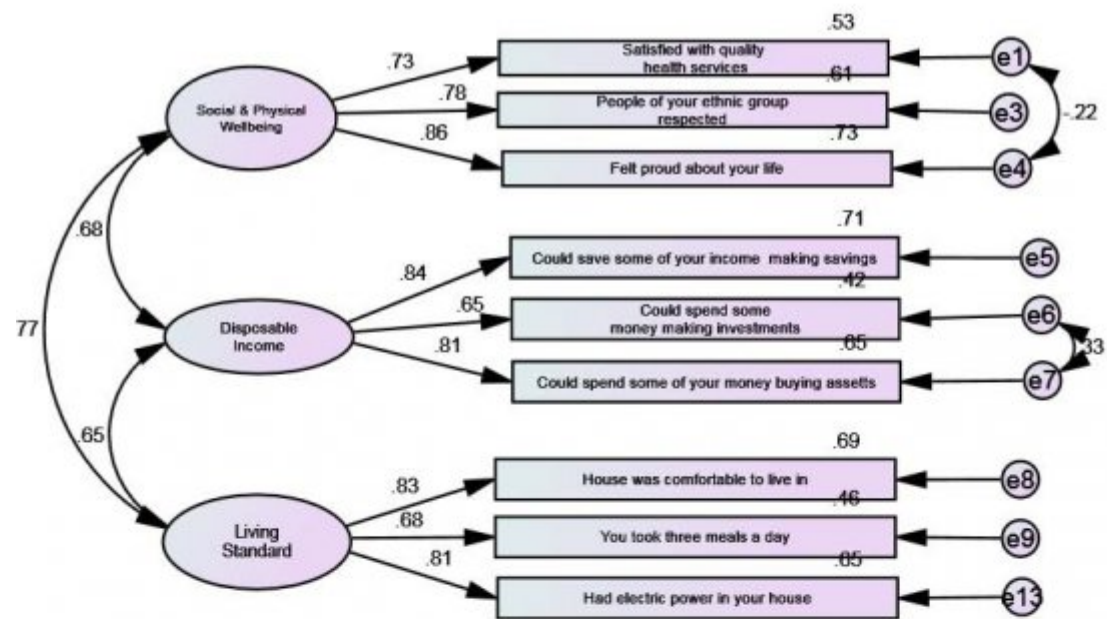


Figure 1:



1

Figure 2: Figure 1 :

1

[Note: c) Statistical Procedures Used i. Initial Reliability Test]

Figure 3: Table 1 :

2

	Scale Mean if Item Deleted	Scale Variance if Item Deleted	Corrected Item- Total Corre- lation	Squared Mul- tiple Corre- lation	Cronbach's Alpha if Item Deleted
Satisfied with supply of water	43.07	140.149	.539	.477	.916
Satisfied with quality of health services	42.67	134.637	.681	.705	.912
Satisfied with quality of education	42.75	137.586	.562	.608	.916
Satisfied with quality of sanitation	43.24	140.315	.558	.475	.916
You took three meals a day	42.77	135.347	.630	.476	.914
You found of energy for cooking afford- able	43.07	140.077	.535	.438	.917
House was comfortable to live in	42.77	133.611	.730	.641	.911
Had electric power in your house	42.45	134.356	.683	.553	.912
Felt safe in your village	42.47	132.790	.725	.639	.911
Felt proud about your life	42.34	133.222	.713	.613	.911
People of your ethnic group respected	42.41	134.347	.675	.618	.913
Had a voice in matters that affected you in the village	42.16	138.291	.567	.454	.916

Figure 4: Table 2 :

3

	Factor 2	3
1		

Figure 5: Table 3 :

4

	QL5	QL7	QL16	QL15	QL14	QL10	QL11	QL2
QL8								
QL8 .000								
QL5 -.454	.000							
QL7 .052	.296	.000						
QL16 -.069	.496	-.496	.000					
QL15 .050	1.933	1.593	.000	.000				
QL14 .066	.256	-.430	-.014	.054	.000			
QL10 .388	-.080	.029	-.820	-	-	.000		
				1.214	.435			
QL11 -.049	-.608	-1.065	1.483	-.965	.995	.170	.000	
QL2 .396	.546	.074	.679	-.608	.167	.000	-	.000
								.311

The covariances all fell within the acceptable range of $<.196$ This finding suggests the solution lacked subst

Figure 6: Table 4 :

Model	χ^2	Df	χ^2 diff	RMSEA (90%CI)	Δ RMSEA	CFI	Δ CFI
Unconstrained	133.653	66	-	.037 (.028-.046)	-	0.980	-
Measurement weights	154.961	78	21.3	.036 (.028-.044)	0.001	0.978	0.002
Measurement Intercepts	205.264	96	50.3	.039 (.0037-.046)	0.003	0.968	0.01
Structural covariances	227.811	108	22.5	.038 (.03-.045)	0.001	0.965	0.003
Measurement residuals	276.755	130	48.9	.039 (.032-0.045)	0.001	0.957	0.008

[Note: Losses in CFI and RMSEA scores were below the thresholds of ≥ 0.01 and ≥ 0.013 in all nested models. The scale thus had strict factorial invariance.]

Figure 7:

6

	Factor 1	Factor 2	Factor 3
Composite Reliability	0.86 >0.7	0.84 >0.7	0.882 >0.7
Convergent Validity (AVE)	0.79	0.76	0.77
Discriminant Validity	MSV (0.46 <0.79 , AVE)	MSV (0.44 <0.76 , AVE)	MSV (0.59 <0.77)
	ASV 0.52 <0.79	ASV 0.42 <0.76	ASV 0.5 <0.77

Figure 8: Table 6 .

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