Assessing predictors that influence working mothers' perception of child care service quality: A SERVQUAL Analysis

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Abstract: **This study examines working mothers' perceptions towards service quality on childcare centres in Dar es Salaam. The study applied five dimensions in SERVQUAL as indicators that influence working mothers' perceptions. The study used service quality SERVQUAL collected data from 411 working mothers with children aged 2-5 years using structured questionnaires. Data collected were analyzed using PLS-SEM. Findings revealed a significant and positive relationship between service quality dimensions and childcare service quality. It was also shown that tangibility, responsiveness, empathy, assurance, and reliability directly influence service quality, even when the effects of all constructs are considered simultaneously. The study recommends child care centres to conduct service quality surveys among its care givers and parents and consider their opinions in order to identify areas for service quality improvements. Besides, Ministry of Community Development, Gender, and Children need to harmonize childcare services standard guidelines to incorporate working mother's views since they are directly setting instructive objectives.**

Key words: **SERVQUAL Model, Service quality, Child care, working mothers' Perception**

I. INTRODUCTION

The increasing number of working mothers of childbearing age in the labor force, unreliable in-house helpers and weakening of extend family supports have increased the demand for quality and reliable care centres (Heir & Cassier, 2010; Hussin *et al.,* 2019, Sammon & Marshall, 2016; Okobah, 2018; Simiyu, 2013). Globally, working mothers shoulder more childcare responsibilities than men due to persistent gender norms across all countries (ILO,2018a) Employed mothers are facing a great challenge of care gap as they are not sure of childcare services in centres or homes (Heir & Cassier, 2010; Simiyu, 2013). One of these challenges concerned managing households as well as their profession (Hussin *et al*., 2019*).* During work hours, it is nearly impossible for parents to look after their children, thus creating the needs to send them under childcare services (Hussin *et al.,* 2019).

Studies indicated that, the early years of life are critical for the development of the child's mental, health, and other potentials (Bassok *et al.,* 2018; Plamer-Wilson, 2020; Slot *et al,* 2018. It is an integral part of the wellbeing of the children .High service quality centre –based childcare is associated with a host of positive developmental outcomes for children such as increased cognitive abilities, language development, emotional and social development (Burchinal, *et al.,* 2016; Coley *et al.,* 2016*;* Slot *et al.,* 2018).Working mothers' are concerned with the good quality services served by childcare centres. This is due to the fact that service quality is a dominant feature that leads to customer satisfaction. Many studies have shown that the capability to influence a customer's perception on service performance is based on what they had encountered before (Hussin *et al,* 2019).

In 2012, 184 million children were enrolled in pre-primary education worldwide (UNESCO, 2015). In the USA one-a quarter (23.4 per cent) of children under the age of five were in some form of organized child care arrangement, which includes daycare centers, nurseries, and preschools (Glynn, 2012).Coincidentally, in Africa between 1999 and 2012 enrollment rose by almost two and half times, (20% of young children in Africa were enrolled in pre-primary programs in 2012). In Sub- Saharan Africa, 11 million children were enrolled in pre-primary education in 2012 (UNESCO, 2015). In Tanzanian, enrollment increased by 46.1% from 1.06 in 2015 to 1.56 million in 2016, the total enrolment of under 5 years was 56,329 (5.3%) in 2015 (URT, 2016). The increase in the number of children to some extent reflect increased demand for childcare services.

Whilst childcare centres are increasingly becoming a popular and viable solution for working mothers; it is similarly becoming a big threat to the health and safety of children under the age of five years. This is due to the fact that there is a wide inconsistency in the quality of childcare centres (Ang et al., 2018; Nabiha *et al.,* 2015; Suppramniam *et al.,* 2019). Studies conducted in Tanzania by Mligo, (2018); Mghase &William (2016) revealed unsatisfactory quality of pre- schools. Molel (2010) study on childcare giving institutions' influence on the development of children under eight years, revealed inadequate and inequitable provision of services that later affected the welfare of children .

Studies have indicated that working mother's perspectives on child care quality has been shown to vary between different society (Hussin et al., 2019; Radjabovna, 2019. Scholars posit that parents are important stakeholders when demanding for

childcare services (Radjabovna, 2019; Waterhouse, Hill & Hinde., 2017). Their selection views vary according to needs, socio-economic factors, and convenience (Libent, 2015; Ling *et al.,* 2019). Markowitz et al., (2018) asserts that the availability of child care services has increased with the increasing childcare facilities, while quality remains low and higher degree of dissatisfaction. Little is known about how working mothers perceive the quality of these different types of childcare arrangement in relation to their expectation and adding to profiting children's needs. The current study intends to investigate the dimensions of service quality that affects working mother's perceptions with child care service quality in Dar es Salaam, Tanzania. Consequently the aim of the study is to assess working mothers' perception of child care centres service quality dimensions.

II. LITERATURE REVIEW

2.1 Working mothers' perception of service quality dimensions

Parents are the primary providers for their children's education, and bring different perspectives on what constitute program quality (Jang *et al*, 2014; Manning, Garvis &Wong, 2017; Menon, 2015). How working mothers perceive service quality is critical because it determines how they evaluate the service based on their expectations. Many studies have shown that the capability to influence customers' perception on service performance is based on what they have encountered before (Gupta & Simonsen, 2016; Hussin *et al.*, 2019; Ongo, 2018).Thus, how customers evaluate a quality service today (based on some criterion) may change tomorrow. Working mothers may have different expectations regarding the childcare services based on the developmental stage of the child and changes in needs. Omar, *et al.,* (2010), submit that the choice of child care is in the hands of the customers (working mothers).Positive perception of service quality is the indication of the customers satisfaction (Malik, 2011). Therefore, understanding consumer's and family's needs is an important issue when deciding on childcare program.

2.2 Service Quality

Parasuraman *et al.,* (1985; 1988; 1994) define service quality as "a measure of how well the service level delivered matches customer expectations. The authors further clarified service quality as an attitude, associated but not equivalent to customer satisfaction and results from a contrast of expectations with perceptions of performance

SERVQUAL dimensions descriptions as related to childcare services are:

2.2.1 Tangibles

Tangibles: are identified as the physical appearance of the organization including overall facilities of the child care centre, including the concept of structure quality of student-teacher ratio, such as new equipment, attractive environment, appropriate dressing of children and staff, adequate number of

teachers, etc. (Boller *et al.,* 2014; Zeithaml *et al.,* 2018, Zeithaml *et al.,* 2017). Providing a good learning environment is Tangibles Quality in service quality.

2.2.2 Reliability

The service dimension of reliability measures consistency of performance and the dependability of childcare service. According to Zeithaml *et al*, (2006) reliability is the ability to perform the promised services dependably and accurately or delivering in its promises. Reliability is seen as a vital aspect of service that contributes to a great degree of a disappointment than positive perception of a service. Those aspects of reliability child care service quality can reassure working mothers to stay at work while children are in the child care centre. For example, the things the daycare centres promised parents were realized, and the daycare centres record and properly kept information about students and parents (Chikwendu *et al.,* 2012; Zeithaml *et al.,* 2018, Zeithaml *et al.,* 2017)

Reliability includes whether the daycare centres can provide healthy and safe meals, whether the things they promise can be completed on schedule, whether they can help children to resolve. Among the above connotations of Chen (2016), if the promised things were completed on time, then there was Reliability Quality in service quality.

2.2.3 Assurance

Assurance service quality covers the knowledge and courtesy of employee and their ability to inspire confidence in working mothers. It also includes competence, courtesy, credibility and security. Assurance includes the child care centre' ability to provide a good learning environment, excellent service attitude of staff, extraordinary competence quality of teachers, and the employees' ability to cope with a crisis. Safety and security features of a childcare are important features and factors for parents in deciding the childcare for the child. Parents are looking for childcare which provides congenial environment for the wellbeing of their child (Dahari & Ya, 2011). Extraordinary competence quality of teachers and the employees' ability to cope with the crisis are competence quality in service quality (Zeithaml *et al.,* 2018, Zeithaml *et al.,* 2017).

2.2.4 Responsiveness

Responsiveness concerns the willingness or readiness of employees to provide prompt service (Parasuraman *et al*, 1985).This dimension is concerned with dealing with customer's requests, questions and complaints promptly and attentively. Child care Responsiveness Quality: means the child care centre' handling of and response to parents' needs. For example, daycare centres offer parents convenient services, caregivers or staff are ready to help parents and daycare centres arrange special care for children with special needs (Chikwendu *et al.,* 2012; Rahaman *et al.,* 2011; Tan *et al*., 2014, Zeithaml *et al.,* 2018, Zeithaml *et al.,* 2017). Responsiveness is an important prerequisite for achieving the

child care service quality and lack of service is the main cause of dissatisfaction (Parasuraman *et al.,* 1991To be successful, childcare need to look at responsiveness from the view point of the customers (working mothers) rather than company's perspective (Zeithaml et al, 2006)

2.2.5 Empathy

Empathy is established by giving caring, individualized attention to customers (Parasuraman *et al.,*1985).The dimension describes the customer as special and unique.

2.3 Theoretical and Conceptual Framework

This study was guided by service quality theory based on GAP SERVQUAL(based service end user-working mother .The SERVQUAL model was developed by Parasuraman *et al,*1988 and has become astandard method for service quality measurements.

Service quality theory states that to measure certain service, specific process should be in place with particular variables and steps to follow. According to that theory, the service quality should be measured through process involving a systematic assignment of values or numbers based on prior rules of measurement (Hair, *et al.,* 2014**).**
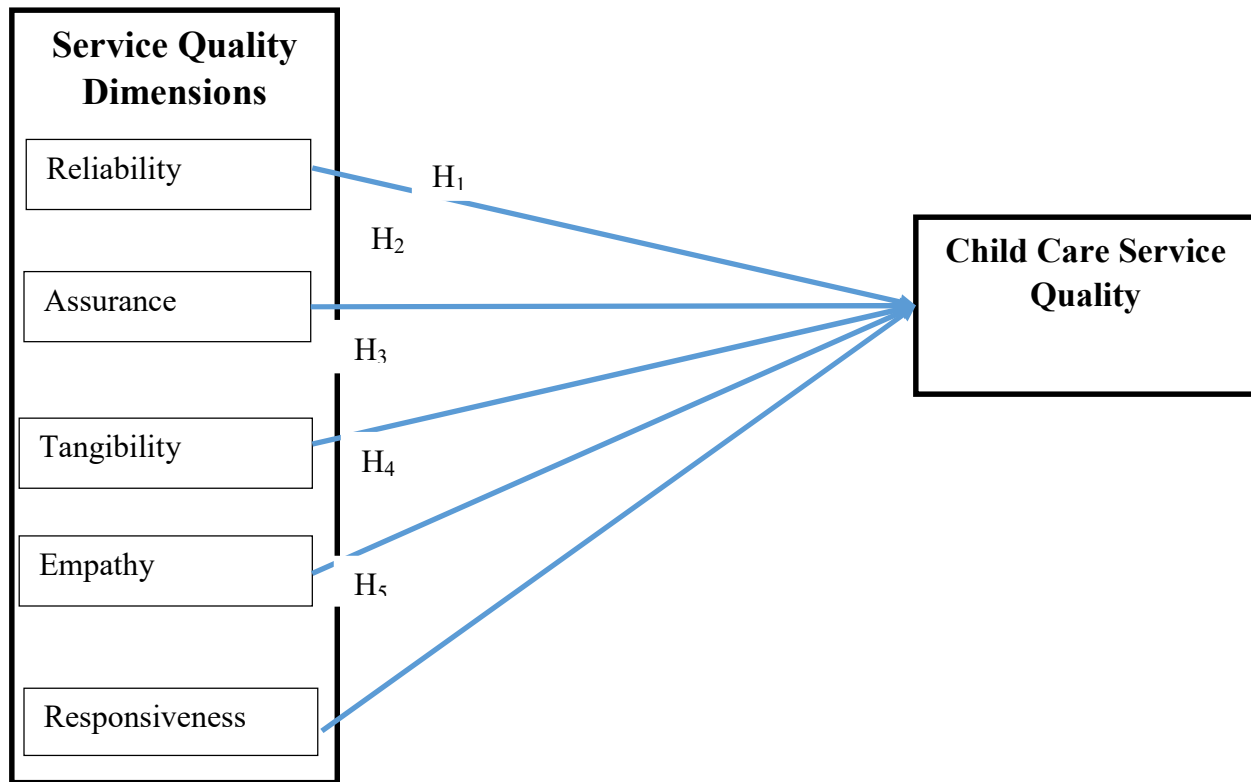

Figure 1: Conceptual framework of the study

Hypotheses development

H_1: There is a positive relationship between working mothers' perception of tangibility on child care services quality.
H_2: There is a positive relationship between working mothers' perception of reliability on child care services quality.
H_3: There is a positive relationship between working mothers' perception of empathy on child care services quality.
H_4: There is a positive relationship between working mothers' perception of responsiveness on child care services quality.
H_5: There is a positive relationship between working mothers' perception of assurance on child care services quality.
The hypotheses were tested based on a significant level of 0.05

III. METHODOLOGY

The study used a questionnaire survey to collect information from working mothers. The questionnaire was developed from the SERVQUAL model, developed by Parasuraman *et al.*, (1988). The researcher used a questionnaire based on its capability to collect information from a big number of people in a short period. The quantitative analysis was conducted using the statistical analysis known as PLS-SEM. Out of the 683 questionnaires distributed, 411 of them were completed and collected by the researcher. This number illustrates a response rate of 61 %, this rate is consistent with the one suggested by Bernard (2013) who achieved a response rate of 60 percent.

The partial least squares structural equation modeling (PLS-SEM) approach was used to evaluate the measurement model

of working mothers' perceptions on the quality of childcare services latent construct due to its superiority in handling reflective and formative models compared to covariance-based structural equation modeling. Also, PLS-SEM is a nonparametric method with no data distributional assumption. Therefore, bootstrapping was employed to determine standard errors of the coefficient estimate to evaluate the coefficient's statistical significance without relying on a distributional assumption (Hair *et al.* 2017). The repeated indicators approach is considered more powerful than alternative approaches such as two-stage approach and hybrid approaches when the number of items of the first-order constructs is unequal (Becker, *et al.,* 2012).

IV. STUDY FINDINDS

Demographic profiles

411 respondents who were included in the study analysis. Family background measures

Analysis of the sample indicated that the majority of the respondents were married, (64.2 %), whereas (17 %) were divorced. Analysis showed that the majority of working mothers were secondary education holders and above (95.9%). Half of the respondents had degrees and postgraduate education levels. Followed by diploma holder, certificate holder, secondary education holders, and lastly primary education. Only minority of respondents were having primary education (4.1%).percentage of distribution by education level. As regards to working mother's number of children, the analysis of the sample indicates the dominance of mothers with one to three children (88.2%). Only very few working mothers have 5 and above children (1.9%). From a total of 411respondents, 60.1% were employed in private companies or self-employed (14.6 %.) whereas (5.4 %.) were

local government Central government employees. From 411 respondents, 57.2% working mother's had an income of two million Tanzania Shillings and above .The most characteristics of respondents' distribution by income level per month of the sample were relatively comparable in proportional, except for level between 2,000,001 and 2,500,000. 154 respondents had disproportionately level of income as compared to the rest. The statistics justify the affordability of those working mothers to pay for child care services.

V. RESULTS FROM MEASUREMENT MODEL

In the first stage of model validation, the latent variables were evaluated in terms of their reliability and validity using three main properties; individual item reliability, convergent validity, and discriminant validity. Individual item reliability was assessed using factor loading. As shown in Table1 the loading of the measurement item exceeded the recommended value of 0.708 indicating the acceptable level of individual item reliability. Internal consistency reliability was assessed using Cronbach's alpha and Composite Reliability (CR) results shown in Table 1 shows that all the values were above the recommended levels needed for this study which are 0.70 for Cronbach's alpha, 0.70 for CR, and Convergent validity was assessed using Average Variance Extracted, results shown in Table 1 that all the values were above the recommended levels needed for this thesis which are 0.50 for AVE.

The third property, discriminant validity was examined through, cross-loadings, Fornell-Larcker, HTMT, and the results shown in Table 1 to 3 proved that each factor in the measurement model was empirically distinguishable.
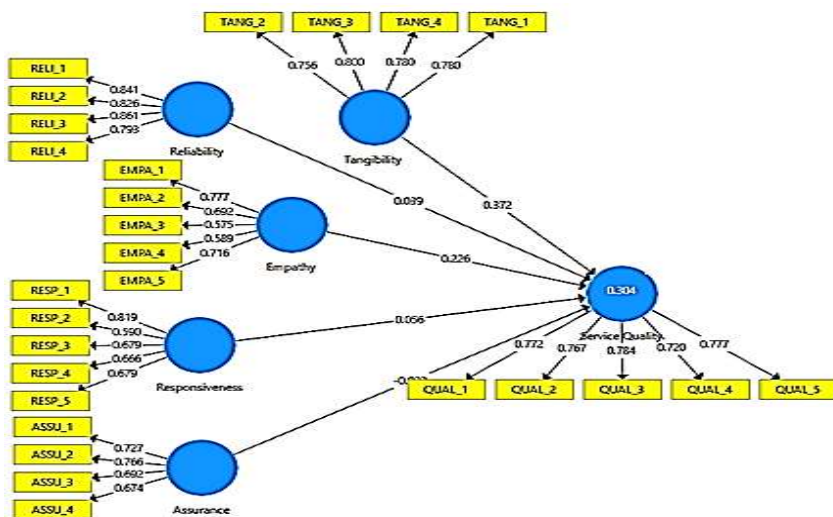

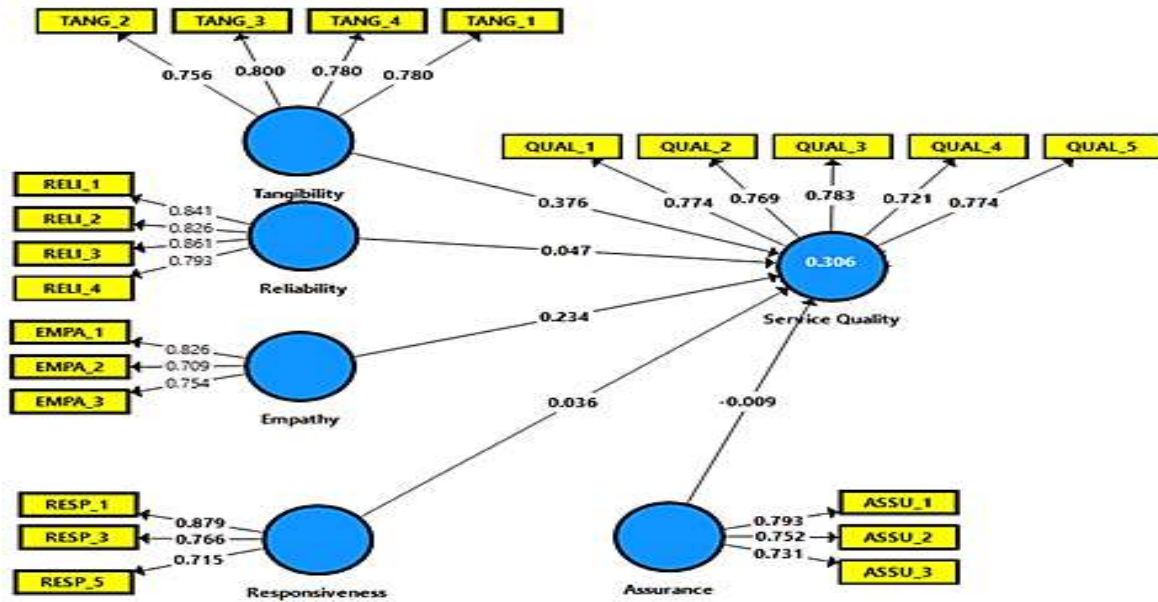Figure 3: Measurement model before factor analysis

Figure 4: Measurement model after factor analysis

Table 1: Measurement model assessment

Indicator Code	Construct. Items	Outer loadings	Weights	Cronbach alpha	Composite reliability	AVE	VIF
TANG_1	Tangibility	0.78*	0.29*	0.79	0.86	0.61	1.44
TANG_2		0.76*	0.32*				1.87
TANG_3		0.80*	0.29*				1.40
TANG_4		0.78*	0.39*				1.80
RELI_1	Reliability	0.84*	0.32*	0.85	0.90	0.61	2.10
RELI_2		0.83*	0.28*				2.18
RELI_3		0.86*	0.35*				2.15
RELI_4		0.79*	0.25*				2.06
EMPA_1	Empathy	0.83*	0.46*	0.75	0.81	0.59	1.44
EMPA_2		0.71*	0.38*				1.28
EMPA_3		0.75*	0.47*				1.21
RESP_1	Responsiveness	0.88*	0.61*	0.72	0.83	0.62	1.32
RESP_2		0.77*	0.33*				1.57
RESP_3		0.72*	0.30*				1.47
ASSU_1	Assurance	0.79*	0.52*	0.74	0.80	0.58	1.20
ASSU_2		0.75*	0.41*				1.29
ASSU_3		0.73*	0.39*				1.27
QUAL_1	Service quality	0.77*	0.28*	0.82	0.88	0.58	1.62
QUAL_2		0.77*	0.28*				1.64
QUAL_3		0.78*	0.28*				1.83
QUAL_4		0.72*	0.22*				1.59
QUAL_5		0.77*	0.25*				1.83

Note: *p < 0.05

Discriminant validity

Discriminant validity through cross-loading, the Fornell-lacker criterion, and HTMT criterion measured.

Cross loadings

A cross-loading evaluation was conducted the results are demonstrated in Table 2and Appendix 1for more details and show that all the indicators loaded higher on its respective latent construct than its cross-loadings on any other latent constructs and they were theoretically specified to measure any other construct in the measurement models. This result indicates that all 31 indicators outer loadings loaded distinctly on the specified latent construct they measured, and therefore show a discriminant validity of the latent constructs.

Table 2: Cross-loading analysis

	Assurance	Empathy	Reliability	Responsiveness	Service Quality	Tangibility
ASSU_1	0.793	0.44	0.069	0.341	0.276	0.331
ASSU_2	0.752	0.418	0.095	0.385	0.217	0.384
ASSU_3	0.731	0.343	0.098	0.372	0.206	0.341
...	...	...	...	...	...	...
QUAL_4	0.111	0.241	0.035	0.219	0.721	0.326
QUAL_5	0.207	0.233	0.101	0.258	0.774	0.376
TANG_1	0.297	0.357	0.073	0.322	0.342	0.78
TANG_2	0.387	0.368	0.065	0.335	0.386	0.756
TANG_3	0.305	0.301	0.073	0.314	0.351	0.8
TANG_4	0.42	0.422	0.084	0.408	0.464	0.78

Fornell-Larcker criterion

The second procedure to determine the discriminant validity was the Fornell-Larcker criterion, in which the square root of AVE of each of the Latent Constructs must be higher than its correlation with other latent constructs (Hair *et al.,* 2010, Henseler *et al.,* 2009). Employing this procedure, the researcher has confirmed that the square root of AVE of every the latent construct was higher than its correlation with other latent constructs as demonstrated in Table3.

It was at a satisfactory level because the square root of the AVE from the constructs (0.759, 0.766, 0.771, 0.765, and 0.830) was greater than the correlation shared between the latent construct and other latent constructs in the model (See Table 3).

Table 3: Discriminant validity- Fornell-Larcker Criterion.

	Latent constructs	1	2	3	4	5	6
1	Assurance	0.759					
4	Empathy	0.531	0.765				
5	Reliability	0.112	0.157	0.830			
6	Responsiveness	0.478	0.602	0.064	0.790		
7	Service Quality	0.311	0.436	0.121	0.344	0.764	
8	Tangibility	0.460	0.471	0.095	0.448	0.503	0.779

Note: The diagonal elements (in bold) are the square root of the AVEs; non-diagonal elements are latent construct correlations.

HTMT criterion

Hair *et al*., (2017) have recommended the evaluation of the correlations "heterotrait monotrait ratio (HTMT) to determine the discriminant validity in PLS-SEM.

In this study researcher considered the HTMT, Henseller *et al.,* (2015) suggested the HTMT should be lower 0.90 (more lenient threshold) or significantly smaller than 1. Our result, the HTMT of all latent constructs' relationships, and were below the recommended threshold of 0.90 (See Table 4). Moreover, the one-sided 95% percentile confidence interval of HTMT does not cover 1, that is, it is significantly different from 1. Hence, study follow Hair *et al.,* (2017) suggestion to test whether the HTMT is significantly smaller than 0.90.

As indicated in Table 4 all latent constructs in the estimated model fulfilled the condition of discriminant validity for the study PLS-SEM Model. Since none of the off-diagonal elements exceeded the respective diagonal element, discriminant validity was achieved. Latent Constructs may be considered to have adequate discriminant validity if the square root of the AVE for each construct was greater than the correlation between the latent construct and any other latent construct in the model (Hair *et al.,* 2017, Riel, *et al.,* 2017)).

Table 4: HTMT Discriminant validity

	Latent construct	1	2	3	4	5	6
1	Assurance	■					
4	Empathy	0.82	■				
5	Reliability	0.15	0.22	■			
6	Responsiveness	0.69	0.84	0.09	■		
7	Service Quality	0.41	0.58	0.13	0.4	■	
8	Tangibility	0.64	0.65	0.11	0.58	0.61	■

Figure wise representation of HTMT discriminant validity indicated in figure 5

Results of Structural Model

Structural model assessment in six values that represents the underlying concept of the path model which includes: collinearity evaluation, coefficient of determination (R^2 value), effect size f^2, blindfolding and predictive relevance Q^2, and structural model path coefficients.

Results of Collinearity Evaluation

The high correlations are normally not anticipated between the items of formative measurement models. The high correlations of formative indicators are considered problematic (Henseler, 2017; Ringle *et al.,* 2018). The results for evaluating collinearity issues were the variance inflated factor (VIF) values. The following sets of predictor constructs for collinearity were assessed: (i) tangibility, assurance, empathy, reliability, and responsiveness as predictors of service quality; (ii) service quality and customer satisfaction as predictors of customer loyalty. The results of this test shown in Table 5 representing all the VIF values and mean VIF values were below the suggested threshold levels (lower than 3.5) (Hair *et al,*2017, Henseler *et al.,* 2015) and therefore collinearity among the exogenous latent constructs was not a problem in the structural model.

Table 5: Collinearity evaluation VIF Values

Exogenous/Endogenous	Service Quality
Assurance	1.565
Empathy	1.877
Reliability	1.029
Responsiveness	1.719
Service Quality	
Tangibility	1.443

Results of Coefficient of Determination (R^2)

The results of the PLS-SEM algorithm are shown in Table 6, and show that the R^2 values for all endogenous latent constructs were significant ($p <0.05$). Table 6 indicates that the exploratory power of the structural model was statistically significant. Hair, *et al.,* (2019) recommended that the R^2 value should be more than 0.1 as a rule of thumb. All the R^2 values in this structural model were above 10% indicating that 10% or more of variance in endogenous variables was accounted for by the exogenous variables. These results suggest that all the hypothesized relationships in the model were informative. The R squares were 0.234, 0.415, and 0.306 which suggest that the model variables can explain 23.4%, 41.5%, and 30.6% for Service Quality respectively. Thus, working mother satisfaction with the service quality of daycare had a much stronger link with child care service quality (R^2=0.415).

It is imperative to note that selecting a model based on the R^2 value was not a safe approach (Hair *et al.,* 2017) because adding or omitting non-significant constructs to explain an endogenous latent construct in the structural model would probably fluctuate its R^2 value. In the next section, the structural model was assessed by exploring the change in R^2 values to see if the influence of a particular independent (exogenous) construct on a dependent (endogenous) construct had a large impact.

Table 6: Results of PLS bootstrapping for the significance of R^2

Endogenous constructs	R Square	R Square Adjusted	Significance Level	Confidence Interval bias corrected	
				2.50%	97.50%
Service Quality	0.306	0.297	0.000	0.135	0.431

Results of Effect Size f^2

The result of the PLS-SEM algorithm for the significance of f^2 demonstrates that of the 5 predictors of service quality (QUAL), the effect size of the tangibility (0.196) was much higher than the other predictors. The effect size of empathy, assurance, reliability, and responsiveness on service quality (QUAL) was small and significant.

Table 7: Results of effect size (f^2) analysis

Endogenous latent Construct	Exogenous latent constructs	f^2	P-Value	Inference
Service quality	Tangibility	0.196	0.035	Small effect
	Assurance	0.015	0.040	Small effect
	Empathy	0.017	0.05	Medium effects
	Reliability	0.004	0.041	Small effect
	Responsiveness	0.045	0.012	Small effect

Despite, some of the exogenous latent constructs individually had a little effect on predicting the endogenous latent constructs, the results of the PLS-SEM algorithm for all the R^2 indicated that the model explained more than 30.6% the variance in the endogenous latent construct (service quality) were quite well.

Results of Blindfolding and Predictive Relevance Q^2

According to Hair *et al.,* (2015), Ringle *et al.,* (2018) for predictive relevance, the predictive sample reuse technique (Q^2) can be used as a criterion. The Q^2 evaluates the predictive validity through the blindfolding procedure in which data was omitted for a given block of indicators and then the omitted part was predicted based on the calculated parameters. Therefore, Q^2 depicted how well the empirically collected data could be reconstructed with the help of the model and the parameters of PLS-SEM (Hair *et al.,* 2017). Hair *et al.,* (2017), Ringle, *et al.,* (2017) suggested that the model has predictive relevance when Q^2 is greater than 0 whereas the model lacked predictive relevance when Q^2 was less than 0.

The results in Table 8 demonstrated the Q^2 values (along with the R^2 values) of all the endogenous latent constructs. All the Q^2 values were above zero and therefore supported the models in- sample has predictive relevance regarding the endogenous latent constructs.

Table 8: Results of Predictive relevance (Q^2)

Endogenous latent Construct	Q^2	Inference
Service quality	0.171	Predictive relevance
Tangibility	0.244	Predictive relevance
Reliability	0.125	Predictive relevance
Empathy	0.233	Predictive relevance
Responsiveness	0.267	Predictive relevance
Assurance	0.312	Predictive relevance

Results of Structural Model Path Coefficients its significance and relevance of latent constructs

The purpose of this section was to describe the Structural Equation Modeling (SEM) techniques used to test the study's hypotheses and to report the results of the hypotheses tests. The significance of the weight of each latent constructs revealed the relative importance and the loading represented the absolute importance that is determined using bootstrapping.

The validity of the structural model was confirmed, the next step was to evaluate the path of the proposed structural model.

Figure 6 exhibits the second repeated indicators structural model and the analytical results are depicted in Table 9. Each path corresponds to each proposed hypothesis in this study. The test of each hypothesis was achieved by looking at the sign, size, and statistical significance of the path coefficient (b) between the exogenous latent construct and its endogenous latent constructs. Hence, the hypothesized relationships were examined against various coefficients and scores obtained from the analysis. In this study the hypotheses were tested based on the direction, the strength of the standardized paths beta coefficient (β), the T-statistic (t-value), significance level (p-value), and Bias corrected confidence interval (Table 9). The higher the path coefficient, the stronger the effect of latent constructs on the endogenous latent construct. Almost all the proposed relationships show significance at p<0.05. The significance of the path coefficients was evaluated using the bootstrapping function of Smart PLS 3.2.8 with 500 sub-sample (the default value). Table 9 shows the proposed hypothesis and its results, whether supported or not. In Figure 7, the comparison of standardized path coefficients suggested that reliability of service quality was the most important indicator of customer satisfaction followed by the responsiveness and tangibility aspects of service quality.
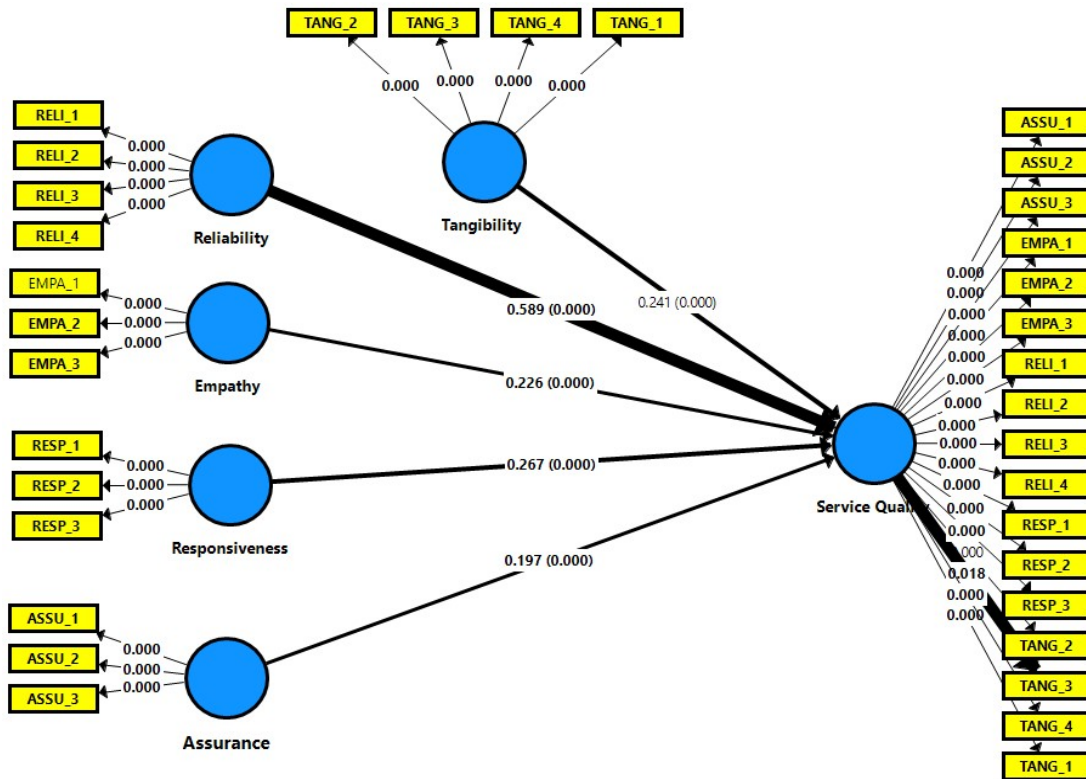

Figure 7: Second order repeated indicators approach.

Hypotheses Testing

Hypotheses were tested based on the objectives of the study where first objective which was to assess working mothers'

perception of child care centres service quality dimensions in Ilala Municipality had nine hypotheses (H_1-H_5).

Hypothesis	Relationship	Path coefficient (Weight)	t value	P Values	95% Confidence interval Bias corrected		Results
					2.5%(LB)	97.5%(UB)	Supported
H_1	Tangibility -> Service Quality	0.241	8.37	0.000	0.181	0.297	Supported
H_2	Reliability -> Service Quality	0.589	11.77	0.000	0.508	0.706	Supported
H_3	Empathy -> Service Quality	0.226	9.21	0.000	0.177	0.273	Supported
H_4	Responsiveness -> Service Quality	0.267	10.86	0.000	0.221	0.318	Supported
H_5	Assurance -> Service Quality	0.197	8.16	0.000	0.153	0.253	Supported

The test for this hypothesis showed that tangibility is positively related to child care services quality (β = 0.241; t-value = 8.37; p = 0.000; CI: 0.181:0.297), meaning that when tangibility goes up by 1 standard deviation, child care services quality goes up by 0.241 standard deviations. Thus, the study showed that a moderate level of tangibility would result in a moderate level of child care service quality.

The test for this hypothesis showed that working mothers' reliability perception was significantly positively related to child care services quality (β= 0.589; t-value = 11.77; p = 0.000; CI: 0.508:0.706, meaning that when working mothers' reliability perception goes up by 1 standard deviation, child care services quality goes up by 0.589 standard deviations. Thus, the study showed that a higher level of working mothers' reliability perception would result in a greater level of child care services quality.

The test for this hypothesis showed that there is no significant positive relationship between working mother's empathy perception and child care services quality (β = 0.226; t-value = 9.21; p = 0.000; CI: 0.177: 0.273), meaning that when working mother's empathy perception up by 1 standard deviation, child care service quality goes down by only = 0.226 standard deviations. Thus, the study showed that a higher level of working mother's empathy perception would not result in any meaningful and significant change in the level of child care services quality.

The test for this hypothesis showed that there is no significant positive relationship between working mother's responsiveness perception and child care services quality (β = 0.267; t-value = 10.86; p = 0.000; CI: 0.221:0.318), meaning that when working mother's responsiveness perception goes up by 1 standard deviation, child care services quality goes up by only 0. 0.267 standard deviations. Thus, the study showed that a higher level of working mother's responsiveness perception would not result in any meaningful and significant change in the level of child care services quality.

The test for this hypothesis showed that there is no significant positive relationship between working mother's assurance perception and child care services quality (β = 0.197; t-value = 8.16; p = 0.000; CI: 0.153:0.253), meaning that when working mother's assurance goes up by 1 standard deviation, child care services quality goes up by only 0.197 standard deviations. Thus, the study showed that a higher level of working mother's assurance perception would result in any meaningful and significant change in the level of child care services quality.

VI. DISCUSSION

Findings from the study indicated a positive and significant contribution of tangibility on the child care service quality. These results suggest that child care centre should improve their physical attributes such as building and environment and upgrade their facilities to satisfy working mothers. The results concur with findings of Untaru (2017), Ling, et al., (2019), Chui et al., (2015), Fan et al., (2017), Incesu and Asikgil, (2012). These findings too support an earlier study of Parasuraman et al., (1994) in which tangibles have a significant and positive relationship on parents' perception of service quality and satisfaction). Parasuraman study explained that the presence of physical facilities and personal appearance are tangibles. Working mothers would be satisfied with the service if the service providers can improve their physical attributes including the appearance of a building, teaching-learning materials, and the environment

Findings from the study indicated a positive and significant contribution of reliability on the child care service quality. The adherence of operation hour is important to help working mothers to manage their time effectively. The childcare should be reliable and trust –gaining by making working mothers confident and secure. The study is consistent with the finding in Chen and Childhood (2016) and Incesu and Asikgil (2012) that, reliability was significantly linked to the parents' satisfaction. It was observed in the findings that the parents' value reliability the most as the care centres were able to provide healthy and safe meals, promised things completed as scheduled. This is supported by service quality measurement theory (the GAP) which outlook service quality as the gap between customers' expectations with respect to the five dimensions and their perceptions on what was actually delivered (Parasuraman et al., 1994) .As mentioned in Kim (2014) the ability to respond to emergencies required the improvement of the reliable service to increase the working mother's perception of child service quality.

Findings from the study indicated a positive and significant contribution of Empathy on the child care service quality.

That working mother' expect the childcare to pay attention and give love to children. This is consistent with Chowdhary (2000), Fan *et al.,* 2017 who supported that empathy was most important in the labor-intensive industry. This study imparts support to work in Incesu and Askgil (2012), as well as Vas and Mansori (2013) who emphasized personal care and personalized attention, were the reasons that influence parents' perception of service quality. Working mothers believe that a child care centre is trying to individualize services based on their personal needs. These results suggest that the child care centre must show empathy to improve child care service quality.

Findings from the study indicated a positive and significant contribution of responsiveness on the child care service quality. These results suggest that child care centre responsiveness is an important factor amongst working mother's perception of service quality**.** Working mothers expect the childcare to promptly inform if their children were sick and take the necessary action as indicated on the findings. These results concurred with the findings of Azam (2018), Chandra *et al.*, (2018) who found that the items of responsiveness were an important aspect of the SERVQUAL variable in the education sector. Further, the study results were in line with (Vaz and Mansori, 2013) responsiveness was strongly related to parents' perception of service quality and satisfaction. Mohsin, *et al.,* (2019) findings found that, students view the responsiveness dimension as the most critical dimension.

Findings from the study indicated a positive and significant contribution of assurance on the child care service quality. These results highpoint on the importance of courtesy and trust to gain a higher perception of service quality and satisfaction level on working mothers. This result has coincided with the findings of Alsem *et al.,* (2016), Incesu and Asikgil (2012) who found out that assurance had a significant and positive influence on parents' perception of service quality and satisfaction. Omar *et al.,* (2009) and Oluwafemi (2013) on the other hand, found that some items of assurance quality were an important aspect of the SERVQUAL variable in the education sector especially in building working mother loyalty to child care.

VII. CONCLUSION

The results suggest that the working mothers' perceptions of child care service quality are best modeled as a composite model. The results showed the evidence presented to supports this position. Specifically, results shows that tangibility, responsiveness, empathy, assurance, and reliability directly influence service quality, even when the effects of all latent constructs are considered simultaneously.

VIII. RECOMMENDATIONS

The study findings recommend that Ministry of Community Development, Gender, and Children need to harmonize childcare services standard guidelines to incorporate working mother's views on those issues since they are directly setting instructive objectives.

Social welfare and community development officers should use the findings in expanding their quality supervision of daycare programs to include assessing the perception of working mothers on the quality of services provided to their children so that appropriate measures could be taken to improve the quality of childcare services.

This study highlights the usefulness SERVQUAL service dimensions for child care centres to conduct service quality surveys among its care givers and parents and consider their opinions in order to identify areas for service quality improvements.

Study argues that for solving the working mother work – family challenges there is a need of placing child care centres at workplaces to serve energy and time resources.

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