

**Parents' Satisfaction with the Facilities in Montessori School at Nawalparasi District**

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**Abstract**

The primary objective of this study was to analyze the level of parents' satisfaction with the behaviour and roles of office staffs, receptionists, and roles of teachers. This study has applied the quantitative approach along with the survey method. The survey instrument was used to collect two hundred (N =200) data from the parents of Montessori schools in Gaindakot 1 and 2, Nawalpur. Random sampling was used to select the parents of Montessori schools. The results show positive association between the behaviour and roles of office staff, receptionists, and parents, satisfaction.

Similarly, the results show a negative association between the facilities of Montessori schools, the influence of Montessori quality and behaviour and the roles of Montessori teachers. This study has concluded that there was an association between the quality of Montessori education and parental satisfaction. This study's implications would benefit new researchers, scholars, colleges, local government, Montessori schools, school administrators and owners and investors of private schools in Nepal.

**Keywords:** *Montessori school, office staff and receptionist, parental satisfaction, roles and behaviour, teachers*

## 1. INTRODUCTION

This study is about the parent's satisfaction with their children's education at Montessori Schools. Parent satisfaction is based on the activities of behaviour and roles of Office staff and receptionists, teachers, and the facilities to provide a better practical education system, individual care, hands-on learning, independence, and self-directed activities. Access to quality pre-primary education plays an important role in children's growth and development. Several studies reveal that high-quality early education produces long-lasting benefits for children, such as stronger literacy, language and math skills, better attitudes towards school, better relationship with classmates, and later academic success (Omondi, 2013). Globally, the provision of quality pre-primary education remains elusive, especially in developing countries. According to UNICEF (2019), the quality of pre-primary education in Sub-Saharan African countries was inadequately characterized by a shortage of trained teachers, poor funding, poor physical infrastructure, unfavourable child-teacher ratio, and low participation rates.

Parents' satisfaction with the quality of education has been reported to vary with the type of school. Studies indicate that parents are transferring their children from public to private schools due to the perceived low quality of education in public schools regarding good discipline, physical facilities, better teacher performance and higher quality output (Gibbons & Silva, 2011). Koirala (2019) highlights that Nepal's Montessori has not been able to make the learning of children as effective and productive as the Montessori in abroad. He further says that most of the Montessori kindergartens in Nepal do not meet international standards and do not significantly impact children's social, mental and intellectual development.

Based on the article's website, it has a unique topic, and few literature reviews are available in general, as well as those parents who followed the Montessori trend of sending their children to pre-schooling Montessori. Nowadays, parents are too preoccupied with their careers to spend quality time with their children. Parents are increasingly choosing Montessori education to provide their children with a better environment and education. Parents know various learning methods and seek the best Montessori for their children. The Montessori curriculum is unique because it encourages children to maximize their natural talents and interests.

This study has discussed a few major topics related to customer satisfaction. Still, all kinds of literature on parental satisfaction with Montessori education are discussed. They are derived from websites, articles, books, and journals to aid in the citation for the literature review. There are many review studies and sources for literature reviews; each review shows a summarized conclusion. The entire literature review was comparable, and related topics were carried out. Montessori education is the most powerful way of teaching children to friendly learning environment worldwide today (Lewa, 2018).

Montessori education also develops natural teaching growth, using various materials such as hand materials, and understanding basic mathematics and science (Montessori, 2014). According to Chen and Guo (2021), Montessori education includes culturally innovative respect for children, joy, and a prepared environment comprising outdoor and indoor activities and hands-on materials that meet specific learning needs and encourage positive brain development. The Five-point Likert scale measurement scale was used to examine parental satisfaction with Montessori. Similarly, Montessori classrooms were designed to be self-directed environments that aided in developing children's independence. Some classrooms use only Montessori materials, while others supplement Montessori materials with commercially available materials such as puzzles and games (Lillard & Heise 2016).

The study of Pihanperä, Lepistö & Ruokonen (2022) on the literature review of parent satisfaction shows that parents were motivated by the principal's attractiveness, practical knowledge, the attractive classroom environment, and the emphasis on children's long-term outcomes. Modern educators must constantly adjust their work based on their knowledge and overall understanding of children. If the Montessori schooling environment is supportive, all students are more likely to achieve academic success. The principle of children's learning and contributing to the development of an institutional environment has to be understood. This available answer to Montessori teacher's types of culture promotes children's culture. Daily, encouraging individual children through self-determination, positive awareness, and acquiring new skills also influences parental satisfaction in Montessori schools. It predicts parents' satisfaction positively with Montessori services embedded in administrative, teacher teaching qualifications, facilities, and a friendly environment (Miljevic-Riddick et al., 2013).

The implications of this research are crucial for parents, Montessori school owners, researchers, educators, scholars, policymakers, and academicians to foreground the current situation of Pre-schools in Nepal. These effective schools with a positive school climate have concentrated on reaching out to their students' families to develop good cooperation. Montessori schools succeed when a strong and positive relationship is established between students, parents, teachers, and the community (Ebner & Ebner 2022).

The topic of parental satisfaction on Montessori Education in Nawalparasi basically motivated me to show the current parent's beliefs in Montessori education rather than traditional education and understand whether pre-schools have followed the teaching pedagogy based on Montessori education connecting with parental satisfaction. This author wants to know whether Montessori schools are using Facebook pages, YouTube, TikTok, websites, articles, and news are using or not to understand the main reason for parental attraction to Montessori education. The problem of my best friend, whose children attend a Montessori school, inspired me to consider and investigate the parents' satisfaction with Montessori education. As I read and observed the changes in their child's physical, mental, and observed goal objectives, I became more interested in examining parental satisfaction with their educational quality.

## **Early Childhood Education in Nepal**

Early childhood is considered a crucial period of human life which lays the foundation for the future (Kopila 2009). Nonetheless, early childhood education and development (ECED) services are not fully developed within the Nepali context. A key factor is that the geographical structure creates rural and urban divisions that affect the education of young children. According to the Central Bureau of Statistics (2012), "Literacy rates are substantially higher in urban areas (64%) than in rural areas (36%)". So, the school attendance rate for rural areas is also lower than in urban areas, even though every child is entitled to attend school free of charge. The fact that school attendance is not mandated or enforced is a probable explanation for this fact. Traditionally, gender discrimination, illiteracy, the persistence of poverty and traditional social beliefs have also acted as barriers to Nepalese children's educational development (Pant, Nepal 2010); these barriers persist in rural parts of contemporary Nepal.

According to the Department of Education, there are 35,991 Early Childhood Development and Pre-Primary classes in operation (Department of Education 2015). In rural areas, the number of kindergartens is low in government-funded institutions or kindergartens run by the private sector. Only 3,412 Early Childhood Development and Pre-Primary classes are in operation in the Mountain region (Department of Education 2015). Similarly, in the Hill, there are 15,671 and, in the Valley, – 1,989 Early Childhood Development and Pre-primary classes in operation with government support and the private sector (Department of Education 2015). In the Terai area, 14,929 Early Childhood Development and Pre-primary classes are in operation, supported by the government and private sector. However, kindergarten education provided by the government and the private sector creates social gaps as public kindergartens are mainly Nepali-speaking.

In contrast, private kindergarten education is mainly provided via English, highly prized as the language of social mobility. Thus, while in private kindergartens, "the cost of attending is a major barrier to access" (Education International 2010), many parents want their children to learn English and make every effort to enrol their children in private kindergartens. In this article, I discuss the quality of early childhood education and development within the Nepali context, the barriers to its development, and why professionalism within the ECED workforce is a vision that has yet to be realized.

In Nepal, many Montessori Schools are profit motive rather than parents' satisfaction, so parents could not get adequate facilities and prompt responses from teachers and staff. Many children are initially admitted based on the mouth-to-mouth commitments between school administration and parents. Still, parents do not get any consistency between school promise and actual achievement during their children's study in Montessori Schools.

## **Objectives of this study**

The objectives of the study include the following:

- Establish the level of parents' satisfaction with the behaviour and roles of office staff and receptionists.

- Examine if there is a difference in satisfaction with pre-primary education facilities between parents of children in private pre-primary schools.
- Determine if there is a difference in parents' satisfaction with the behaviour and roles of pre-primary education teachers.

### **Primary research question**

1. *What is the association between the facilities of Montessori schools and parents' expectations of their children's education quality?*

### **Secondary research questions**

- 1.1 *What is the association between the behaviour and roles of office staff and reception of Montessori schools and parental satisfaction with their children's education quality?*
- 1.2 *What is the association between the facilities of Montessori schools and parental satisfaction with their children's education quality?*
- 1.3 *What is the association between the behaviour and roles of Montessori teachers and parental satisfaction with their children's education quality?*

The following null hypotheses were tested at a significance level of 0.05:

**Ho<sub>1</sub>:** There is no significant difference in satisfaction with the behaviour and roles of office staff and receptionists

**Ho<sub>2</sub>:** There is no significant difference in satisfaction with pre-primary education facilities between parents of children in private pre-primary schools.

**Ho<sub>3</sub>:** There is no difference in parents' satisfaction with the behaviour and roles of pre-primary education teachers.

### **Rational of this study**

The rationale of this study is based on adding the new literature in the Nawalparasi district to begin the discussion of the Montessori Education quality and facilities. The present condition of Montessori education is still in the beginning phase and needs to improve its quality, facilities, teachers' capability and teaching and learning resources. This study would be a milestone to break through the academic discussion in our society in order to improve the quality, facilities, and teachers' teaching skills and increase teaching and learning resources in Montessori Schools.

## 2. LITERATURE REVIEW

This review was based on parent's satisfaction with Montessori school's education regarding the behaviour and roles of office staff and receptionists, the facilities of Montessori schools and the behaviour and roles of Montessori teachers. The key focus of this literature was to analyze the previous findings on the parent's satisfaction regarding Montessori schools. A few topics can be found on various websites where various journals, books, theses, articles, and some reviews can be found. Their views of websites, articles, books, and journals were discovered to assist in the literature review citation. The ten review studies and sources are analyzed; each showing the publication years, objectives, findings, methods used, and convergent results are summarized (see Table 1).

**Table 1: finding of the previous study of parents' satisfaction towards Montessori educational quality**

Author and publication year	Objectives	Methods used	Findings	Convergence
Parker(2007)	To examine if parents' educational choices correspond to their reasons for selecting Montessori schooling and the impact of family income and ethnicity on their preference for Montessori.	The mixed methods approach	The results indicate that assisting parents in selecting Montessori school options due to practical education, creative mind, friendly environment, and proper care of each child is embedded in parental satisfaction in Montessori schools.	The results highlighted that parents choose Montessori for practical education, creative activities, individual care of their payment-based system, and a friendly environment. Physical activities, feeding systems, safety and security, teacher teaching quality, and play were also found to be areas of satisfaction with the Montessori education system by the researchers.
Schmidt et al. (2009)	To help make Montessori education available to as many children as possible.	Descriptive Research Method	The results highlighted that understanding and assisting the natural process of child development and learning is connected with parental satisfaction. It further indicates that creating Montessori outdoor and indoor areas with hands-on materials that meet specific learning needs and encourage positive brain development is embedded in parental satisfaction.	
Xanthavanij & Eamoraphan (2019)	To identify parental satisfaction with the quality of education. To determine if there was a significant difference between parents' satisfaction with the quality of education according to their demographics.	Conceptual Model	The results show that analyzing parents' satisfaction with the Montessori education system in various areas, such as physical activities, safety and security, the Montessori feeding system, teaching-learning and play materials,	



Author and publication year	Objectives	Methods used	Findings	Convergence
Mustafa (2016)	To identify the relationship between six service quality dimensions and the parents' satisfaction in the community development department (KEMAS) pre-school in Tanjong Malim district.	SEROQUEL Model	The results highlighted that progressing in intelligence, social-emotional development, learning something new, health, and promotion as a learning environment are supportive factors of parental satisfaction.	
Mustafa et al. (2014)	To parents, as well as strengthen their services while facing the challenges in Montessori pre-school.	Integrated framework	The previous study indicates that providing parents' preferred marketing strategies for Montessori using 7p's service for better marketing satisfied the parents in Montessori schools.	
Ackerman (2019)	To support a network of high-quality, full-scholarship, Montessori-inspired pre-schools in underserved communities.	Traditional Montessori approach	The results show that directly teaching knowledge and skill to most children curious about Mathematics and science-related questions and helping with creative work was connected with parents' satisfaction.	
Hiles (2018)	To examine why parents, decide to enrol their children in Montessori schools.	Descriptive Research Method	The results highlighted those motivating parents to Choose Montessori for the appeal of the Montessori activities system, the classroom environment, and the primary focus on long-term child outcomes were related to parents' satisfaction.	
Dahari (2011)	To identify the important factors that contribute most to parents' choice of pre-school for their children.	Descriptive Research Method	The previous study disclosed that assisting parents in selecting a Montessori school based on key factors (privately run institutions, safety and security, and food quality) was embedded with parents' satisfaction.	
Ebner (2022)	They followed their chosen Montessori teaching vocations to examine the joyful paths.	Experimental Research	It was found that encouraging individual children through self-determination, positive awareness, and the acquisition of new skills daily helped satisfy parents in Montessori schools.	
Hu et al. (2020)	To investigate the association between parents' perceptions of home-school partnership and parental satisfaction with pre-school services.	Correlation study	It was discovered that predicting parents' satisfaction positively with Montessori services on different levels (administrative, teacher teaching qualification, facilities, and friendly environment) were related to parental satisfaction in Montessori schools.	

Parker (2007) highlighted that Montessori school options due to practical education, creative mind, friendly environment, and proper care of each child to assist parents in selecting Montessori schools. Similarly, Schmidt (2009) stated that to create a Montessori environment, outdoor and indoor areas must be filled with hands-on materials that meet specific learning needs and encourage positive brain development.



Furthermore, Xanthavanij (2019) indicated the level of parental satisfaction with the system and various areas (physical activities, safety and security, the Montessori feeding system, teaching-learning and play materials, and data analysis) using a five-point Likert scale must be considered. Moreover, Mustafa (2016) stated that to develop children's activities, intelligence, social-emotional development, learning something new, health, and promotion as a learning environment must develop children. Mustafa (2014) highlighted that Montessori uses 7p's service for better marketing to provide parents with preferred marketing strategies. Likewise, Ackerman (2019) found that teaching specific knowledge skills to most children interested in Mathematics and science-related questions supported creative work. Most importantly, Hiles (2018) indicated that the Montessori activities system, classroom environment, and primary focus on long-term child outcomes motivate parents to choose Montessori for various reasons.

However, Dahari (2011) clarified that key factors such as privately run institutions, safety and security, and food quality could help parents choose a Montessori school. Indeed, Ebner (2022) highlighted the significance of encouraging individual children through self-determination, positive awareness, and the acquisition of new skills daily. Hu (2020) found that administrative, teacher teaching qualifications, facilities, and a friendly environment positively predicted parents' satisfaction with Montessori services (see table 1).

### **3. METHODS AND MATERIALS**

#### **'Ontological and epistemological assumptions of this study**

A framework must consider how philosophy fits into the design of the quantitative method. This author likes to apply Crotty's (1998) conceptualization to position philosophy within a quantitative methodology. Paradigm (beliefs: epistemology, ontology), theoretical lens (social science theories), methodological approach (integrated methods approach), and methods (the survey) of data collection. Postpositivist worldview, Constructivist worldview, Participatory worldview and Pragmatist worldview are four applicable worldviews (Creswell & Plano Clark, 2011). All these four worldviews have the same components but take different stances on these components. Worldviews differ in social

reality (Ontology), how people gain knowledge of what they know (epistemology), and the role values play in research (axiology).

Similarly, the process of research (methodology), and the language of research (rhetoric) are different elements of the four worldviews. Methods of data collection help inform the problems under study. This study has followed Positivist worldviews typically associated with a quantitative approach.

The Positivism worldview focuses on the consequences of research. The primary importance of the question asked rather than the methods to inform the problems under the positivism study. Thus, it is pluralistic and oriented toward what works and practices are required (Cohen et al. 2011). In a postpositivist study, the investigators work from the top down, from theory to hypothesis to data, to add or contradict the theory (Creswell & Plano Clark 2011).

### **Quantitative method**

The quantitative method is a research strategy that quantifies data collection and analysis. It is built on a deductive approach, emphasizing theory testing. It's basically making observations about something unknown, unexplained, or new. It helps to investigate the current theory surrounding the problem of this study (Adhikari 2022). This study has applied the quantitative research method because it is more accurate and reliable as it involves studying and analyzing the data using numbers rather than texts (Eriksson & Kovalainen, 2008). This method tries to identify cause-effect correlations between variables similar to genuine experiments, but there are some significant distinctions between them (Winston-Salem State University, 2022). The participants answered five-point Likert-type questions.

### **The survey instruments**

The survey instrument answered three objectives of this study. The first research question answered the behaviour and roles of office staff and receptionists. Similarly, the facility of the Montessori school was answered by the second research question. Finally, the third research question answered the behaviour and roles of Montessori teachers. The survey collected from parents' responses to achieve the study's fixed objectives. The Montessori schools of Nawalparasi were first contacted by email. In the

second phase, they were requested to provide their contact number when they replied to this author's first email. In the third stage, the permission of schools was requested. They all agreed to meet them and discuss this research's importance.

In the fourth phase, Montessori schools were randomly selected for the further process of data collection. After their selection, this author requested with school administration to provide parents' contact details. When this author got information from schools about parents, parents were sent a consent form to participate in this research. After the parents' acceptance, this author decided to go for the questionnaire distribution. Before sending the questionnaire, five parents were sent the survey questionnaire for pilot survey. After the pilot study, some minor correction was made and sent the questionnaire to parents by email. The total population of parents was unknown, but this author sent 220 questionnaires to the parents, but only 200 questionnaires were returned by the returnees ( N =200).

The behaviour and roles of office staff and receptionists, the facilities provided by Montessori schools, and the behaviour and roles of Montessori teachers, and identifying trends and patterns in data will not go so far as to prove the reasons for these observed patterns. This study employs the random sampling method to select the study's sample size. Four Montessori schools were chosen to find teachers, parents, and school staff (e.g., Kakhara Montessori, Smile Kids Montessori Pre-School, S.S. Nike tan Montessori, and Evergreen Montessori). The study's total sample was one thousand (N = 1000). But the total sample population was two hundred (n = 200). Everyone has an equal opportunity to participate in this study. Data were collected from four sampled Montessori schools in Gaidakot 1 and 2. But Montessori children range in age from three to six years old, and this study's data is based on parent satisfaction, which was obtained when parents provided data about their children education in Montessori schools (Blog, 2022).

## Data Analysis

This study uses the reduction of the factors dimension method to find the Principal Component Analysis (PCA) and similar variables in the survey instrument. PCA is a statistical measurement tool used to determine the strength of a link between two or more

variables. Relationship between and among the few facts are sought and understood in PCA. The Binary Logistic Regression research is used to find the association between the independent and dependent variables.

Principal Component Analysis (PCA) was based on the subscales and independent variables of Binary Logistic Regression Analysis. The dependent variable was parents' satisfaction with Montessori educational quality. Questionnaires were used to collect primary data using regression and correlation and then presented using tables created with the data analysis programs Spss and Excel. Furthermore, the study's geographical scope was limited to Gaidakot-1 and 2 areas, only analyzed using regression and correlation, and then presented using tables created with the data analysis programs SPSS and Excel.

Descriptive analytics is the process of identifying trends and relationships in current and historical data. It comes in four varieties. Measures of Frequency Count, Percent, Frequency, and using this to show how frequently a response is given. Measures of Central Tendency (Mean, Median, and Mode, and using this to show how an average or most commonly indicated response), Measures of Dispersion or Variation (Range, Variance, Standard Deviation, and to show how "spread out" the data are), and Measures of Position (Percentile Ranks, Quartile Ranks and to compare scores to a normalized score) were applied in the data analysis phase( Lab, 2018). The KMO values are also presented (see Table 3).

Regression analysis is a statistical method used to show the relationship between two or more than two variables, usually a dependent variable and an independent variable. The analysis was linked to the relationship between the behaviour and roles of office staff and receptionists, the relation between the facilities of Montessori schools, and the relation between the behaviour and roles of Montessori teachers and parents' satisfaction in Montessori schools in this study. The results show that the analysis's first research question has two variables: "the behaviour and roles of office staff and receptionist" as an independent variable and "parents' satisfaction in Montessori schools" as a dependent variable. Similarly, the analysis of the second research question was based on the facilities of Montessori schools" The following question number third has the independent variable being "the behaviour and roles of Montessori teachers", and the

dependent variable is parents' satisfaction in Montessori schools.

**Table 2. Research questions, subscales, number of variables in each scale, and regression**

Research question	Scales	Subscales	Number of variables	PCA of Regression Analysis
Main research question				REGR 1: The Behaviour and roles of Office staff and receptionist
First question	Five-point Likert type	1. The behaviour and roles of Office staff and receptionist	6	REGR 2: The personal influence of Montessori members
		2. The personal influence of Montessori members	2	REGR 3: The Facilities of Montessori schools
		1. The facilities of Montessori schools	4	REGR 4: The Influence of Montessori quality
		2. The influence of Montessori quality	4	REGR 5: The Behaviour and roles of Montessori teachers
Second question				REGR 6: The duties and responsibilities of Montessori teachers
Third question		1. The behaviour and roles of Montessori teachers	4	
		2. The duties and responsibilities of Montessori teachers	3	

#### 4. MAIN RESULTS

The results of this study were based firstly on the factor reduction method of principal component analysis (PCA). Secondly, the results were based on subscale descriptive analysis to find parents' satisfaction based on the behaviour and roles of office staff and receptionists, Montessori schools' facilities, and teachers' roles and behaviour.

Thirdly, the results were based on gender differences on each of the scales of the PCA. Fourthly, the results were based on determining the impact of the overall roles and activities of Montessori schools on parents' satisfaction. Under the first main research question, three sub-chapters were designed. The quantitative results were analyzed and presented in each subsection. The result confirmed that the percentage of female (57.5%) respondents is higher than that of male respondents (42.5%). Two hundred children (n=200) completed the questionnaire and shared their opinions on parents' satisfaction with Montessori schools.

**Table 3. Mean, Standard deviation and Alpha values of the behaviour and roles of office staff and receptionists, Montessori schools' facilities, and teachers' roles and behaviour on parents' satisfaction (N = 200).**

Subscale	Mean	Std	Alpha	variances	KMO and Bartlett's Test
The behaviour and roles of office staff/receptionists	2.238	.49439	.765	39.561	
The personal influence of Montessori staff	2.705	.79285	.671	15.653	.778
The facilities of Montessori schools	2.745	.57205	.696	28.508	
The influence of Montessori quality	2.605	.50336	.601	20.819	.641
The behaviour and roles of Montessori teachers	2.515	.59502	.755	43.747	
The duties and responsibilities of Montessori teachers	2.181	.56691	.706	15.632	.725

The results indicated that the mean value of the first subscale, the behaviour and roles of the office staff and receptionist, is (2.23 < 3) of six subscales is lower than the mid-value (3), signifying that respondents disagreed with the statements on the behaviour and roles of office staff and receptionist, staff being available to speak with parents, phone calls answered promptly and respectfully, being satisfied with the office staff/receptionist, assisting them in understanding their child's needs, and being greeted with courtesy and respect when they visited the school.

Similarly, the mean value of the second subscale, the personal influence of Montessori members, is (2.70 < 3) of six subscales, which is lower than the mid-value (3). It includes that respondents disagreed with the statements that all staff members were well educated and treat them as an equal Montessori team member. Furthermore, the mean value of the third subscale, the facilities of Montessori schools (2.74 < 3), was

lower than the mid-value (3). It indicates that respondents disagreed with the statements about classrooms and playgrounds being smartly updated, that they were satisfied with the school facilities in terms of all necessities, that the school's exterior appearance is clean and neat, and that the children's class activities are displayed throughout the schools. Moreover, the mean value of the fourth subscale's influence of Montessori quality on the (2.60 < 3) of six subscales was lower than the mid-value (3), indicating that respondents disagreed with the statement that a transportation helper is available to support children's health needs. Signs direct students to their destinations, and the school's interior are neat and organized. The results show that the mean value of the fifth subscale of six subscales (2.51 < 3) was lower than the mid-value (3), indicating that respondents disagreed with the statement about parents being satisfied with their child's teachers and the principal being available to address their concerns. All of the teachers are certified and child friendly.

After all, the mean value of the sixth subscale (2.18 < 3) was lower than the mid-value (3), indicating that respondents disagreed with the statement that the child's or children's teacher treats parents courteously and respectfully. When parents have concerns about their child or children, they are thoroughly addressed, and the teacher is readily available (see Table 3). The results of the parent's independent t-test indicate that there was no difference between the satisfaction with Montessori schooling gender-wise.

#### 4.1 The behaviour and roles of office staff and receptionist

*What is the association between the behaviour and roles of office staff and reception of Montessori schools and parental satisfaction with their children's education quality?*

**Table 4. Summary table of block 1 models**

Model	Chi-square	Df	Sig.	Cox and snell's R Square	Nagelkerke's R square	-2loig-likelihood
Omnibus tests of model coefficients	3.614	2	.164	.018	.024	268.502
Hosmer and Lemeshow test	13.547	8	.094			

The results evaluated the tabulated data of block 1 are included in the model. Two more tables are generated to compare this model with the base model. The omnibus tests of model coefficient and Hosmer and Lemeshow test model table give the value of Chi-



square. It also gives degrees of freedom, associated significance level, Cox and Snell & R Square, Nagelkerke's R Square, and -2 log-likelihood used to examine whether including an additional covariate is significant. The value of Chi-square indicates that change in value of -2LL (log-likelihood) from the base model to the present model. If Chi-square static is positive, it shows a decrease in deviance in the prediction of y from the previous/ base model; if it is negative, it shows an increase in deviance. Since the Chi-square is 3.614 and no associated significance level is more than 0.05, the present model shows a decrease in deviance from the base model. As Hosmer and Lemeshow test, the Chi-square is 13.547, and the associated significance level is more than 0.05. The present model shows a decrease in deviance from the base model.

The second item was 2-lig-likelihood, which examines multiple models and determines which best describes the data. Because this is a single model, no comparison can be drawn. The effect size shown by Cox and Snell & R Square value is .018, and Nagelkerke's & R-square value is .024, indicating a better fit. According to Camp man (2017), Nagelkerke's & R Square modify the Cox and Snell R square mathematics to potentially allow the value to reach 1. That is why Nagelkerke's R-square is used in this study.

**Table 5. The binary model to predict parents' satisfaction with Montessori school quality (N =200)**

Independent variables	B	S.E.	Wald	df	Sig.	Exp(B)	95% C.I. for EXP(B)	
							Lower	Upper
The behaviour of office staff/receptionists	.138	.147	.881	1	.348	1.148	.861	1.531
The personal influence of Montessori staff	-.239	.146	2.688	1	.101	.788	.592	1.048
Constant	-.329	.145	5.156	1	.023	.720		

The variables in the equation table show its estimated B, standard error, Wald statistics, degree of freedom, significance level and exponential. The squared ratio of the estimated coefficient to its standard error is Wald statistics and is used to examine the significance of parameters. As tabulated, the significant value of the independent variable is less than 0.05; the parameters are significant. As the value of p is greater than .05, the variables are not significant with the dependent variables. The largest odds value among them is 1.148. it did not show significance ( $p > 0.05$ ).

## 4.2. The facilities of the Montessori schools

*What is the association between the facilities of Montessori schools and parental satisfaction with their children's education quality?*

**Table 6. Summary table of block 1 models**

Model	Chi-square	df	Sig.	Cox and snell's R Square	Nagelkerke's R square	-2loig-likelihood
Omnibus tests of model coefficients	49.885	2	.000	.221	.297	222.232
Hosmer and Lemeshow test	14.189	8	.077			

The results indicate that the Chi-square is 49.885, and no associated significance level is less than 0.05. The present model shows a decrease in deviance from the base model. As Hosmer and Lemeshow test, the Chi-square is 14.189, and the associated significance level is less than 0.05. Therefore, this model is a better fit compared to the base model. The effect size shown by Cox and Snell & R Square value is .221, and Nagelkerke's & R-square value is .297, indicating a better fit in the present model.

**Table 7. The binary model to predict parents' satisfaction with Montessori school quality (N =200)**

Independent variables	B	S.E.	Wald	df	Sig.	Exp(B)	95% C.I. for EXP(B)	
							Lower	Upper
The facilities of Montessori schools	-.983	.193	25.876	1	.000	.374	.256	.546
The influence of Montessori quality	-.773	.178	18.849	1	.000	.462	.326	.654
Constant	-.408	.165	6.134	1	.013	.665		

The results show the significant value of the independent variable is less than 0.05; the parameters are significant. The odds value of .462 is greater than that of other variables. The results show a significant association between the facilities of Montessori schools ( $p < 0.05$ ,  $B = -.983$ ,  $odds = .374$ ) and Montessori facilities ( $p < 0.05$ ,  $B = .773$ ,  $odds = .462$ ), indicating the negative impact on parental satisfaction. The results further show an association between the Montessori quality and parental' satisfaction in Nawalparasi district, Nepal ( $p > 0.05$ ).

### 4.3. Teachers' roles and behaviour with parents

*What is the association between the behaviour and roles of Montessori teachers and parental satisfaction with their children's education quality?*

**Table 8. Summary table of block 1 models**

Model	Chi-square	df	Sig.	Cox and snell's R Square	Nagelkerke's R square	-2log-likelihood
Omnibus tests of model coefficients	17.358	2	.000	.083	.112	254.759
Hosmer and Lemeshow test	10.146	8	.255			

The results show that the Chi-square is 17.358, no associated significance level is less than 0.05, and the present model shows a decrease in deviance from the base model. As Hosmer and Lemeshow test, the Chi-square is 10.146, and no associated significance level is less than 0.05. Therefore, this model is a better fit compared to the base model. The second item was 2-log-likelihood, which examines multiple models and determines which best describes the data. Because this is a single model, no comparison can be drawn. The effect size shown by Cox and Snell & R Square value is .083, and Nagelkerke's & R-square value is .112, indicating a better fit.

**Table 9. The binary model to predict parents' satisfaction with Montessori school quality (N = 200)**

Independent variables	B	S.E.	Wald	df	Sig.	Exp- p(B)	95% C.I. for EXP(B)	
							Lower	Upper
The behaviour and roles of Montessori teachers	-.614	.163	14.104	1	.000	.541	.393	
The duties and responsibilities of Montessori teachers	-.184	.151	1.489	1	.222	.832	.618	.746
Constant	-.339	.150	5.119	1	.024	.713		1.118

The results show its estimated B, standard error, Wald statistics, degree of freedom, significance level and exponential. The results confirm the significant value of the independent variable is less than 0.05; the parameters are significant. The results indicate a significant and positive association between the behaviour and roles of Montessori teachers and parental satisfaction ( $p < 0.05$ ,  $B = -.614$ , odds = .541). The results also highlight no significant association between the duties and responsibilities of Montessori teachers and parental satisfaction in Nawalparasi district, Nepal ( $p > 0.05$ ).

## The Wholesome Regression Model

**Table 10. Summary of block 1 models**

Model	Chi-square	df	Sig.	Cox and smell's R Square	Nagelkerke R square	-2loig-likelihood
Omnibus tests of model coefficients	73.300	6	.000	.307	.413	198.817
Hosmer and Lemeshow test	11.667	8	.167			

The results show that the Chi-square is 73.300, no associated significance level is less than 0.05, and the present model shows a decrease in deviance from the base model. As Hosmer and Lemeshow test, the Chi-square is 11.667, and no associated significance level is more than 0.05; the present model shows a decrease in deviance from the base model. Therefore, this model is a better fit compared to the base model. The results confirm the effect size of Cox and Snell & R Square value is .307 and Nagelkerke's & R-square value is .413 indicating a better fit in the present model.

**Table 11. The wholesome model to predict parents' satisfaction toward Montessori schools' facilities (N = 200)**

Independent variables	B	S.E.	Wald	df	Sig.	Exp(B)	95% C.I. for EXP(B)	
							Lower	Upper
The behaviour and roles of Montessori staff/receptionists	.401	.202	3.960	1	.047	1.494	1.006	2.219
The personal influence of Montessori staff	-.022	.217	.011	1	.918	.978	.639	1.497
The facilities of Montessori schools	-1.024	.231	19.713	1	.000	.359	.229	.565
The influence of Montessori quality	-.895	.215	17.332	1	.000	.409	.268	.623
The behaviour and roles of Montessori teachers	-.862	.200	18.540	1	.000	.422	.285	.625
The duties and responsibilities of Montessori teachers	-.144	.185	.607	1	.436	.866	.602	1.244
Constant	-.489	.180	7.366	1	.007	.613		

The results confirm the significant value of the independent variable is less than 0.05; the parameters are significant. The odds value of 1.494 is greater than that of other variables, showing their significant association and a positive relation with the dependent variable. The results indicate a significant association between the facilities of Montessori schools ( $p < 0.05$ ,  $B = -1.024$ , odds = .359), showing a positive impact on parental satisfaction. The results further indicate a significant association between the facilities of Montessori schools, the influence of Montessori education quality, the behaviour of Montessori staff and parental satisfaction ( $p < 0.05$ ,  $B = .895$ , odds = .409),

indicating a negative impact on parental satisfaction (see Table 11). The result highlights no association between the behaviour and roles of office staff/receptionists and parental satisfaction in Nawalparasi district, Nepal ( $p > 0.05$ ) (see Table 11).

## 5. DISCUSSION AND CONCLUSION

My discussion is based on objectives and research questions about parents' satisfaction with Montessori education. This study has already presented three research questions based on the parents' satisfaction. This study's main focus was Montessori education and facilities. The quality and facilities of Montessori schools related to parents' satisfaction with Montessori schooling. This study was conducted with a survey administered instrument to the total sample was one thousand, but the total sample population was two hundred. Data were collected from four sampled Montessori schools in Gaidakot 1 and 2. The survey questionnaire was used to collect primary data and analyzed by using regression and correlation and then presented using tables created with the data analysis programs of SPSS and Excel.

The results indicate that the behaviour and roles of office staff and receptionist, the personal influence of Montessori members, the facilities of Montessori schools, the influence of Montessori quality, the behaviour and roles of Montessori teachers, and the duties and responsibilities of Montessori teachers were subscales of the survey variables. The mean values of facilities of Montessori schools have the highest mean value following the lowest mean value (2.161) of facilities of Montessori schools. The results also indicate that the data of this study was reliable and valid because the Alpha value was better (.601).

Similarly, the results show a significant association between the personal influence of Montessori members observing parents' satisfaction in Montessori schools, indicating a negative association with parents' satisfaction in Montessori schools ( $p < 0.05$ ). Further, it shows that there was no association between these subscales. The results indicate a negative association between the facilities of Montessori schools with parents' satisfaction in Montessori schools (see Table 11). The results further indicate that that there was no association between the personal influence of Montessori members and the duties and responsibilities of Montessori teachers and parents' satisfaction. The

results further indicate a negative association between the duties and responsibilities of parents' satisfaction in Montessori schools (see Table 11).

### **First research question**

*What is the association between the behaviour and roles of office staff and reception of Montessori schools and parental satisfaction with their children's education quality?*

The result shows a significant association between the behaviour and roles of office staff and receptionists of parents' satisfaction in Montessori schools, indicating a positive association with parents' satisfaction in Montessori schools ( $p < 0.05$ ). Similarly, the results show a significant association between the personal influences of Montessori members observing parents' satisfaction in Montessori schools, indicating a negative association with parents' satisfaction in Montessori schools ( $p < 0.05$ ). The study of Lillard, Meyer, Vasco & Fukuda (2021) and Schmidt, Schmidt & Syd Kruse (2009) supported this study and found that the behaviour and roles of office staff and reception of Montessori schools positively impact parental satisfaction in Montessori Education.

### **Second research question**

*What is the association between the facilities of Montessori schools and parental satisfaction with their children's education quality?*

The result further indicates a significant association between the facilities of Montessori schools observing parents' satisfaction in Montessori schools, indicating the negative association with parents' satisfaction in Montessori schools ( $p < 0.05$ ). Similarly, the results show that there was a significant association between the influence of Montessori quality on parents' satisfaction in Montessori schools, indicating a negative association with parents' satisfaction in Montessori schools ( $p < 0.05$ ) (see Table 7). The current studies supported the previous studies of Xanthavanij and Eamoraphan (2019) and Mustafa et al. (2014), who found that parents' satisfaction with the Montessori education system in various areas was embedded in physical activities, safety and security, the Montessori feeding system, teaching-learning and play materials.

### **Third research question**

*What is the association between the behaviour and roles of Montessori teachers and parental satisfaction with their children's education quality?*

The result further indicates a significant association between the behaviour and roles of Montessori teachers observing parents' satisfaction in Montessori schools, indicating a negative association with parents' satisfaction in Montessori schools ( $p < 0.05$ ). Similarly, the results show a significant association between the duties and responsibilities of Montessori teachers and parents' satisfaction with Montessori school quality, indicating a negative association with parents' satisfaction in Montessori schools ( $p < 0.05$ ). The current study is supported by Hu et al. (2020), who found that the behaviour and roles of Montessori teachers positively impact parental satisfaction in Montessori schools.

### **Recommendations**

- Future research could focus on using the mixed methods approach to understand the multiple reality of the impact of the Montessori school's facilities on parents' satisfaction
- We can analyze and strengthen the findings using a larger sample size and more people and samples.
- More funding could lead to more stable and reliable data analysis in the research.
- It could be more than just academic research that contributes to Montessori advancement in the academe and other sectors.
- More time could have been spent on data collection, literature reviews, and in-depth research.
- The effects of Montessori programs on the learning outcomes of children from low-income families are also required in the future study.

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