MOST RELEVANT ASPECTS OF THE QUALITY OF URBAN PUBLIC BUS TRANSPORTATION SERVICE

ASPECTOS MAIS RELEVANTES DA QUALIDADE DO SERVIÇO DE TRANSPORTE PÚBLICO URBANO DE ÔNIBUS

ASPECTOS MÁS RELEVANTES DE LA CALIDAD DEL SERVICIO DE TRANSPORTE PÚBLICO EN AUTOBUS URBANO

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ABSTRACT

The present study aimed to identify the most relevant aspects of the quality of urban public bus transportation service according to the users' perceptions. Although the study starts from a specific reality, reflections are raised about the quality of the urban public bus transportation service as a whole, inputs that prove to be important for other realities. Questionnaires were applied to measure the dimensions of reliability, tangible aspects, empathy, safety, and promptness. Data was subjected to Pearson correlation and logistic regression tests to explore which quality dimensions influence the recommendation of the service to other users. The results showed that users attribute greater importance to the reliability dimension and evaluate empathy as the highest performance dimension. The research results also indicated the need for attention to the dimension of tangible aspects, which, together with reliability, can influence the recommendation of the urban public bus transportation service. Such dimensions can jointly explain 27.1% of the variability in service recommendations to other users. We hope this research may raise inputs worthy of reflection to promote improvements in urban public transport by the companies providing these services and by public authorities.

Keywords: Satisfaction; SERVPERF; Collective transport.

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RESUMO

O presente estudo teve como objetivo identificar os aspectos mais relevantes da qualidade do serviço de transporte público urbano de ônibus segundo a percepção de usuários do serviço. Embora o estudo parta de uma realidade específica, são levantadas reflexões acerca da qualidade do serviço de transporte público urbano de ônibus como um todo, *inputs* estes que se mostram importantes para outras realidades. Aplicaram-se questionários que mensuraram as dimensões de confiabilidade, aspectos tangíveis, empatia, segurança e presteza. Os dados foramsubmetidos a testes de correlação de Pearson e de regressão logística a fim de explorar quais dimensões da qualidade exercem influência na recomendação do serviço a outros usuários. Os resultados apontaram que os usuários conferem maior importância à dimensão confiabilidade e avaliam a empatia como sendo a dimensão de desempenho mais elevado. Os resultados da pesquisa também indicaram a necessidade de atenção à dimensão de aspectos tangíveis, a qual, juntamente com a confiabilidade, é capaz de influenciar a recomendação do serviço de transporte público urbano de ônibus. Tais dimensões mostraram-se capazes de explicar, conjuntamente, 27,1% da variabilidade da recomendação do serviço a outros usuários. Espera-se que esta pesquisa levante *inputs* dignos de reflexão que contribuam para promoção de melhorias no transporte coletivo urbano pelas próprias empresas prestadoras desses serviços e pelo poder público.

Palavras-chave: Satisfação; SERVPERF; Transporte coletivo.

RESUMEN

El presente estudio tuvo como objetivo identificar los aspectos más relevantes de la calidad del servicio de transporte público urbano de autobuses según la percepción de los usuarios del servicio. Si bien el estudio parte de una realidad concreta, se plantean reflexiones sobre la calidad del servicio de transporte público urbano en autobús en su conjunto, *inputs* que resultan importantes para otras realidades. Se aplicaron cuestionarios que midieron las dimensiones de confiabilidad, aspectos tangibles, empatía, seguridad y prontitud. Los datos fueron sometidos a pruebas de correlación de Pearson y regresión logística para explorar qué dimensiones de calidad influyen en la recomendación del servicio a otros usuarios. Los resultados mostraron que los usuarios otorgan mayor importancia a la dimensión de confiabilidad y evalúan la empatía como la dimensión de desempeño más alta. Los resultados de la investigación también indicaron la necesidad de prestar atención a la dimensión de los aspectos tangibles que, junto con la confiabilidad, son capaces de influir en la recomendación del servicio de transporte público urbano por autobús. Estas dimensiones demostraron ser capaces de explicar en conjunto el 27,1% de la variabilidad en la recomendación del servicio a otros usuarios. Se espera que esta investigación recaude insumos dignos de reflexión que contribuyan a promover mejoras en el transporte público urbano por parte de las empresas prestadoras de estos servicios y de las autoridades públicas.

Palabras clave: Satisfacción; SERVPERF; Transporte colectivo.

1 INTRODUCTION

The public transport system is fundamental for society's quality of life and economic and social development. This system has democratic characteristics, as it allows people with a lower economic level to move within cities, individuals who, for some reason, cannot drive, such as those under eighteen, elders, people with physical and mental disabilities, or people who, despite having the means, choose not to drive (Ferraz; Torres, 2004).

Transport and urban mobility are fundamental elements for the development of Brazilian cities, many of which have been experiencing rapid growth and, consequently, an intense movement of products and people, whether for work, study, shopping, health, leisure,

or other reasons related to everyday life. Therefore, the quality of public transport is relevant for its users since they use it constantly, and it is even more necessary because it is a public service considered essential for the population (Ramos, 2013).

Organizations should strive to improve the level of their services and also the satisfaction of their customers so that they can compete and maintain themselves in the long term, given the complex and unstable scenario arising from the technological dynamics of different productive sectors. The top management of large organizations has recognized how improving the quality of their goods and services can contribute to the success of companies and, therefore, has started to value customers and their satisfaction as an instrument capable of influencing the preservation and expansion of market share (Finger, 2000).

Companies operating in the public transport sector should serve their users in the best possible way, seeking to understand what they consider quality transport since such service users play a fundamental role in the relationship with suppliers. Furthermore, companies in this sector have been competing for customers with transport applications that already operate with the option of sharing trips, such as "Uber Juntos" or "99 Compartilha", promoting collective travel. The migration of users to app-based transport represents a reduction in demand for buses, a reduction in revenue, and, consequently, an increase in the value of fares (ANTP, 2022).

Thus, users are fundamental in evaluating urban transport, as they can provide relevant information based on their experiences, contributing to establishing parameters and quality indicators that will guide public authorities and the companies providing the service. Therefore, to retain passengers and prospect new users, customer satisfaction and the quality of the service offered become indispensable tools.

Given the above, this study seeks to answer the following question: what are the most relevant aspects of the quality of urban public bus transportation service according to users' perceptions?

The study was developed in Montes Claros-MG for accessibility reasons. Given the territorial extension and number of inhabitants in the city (above 400,000), the unit of analysis of this research, we chose to focus on a specific bus line (2601) due to its relevance concerning the number of individuals transported daily. In addition to the high number of users, the intensive use of this line by university students at the Federal University of Minas Gerais (UFMG) Montes Claros Campus and other educational institutions located in the same region would have the potential to bring relevant elements to this study, as they comprise a group with rigid schedules for classes and other academic activities, presenting, in general, a high frequency of use, from the early hours of the morning until the end of the working day, since UFMG offers undergraduate courses in the morning, afternoon, and evening periods.

The general objective of this study was to explore the most relevant aspects of the quality of urban public bus transportation service according to users' perceptions. The following specific objectives were established: to characterize the urban public bus transportation service and its users; to evaluate the dimensions of service quality in terms of importance and performance; to explore statistically significant correlations between importance assessments and performance; and to explore which dimensions of quality influence the recommendation of the bus line to other users.

Through this investigation, we explored how people understand transport quality, identifying what users believe to be essential in the public bus transport service. Getting to know users and what they point out as quality can help the companies providing the service identify improvement opportunities, thus contributing to better service provision. Besides, that

can even influence people who do not use public bus transport to choose this mode of transport as improvements are implemented.

This study is relevant for users, as the research results and suggestions could bring positive changes to their daily lives, influencing an increase in quality of life by moving to the desired destinations with more comfort, safety, punctuality, and hygiene, among other aspects. This study may also help public authorities identify deficiencies and improvement opportunities in the contracted service. In this sense, it is essential to raise users' opinions as one of the references to adjust the contract and bidding processes with outsourced companies.

This study may contribute to understanding public bus passenger transport, particularly the quality of services offered. The study can also serve as a reference for future studies on quality and other relevant topics.

This article comprises five sections. In addition to this introductory section, in which the theme, problem, and objectives were presented, the text is structured into four more sections. Next, the theoretical framework will be presented, mainly addressing previous studies that have already developed quality assessments of the urban bus transport service. Afterward, the methodological procedures adopted in the study will be presented. Subsequently, the results of the research will be described and discussed. At last, the study's final remarks, limitations, and suggestions for future research.

2 THEORETICAL BACKGROUND

Scientific literature, both national and international, addresses various dimensions and attributes used to measure the quality of public bus transport service. Some research carried out in different Brazilian regions will be highlighted here as they present similar contexts to this study.

Services have some characteristics, such as intangibility and variability in production processes and their results. The customer participates in production, which partly explains the high variability linked to users, which makes it difficult to measure the quality of services (Lübeck *et al.*, 2011).

The study developed in Santa Maria-RS by Lübeck *et al.* (2011) aimed to evaluate user satisfaction levels concerning urban public bus transport quality. The results showed higher levels of satisfaction linked to the treatment of drivers and collectors and respect for traffic laws by drivers, highlighting satisfaction with empathy and safety. Tangible aspects and reliability were associated with user dissatisfaction.

Given the typical difficulties of measuring service quality, Freitas and Reis (2013) developed a study in Itaperuna-RJ to propose a methodological approach to evaluate the quality of public transport services provided by urban buses based on users' perceptions. They used five dimensions of service quality: vehicles, routes and stops, service, time, and added value. The dimensions that provided greater and lesser satisfaction were service and added value, respectively.

Antunes and Simões (2013) developed a survey in Maringá-PR using Psychometrics to measure the level of satisfaction of urban transport users concerning the quality of the urban public bus transport system. The attribute with the highest satisfaction was accessibility to the public transport system. According to users, capacity correlated with the highest dissatisfaction.

Antunes, Romeiro, and Sigrist (2017) analyzed the public bus transport service quality in Santos-SP. Most evaluations of the service quality in the city ranged from 5.1 to 7.5 on a scale of 0 to 10.

Barros and Melo (2017) evaluated user satisfaction levels with the public transport service in Caruaru-PE based on one specific bus line (Downtown/UFPE). The research population comprised students from the Production Engineering undergraduate course at the Federal University of Pernambuco (UFPE) Campus Centro Acadêmico. There were 60 respondents, and most students were dissatisfied with the services provided.

The research carried out in Unaí-MG by Leitão, Silva, and Morais (2018) with users of public transport aimed to compare their expectations and perceptions of the service provided and verify possible tools for improvement. The dimensions evaluated were tangibility, reliability, responsibility, safety, and empathy. Among the results obtained, the category that received the most criticism from users was safety.

According to Strehl, Moyano, and Angnes (2019), user satisfaction can be considered a key indicator of satisfaction. Therefore, the authors aimed to identify the qualitative attributes that impact satisfaction with the quality of urban buses. They identified six factors as preponderant for satisfaction with the urban bus service: passenger service, passenger information, transport vehicle, public transport service, bus stop structure, and stop environment.

Castilha (2019) developed a study in Foz do Iguaçu-PR to evaluate the quality of public transport based on users' perceptions associated with the city's development. He evaluated the criteria based on scores from 1 to 5 according to the degree of importance and satisfaction. Safety, reliability, and capacity were the most relevant factors. The accessibility and operators criteria were the only ones that showed regular satisfaction.

Tardin et al. (2020) developed a survey in Vitória-ES with 233 students from the Federal University of Espírito Santo (UFES) Campus Goiabeiras to explore quality attributes of public transport service that influence users' satisfaction. The results revealed that the comfort dimension is the most relevant aspect and has the strongest effect on satisfaction, followed by the reliability dimension.

At last, Muniz *et al*. (2020) analyzed the satisfaction level with public transport services provided by buses and used by students at the Federal University of Sergipe (UFSE) Campus São Cristóvão. The transport service was analyzed by vehicle dimensions, routes and stops, service, time, and added value. Among all the categories analyzed, the one that presented the worst level of satisfaction was added value, while service obtained the best result.

As theoretical-empirical studies point out, several attributes are relevant to public transport service quality. The systematization of previous studies presented above aimed to bring together guiding elements for choosing a model for evaluating the quality of public transport services in this study, according to details in the following section.

3 METHOD

Regarding the approach to the problem, this research is characterized as a quantitative study, given that, to achieve its general and specific objectives, the data obtained were presented and analyzed by performing multivariate correlation and logistic regression.

The population of this research comprised users of collective public bus transport in Montes Claros-MG, specifically undergraduates from UFMG Campus Montes Claros who use bus line 2601 to access the university daily. The chosen line was ratified by the President of the Municipal Company for Planning, Management, and Education in Traffic and Transport of Montes Claros (MCTrans) as the line with the highest volume of passengers transported daily. The sampling was based on accessibility.

98 questionnaires were applied from April 4th to May 17th, 2023. Out of the 98 questionnaires applied, 96 were validated. Two were discarded because they had not been completely answered. The questionnaire used was prepared based on the analysis of questionnaires applied by Lima (2018), Leitão, Silva, and Morais (2018), and Costa, Barros, and Oliveira (2018). Questions considered appropriate to achieve the objectives of this study were prepared using the SERVPERF model adapted for this research as an instrument. This data collection instrument was a closed questionnaire divided into four blocks. The first block contained questions that sought to understand the profile of urban public transport users.

The second block sought to understand the importance of the five dimensions of service quality: reliability, tangible aspects, promptness, safety, and empathy. In this block, the respondents placed the dimensions in order of importance from the first to the fifth dimension, with the first being the most important and the fifth being the least important according to users' perceptions.

In the third block, specific statements were made for each dimension, totaling 22 statements, evaluated using a 5-point Likert scale, ranging from "Totally disagree" to "Totally agree". The fourth block aimed to understand how users evaluate the general performance of bus line 2601 based on the dimensions of service quality, also using the 5-point Likert scale, ranging from "Terrible" to "Excellent".

Data was analyzed using the software IBM® SPSS® 20.0 (Statistical Package for the Social Sciences). First, data underwent univariate descriptive statistics analysis. Next, we performed multivariate data analyses: Pearson correlation and logistic regression tests. The results were then discussed in light of previous studies concerning the topic.

After addressing the methodological procedures adopted in the research, the study results are presented below characterizing the research participants, followed by the correlation and regression results.

4 RESULTS AND DISCUSSION

4.1 Sample characterization

The study sample consisted of 96 undergraduates, comprised of female and male individuals of different ages, courses, and periods. Women represented most of the sample (76.04%). Most of the participants were aged between 17 and 22, attending the first and third periods. 70.83% of respondents do not work. That justifies the high number of people who stated they did not have an individual income (73.96%).

The most used forms of payment for bus transport were cash and card (citizen and transport voucher), and in some cases, both forms are used by the same person. Although the sample comprises students, the student half-pass payment method, surprisingly, was not the most used.

The majority of study participants attend the university from morning to afternoon. This is because only the Administration course is offered in the evening shift. Half of the sample do not use alternative transport to access the university, only public transport. Of those who use other means of transport, the majority use a car or motorcycle, up to a maximum of five times a week, while bus line 2601 is used more than ten times a week by some students. Furthermore, 32 students stated that they use bus line 2601 to access other destinations, while 64 students use this line only to attend the university.

4.2 Analysis of service quality in terms of importance and performance

Using Mode (Mo), a scale of importance of dimensions was established, based on the number of times each dimension was associated with positions, from 1st to 5th, with the first position being the most important and the fifth the least important. Table 1 summarizes the order of importance of the dimensions according to users' perceptions.

Table 1 – Scale of importance of quality dimensions identified in the study

Order of importance	Dimensions	Quantity
1st	Reliability	52
2nd	Promptness	40
3rd	Safety	39
4th	Tangible aspects	41
5th	Empathy	54

Source: Research data

According to Table 1, respondents placed the reliability dimension first 52 times, considered by students the most important. The reliability dimension is related to compliance with schedules and routes. This result makes sense since the research participants are students with class schedules they need to follow at the university. The studies developed by Barros and Melo (2017) and Santos (2014) also identified the reliability dimension as the most important according to users.

Regarding the evaluation in terms of performance level, the three variables that presented the highest performance levels were tangible aspects, safety, and reliability. It is relevant to highlight that the present research differentiates between perceptions of importance and perceptions of performance. In other words, it is possible that a user considers a dimension important but evaluates it negatively in the service provided.

Despite being part of more than one quality dimension, the variable with the best performance evaluation concerned the behavior of drivers and collectors. Similar results were found in the studies developed by Lübeck *et al.* (2011) and Freitas and Reis (2013). Drivers and collectors play a fundamental role in the service as they interact directly with customers (Hoffman; Bateson, 2008). The positive or negative image of both the service and the company depends on the actions of front-line staff (Fitzsimmons; Fitzsimmons, 2010).

The three variables that presented the worst performance evaluation belong to the dimensions of tangible aspects and safety. These results shed light on the tangible aspects and

safety dimensions since these attributes present variables of both greater satisfaction and greater dissatisfaction simultaneously. Specifically, the greatest dissatisfaction was associated with the structure of the buses used by the public transport service in Montes Claros-MG.

According to the concession between the city and the company providing the service, one of the contract objectives is the modernization and qualification of the bus fleet to provide transport with safety, comfort, and ease of boarding (Montes Claros, 2019). In 2020, 19 new buses were added to the city's public transport bus fleet, and only the new ones have air conditioning (Pelegi, 2020).

Night shift students demonstrated the worst performance evaluations, especially concerning the schedule. According to the Consortium that manages the bus line 2016, the travel times start at 5:10 am and end at 10:30 pm on weekdays. The time interval between buses is, on average, 15 minutes, however, from 7:05 pm this interval increases. That may explain why night shift students showed greater dissatisfaction with this dimension since the timetable options for bus line 2601 are much more restricted at night.

As previously highlighted, evaluations of the order of importance and performance in the same study make it possible to intertwine the quality dimensions considered relevant for users of urban public bus transport and the service that is actually provided. In this sense, some results draw attention. As an example, although the empathy dimension received the best evaluation in terms of performance, this attribute was considered the least important by the study participants, as observed in Table 2. That indicates the transport service is exemplary in performance in the dimension considered least relevant for users.

Table 2 – Importance vs. Performance of quality dimensions

Importance		Performance	
Dimensions	Position	Dimensions	Position
Reliability	1st	Empathy	1st
Promptness	2nd	Reliability	2nd
Safety	3rd	Promptness	3rd
Tangible aspects	4th	Safety	4th
Empathy	5th	Tangible aspects	5th

Source: Research data

Comparing the performance and importance of quality dimensions makes it possible to verify whether the effort to provide a good service has been applied in the correct direction. Getting to know service users brings organizations a significant competitive advantage (Fitzsimmons; Fitzsimmons, 2010).

The results presented in Table 2 show that it is necessary to invest in increasing the quality of reliability and promptness dimensions, which were identified as the most relevant in this study. Acting on problems linked to service quality requires the ability to dialogue with users, focusing on the needs and desires that are most relevant and capable of generating greater satisfaction (Zamberlan *et al*., 2010).

At last, according to the study results, out of the 96 users, 62 (65%) would recommend bus line 2601 to other users. In general, users who would not indicate bus line 2601 (35%) evaluated the five quality dimensions as "Terrible", "bad", or assumed neutrality.

4.3 Analysis of correlation between bus transport quality dimensions

One of the specific objectives of this study was to explore statistically significant correlations between importance assessments and between performance assessments as perceived by users. Thus, it became possible to glimpse which quality dimensions are associated with each other positively or negatively. Tables 3 and 4 present, respectively, the correlation matrix for the level of importance and the correlation matrix for the level of performance of the quality dimensions.

Table 3 – Correlation matrix for the level of importance

		Reliability	Tangible aspects	Promptness	Safety	Empathy
Reliability	oef.	1	-,176	-,046	-,344**	-,480**
	ig.		,087	,655	,001	,000
Tangible aspects	oef.	-,176	1	-,441**	-,136	-,129
	ig.	.087		.000	.186	.210
Promptness	oef.	-.046	-.441**	1	-.364**	-.248*
	ig.	.655	.000		.000	.015
Safety	oef.	-.344**	-.136	-.364**	1	-.128
	ig.	.001	.186	.000		.215
Empathy	oef.	-.480**	-.129	-.248*	-.128	1
	ig.	.000	.210	.015	.215	

Source: Research data. Note: * = significant correlation at the 95% confidence level; ** = significant correlation at the 99% confidence level.

Table 4 – Correlation matrix for the level of performance attributed by the participants

		Reliability	Tangible aspects	Promptness	Safety	Empathy
Reliability	oef.	1	.407**	.498**	.503**	.416**
	ig.		.000	.000	.000	.000
Tangible aspects	oef.	.407**	1	.475**	.340**	.463**
	ig.	.000		.000	.001	.000
Promptness	oef.	.498**	.475**	1	.493**	.514**
	ig.	.000	.000		.000	.000
Safety	oef.	.503**	.340**	.493**	1	.471**
	ig.	.000	.001	.000		.000
Empathy	oef.	.416**	.463**	.514**	.471**	1
	ig.	.000	.000	.000	.000	

Source: Research data. Note: * = significant correlation at the 95% confidence level; ** = significant correlation at the 99% confidence level.

Regarding the evaluation of quality dimensions according to the level of importance (Table 3), two statistically significant correlations stood out for presenting higher correlation coefficients. First, the results demonstrated that users who consider the reliability dimension relevant do not appraise the empathy dimension as important ($r = -0.480$; $p < 0.001$). Second, data showed that users who consider the tangible aspects dimension relevant do not appraise the promptness dimension as important ($r = -0.441$; $p < 0.001$).

Both results bring reflections. The first suggests that users would not mind using a transport service with low empathy as long as reliability was present. Low empathy is characterized, for example, by a low level of information to customers about fees or the absence of a user support application. As already presented, reliability manifests in a transport service that delivers as promised concerning routes and timetables, for instance.

The second result suggests that users would not mind using a low-responsive transport service, characterized by drivers and collectors who are not friendly and willing to help if tangible aspects such as comfort and cleanliness are guaranteed.

Concerning the assessment of quality dimensions according to performance level (Table 4), some statistically significant correlations also stood out for presenting higher coefficients. The results showed that users who highly evaluated the reliability of the transport

service currently provided also evaluated such transport well in terms of tangible aspects ($r = 0.407$; $p < 0.001$), promptness ($r = 0.498$; $p < 0.001$), safety ($r = 0.503$; $p < 0.001$), and empathy ($r = 0.416$; $p < 0.001$). The reliability dimension, therefore, showed the strongest correlations with the other quality attributes measured in this research in terms of performance level.

Bearing in mind that correlations do not imply causality, the final specific objective of this research was to explore which quality dimensions exert a statistically significant influence on the recommendation of the bus line to other users. These results will be presented and discussed below.

4.4 Analysis of influence of quality dimensions on bus line recommendation

To explore what quality dimensions would partially explain the variability of bus line recommendation to other users, logistic regression tests were carried out, considering the bus line recommendation as a binary dependent variable (1 = Yes, I would recommend; 2 = No, I would not recommend). As independent variables (predictors), the five quality dimensions measured in this study in terms of performance level were considered. Table 5 summarizes the only statistically significant predictions identified.

Table 5 – Quality dimensions that influence bus line recommendation

Independent variables	Dependent variable	Sig.	R2 (Adjusted)
Tangible aspects	Bus line recommendation	0.000**	0.271
Reliability			

Source: Research data. Note: ** = significant prediction at the 99% confidence level.

The results in Table 5 indicate that the performance of the urban public bus transport service in terms of tangible aspects and reliability jointly explains 27.1% of bus line recommendations to other users. The prediction showed a positive sign, indicating that the higher the performance of the bus transport service in these two dimensions, the higher the probability of users recommending the bus line.

If we take the bus line recommendation as a general assessment of the quality of the transport under analysis, we can conclude that the dimensions of tangible aspects and reliability are those that deserve, in fact, greater attention from the service provider company, given its power to influence user satisfaction.

5 FINAL CONSIDERTIONS

The general objective of this study was to identify the most relevant aspects of the quality of urban public bus transportation service according to users' perceptions. In general, the dimensions received good evaluations, with more responses ranging from neutral to excellent, demonstrating a good satisfaction level and a greater propensity to recommend the analyzed bus line.

The study concluded that users who use public bus transport to access the university attribute greater importance to the reliability dimension, being more sensitive to following established routes and timetables. The performance evaluation pointed to empathy as the best-evaluated dimension. Therefore, the results of this study indicate the need for companies providing services and public authorities to turn their attention to the dimension capable of generating greater user satisfaction: reliability. The research results also indicate the need for attention to the dimensions of tangible aspects and reliability that jointly influence bus line recommendation.

This study analyzed users' perceptions in Montes Claros-MG and the quality of the transport service regarding the most important bus line in the city. Although the study collected and analyzed data from a specific reality, the reflections raised about the quality of the urban public bus transportation service are also relevant for other realities.

Compared to previous relevant research developed on the topic, the primary strength of this study concerns the fact that the discussion sought to go beyond the description of the results, also applying statistical tests that allowed the analysis to be deepened, approaching correlation and prediction between variables. The model used here has the potential to contribute to advancing understanding of the phenomenon in question, enabling original reflections for companies providing transport services and representatives of public authorities.

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