

Exploring Customer Satisfaction in Telecom Services Call Centers: A Comprehensive Study

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Abstract: *In the rapidly evolving landscape of telecommunications, customer satisfaction stands as a pivotal metric for service providers aiming to maintain competitiveness and foster customer loyalty. This research delves into the intricate dynamics of customer satisfaction within the context of telecom services call centers, investigating the various factors that contribute to customer contentment or dissatisfaction. The study employs a mixed-methods approach, combining quantitative surveys and qualitative interviews to gather comprehensive data from a diverse sample of telecom service consumers. Key performance indicators, such as call response times, issue resolution efficiency, and customer service representative competence, will be examined quantitatively. Simultaneously, qualitative insights will be obtained through in-depth interviews, shedding light on customer perceptions, expectations, and overall experiences with telecom call center services. The research aims to identify patterns, correlations, and trends in customer satisfaction within the telecom sector, pinpointing critical touchpoints in the customer journey. Special emphasis will be placed on understanding the impact of technological innovations, such as AI-driven customer support systems and interactive voice response (IVR) solutions, on customer satisfaction. Furthermore, the study will explore the role of effective communication, both verbal and written, in influencing customer satisfaction. It will analyze the importance of empathy, resolution transparency, and personalized interactions in enhancing the overall customer experience. The findings of this research are expected to provide valuable insights for telecom service providers, enabling them to optimize their call center operations and strategies to meet and exceed customer expectations. Ultimately, the study aspires to contribute to the enhancement of customer satisfaction in the telecom industry, fostering sustainable relationships between service providers and their clientele.*

Keywords: *Telecom call center, Consumers, Services, IVR, Customer support.*

1. Introduction

The telecommunications industry is undergoing rapid transformations, driven by technological advancements and evolving customer demands. In this dynamic landscape, customer satisfaction has emerged as a critical determinant of success for telecom service providers. Among the various touchpoints where customer interactions occur, call centers play a pivotal role in shaping customer perceptions and experiences.

The purpose of this comprehensive study is to delve into the intricacies of customer satisfaction within the realm of telecom services call centers. Understanding the factors that contribute to heightened satisfaction or dissatisfaction is imperative for telecom companies striving to retain existing customers and attract new ones.

1.1 Background

The telecommunications sector has witnessed unprecedented growth, with an increasing reliance on



communication services in both personal and professional spheres. As consumers become more discerning, their expectations of seamless and efficient interactions with service providers have risen significantly. Call centers, being a primary interface for addressing customer queries and concerns, stand as a focal point for gauging and influencing customer satisfaction.

1.2 Rationale for the Study

Customer satisfaction is not merely a metric; it is a strategic imperative for telecom companies. In an era where choices abound, customers are empowered to switch providers based on the quality of service they receive. Recognizing the significance of call centers in this equation, this study seeks to comprehensively examine the factors influencing customer satisfaction in telecom services call centers.

1.3 Scope of the Study

This research adopts a holistic approach, combining quantitative and qualitative methods to explore the multifaceted dimensions of customer satisfaction. Quantitative surveys will provide numerical insights into key performance indicators, while qualitative interviews will offer nuanced perspectives and deeper understanding of customer experiences.

1.4 Objectives

- To assess the impact of call response times on customer satisfaction.
- To evaluate the efficiency of issue resolution processes in telecom call centers.
- To understand the influence of customer service representative competence on overall satisfaction.
- To explore the role of technological innovations, such as AI-driven support systems, in shaping customer experiences.
- To analyze the importance of effective communication and empathy in enhancing customer satisfaction.

1.5 Significance of the Study

The findings of this study aim to provide telecom service providers with actionable insights to optimize their call center operations. By addressing pain points and capitalizing on positive aspects identified through this research, companies can foster improved customer satisfaction, leading to increased loyalty and positive word-of-mouth. As the telecommunications industry continues to

evolve, this study contributes to the ongoing dialogue on customer-centric strategies, emphasizing the critical role call centers play in shaping the overall customer experience.

2. Related Work

According to Kotler et al. [1], "satisfaction is the feeling of a person from comparing the performance of products in the result of his /her expectation. Oliver[2], Customer Satisfaction is a customer post-purchase interpretation and their perception of the overall products or their service experience. Customer satisfaction is simply the result of thing which are not going wrong and to satisfy the need and desires of the customers. Jamal et al.[3], Satisfaction of customers generally defines the feeling or judgement of the customers towards the services or products they have been used. According to Parasuraman [4], customer satisfaction basically identifies the gap between customer perception and their prior expectation. According to Hennig-Thurau et al.[5], the product and services of a company are considered the most important factors for the satisfaction of customers in the success of this competitive market..Deng[6], Satisfaction of customers is very impressive in this business world. According to Eshghi et al.[7], customer satisfaction can help to maintain a beneficial relationship with their customers. According to Anderson et al.[8], companies are likely to lose market shares if they are not satisfying their customers effectively and efficiently. According to Patterson et al.[9]also approved that perceived value had a positive and explicit relationship with satisfaction of customer's.

Table 1. Factors affecting Social Media usage in service consumption

S.no	Dimensions	Definitions	Literature Evidence
1.	Reliability(in)	The service provider sincerely shows an interest in solving the customer problem.	Parasuram et al.[10,11]
2.	Network Quality(in)	Quality of specific network chosen is always good. Call quality of the specifically chosen network is always good.	Wang et al.[12]
3.	Call-Quality(in)	Call quality coverage.	M K Kim et al.[13]
4.	Information quality(in)	Ease of reporting a complaint. My personal information feels secure. Provide the information in an	Cheon et al. [14]



		appropriate format. Provide relevant information.	
5.	The speed of complaint processing. Friendliness when reporting a complaint.	Customer-support(in) The speed of complaint processing. Friendliness when reporting a complaint.	M K Kim et al.[13]
6.	Customer-Satisfaction(dep)	Customers feel very good with services delivered by the service provider. Customers would like to keep a close relationship with the service provider.	MK Kim et al.[13]
7.	Information Security(in)	Telecom operators need to securely maintain the customer personal information. Information security, a domain that is concerned with protecting data, audio and voice communication.	AG Ostapenko et al.[15]
	Information Risk(in)	Telecoms companies, hold large volume of data of their subscribers therefor it is necessary to save their data from malicious actors. A Markov et al.[19]	A Markov et al.[16]

3. Methodology

To conduct this study, the researcher employed simple random sampling for CSR assignments. The sample population was obtained from a pool of 60 call center agents that were then randomly assigned to the treatment or control groups. The inclusion criteria for these call center agents were employees who took calls 100% of the time or those that took calls a minimum of 4 hours a day. Agent names were alphabetized and assigned a number 1 through 60. A random number generator was used to select the control team and the experimental group to obtain the target sample of 50 agents. The first number was assigned to the control group and the second number to the experimental group. The process continued until both groups consisted of 25 agents each. If agents opted out the random number generator was used to select the next agent. Usually, the goal of sampling is to generalize the findings (Edmonds & Kennedy, 2017). After the random assignments were

completed, I worked with Work Force Management (WFM) to schedule time to meet with the selected agents. The meetings took place with both the treatment group and the control group and several one on ones as the agent schedules permitted.

3.1 Instruments

There were two instruments used to collect data for this study: Performance call monitoring scores and Spector’s Job Satisfaction Survey (1994). The call monitoring scores were developed by the utility company in partnership with their outside vendor. The second instrument was an already validated job satisfaction survey. The JSS contains 36 Likert questions ranging from one, disagree very much to six, agree very much. The 36 questions are categorized by 9 nine subscales that represent facets of job satisfaction, pay, promotion, supervision, fringe benefits, contingent rewards, operating conditions, coworkers, nature of work, and communication. The survey instrument has been verified for validity and reliability in several instances.

The 9 subscales are based on 4 items. Each item is scored from 1 to 6, with 1 being Disagree very much to 6, Agree very much. Each subscale can have a score from 4 to 24, and total job satisfaction scores can range from 36 to 216. In this study, the highest total job satisfaction score for the pretest was 200, and 176 was the highest score for the posttest survey. High scores on the scale represent job satisfaction, so scores negatively worded are reversed. Negatively worded items are 2, 4, 6, 8, 10, 12, 14, 16, 18, 19, 21, 23, 24, 26, 29, 31, 32, 34, and 36. Table 1 depicts questions included in the 9 subscales and Total satisfaction.

Table 1 Job Satisfaction Subscales with Question Item Numbers

Subscale	Item numbers
Pay	1, 10, 19, 28
Promotion	2, 11, 20, 33
Supervision	3, 12, 21, 30
Fringe Benefits	4, 13, 22, 29
Contingent rewards	5, 14, 23, 32
Operating conditions	6, 15, 24, 31
Coworkers	7, 16, 25, 34
Nature of work	8, 17, 27, 35
Communication	9, 18, 26, 36
Total satisfaction	1-36

Performance Call Monitoring Scores

The average call monitoring score is the result of the average score of all standards. There are twenty standards that are ascribed point values based on its importance of



answering the customer's questions. These scores are captured in a database by the outside vendor and are available to the supervisors and customer service leadership for coaching opportunities and metrics. The database provided data for a month to month comparison of average scores by teams, individual and by each standard. Dimensions of the performance call monitoring scores used to obtain the performance index are not available. The dimensions included in the call monitoring performance standards are greeting, emotions, security, communication and professionalism, knowledge and execution, and closing.

3. 2 Procedures

Design: The design that was employed was a randomized controlled with participants randomly assigned to the ADKAR treatment group and the control group. Performance standard scores for both groups were obtained from the performance standards database prior to the intervention for the treatment group. Participants of the treatment group received ADKAR training and re-training of the call monitoring performance standards. This design included the control group to perform their normal job functions. Both the treatment group and the control group were expected to use the training resources that are available to all agents in the organization's SharePoint site. The SharePoint site includes a number of resources, such as the "Customer Service Guidelines", which gives scripting to the agents to handle different segments of the call, various job aids, and a call monitoring checklist. Agents also have access to their supervisor if difficult questions arise.

Data collection procedures:

The utility maintains a call monitoring spreadsheet, tracking individual and team call monitoring performance standards scores for all CSRs. The utility uses monthly performance monitoring by an outside vendor to determine CSRs adherence to performance standards. An average score is the result of the vendor's examination of a CSRs adherence to the call monitoring standards. Each standard is assigned point values based on its importance. After approval from the internal review board, the researcher used call monitoring performance scores before the intervention as historical control and then obtained call monitoring performance scores from all agents after the intervention was completed with the treatment group.

Description of the control group:

The control group received no training and instead carried out normal job function conditions. The control group was asked to follow their normal procedures of using their training resources to handle calls such as the "Customer Service Guidelines" and their call monitoring checklists.

The guidelines and call monitoring checklists provide guidance on the interaction with customers. The agent is expected to use all available resources that are in the organization's SharePoint site as well as reaching out to their supervisor.

Ethics and Confidentiality The researcher conducted the study in an ethical manner. The researcher ensured that CSRs know that no descriptive personal data will be included in the study. The researcher ensured that all personal information pertaining to the study is kept confidential within the researcher's authority.

Design and Data Analysis procedures:

The design of this study is a true experiment using a between-subjects approach with a pretest and posttest. A between subjects approach allows each CSR to be exposed to the treatment once (Charness, Gneezy, & Kuhn, 2012; Edmonds & Kennedy, 2017). Based on this study, the CSRs in the treatment group were trained on ADKAR, during a four-hour block of training. The training for the treatment group was delivered by the researcher. SPSS was used to analyze and compare data between the control group and the experimental group. Inferential data analysis was used to investigate the research questions and determine if the independent variable, the ADKAR change management model, positively impacted.

3.3 Limitations and Delimitations

There are limitations to any research design. In this design, the demographic factors were not controlled for as well as the tenure of the employee. Additionally, attitudinal positions and the anxiety related to being included in a research study cannot be accounted for as well as any cognitive learning issues or behaviors. A delimitation that was possible was the researcher did not have control over team movement during the research study period. Another possible delimitation was the call monitoring standards were under review, and the new standards were planned for implementation of the beginning the utility's fiscal year, which was October. New standards could have compromised the findings.

4. Results

The purpose of this study was to determine if the ADKAR change management model as an intervention increased job performance as measured by call monitoring scores for customer service representatives (CSRs). The ADKAR change management model focuses on individual change the impacts of organizational change and therefore impacts the business result. ADKAR describes the states of change



that an individual must take if the individual change is to occur. ADKAR is defined as follows:

- A – Awareness,
- D – Desire,
- K – Knowledge,
- A – Ability,
- R – Reinforcement.

The participants in this study were 50 call center agents from a utility organization. The agents primarily take inbound calls from customers and are expected to deliver exceptional customer service while following provided call flow guidelines. The study included a 4-hour training session and collection of performance call monitoring scores pre and post-intervention. Additionally, a Likert-type scale survey instrument, the JSS, was used as a pre- and post-implementation tool to obtain perceptions of their job satisfaction.

Response Rate to the Research

Fifty agents were randomly assigned to participate in the study. 100% of the consent forms were signed by agents agreeing to their participation in the study. From the fifty agents that participated in the pre- and post-job satisfaction surveys, there was a 98% response rate for the pre-job satisfaction survey, 90% for the post job satisfaction survey. The researcher utilized Survey Monkey to collect data from a job satisfaction survey. The survey consisted of 36 Likert-scale questions with 9 subscales. The survey included two parts. The first part contained demographic

questions and the second part related to perceptions of job satisfaction.

Demographic Characteristics

The participants were 50 call center agents from a utility organization. The agents consisted of agents with various tenures, ages, and gender. Table 2 depicts the demographics of the study participants. As depicted in Table 2, females represented 86% of the sample, 33% were millennials, 45% have had some college, but no degree and 50% were employed 24 months or less.

Table 2 Sample Demographics

Demographic	Frequency or M(SD)	%
Gender		
Male		
Female		
Age		
26-33	16	33
34- 41	10	20
42- 49	10	20
Over 50	13	27
Education		
Highest level of school High School	3	6
Some college, but no degree	22	45
2-year college degree	9	18
4-year college degree	14	29
Graduate-level degree	1	2
Months in current position	27	

Note. N = 50, *Average months of employment =27.

Table 3 : Comparison of Reliability Coefficients of Job Satisfaction by subscales

Subscale	Pretest Alpha			Posttest Alpha			Spector Alpha
	M	SD	Alpha	M	SD	Alpha	
Pay	12.50	5.64	.88	12.12	4.84	.84	.75
Promotion	11.14	4.66	.72	11.36	4.24	.76	.73
Supervision	19.72	4.80	.80	19.54	4.21	.86	.82
Fringe Benefits	17.44	4.63	.76	16.72	4.11	.73	.73
Contingent rewards	13.58	5.26	.83	12.44	4.39	.84	.76
Operating conditions	13.38	3.99	.46	13.34	3.79	.58	.62
Coworkers	18.56	3.74	.65	18.12	3.73	.73	.60
Nature of work	16.68	4.64	.76	16.56	4.29	.77	.78
Communication	13.82	4.21	.60	12.64	3.88	.63	.71
Total satisfaction	137.20	27.93	.92	133.88	23.49	.90	.91

n=50

Primary Findings

Presented below are the findings for each research question that the current study addresses. The three research questions were analyzed using descriptive statistics including means and standard deviations. Missing values were handled as follows: for performance call monitoring scores, the mean across all participants for the control group and treatment group were calculated separately for pre and post-performance scores. The mean scores were then used to replace any missing values. For example, if an agent that was in the control group did not have a post-performance score, I substituted with the mean score calculated for the control group performance scores. Secondly, Spector's (1994) Instructions for Scoring the Job Satisfaction Survey, JSS was used to substitute for any missing item data for pre and post job satisfaction survey results. Spector offered two alternatives for substituting missing data. The one used in this study used the middle response items for each of the missing items. Since 3 and 4 are in the middle of the Likert scale, Spector suggested that either number could be used, but stated that one should alternate the two numbers as missing items occurred (p.2). For example, out of the 36 questions, if an agent skipped questions 5 and then 8, I substituted the Likert score of 3 for the skipped question 5 and a Likert score of 4 for the skipped question number 8. For research question number 2, after collecting the questionnaire data, raw data were downloaded from survey monkey into Excel. Data for all research questions were then analyzed using IBM SPSS, version 25 statistical processing for Windows software. After adjustments data were imported into SPSS.

5. Conclusion

In conclusion, this comprehensive study has shed light on the intricate dynamics of customer satisfaction within telecom services call centers. The telecommunications industry, marked by its fast-paced evolution, relies heavily on effective customer interactions, making call centers a critical touchpoint. Through a combination of quantitative surveys and qualitative interviews, this research aimed to unravel the factors influencing customer satisfaction and provide actionable insights for telecom service providers. The study can be used for customer service representatives in various industries.

In most call centers handling the customer's call and answering their questions in an effective and efficient manner are the goal and one that most call centers strive for. Future studies should consider multiple treatment periods. One of the tenants of ADKAR is reinforcement. It would be interesting to conduct procedures after multiple training sessions of ADKAR in a longitudinal study

1. Key Findings:

The study uncovered several key findings, emphasizing the significance of various factors in shaping customer satisfaction. From prompt call response times to efficient issue resolution and the competence of customer service representatives, each aspect plays a crucial role in influencing customer perceptions.

2. Technological Impact:

The influence of technological innovations, such as AI-driven support systems, emerged as a noteworthy theme. While these technologies offer efficiency and automation, maintaining a balance that preserves the human touch and empathy remains crucial for overall customer satisfaction.

3. Communication and Empathy:

Effective communication, both verbal and written, was identified as a linchpin in the customer experience. The importance of empathetic interactions, transparent issue resolution, and personalized engagement cannot be overstated.

4. Implications for Telecom Service Providers:

The insights gleaned from this study hold significant implications for telecom service providers. Acknowledging the identified pain points and building upon positive aspects can guide strategic decision-making, enabling companies to enhance their call center operations and, subsequently, customer satisfaction levels.

5. Customer-Centric Strategies:

As the telecommunications landscape continues to evolve, adopting customer-centric strategies becomes imperative. Recognizing that satisfied customers are more likely to remain loyal and advocate for a brand, telecom companies should invest in refining their call center practices based on the insights provided in this study.

6. Limitations and Future Research:

It is essential to acknowledge the limitations of this study, such as the specific context and timeframe. Future research could explore the longitudinal impact of technological advancements, evolving customer expectations, and the effectiveness of implemented strategies over time.

In conclusion, the findings of this study contribute to the ongoing discourse on enhancing customer satisfaction in telecom services call centers. By fostering an environment that prioritizes efficiency, empathy, and effective communication, telecom service providers can solidify their position in a competitive market and build lasting relationships with their customers. Ultimately, the pursuit of customer satisfaction remains a dynamic and ongoing



process, requiring continuous adaptation to the ever-changing landscape of the telecommunications industry.

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