

A STATISTICAL ANALYSIS OF INEFFICIENT SANITATION SYSTEM IN KANDY CITY

**Higher National Diploma in Information System Management 24.1F
Statistic for computing Course work**

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Title of the project: A Statistical Analysis of Inefficient Sanitation System in Kandy city

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Declaration

“I certify that this project does not incorporate without acknowledgement, any material previously submitted for a Higher National Diploma in any institution and to the best of my knowledge and belief, it does not contain any material previously published or written by another person or myself except where due reference is made in the text. I also hereby give consent for my project report, if accepted, to be made available for photocopying and for interlibrary loans, and for the title and summary to be made available to outside organizations”

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Chapter :01

INTRODUCTION

One of the major problems in Sri Lanka is the flawed scientific method in which the urban system is being implemented, which is a problem of lack of proper management. To investigate to what extent that problem has an effect on the people of different age groups who come to the city, those who do not come but are aware of this, the city of Kandy, which is a busy city with a large population, was taken as a sample and the necessary data was collected Due to this inefficiency, the contamination of water sources, the spread of diseases and the pollution of the environment, as well as the inconvenience caused to the people who come to the city and use these in abundance, have to be explained. Based on the responses given that the sanitation system implemented by the government is so inefficient, the following reasons stood out. **Inadequate facilities for proper waste disposal in sanitary areas, bad smell and inadequate ventilation as well as impact on privacy (insecurity).** Through this Cities can consider sanitation processes as an essential factor in ensuring public health and environmental sustainability.

Chapter 02: CONCEPTUAL FRAMEWORK

OBJECTIVE

Due to the existing educational systems in the city, there is a chance of creating a disturbing situation for the city and the people who live here. With polluted water sources and unsanitary conditions, the city faces serious health risks and environmental damage. Addressing these challenges is critical to ensure well-being and environmental sustainability, while promoting public health, improving quality of life, uplifting the future safety of the city, and educating the public about proper health practices and awareness. The main purpose of this is to point out the efforts to improve sanitation processes by bringing the problem of inefficient methods to the attention of the authorities and getting solutions to them

DEPENDENT VARIABLE

Lack of adequate infrastructure for proper management and maintenance

It is a notable fact that an environment with inadequate infrastructure is created in the activities carried out in an ineffective sanitation system. To effectively manage and maintain sanitation services, it is possible to point out the weaknesses in planning, providing the necessary facilities, providing the necessary services to the people who receive these services. This inadequacy of infrastructure is a major hindrance to the proper functioning and maintenance of sanitation systems and causes the inefficiency of the city's waste management and overall sanitation services.

INDEPENDENT VARIABLES

- **Limited Funding and Resources:** Impediments to the planning and maintenance of infrastructure development, essential for effective waste management and provision of sanitation services, are all due to inadequate allocation of funds and resources for sanitation projects.
 - **Rationale:**
 - **Infrastructure Development:** Sanitation systems require substantial investment to build and maintain infrastructure such as pipelines, treatment plants, and waste collection systems. Limited funding restricts the ability to develop new infrastructure or upgrade existing facilities, resulting in outdated or inadequate systems.

- **Operational Costs:** Maintaining and operating sanitation facilities involves ongoing expenses, including labor, energy, and materials. Insufficient resources can lead to cost-cutting measures that may compromise service quality and system reliability.
- **Technological Advancements:** Modern sanitation solutions often require advanced technologies and materials that come at a higher cost. Limited resources may prevent the adoption of such technologies, keeping the system stuck in less efficient practices.

- **Impact:**

- **System Inefficiency:** Without adequate funding, sanitation systems are prone to inefficiencies such as frequent breakdowns, slower waste processing, and reduced service coverage.
- **Increased Maintenance Needs:** Underfunded systems often require more frequent repairs and maintenance, leading to higher long-term costs and operational disruptions.
- **Decreased Service Quality:** Limited resources can result in lower quality services, such as less frequent waste collection or poorer treatment outcomes, which can negatively affect public health and the environment.

- **hypothesis** Through increased funding and resources for sanitation projects, the efficiency, reliability, and quality of sanitation systems can be improved while reducing inefficiencies in the system, reducing maintenance costs, and improving public health outcomes.
- **Inadequate Planning and Coordination:** Short-term efforts and outdated ideas in the implementation and maintenance of sanitation infrastructure, as well as poor implementation planning and coordination among relevant authorities, lead to inefficient situations.

- **Rationale:**
- **Fragmented Efforts:** Effective sanitation management requires integrated planning and coordination among various authorities and stakeholders. Inadequate planning can lead to unaligned objectives and fragmented efforts, causing inefficiencies in system implementation.
- **Resource Utilization:** Poor coordination can result in duplicated efforts or gaps in service provision, wasting resources and missing opportunities for synergy among different sanitation projects or programs.
- **Implementation Delays:** Lack of comprehensive planning often leads to delays in project execution, as systems may not be fully developed or operational when needed, compromising their effectiveness.

- **Impact:**
- **Operational Disruptions:** Ineffective planning and coordination can lead to misaligned or incomplete sanitation projects, resulting in operational disruptions and reduced system effectiveness.
- **Wasted Resources:** Fragmented efforts and poorly executed projects waste resources and may result in suboptimal infrastructure that fails to meet community needs or expectations.
- **Reduced System Effectiveness:** Inefficient implementation due to poor planning can lead to sanitation systems that are less effective in managing waste, leading to environmental and public health issues.
 - **Hypothesis** Improving planning and coordination between authorities and stakeholders involved in sanitation projects leads to more efficient and quality operation and maintenance of infrastructure, reducing operational constraints, optimizing resource utilization and improving efficiency of the overall system.
 - **Rapid Urbanization Pressure:** Rapidly growing urbanization is primarily responsible for putting severe pressure on the existing sanitation infrastructure. Demand for services outstrips the capacity of existing systems, creating challenges to effectively manage and maintain them.

- **Rationale:**

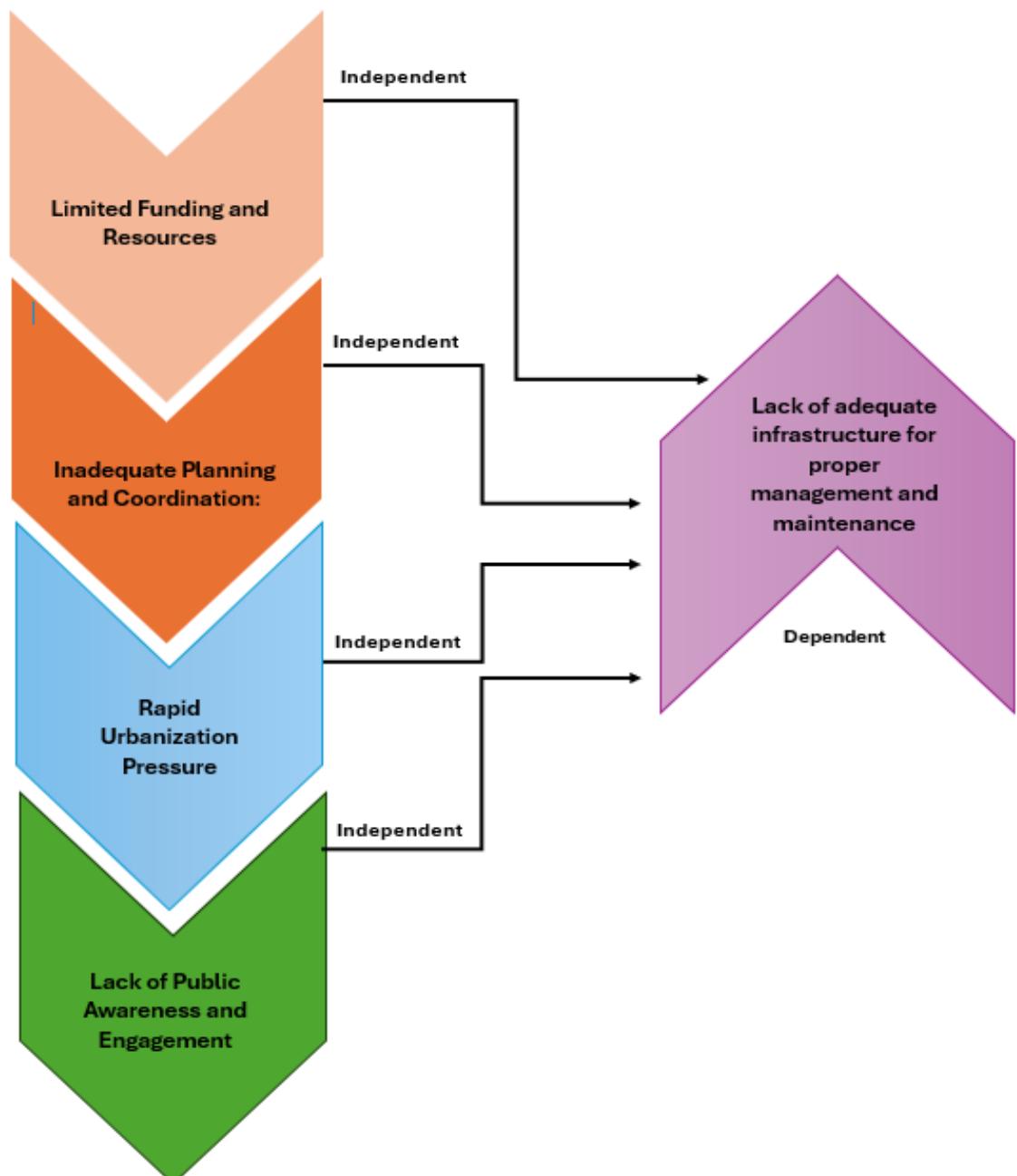
- **Increased Demand:** Rapid urbanization increases the volume of waste generated and the demand for sanitation services, which can outstrip the capacity of existing infrastructure that was not designed to handle such high loads.
- **Infrastructure Lag:** Urban expansion often happens faster than infrastructure development, leading to inadequate sanitation facilities in newly developed areas. This lag creates significant pressure on the existing systems.
- **Maintenance Challenges:** As urban areas grow, maintaining and upgrading sanitation infrastructure becomes more complex and costly, particularly in areas experiencing rapid population growth.

- **Impact:**

- **System Overload:** Existing infrastructure may become overloaded, leading to frequent system failures, such as sewage overflows, inadequate waste treatment, and environmental contamination.
 - **Service Gaps:** Rapid urban growth can result in service gaps where new or expanding areas lack sufficient sanitation facilities, negatively impacting public health and quality of life.
 - **Increased Operational Costs:** Managing and expanding infrastructure to keep up with urban growth increases operational and maintenance costs, potentially leading to financial strain on sanitation authorities.
 - **Hypothesis** Rapid urbanization puts pressure on sanitation infrastructure, resulting in increased system burden, service gaps and increased operating costs. In order to reduce this problem, timely infrastructure development and expansion should be done, thereby improving system performance and service coverage.
- **Lack of Public Awareness and Engagement:** Limited public awareness and community participation in sanitation issues and related health issues contributes to lack of support for infrastructure improvements and maintenance efforts and hampers the overall efficiency of sanitation systems.

- **Rationale:**
 - **Behavioral Impact:** Public awareness influences how residents use sanitation services. Without proper education, individuals may engage in practices that damage or overwhelm the system, such as improper waste disposal or littering.
 - **Support for Initiatives:** Effective sanitation systems require community support for infrastructure projects and maintenance efforts. Lack of awareness can result in resistance to changes or new initiatives, impeding progress.
 - **Community Involvement:** Engaging the community in decision-making processes helps ensure that sanitation solutions meet local needs and garner public support. A lack of involvement can lead to poorly designed systems that do not address key issues.
- **Impact:**
 - **System Misuse:** Inadequate public awareness can lead to behaviors that compromise the sanitation system, such as improper disposal of hazardous materials or increased waste generation, exacerbating system inefficiencies.
 - **Reduced Effectiveness:** Low public support and engagement can hinder the successful implementation of sanitation projects and maintenance efforts, resulting in less effective systems and services.
 - **Community Resistance:** Lack of community involvement may lead to resistance to new sanitation policies or infrastructure projects, slowing down necessary improvements and reducing overall system effectiveness.
 - **Hypothesis** Improving public awareness and community participation in health issues can improve support for infrastructure projects and maintenance efforts, while better equipment use can reduce resistance to new policy initiatives and improvements in sanitation services.

CONCEPTUAL FRAMEWORK



Chapter summary

It has been mentioned that the scholarship has been tested to the extent that the educational health systems operating in the city of Kandy do or do not come to that city. It was identified that the lack of adequate infrastructure for proper management and maintenance is a serious threat to the capacity of this project and it was decided to take this as the dependent variable. Limited Funding and Resources, Inadequate Planning and Coordination, Rapid Urbanization Pressure, Lack of Public Awareness and Engagement were taken as the main independent variables affecting it, and the hypothesis, rational, impact within these were also explained.

Chapter 02: PREPARING QUESTIONNAIR

1. Demographic and Contextual Information

- (Select Age, Gender and select visit to Kandy city)

2. Sanitation Infrastructure and Quality

- Are there adequate sanitary facilities in the city of Kandy?
- How would you rate the overall cleanliness of sanitation facilities in Kandy?
- Are there sufficient facilities for waste disposal in the sanitary areas?
- How would you describe the odor in sanitary facilities?
- How often do you encounter out-of-order sanitary facilities?
- Are sanitary facilities available in all the locations you need them?
- How would you rate the privacy of the sanitary facilities?
- Are there facilities designated specifically for men and women?
- Are the sanitary facilities adequately ventilated?
- How would you rate the availability of water in the sanitary facilities?

3. User Experience and Perception

- Have sanitary facilities been used in the city of Kandy?
- How secure do you feel using the sanitary facilities?
- Is there signage available to guide you to the sanitary facilities?
- Are you aware of any health issues related to the use of these sanitary facilities

4. Program Understanding and Management

- How did you get an understanding of the existing sanitation program in the city of Kandy?
- Are you satisfied with the orderly collection and disposal of sanitary products (towels, soap, toilet paper, etc.)?
- How would you rate the responsiveness of the authorities to complaints about sanitary facilities?

Note: The 20 questions we used this taxonomy helps to analyze the various aspects of sanitation facilities across the city of Kandy.

Chapter 03: SAMPLING AND DATA COLLECTION

To ask to what extent, the effect of an ineffective sanitation system is a problem that is brought to the public, Kandy, an urbanized and densely populated city, was **targeted as a sample and the Sri Lankan people** who visit or are aware of the city as the target population, while **collecting the necessary data for this purpose is a Google filling**. A form consisting of twenty targeted questions was advertised through social media. While **age** is taken as **the strategical sampling method** of this filler prepared based on different age gap and sexes. **All the people who provided the data sampling size =263 , Random Sampling size = 80**

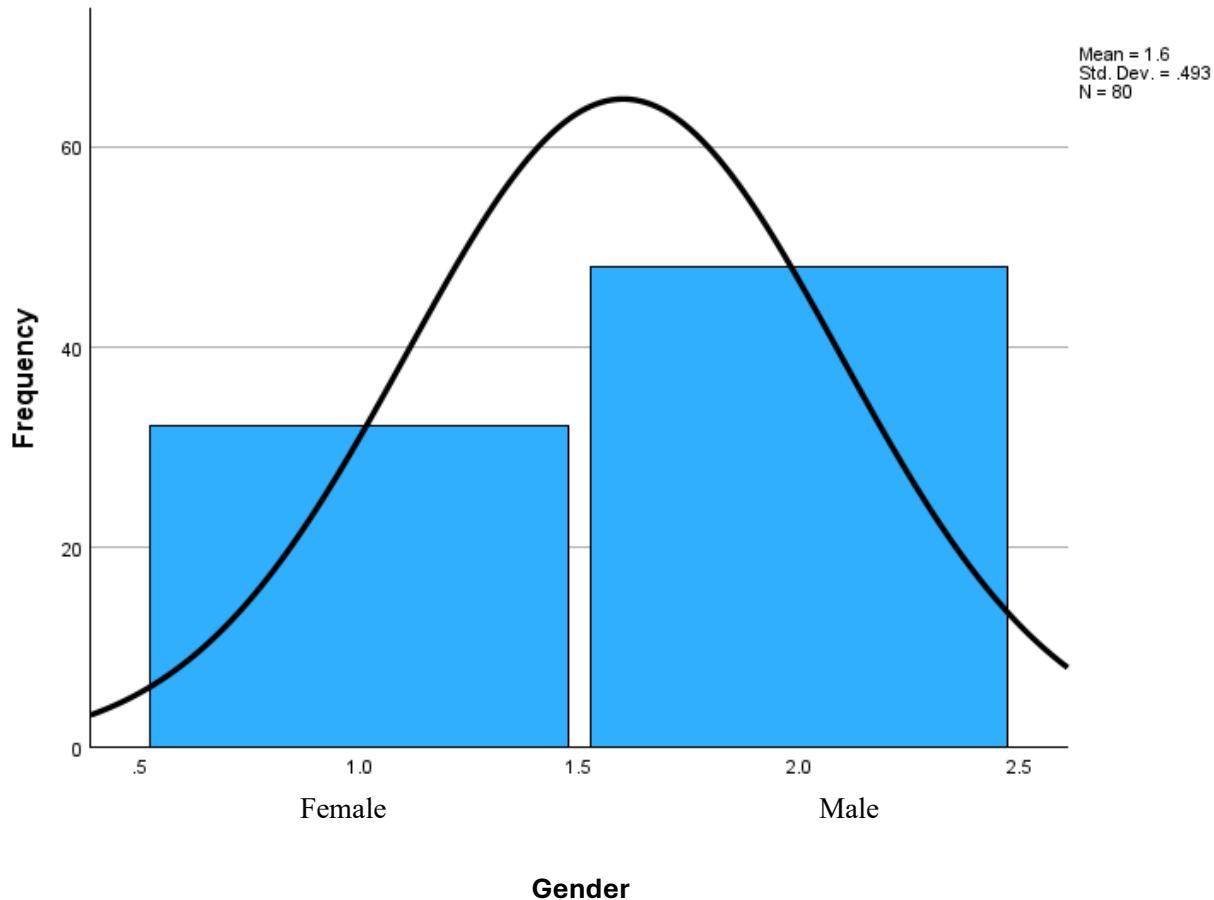
Chapter 04: STATISTICAL ANALYSIS

4.1 Gender Reviews

Through this histogram, it is shown that the gender that uses the inefficient sanitation facilities operating in the city of Kandy is the most.

- Male = 1
- Female = 2

The histogram shows that males have mostly used these facilities while they are marked as mentioned above

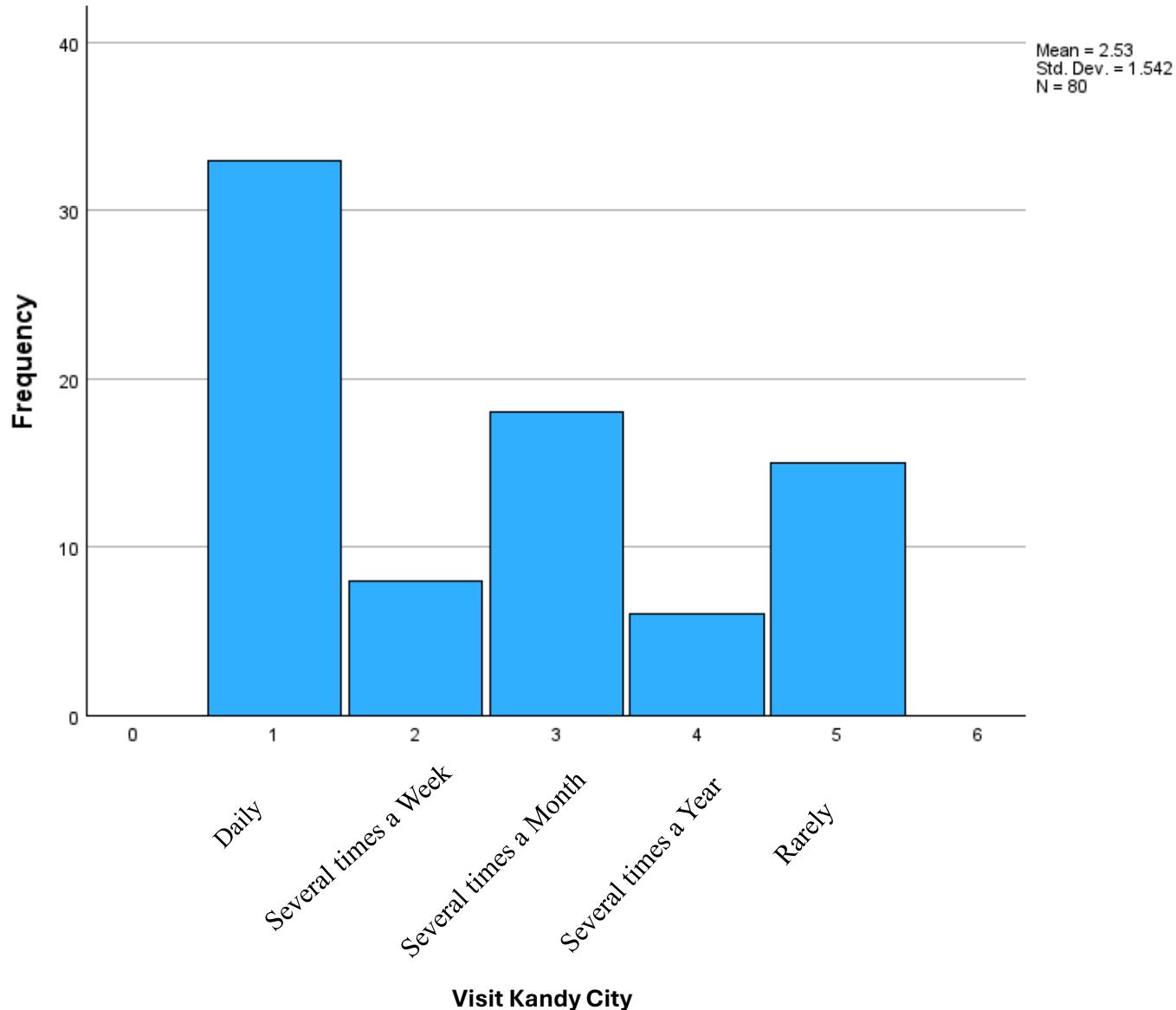


4.2 The effect of coming to town

The histogram below shows how to get to visit Kandy city.

- Daily = 1
- Several times a Week =2
- Several times a Month =3
- Several times a Year =4
- Rarely = 5

The highest percentage of this is taken through daily attendance



4.3 Analysis of selected random sample (sample size 80)

Eighty people were selected as a random sample from the 263 people who gave their response to the question 20 that we sent to ask to what extent the effect of the sanitary system operating in the city of Kandy affects the people. In the twenty questions prepared there, eight questions were directly directed to the ineffectiveness of the activities taking place here. In the 80-sample, dividing the responses according to four age groups, the mean value is shown to be 2.2942. It can then be concluded that most people have been severely affected by an ineffective sanitation system

Frequencies

Statistics

Sanitary

N	Valid	80
	Missing	0
Mean		2.2942
Median		2.2667
Mode		2.20
Std. Deviation		.20832
Variance		.043

Sanitary

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	1.80	1	1.3	1.3	1.3
	1.87	1	1.3	1.3	2.5
	1.93	2	2.5	2.5	5.0
	2.00	3	3.8	3.8	8.8
	2.07	8	10.0	10.0	18.8
	2.13	5	6.3	6.3	25.0
	2.20	14	17.5	17.5	42.5
	2.27	8	10.0	10.0	52.5
	2.33	10	12.5	12.5	65.0
	2.40	9	11.3	11.3	76.3
	2.47	6	7.5	7.5	83.8
	2.53	4	5.0	5.0	88.8
	2.60	3	3.8	3.8	92.5
	2.67	4	5.0	5.0	97.5
	2.73	1	1.3	1.3	98.8
	2.80	1	1.3	1.3	100.0
		Total	100.0	100.0	

4.4 Analysis of the effect of independent variable

Frequencies

Statistics

Limited Funding

N	Valid	80
	Missing	0
	Mean	2.2525
	Median	2.2000
	Mode	2.20
	Std. Deviation	.31940
	Variance	.102

Limited Funding

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	1.40	1	1.3	1.3	1.3
	1.60	2	2.5	2.5	3.8
	1.80	8	10.0	10.0	13.8
	2.00	11	13.8	13.8	27.5
	2.20	24	30.0	30.0	57.5
	2.40	19	23.8	23.8	81.3
	2.60	9	11.3	11.3	92.5
	2.80	3	3.8	3.8	96.3
	3.00	3	3.8	3.8	100.0
	Total	80	100.0	100.0	

Frequencies

Statistics

Inadequate Planning

N	Valid	80
	Missing	0
	Mean	2.3000
	Median	2.4000
	Mode	2.00
	Std. Deviation	.36003
	Variance	.130

Inadequate Planning

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	1.40	1	1.3	1.3	1.3
	1.60	1	1.3	1.3	2.5
	1.80	7	8.8	8.8	11.3
	2.00	19	23.8	23.8	35.0
	2.20	11	13.8	13.8	48.8
	2.40	18	22.5	22.5	71.3
	2.60	13	16.3	16.3	87.5
	2.80	5	6.3	6.3	93.8
	3.00	4	5.0	5.0	98.8
	3.20	1	1.3	1.3	100.0
	Total	80	100.0	100.0	

Frequencies

Statistics

Rapid pressure

N	Valid	80
	Missing	0
	Mean	2.4156
	Median	2.5000
	Mode	2.50
	Std. Deviation	.36008
	Variance	.130

Rapid Urbanization pressure

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	1.25	1	1.3	1.3	1.3
	1.50	1	1.3	1.3	2.5
	1.75	1	1.3	1.3	3.8
	2.00	13	16.3	16.3	20.0
	2.25	16	20.0	20.0	40.0
	2.50	32	40.0	40.0	80.0
	2.75	8	10.0	10.0	90.0
	3.00	5	6.3	6.3	96.3
	3.25	3	3.8	3.8	100.0
	Total	80	100.0	100.0	

Frequencies

Statistics

Lack of Public Awareness and Engagement

N	Valid	80
	Missing	0
	Mean	1.7188
	Median	1.5000
	Mode	1.00
	Std. Deviation	.67432
	Variance	.455

Lack of awareness

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	1.00	24	30.0	30.0	30.0
	1.50	22	27.5	27.5	57.5
	2.00	18	22.5	22.5	80.0
	2.50	10	12.5	12.5	92.5
	3.00	4	5.0	5.0	97.5
	3.50	1	1.3	1.3	98.8
	4.00	1	1.3	1.3	100.0
	Total	80	100.0	100.0	

The mean value of the main independent variables affecting the dependent variable is respectively Limited Funding - 2.2525, Inadequate Planning-2.3000, Rapid Urbanization pressure - 2, 4156, Lack of Public Awareness and Engagement- 1.7188.

Here, the dependent variable, Lack of adequate infrastructure for proper management and maintenance, can be pointed out as the independent variable that has a higher mean value of Rapid Urbanization pressure - 2, 4156

4.5 T-Test

Through the T-test diagram it is shown how much gender affects hygiene. Male has mostly contributed to this

Group Statistics

	Gender	N	Mean	Std. Deviation	Std. Error Mean
Sanitary	Female	32	2.2854	.24318	.04299
	Male	48	2.3000	.18399	.02656

Independent Samples Test

		Levene's Test for Equality of Variances		t-test for Equality of Means							
				Significance		Mean Difference	Std. Error Difference	95% Confidence Interval of the Difference			
		F	Sig.	t	df			Lower	Upper		
Sanitary	Equal variances assumed	3.742	.057	-.305	78	.381	.761	-.01458	.04782	-.10978	.08061
	Equal variances not assumed			-.289	53.99	.387	.774	-.01458	.05053	-.11589	.08672

Independent Samples Effect Sizes

		Standardizer	Point Estimate	95% Confidence Interval	
Sanitary	Cohen's d			Lower	Upper
	Hedges' correction	.21157	-.069	-.512	.374
	Glass's delta	.18399	-.079	-.526	.369

a. The denominator used in estimating the effect sizes.

Cohen's d uses the pooled standard deviation.

Hedges' correction uses the pooled standard deviation, plus a correction factor.

Glass's delta uses the sample standard deviation of the control (i.e., the second) group.

4.6 ANOVA

For the following ANOVA table, the calculation was done using the age intervals of several categories. It is clear that the most impact of the sanitation process has been on the community between 18-30 years.

Onaway

Descriptives

Sanitary

	N	Mean	Std. Deviation	Std. Error	95% Confidence Interval for Mean		Minimum	Maximum
					Lower Bound	Upper Bound		
Below 18	20	2.2500	.24170	.05405	2.1369	2.3631	1.80	2.67
18 - 30	20	2.3833	.23682	.05295	2.2725	2.4942	1.93	2.80
30 - 40	20	2.2567	.17205	.03847	2.1761	2.3372	2.00	2.53
Above 40	20	2.2867	.15612	.03491	2.2136	2.3597	2.00	2.60
Total	80	2.2942	.20832	.02329	2.2478	2.3405	1.80	2.80

ANOVA

Sanitary

	Sum of Squares	df	Mean Square	F	Sig.
Between Groups	.227	3	.076	1.799	.155
Within Groups	3.201	76	.042		
Total	3.428	79			

ANOVA Effect Sizes^{a,b}

		Point Estimate	95% Confidence Interval	
			Lower	Upper
Sanitary	Eta-squared	.066	.000	.165
	Epsilon-squared	.029	-.039	.132
	Omega-squared Fixed-effect	.029	-.039	.131
	Omega-squared Random-effect	.010	-.013	.048

a. Eta-squared and Epsilon-squared are estimated based on the fixed-effect model.

b. Negative but less biased estimates are retained, not rounded to zero.

Post Hoc Tests

Multiple Comparisons

Dependent Variable: Sanitary

Tukey HSD

(I) Age group	(J) Age group	Mean Difference (I-J)	Std. Error	Sig.	95% Confidence Interval	
					Lower Bound	Upper Bound
Below 18	18 - 30	-.13333	.06490	.178	-.3038	.0371
	30 - 40	-.00667	.06490	1.000	-.1771	.1638
	Above 40	-.03667	.06490	.942	-.2071	.1338
18 - 30	Below 18	.13333	.06490	.178	-.0371	.3038
	30 - 40	.12667	.06490	.216	-.0438	.2971
	Above 40	.09667	.06490	.449	-.0738	.2671
30 - 40	Below 18	.00667	.06490	1.000	-.1638	.1771
	18 - 30	-.12667	.06490	.216	-.2971	.0438
	Above 40	-.03000	.06490	.967	-.2005	.1405
Above 40	Below 18	.03667	.06490	.942	-.1338	.2071
	18 - 30	-.09667	.06490	.449	-.2671	.0738
	30 - 40	.03000	.06490	.967	-.1405	.2005

Homogeneous Subsets

Sanitary

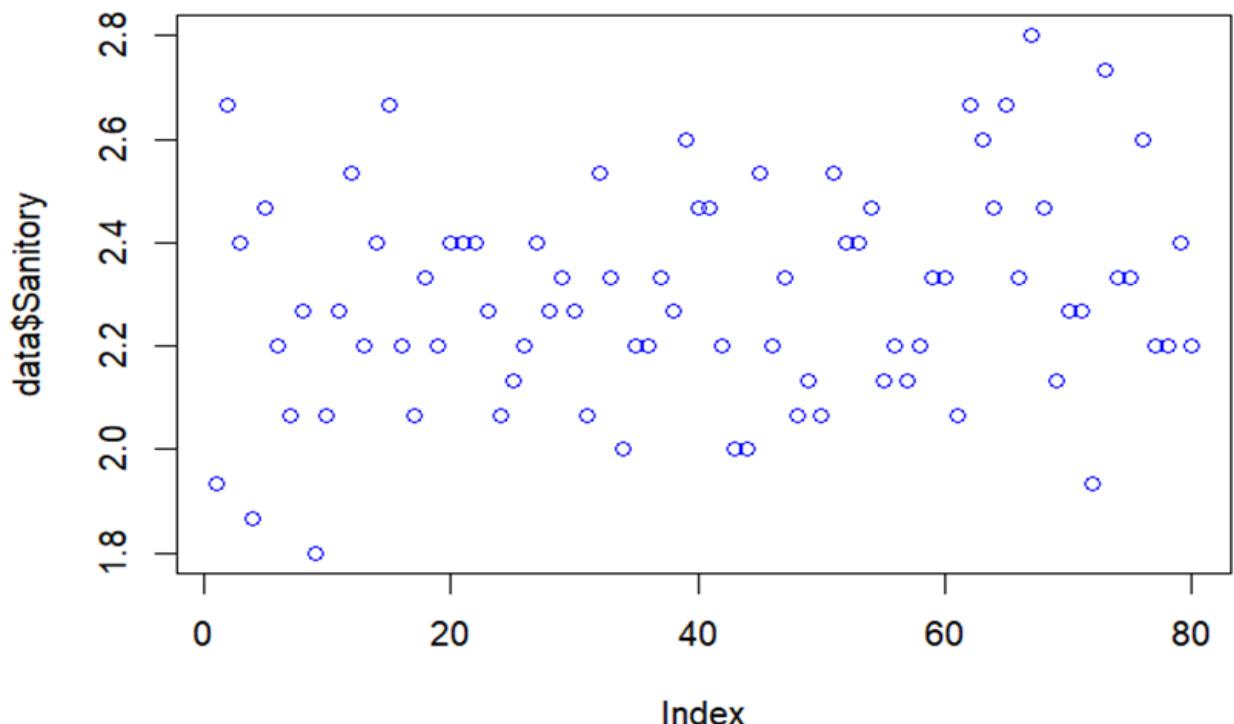
Tukey HSD^a

Age group	N	Subset for alpha = 0.05	
		1	
Below 18	20	2.2500	
30 - 40	20	2.2567	
Above 40	20	2.2867	
18 - 30	20	2.3833	
Sig.		.178	

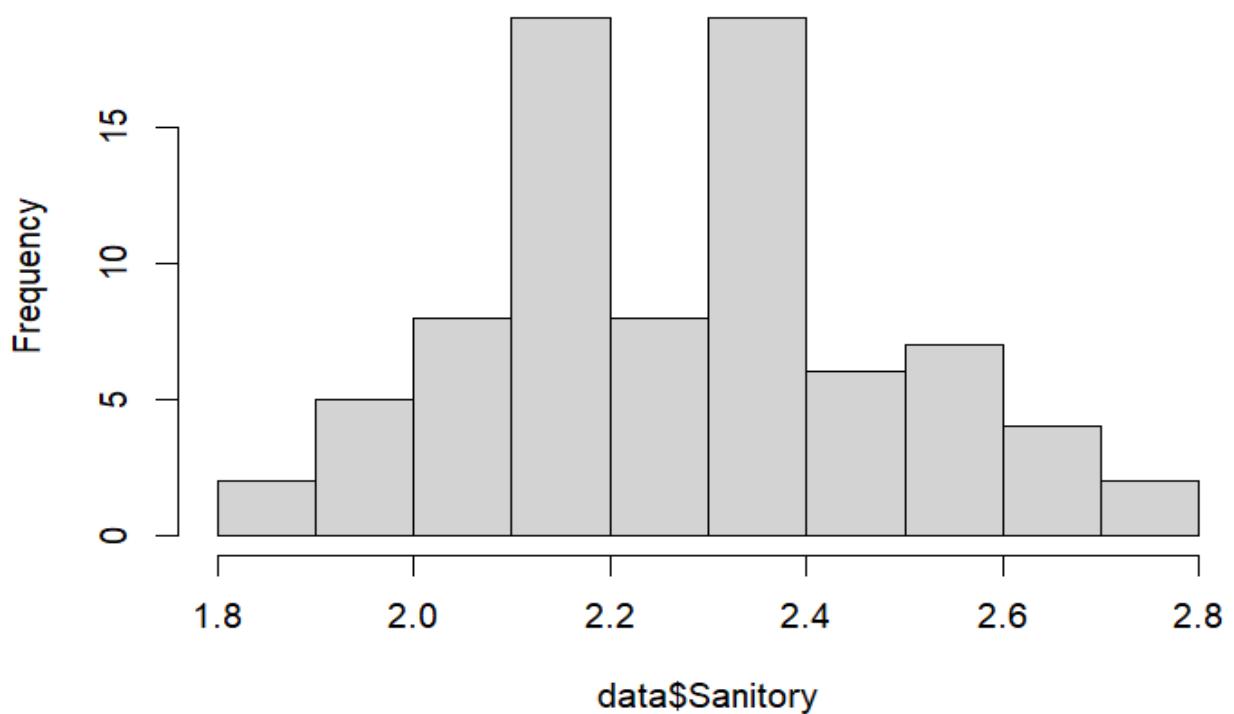
Means for groups in homogeneous subsets are displayed.

a. Uses Harmonic Mean Sample Size = 20.000.

4.7 Dependent variable – Sanitary



Histogram of data\$Sanitary



4.8 Correlation analysis

The table below shows the analysis of the relationships between the variables. (Dependent and Independent). Infrastructure Deficiency, limited size, inadequate planning and arrangements, rapid urban pressure and lack of awareness. Each entry in the table represents the Pearson correlation coefficient between two variables, which quantifies the strength and direction of their linear relationship.

	Infrastructure Deficiency	Limited Funding	Inadequate Planning	Rapid pressure	Lack of awareness
Infrastructure Deficiency	1.0000000	0.28748373	0.78423551	0.57132192	0.41319425
Limited Funding	0.2874837	1.00000000	-0.02421691	-0.05454893	0.08925915
Inadequate Planning	0.7842355	-0.02421691	1.00000000	0.29536734	0.19552477
Rapid pressure	0.5713219	-0.05454893	0.29536734	1.00000000	0.02728804
Lack of awareness	0.4131942	-0.08925915	0.19552477	-0.02728804	1.00000000

1. Diagonal values (e.g., Infrastructure Deficiency with Infrastructure Deficiency) are all 1.0000, indicating a perfect correlation with themselves.

2. Infrastructure Deficiency:

Positive correlation with Limited Funding (0.2875), Inadequate Planning (0.7842), Rapid Pressure (0.5713), and Lack of Awareness (0.4132).

The strongest relationship is with Inadequate Planning.

3. Limited Funding:

Weak positive correlation with Lack of Awareness (0.0893).

Negative correlation with Inadequate Planning (-0.0242) and Rapid Pressure (-0.0545).

4. Inadequate Planning:

Positive correlations with Rapid Pressure (0.2954) and Lack of Awareness (0.1955).

5. Rapid Pressure:

Very weak negative correlation with Lack of Awareness (-0.0273).

6.Lack of Awareness:

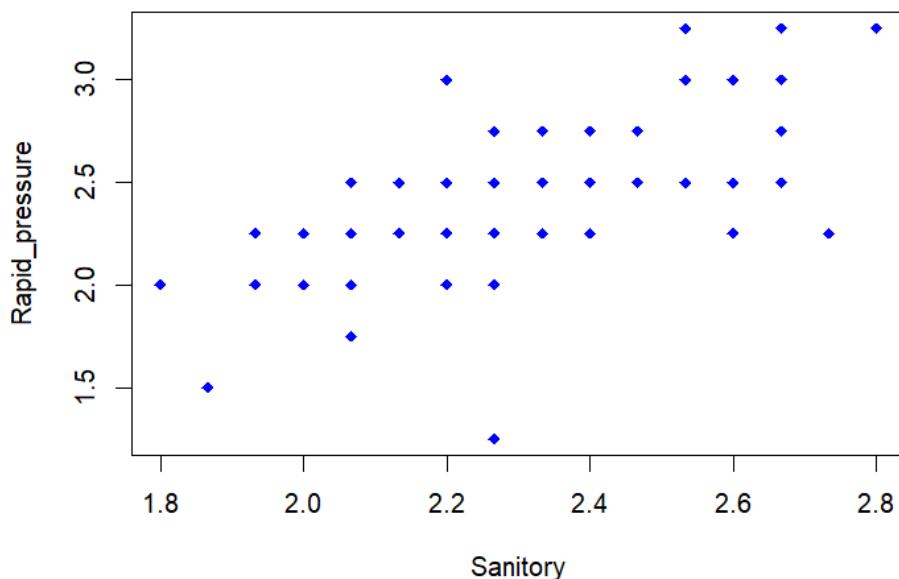
Mostly weak correlations with other factors.

Summary:

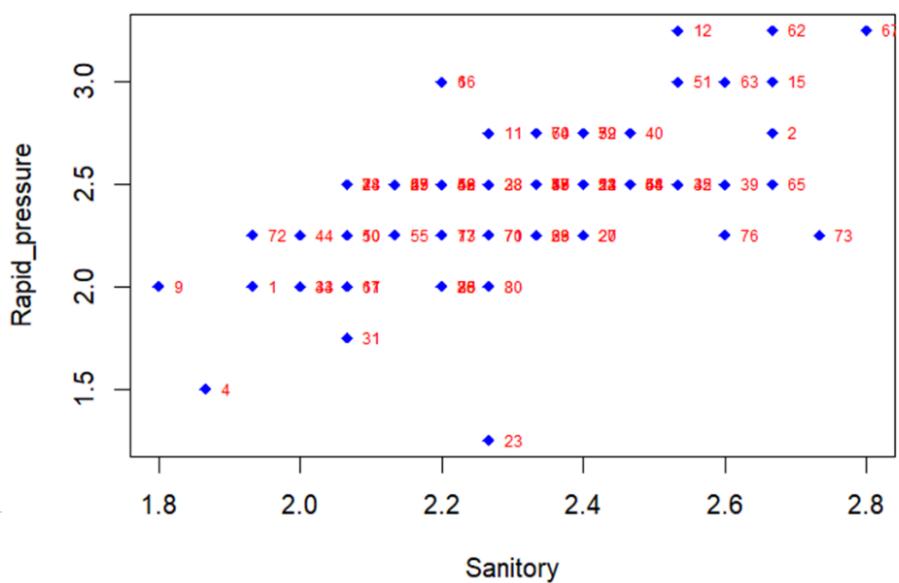
Strong positive correlations exist between Infrastructure Deficiency and Inadequate Planning (0.7842), indicating that they increase together.

Weak or negative correlations suggest minimal or inverse relationships between certain variables, like Limited Funding and Inadequate Planning.

Sanitary vs Rapid_pressure



Sanitary vs Rapid_pressure



4.9 Regression Analysis

The full model Formula is,

Sanitary ~ Limited Funding + Inadequate Planning + Rapid pressure + Lack of awareness

Residual

The residuals show that the minimum value is -0.1458, and the maximum is 0.0795, indicating that the model errors are relatively small.

The median residual (0.007) suggests that the errors are centered around zero, which is desirable for a good model fit.

Statistics	Values
Min	-0.145812
IQ (First Quartile)	-0.022525
Median	0.007322
3Q (Third Quartile)	0.028550
Max	0.079507

4.10 Coefficient

All the predictors (Limited Funding, Inadequate Planning, Rapid Pressure, and Lack of Awareness) are statistically significant, as indicated by the low p-values (all are much smaller than 0.05). Inadequate Planning has the highest estimate (0.34828), meaning it has the strongest effect on the dependent variable. Limited Funding and Rapid Pressure also have notable positive effects. Lack of Awareness has the smallest estimate but is still statistically significant.

Predictor	Estimate	Std. error	T - value	P - value	Significance
(Intercept)	0.20126	0.05778	3.483	0.00083	**** 0.001
Limited Funding	0.23175	0.01600	14.480	< 2e-16	*** 0.01
Inadequate Planning	0.34828	0.01513	23.025	< 2e-16	** 0.05
Rapid pressure	0.24424	0.01486	16.434	< 2e-16	! 0.1
Lack of awareness	0.10465	0.00775	13.502	< 2e-16	!! 1

4.11 Model Fit:

The Residual Standard Error (0.04518) indicates a good fit with low error. The Multiple R-squared (0.9553) and Adjusted R-squared (0.953) values indicate that the model explains about 95% of the variance in the outcome, which is a very strong fit. The F-statistic (401.2) and its corresponding p-value (< 2.2e-16) suggest that the overall model is statistically significant.

Component	Value
Residual standard error	0.04518
Multiple R-squared	0.9553
Adjusted R-squared	0.953
F-statistic	401.2
p-value	< 2.2e-16

Conclusion

From the above analysis, the lack of adequate planning in creating sanitary conditions has a strong influence and a decisive factor in its inefficiency. Then the second critical factor to focus on is fast pressure, limited funds and lack of awareness. That factor is a very important model to explain the effect of each other. It explains 95.3% of the variation in sanitary conditions. Raising awareness and securing additional funding is essential for an organization to focus primarily on improving planning processes and managing operational pressures to achieve better sanitation outcomes. Taking these factors into consideration, the conclusion that can be reached is that the argument presented by us is that people have been severely affected by the inefficient sanitation practices, that is, there is something wrong with this very program implemented by the government. We can get an understanding from all the above analysis that simply inefficient sanitation system is also operating in Kandy city.

Chapter 05: DISCUSSION AND RECOMMENDATIONS

5.1 Recommendation

1 Improvement of infrastructure and making the necessary investments.

2 Awareness and promotion

Importance of proper waste disposal Sanitation practices and the impact of a clean environment on public health To what extent does the environment impact and bring value to human society Residents coming to the city should educate the people who use the sanitary facilities in the city and various health programs, educational programs, publicity activities to change their behavior, awareness of the sufferings that will be brought to the people as well as the society in the case of improper use.

3 Enforcement of laws and regulations

It is possible to enforce laws and regulations to provide appropriate punishments for non-compliance with pollution control and hygiene standards, as well as to prevent negligence from happening in the future.

4 Community participation

They will gain the confidence to protect the environment by constantly showing them that they have their own contributions to maintain a clean environment through various workshops, conferences as well as clean-up drives, recycling initiatives and involving communities in sustainable practices.

5 Proposing the use of technology

The public as well as the government should be convinced that the use of systematic technical strategies is the most effective way to eliminate inefficiency. If implemented properly, it will undoubtedly become a systematic solution to reduce the difficulties. Steps can be taken to adopt modern technologies for waste management such as recycling facilities, waste-to-energy plants and smart waste collection systems. If he succeeds, it can lead to improved efficiency as well as sustainability

5.2 Discussion

An ineffective sanitation system operating in a city can cause various problems such as inadequate waste disposal, contamination of water sources, spread of diseases and environmental pollution. This can have a strong impact on public health and the living conditions of the residents. To face those challenges, proper management of waste disposal, investment in sanitary infrastructure and maintenance and safeguarding them, awareness about sanitary practices and as a people these health practices are clean and protecting the environment in a way that does not harm the environment. It is important to know how to implement and implement effective policies and regulations. For this, it is essential for the government to adopt a systematic program

Chapter 06: METHODOLOGY

Defining research questions and identifying objectives

Formulation of a questionnaire to identify and analyze the factors contributing to the inefficiency of the sanitation system.

Designing the data collection process

Data collection through Google filing. The questionnaire prepared by us was presented through social media to get data. Also, through this, detailed opinions can be gathered from community members and sanitation facility users. This category was used to obtain data

- Demographic and Contextual Information
- Sanitation Infrastructure Quality
- User Experience and Perception
- Program Understanding and Management

Survey and analysis of collected data

Using R-studio, SPSS statistical software for data analysis and processing

Chapter 07: REFERENCES



Guys 😊, the HNDISM24.1 student team at the Kandy NIBM campus decided to conduct a detailed analysis of the inefficient sanitation system in Kandy city. While we need your experience for this, this information will not affect privacy at all. Through your feedback, it is possible to get a rough understanding of this common problem. We would like to express our heartfelt thanks for spending some of your valuable time on this and for sharing your experiences.

● Support by clicking the link below ●

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