

## **The Impact of Attitude Change for Cleanliness among Low-Cost Flat Residents towards Quality of Life in Johor Bahru, Malaysia**

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### **Abstract**

The primary cause of cleaning problems in low-cost flats is the attitude of the residents, who are frequently perceived as disliking their shared accountability and dedication to maintaining their dwelling zones. Hence, these attitudes will impact low-cost flats' quality of life (QOL). However, the relationship and effects of a change in attitude toward cleanliness from a property management perspective have received less attention in the literature. This study is conducted to determine attitude change factors for cleanliness among low-cost flat residents and to analyse the impact of attitude change factors towards resident's quality of life (QOL) near Johor Bahru. The quantitative method was used through a questionnaire survey from 100 respondents among low-cost residents. Descriptive analysis, factors analysis and correlation analyses were used for the data. The result shows that cognitive biases and belief formation are the top attitude change factors among the residents. The correlation between attitude change factors and QOL showed a strong correlation between cognitive and behavioural elements. This result can be a basis for further exploration of the change in the cleanliness attitude of low-cost residents.

**Keywords:** Attitude change factors, Quality of life, Cleanliness, Low-cost flat.

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### **1. INTRODUCTION**

Low cleanliness attitudes have long been a problem in low-cost flats. While the management bodies and local authorities have aggressively dealt with solid trash, the impact on the residents' attitudes has been less favourable. A person's cleanliness attitude must be measured to produce a clean and safe environment (Sankaran, 2018). Attitudes are formed by education or experiences, whether positive or negative. Usually, this is what will be carried and become a hold in their lives (Jhangiani & Tarry, 2014). In psychology studies, an attitude refers to emotions, beliefs and behaviours towards a particular object, person, thing or event (Cherry, 2019). A person's cleanliness must be measured to produce a clean and safe environment. Without change efforts, the issues of low cleanliness will remain the same (Watson, 2015).

Previous research is concerned with hygiene problems in low-cost, flat areas. It only studies the government's efforts, law and property management. However, the issue of attitude change should be the first essential aspect that needs to be considered to curb the problem. While the authorities would come to clean up the place, the garbage would soon accumulate again (Light at the end of the tunnel for better liveability at PPRs: experts, 2023). It is one of the proofs that describes the residents' attitude towards cleanliness, which could be better. Not only that, but some residents also urinate wherever in the flat area and habitually throw their garbage out of the window (Ping, 2022). From there, it can

describe how important it is to change the residents' attitude in the low-cost flat area itself.

Most previous researchers rarely test a range of attitude change factors but tend to focus on a few factors only, for instance, government intervention, laws, and property management. Although it is a suitable method, consistent results still need to be. In addition, attitude changes are the most crucial aspect to consider when achieving quality of life (QOL). From a philosophical perspective, quality of life (QOL) is increasingly considered well-being, referring to the prudential value of life, emphasising a person's biographical and personal characteristics (Buiting & Olthuis, 2020). Attitude changes will produce the environmental quality that will influence people's quality of life (QOL) in the physical health, psychological, social relationships, and environmental domains. Therefore, this research aims to determine attitude-change factors for cleanliness among low-cost flat residents and analyse the impact of attitude-change factors towards residents' quality of life (QOL). Property managers may use this study as a reference to create future initiatives that will raise residents' awareness of cleanliness and improve their living conditions.

## 2. LITERATURE REVIEW

### 2.1 Attitude Change Components

Attitude change components refer to the different dimensions or elements in modifying or altering an individual's attitude towards a particular object, person, idea, or situation (Black & Bright, 2019). Attitudes consist of three main components: cognitive, affective, and behavioural. The cognitive component of attitudes involves an individual's beliefs, thoughts, or knowledge about the object of the attitude (Chapel, 2022). Attitude change in the cognitive component occurs when there is a modification in the information, beliefs, or understanding related to the object (Williams, 2022).

The affective component of attitudes pertains to the emotional reactions, feelings, or evaluations associated with the object (Netzer et al., 2018). Attitude change in the affective component occurs when there is a shift in emotional responses or the development of new emotional associations towards the object. Finally, the behavioural component of attitudes refers to behavioural intention or actual behaviours associated with the object (Ajzen & Fishbein, 2005). Attitude change in the behavioural component occurs when there is a modification in behavioural tendencies or actions towards the object (Cherry, 2024). It can involve translating the changed thoughts and emotions into overt behaviours.

### 2.2 Quality of Life (QOL) Aspect

Quality of life (QOL) refers to an individual's subjective perception of their overall well-being and satisfaction with various aspects of their life. It is a multidimensional concept encompassing physical, mental, emotional, social, and environmental factors contributing to an individual's sense of happiness, fulfilment, and overall life satisfaction. Table 1 shows some critical aspects of quality of life (Jenkinson, 2020):

**Table 1:** Key Aspects of QOL

Physical Well-being	Physical well-being includes aspects such as physical health, vitality, energy levels, and the absence of illness or disability. It involves maintaining a healthy lifestyle, engaging in regular physical activity, and having access to healthcare services.
Mental and Emotional Well-being.	Mental and emotional well-being refers to a person's psychological state, including their cognitive functioning, emotional stability, and psychological resilience.

Social Connections and Relationships	Quality of life is influenced by the quality and depth of an individual's social connections and relationships. Positive social interactions and a sense of community are important aspects of a high quality of life.
Material and Financial Well-being	Adequate access to resources, including income, housing, and material possessions, plays a role in quality of life. Financial stability and economic security provide individuals with opportunities for personal growth, security, and the ability to meet their basic needs and pursue their goals and aspirations.
Environmental Factors	The quality of the physical environment in which individuals live can impact their quality of life. Factors such as access to clean air and water, safe and well-maintained infrastructure, green spaces, and a clean and sustainable environment contribute to a higher quality of life.
Personal Fulfilment and Life Satisfaction	Quality of life is closely tied to personal fulfilment and the extent to which individuals feel a sense of purpose, accomplishment, and satisfaction in their lives.
Cultural and Societal Factors	Cultural values, norms, and societal conditions can also influence an individual's quality of life. Factors such as equality, justice, inclusion, and access to opportunities for personal and social development can significantly impact overall well-being.

Source: Jenkinson, 2020

### 2.3 Relationship between Cleanliness Attitude Change towards QOL

A strong relationship exists between cleanliness attitude change and quality of life (Catharina, 2022). Attitudes and behaviours related to cleanliness can significantly impact various aspects of an individual's quality of life. Table 2 shows some ways in which cleanliness attitude change can influence the quality of life (Ross et al., 2021):

**Table 2:** Cleanliness Attitude Change Can Influence QOL

Physical Health and Well-being	Cleanliness practices, such as maintaining personal hygiene, clean living spaces, and proper sanitation, are essential for promoting good physical health. Attitude change towards cleanliness can lead to improved hygiene habits, reducing the risk of illness, infections, and the spread of diseases. A clean environment can contribute to better air quality, reduced exposure to toxins, and a decreased likelihood of accidents or injuries, thereby enhancing overall physical well-being.
Psychological Well-being	A clean and organised environment can have a positive impact on an individual's mental and emotional well-being. Attitude change towards cleanliness can result in reduced stress levels, increased comfort, and a sense of orderliness. Living in a clean environment can create a more peaceful and serene atmosphere, promoting relaxation, reducing anxiety, and enhancing overall psychological well-being.
Social Interactions and Relationships	Attitudes towards cleanliness can influence social interactions and relationships, which are integral to quality of life. Maintaining cleanliness can create a positive impression on others, fostering a sense of respect, trust, and social acceptance. It can also enhance one's self-esteem and confidence, leading to more fulfilling social interactions and stronger relationships with others.

Sense of Pride and Ownership	Attitude change towards cleanliness can instill a sense of pride and ownership in one’s living environment. Taking responsibility for maintaining cleanliness and hygiene can promote a sense of control, accomplishment, and satisfaction. Living in a clean and well-maintained space can contribute to a greater sense of pride and attachment to one’s home, leading to an improved quality of life.
Productivity and Efficiency	A clean and organised environment can positively impact productivity and efficiency in various areas of life. Attitude change towards cleanliness can lead to improved time management, reduced distractions, and increased focus on tasks.
Health and Safety	Cleanliness attitude change is closely related to health and safety considerations. Adopting cleanliness practices reduces the risk of accidents, injuries, and the spread of infectious diseases. A clean environment promotes safety and minimizes hazards, contributing to an overall sense of security and well-being.
Community and Environmental Impact	Attitude change towards cleanliness extends beyond individual well-being and can positively impact the community and environment. Engaging in cleanliness practices, such as proper waste disposal and recycling, contributes to a cleaner and healthier community. It fosters a sense of collective responsibility and environmental stewardship, which can enhance the overall quality of life for everyone in the community.

Source: Ross, et al., 2021

## 2.4 Research Framework

The attitude change element has been selected for this study as a basis for assessing the quality of life’s elements. The discussion touches on the theoretical background and the effect of using this theory in assessing attitude change. It covers the definition of attitude change, the relationship between attitude change and quality of life, the method used by previous researchers, and assesses the impact of attitude change. It also touches on prior studies. Finally, it will discuss the effect of facilities managers conducting attitude change assessments. The purpose of this discussion is to get a better understanding of the research framework. The theoretical framework for this study is shown in Figure 1.

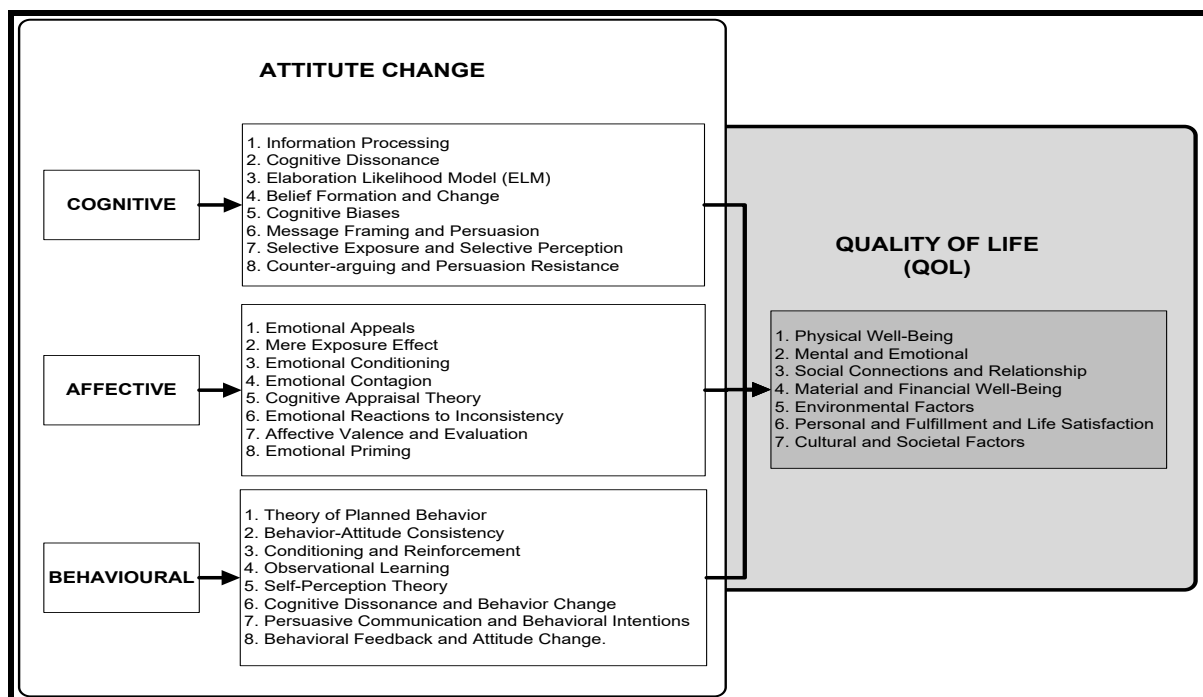


Figure 1 - Theoretical Framework

### 3. RESEARCH METHODOLOGY

This research has a three-stage methodology. The first stage covers the research background. Stage two focuses on determining attitude change factors for cleanliness among low-cost flat residents in Johor Bahru, and the third stage focuses on analysing the impact of attitude change factors on residents' quality of life (QOL).

#### 3.1 Stage One

Stage one focuses on the research background, question, objective, scope and methodology. All these elements must be identified to obtain results for stages 2 and 3.

#### 3.2 Stage Two

The second stage focuses on determining attitude change factors for cleanliness among low-cost flat residents. Three elements of attitude change need to be considered: firstly, cognitive (beliefs), secondly, affective (emotion), and the third one is behavioural (behaviour). This stage will go through the data collection and questionnaire to ensure the first objective will be achieved. The output for stage 2 is a list/rank (mean) for each attitude change element.

Data collection was conducted in two selected low-cost flats (Flat Taman Tun Aminah Johor Bahru and Flat Taman Seri Damansara, Pekan Nanas) near Johor Bahru, and 100 respondents were involved using random sampling. A quantitative questionnaire was used to determine their attitude change factors for cleanliness. The questionnaire was designed and distributed using a survey form involving 100 respondents from selected low-cost flat residents near Johor Bahru. Johor Bahru area was selected because of several cases reported in the media regarding cleanliness issues in low-cost flats. This questionnaire was divided into three parts: Part A was the respondent's demographic, Part B was about attitude change factors for cleanliness, and Part C was the relationship between attitude change and quality-of-life elements. A Likert Scale from 1 to 5 will be used in this questionnaire to analyse each data response, whether strongly disagree, disagree, moderate, agree, or strongly agree.

Low-cost flat residents near Johor Bahru are chosen as the target population for this study. This is because they have a high possibility of helping the property manager increase the level of cleanliness if they are provided with enough knowledge. The sample of this study will involve 100 occupants of low-cost flats through the distribution of instrument forms of inquiry. Descriptive analysis is the method of summing up the basic features of the data collected in a study. It provided simple summaries and analysed all the data with simple graphic analysis, for example, by using a table or chart to present the result of a study. Factor analysis is also used in this stage to determine attitude change weight.

#### 3.3 Stage Three

This stage focuses on analysing the impact of attitude change factors towards resident's quality of life (QOL). The output of stage 3 is attitude change elements, and quality of life elements will be analysed to rank the most vital interrelated elements. *Correlation analysis* is the tool used for stage three to determine the most vital attitude change factor for cleanliness towards Quality of Life (QOL). The overall methodology summary is shown in Table 3.

**Table 3:** Research Methodology Summary

Objective	Method	Variables	Tools	Output
To determine attitude change factors for cleanliness among low-cost flat residents.	Quantitative: questionnaire survey at two selected low-cost flats in Johor Bahru involving 100 respondents	Attitude change factors: Cognitive, Affective and Behavioural.	<ul style="list-style-type: none"> <li>• Descriptive statistics</li> <li>• Factors analysis</li> </ul>	Attitude change factors ranks.
To analyse the impact of attitude change factors towards resident's quality of life (QOL).		Quality of life elements: <ul style="list-style-type: none"> <li>• Physical Health and Well-being</li> <li>• Psychological Well-being</li> <li>• Social Interactions and Relationships</li> <li>• Sense of Pride and Ownership</li> <li>• Productivity and Efficiency</li> <li>• Health and Safety</li> <li>• Community and Environmental Impact</li> </ul>	<ul style="list-style-type: none"> <li>• Descriptive statistics</li> <li>• Factors analysis</li> <li>• Correlation analysis.</li> </ul>	Attitude change factors impact towards resident's quality of life (QOL).

#### 4. RESULTS AND DISCUSSION

One hundred questionnaires were successfully returned, with a precise distribution of 40% male and 60% female respondents. Notably, only 10% of the respondents are between 51-60 years old, with the remaining 90% falling within the 20-50 age range. Additionally, the data confidently shows that 47% of respondents clean their homes 2-3 times a week, and 43% clean the surrounding areas once a month.

##### 4.1 Attitude change factors ranks

The results show that the top three attitude change factors are from the cognitive aspect (see Table 4), which firstly is cognitive-cognitive bias (4.67), in which the question is, "I am convinced that cleanliness is important". It shows that the low-cost flat residents believe that cleanliness is essential. The second factor is Cognitive-Belief formation and change (4.67), in which the question is "My religion emphasises cleanliness in life". It shows that the low-cost flat residents believe cleanliness is essential to their religion. Lastly, the third factor is Cognitive-Message Framing and Persuasion (4.52), in which the question is, "I do not neglect hygiene because it can affect health". It shows that the low-cost flat residents believe their health will be affected if hygiene matters are neglected. The cognitive component involves a person's belief in knowledge about an attitude object (McLeod, 2023). For example, "I believe cleanliness is important". To minimise the cognitive dissonance between the conflicting attitude and behaviour, either change the attitude or the actions must be changed (Cherry, 2023). Examining previous studies and theoretical frameworks about the cognitive processes influencing how people form, alter, and sustain their attitudes is part of the cognitive factors for the attitude change process. Constructed multifacetedly, attitudes include beliefs, emotions, and behavioural inclinations regarding a person, object, or problem. These views are shaped and changed in large part by cognitive factors. The review might be organised according to major theories and themes, emphasising significant findings and empirical research.

Another three factors are from the behavioural aspect, firstly, the first factor is Behavioural-Cognitive Dissonance and Behaviour Change (4.56), in which the question is "I want a clean area of the house, so I am motivated to clean it". It shows that the low-cost flat residents believe they must clean the house if they want a clean area. Many early studies showed that when people cannot change their behaviour, they will change their attitudes to be more in line with the inconsistent behaviour (Stone & Taylor, 2021). The second factor is the Behavioural-Self-Perception Theory (4.53), in which the question is "I attach great importance to cleanliness in myself". Self-perception theory was first proposed by Bem (1967) as an alternative account of cognitive dissonance, where certain circumstances lead to self-described attitudes that are a function of the individual's observations of their behaviour. According to this hypothesis, people become conscious of attitudes by observing their behaviour. Finally, the third factor is Behavioural- Conditioning and Reinforcement (4.51), in which the question is "I will immediately throw the smelly garbage in the garbage can". One of the many ways people learn is through operant conditioning, also known as instrumental conditioning (Cherry, 2023). In operant conditioning, reinforcement strengthens an action by linking it to a positive outcome, turning it into a conditioned reinforcer. For example, if children are required to tidy their room, conditioned reinforcers can be used to ensure they do it by rewarding them with an allowance each time. They learn this behaviour since they receive the same reward (money) every time they complete the task (cleaning the room). The type of reinforcement used can play an essential role in how quickly a behaviour is learned and the overall strength of the resulting response (Shahan, 2010).

One factor is identified from the affective aspect of Affective-Emotional Conditioning (4.52), in which the question is "I feel comfortable if my house is clean". It shows that the low-cost flat residents are comfortable when the area of their house is clean. This component involves feelings or emotional responses like liking, disliking, love, hate, fear, etc. The emotional aspect of an attitude can influence an individual's behaviour (McLeod, 2023). People are normally afraid of cockroaches (the emotional component) in an unclean area. Subsequently since they think all cockroaches are nasty (the cognitive component), the unclean area will be cleaned as they feel that cockroaches might be present (the behavioural component).

The lowest rank would be the Cognitive-Selective Exposure and Selective Perception (3.99), in which the question is "I actively seek information, advice or media content related to cleanliness". It shows that the low-cost flat residents are not actively looking for information related to cleanliness. Selective exposure can be studied regarding whether people select news or entertainment, the issues about which people seek information, which medium is selected for obtaining information, and the extent to which like-minded information is preferred (Knobloch-Westerwick, 2014; Lumeau, 2022). Another one is Cognitive-Cognitive Dissonance (3.79), in which the question is "I am satisfied with the level of cleanliness in the flat I occupy". It shows that the low-cost flat residents are not satisfied with the level of cleanliness in the flats they occupy. *Cognitive dissonance* is the mental discomfort that results from holding two conflicting beliefs, values, or attitudes. People tend to seek consistency in their attitudes and perceptions, so this conflict causes unpleasant feelings of unease or discomfort (Fazio & Zanna, 1981; Brauer, 2023). For instance, if a person is dissatisfied with the cleanliness level in the low-cost flat, he do not need to take the initiative to clean the flat area regularly. As a result, he feels guilty. Sometimes, a person might engage in behaviours that oppose his beliefs due to external expectations at work, school, or social situations (Cancino-Montecinos et al., 2018). It could include giving in to peer pressure or acting in a certain way at work to keep one's job. That is why these two cognitive sides in attitude change factors got the lowest rank in the factor analysis conducted, whereby scores are less than 4.0. The result of the factor analysis is shown in Table 4.

**Table 4:** Factor Analysis for Attitude Change

Item	Mean
Cognitive-Cognitive Biases	4.67
Cognitive-Belief formation and change	4.67
Behavioural- Cognitive Dissonance and Behaviour Change	4.56
Behavioural- Self-Perception Theory	4.53
Affective-Emotional Conditioning	4.52
Cognitive- Message Framing and Persuasion	4.52
Behavioural- Conditioning and Reinforcement	4.51
Cognitive- Information Processing	4.47
Affective- Cognitive Appraisal Theory	4.46
Affective- Emotional Appeals	4.45
Cognitive- Elaboration Likelihood Model (ELM)	4.45
Behavioural- Theory of Planned Behaviour	4.41
Affective- Affective Valence and Evaluation	4.40
Cognitive- Counter-arguing and Persuasion Resistance	4.40
Affective- Emotional Contagion	4.37
Affective- Mere Exposure Effect	4.32
Behavioural- Behaviour-Attitude Consistency	4.31
Affective- Emotional Priming	4.21
Behavioural- Behavioural Feedback and Attitude Change	4.17
Affective- Emotional Reactions to Inconsistency	4.17
Behavioural- Observational Learning	4.12
Behavioural- Persuasive Communication and Behavioural Intentions	4.09
Cognitive- Selective Exposure and Selective Perception	3.99
Cognitive- Cognitive Dissonance	3.79

#### 4.2 Attitude Change Factors Impact Towards Resident's QOL

Based on the correlation results (see Table 5), it was found that the correlation between attitude change factors for the cognitive (0.5) and behavioural (0.5) side is towards the quality of life but not for the affective (0.4) side. In this context, it can be explained that residents of low-cost flats believe (cognitively) that if the rubbish in the flats is cleaned (behaviourally), they will reach a quality of life. However, the beliefs (cognitive) and actions (behavioural) are not in sync with their emotions (affective), where their actions are not based on emotions. The act is only based on their belief that if they do the act of cleaning the flat area, quality of life can be achieved. When considering the attitude change element, there is a combined element between cognitive and behavioural, such as Cognitive Dissonance and Behaviour Change. Cognitive dissonance is a person's discomfort when their behaviour does not align with their values or beliefs (Villines, 2023). This element further strengthens the research findings obtained through this study, where cognition and behaviour are closely related. The cognitive behavioural model theorises how we think and behave will influence our emotional and physical well-being and, consequently, our overall quality of life (Grazebrook, 2005). Bidirectional interactions are thought to exist between thoughts, acts, emotions, and bodily reactions. Even found in health-related attitude studies, Cognitive-Behavioural therapy (CBT) is a talking therapy that targets identifying maladaptive thoughts and behaviours and challenging them, trying to develop different ways of thinking and acting to improve patients' psychological and physical outcomes (Roth & Pilling, 2007).



**Table 5:** Correlations for Weight of Attitude Change Factors and Weight for Quality-of-Life Elements

	Weight Attitude Change-Cognitive	Weight Attitude Change- Affective	Weight Attitude Change-Behavioral
Weight Quality of life Cognitive	.500**	.518**	.430**
Weight Quality of Life-Affective	.445**	.402**	.380**
Weight Quality of Life-Behavioral	.502**	.554**	.539**

## 5. CONCLUSION

This research has delved into the factors influencing attitude change and their impact on the quality of life of low-cost flat residents. It has revealed the most significant and the least significant factors affecting cleanliness and their correlation with residents' quality of life. The findings suggest a promising opportunity to explore behavioural change among residents for a better living environment. For instance, future research could develop a framework for promoting behavioural change related to cleanliness among residents in low-cost flats in Malaysia. This could open opportunities for property management industries to develop impactful awareness programs and finally address the longstanding cleanliness issues.

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