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INDISCRIMINATE MUNICIPAL SOLID WASTE DISPOSAL AN INFLUENCE ON ETHNICS AND SOCIAL NORMS OF INHABITANTS: A COMMUNITY BASED STUDY OF WARD 32, QUETTA

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Abstract:

It is observed that people throw their household solid waste in the streets and road sides. Littering is observed as one of the common in the streets and is not collected in Ward 32 in Quetta city. It is also observed that it imparts harmful and negative effects on the social life of the residents, their behavior also get influenced and it also cause damage to the aesthetics of the area of the inhabitants of ward-32 in the Quetta city. By keeping in mind the statement of problem, following objectives were proposed in order to; To evaluate the indiscriminate and littering of municipal solid waste disposal
To determine the effects of solid waste on the social norms of the inhabitants To determine its effects on the aesthetics of study area.

Introduction:

1.1 Background to the Study:

When the people live together in the form of groups they from communities and being living in communities inhabitants face the poor management system of the household municipal waste. Poor management system has become a consistent problem for the inhabitants. Researchers observed that a revolution has been brought in terms of distinguished norms and customs and expeditious urbanization (Hussain et al. 2016). The societal norm of the society predicts as well as determines the behavior of an individual. They are said to have direct influence on the individual's emotions, cognition and behaviors (Seale 1987). If we talk about the ethic, then they are considered as a set of rules including morals rules with principals which a society follows to be called a civilized society. There do and don't determine direct the social interaction and making the lives of inhabitants more lively and pleasant (Resnik and Ph 2014). It is observed that the basic ethics, a person learns from his antecedents at home from pedagogue at school, mentors and scholars of their religions (Mathur and Corley 2014). The disposal of the solid waste has harmful effects on the locality. It is noted that those countries, which are said to less developed, still their inhabitants are facing the problems related to open dumping of solid waste and poor municipal system people adopted and open dumping methods are used to dispose solid waste (Ferronato and Torretta 2019). Developing countries were observed to use inefficient and old methods like open dumping, littering and open burning of waste for the disposal. It was observed that, in most of the urban areas people throw waste in the streets where solid waste management facilities are unavailable (Ferronato and Torretta 2019).Countries having low income have less success as compare to countries of high income in solid waste management implementation (Iyamu, Anda, and Ho 2020).

Due to an increase in population and change in lifestyle, the demand for food and other necessities have been increased which resulted increase in the disposal of solid waste in open sites (Abdel-Shafy and Mansour 2018). Many scholars researched and found that inefficient methods of disposal of waste and improper dumping sites play a significant role imposes the risk to the environment (Abbasi 2020). Littering has a great influence on finance and health of people living in those residential, where the solid is thrown in open streets, suburbs and drains (Abbasi 2020). According to contemporary research which viewed aesthetics as an analysis that reviving the anticipation for sustainable and successful interlink of the user with the environment. It determines that aesthetics provides for sense-making as it influences what the user may anticipate by an action tendency with respect to the environment ultimately (Ebenezer 2019). Adequate solid waste management is a concern of the attitude of the user of the environment towards the environment (Ebenezer 2019). The user's attitude is an obligation of the realization of the user which is framed partially by the aesthetics value (Ebenezer 2019). Quetta city has divided into 66 Wards by metropolitan department which is responsible for solid waste management in city (Metropolitan Quetta).There are lack of facilities to handle municipal solid waste management in the city (Noor et al. 2018).

1.2 Solid Waste Management in the World:

Many developed countries implemented taxation system on landfill for the purpose of reducing open dumping and such countries include European nation, Russia and Australia. Illegal dumping is known as the process of throwing waste without any regulation. It is regarded as a process of throwing waste in the prohibited areas such as roads, open sites, streets, fences, parks (Iyamu et al. 2020). It causes various social and environmental problems such as negative effects on society and overflow of drains due to blockage (Critto et al, 2003).Litter is the disposal of waste improperly nothing but a piece of waste or rubbish that has been disposed of improperly, no any acquiescence and at the inadequateplace. It is simply means throwing away thing on the ground or leaving them lying on the ground in place of disposed them at garbage collector, bins or trash container(Moqbel, El-tah, and Haddad 2020). One of the most challenging issues for the officials of solid waste management is the Litter control (World Bank 2019).

These are some certain elements which are considered responsible for the production of litter such as people throw solid waste in open sites, garbage vehicles, openly dumped solid waste, plastic, unintentional debris and garbage (litter) (Tang et al. 2009). Litter which is caused by fallen debris or due to heavy wind waste could be related to the presence of solid waste present at different sites which are regarded as unsafe/filled storage sites (Ayilara et al. 2020). On the other hand people littering is associated with the attitude and indoor-outdoor behavior of the people (Ayilara et al. 2020).It was observed that people are more anticipated to litter where litter is already available. The existence of litter on site may consequently act as both an environmental cue (pointing the cleanliness of that location) and a social (interfering a level of social acceptability towards littering at the location) (Brooks and Newcastle University 2017). In most of the developing countries the situation of solid waste has become worsen due to unsuitable processes and practices that increased environmental risks due to which inhabitants are exposed to health risk.

The scholars had found certain problems related to the littering particularly including burning of waste, the open dumping in unconfined sites and the leach-ate ill-management production in the location where lastly solid waste was disposed (Ferronato and Torretta 2019).This situation is more alarming in the slum sites along with the additional issues of higher population showing high density, air, traffic and waste.(Anon 2016)

Improper disposal of solid waste and open landfill site cause environmental threats to surroundings and the nearby areas experience environmental deterioration (Akmal and Jamil 2021). The impacts that were caused due to disposal of solid waste openly, on the environment are; environmental pollution, diseases in located areas, water combination both on surface and ground, optical affects and unpleasant smell. All these have harmful and negative impacts on the inhabitants and tourists who visit such kinds of communities (Anon 2003).

1.2.1 Solid Waste Management System in Pakistan:

Pakistan is a developing country and is on the way of development due to which it is confronting the issues and risks imposed due to improper management of the municipality related to municipal waste from many years, there are several issues and confrontations for the managing officials of municipality for giving proper management of solid waste (Guerrer at el, 2013). Being the second largest country in term of generating solid waste of the continent Asia, it is ranked at the sixth largest country with respect to its population showing 180 million in number. Pakistan is

fronting a heap of problems being a developing country similar to many other countries around the globe (Hina et al. 2020). It is observed that the production of solid waste within Pakistan ranges from 0.283 and 0.612Kg CPD along with the annual growth rate of 2.4 percent (Capital Development Authority, (Hina et al. 2020).

A picture at study area showing that the littering near the drain found, which will choke the drain in storm

1.2.2 Solid Waste Management System in Quetta:

Quetta Metropolitan department has capacity of lifting350MT - 400MT municipal solid waste on regular basis daily, while daily production is about 1000MT – 1250 MT of solid waste. Due to the unavailability of human resources and shortage of machinery which is making worse to worst situation of solid waste in the Quetta city day by day (Noor et al. 2018). The indiscriminate and littering of solid waste causes several environmental and health issues like providing breeding ground for flies and rats, choking of drains and destroying the aesthetic of surroundings(Akhtar et al. 2013).

In the given picture, it is showing that the Bin is incapable for waste collection and municipal solid waste encompasses the bin indiscriminately.

The indiscriminate solid waste not only affected the human health, rather it imposes risk to the psychology of the human beings, influences their social life and also caused certain physical changes in many course of actions. It was found a direct proportional relation between the environmental pollution and psychological dimensions (observation, mental, and social depression of an individual, aggressive behavior) if one increases then the other will also increase (Stiftung 2010). Littering of toxic waste has a significance influence the mental health problem of an individual which in return affects the well-being of an individual (JG linn, Drwilson, J Chauqi, 2020).

Furthermore the common view which was observed in all studies is related to the psychological diseases caused by multiple genetic and environmental considerations and all diseases are said to be influenced by some psychological conditions (Institute of medicine, 2001).

Picture is showing how indiscriminate municipal solid waste destroying the aesthetics of environment.

Literature Review:

It has been observed that human development associated with the management of solid waste because it has certain effect on the environmental and public health. There has been a long background and history related to solid waste management (Nathsanson, 2015). The basics and traces of the system or process of solid waste management could be attributed back to the old time. The first and foremost traces of solid waste management could be observed in Greek A.D in the 14th century. They had to face many issues created due to the disposal of solid waste with the increasing growth of population, and sanitary problem and shortage of space for the removal of waste . The application of solid waste management initially used to dispose the solid waste in the pits present at the outside of the city. It's not only in the urban area that the garbage was observed as a biggest threat to human health and environment. Similar to urban areas in cities because population increasing day by day due to which people were facing the problems related solid waste management system, even in cities this condition had become worst.

In the period of decade of 14th and 16th centuries the initial methods and techniques related to solid waste management were introduced in order to reduce and control the increasing rate of the diseases. Social problems present at that time did not make any progress in the system of solid waste management (Nathan Son, 2015). It is thought that municipalities have been taking the in charge for better services of solid waste management in most of the developing countries (Al-khatibetal, 2009) .The responsibilities of municipal department include the management and organization of the sanitary conditions in different parts of the country. The management system takes into account structure used for transportation, collection, disposal and treatment of the solid waste. Due to increase in the rate of population day - by -day in the developing countries the officers of the municipal are said to face problem in providing an appropriate and efficient solid waste management. There are system of certain constraints due to which SWMS has become ill and poor system and even often its

existence seems to be ceased and such constraint include technical ,social , ethical and institutional constraints .

Through research it has been found that the production of solid waste has increased ten times as compare to the past time around the globe, which is expected to be increased as 2.5 billion ton every year in the future of 2025. The cause behind such production are considered the changes occurred in the process of consumption and the development in the urban areas (Periou , 2012).

It was also noted that inhabitants in most of the developing communities are said to use such disposal methods which prove harmful to their health as well as their environment. Such disposal methods include burning of waste, open dumping waste and unregulated landfills because they do not have any other better option for the disposal of waste (Mwanthi and Ngabola , 1997 ; Goett , 1998 ; Alavi , Moghadametal 2009 ; Narayana, 2009 ; Al - Al-khatibetal , 2015 ; Hilburn , 2015). Solid waste management system has become a critical situation for the official due to rapid growth in population, industrial development in the developing countries.

A major study conducted in the India, revealed that the inhabitants mostly were said to observe to burn or throw the solid waste mostly in the unregulated areas and in open sites (Narayan , 2009). Though the process of burning of solid waste is regarded as an illegal process, but still people adopt this process for the disposal of waste because they have no other option for throwing the waste people have made garbage pits in their locality, where they threw their household waste and later after one or two week, they burn this waste. Often the garbage was thrown into the larger trash pits when the smaller become full (Narayana , 2009).

Due to the urbanization develops in east Africa , the management of solid waste system has become a burden and this scenario has become a burden and this scenario has become worsen due to lack of funding for proper sanitation and the related regulations for the enforcement of sanitation lows for making the situations effective from the findings of a research it has been observed that not less than 100 million population in the country of east Africa are said to face poor sanitation conditions (Troschinetz and Mihelcic , 2009).

There is not an affective system of control due to which inhabitants throw the solid waste in the restricted sites. The poor in the urban areas have to live with the side - by side waste which imposes dangerous risks to their health but they do not have any better option than to live among the heaps of garbage. Similarly many other developing countries are facing such problems and Pakistan is no exception from it. The major reason which contribute to this situation are primarily regarded as illiteracy rate , unawareness on behalf of the solid waste increasing rate of population , industrial development etc .All the factors lead to poor - management system of solid waste and impose dangerous health and environmental risks . Keeping in mind the increase rate of solid waste, the officials of SWMS should regulate and implement strategies to reduce the challenges imposed by it mainly in the developing countries .The literature would prove helpful for filling the existing knowledge gap concerning the issue of solid waste management system . The production of solid waste is directly associated to the growth rate of population due to which the level of consumption is touching the peak (IPA , 2014).

Due to increasing level consumption rate as a consequence of overpopulation results in the higher rate of heaps of garbage around the surrounding. Therefore it is argued

that this issue should be resolved and controlled directly because it provide health and environmental risks at an alarming rate (Narayana, 2009).

Furthermore, it has also been observed that waste disposal in the surrounding environment drastic effect on the health of the inhabitants along with their environment. Furthermore, it also has impacts on their well being and psychology of a person it has been observed that due to massive metal pollution which is the result of waste disposal in the trash has becoming more critical due to higher rate of air pollution which results in many diseases (Advanced et al, 2017). The problems associated with the disposal collection and transportation of solid waste are at alarm and the biggest threat for the developing countries. For instance, in Pakistan due to the construction of unplanned communities and the projects of development in the major cities the situations of sanitary conditions and environmental issues has become very critical and complex (Hashmi H.N, Malik ,N.E, and Hassan 1,2007). The generation rate of solid waste increased day by day in the developing countries due to rapid growth in population, Urbanization, becoming economy and the higher standards of living of inhabitants of the communities (Debnath et al,2015, Minghai et al, 2009)

Everyone should take into account the problems that are spreading due to the presence of garbage because cleanliness is a mutual responsibility of the inhabitants and the government as well. IF this issue has not been resolved properly, it could bring forth disastrous problems related to the environment comfort and damaged structure .All around the world the generation of house land waste has been increasing continuously, with an estimation of 1.3 million tons in 2012 which could be doubled in the year of 2025 in most of the urban areas (Horn Wag and Bhada-Tata, 2012). It is a common practice that the solid waste in the landfill is mostly collected, transported and disposal without following the 3-Rs. This could impose health risks along with the basic reason of polluting air within the community which in turn results into various diseases. This kind of situation could results into property issue among the inhabitants of the community (Robertson, 2011).

It is observed that solid waste production and its disposal has close effects on the community itself also plays a significant role in its generation (Brown, 2015). The studies related to facial experimentation reveal that the disposal of waste at inappropriate sites by the participants can be seen as a result of mental, psychological, biological and environmental issues (Romualdo et al, 200 and Chltopadhyay et al, 1995). The consequences of this situation is to generate stress reaction, which could lead to impaired well being, ten observed factors, psychological regularization which furthermore results into various harmful diseases. Because disposal of solids waste results into many harmful diseases. It could destroy the comfort, pleasure of their life, and the quality of their life, as well. There is no way that when someone considers the issue of solid waste management system and processes then nobody taken into account the cost required for this system. Theses two things goes side by side (Bekhoul, 1991: Calijuri et al, 2004: join et al, 1981: Laureysens et al: 2004 a,b).

Due to the modern age, people would like to live a life of pomp up but they neglect that they want to live in the environment full of many harmful effects to their psychology, mentality and environment. Because the problem of improper and inappropriate disposal of solid waste results into dangerous disease. All these issues are not novel, but the municipal officers should take charge in order to control this problem because it could bring havoc to human life and their existence. When solids waste is not collected effectively it causes, blockage of drains which in turn become a cause of flood and other water related problems. If the household solid waste is not

disposal of by adopting proper methods, this could prove a serious health hazards for the people of the community. Such heaps of garbage and solid waste has a strong attraction for many creatures such as dogs, cats, rats, and flies etc, which all are well-known for ugliness and cause many health and mental distress and diseases. All these features portray a picture of un healthy lifestyle of the inhabitants of the community.

The major risks imposed by it include people living close of dump site and the supply of water whose pipelines passed beneath such sites because water get contaminated due to the presence of solid waste (Ahu D, Asnani PU, Zurbrugg C, Anapolsky S, Mani S, 2008).It is observed that planning effective and appropriate strategies based on the determination of the key factors which effects the littering behavior (Al-Khatib et al, 2009). There are certain factors which one should take into account while fighting against such behavior, such factors are infrastructure, demographics and context (Schultz et al, 2013; Weaver,2015).In previous study the influence of environment on the littering behavior has been examined by weaver in the year of 2015, he argued that the infrastructure of a community in terms of disorder neighborhood depicts the law quality of life in that particular community (Weavers 2015). It is believed that built environments are said to add to the level of litter both in the developing and developed countries It has been also noticed that the level of littering in higher due the presence of graffiti Kiozer, linden-berg and Steg 2013, Zhaug and McCord, 2014). The production and presence of solid waste cause disastrous effect. Litter is a pollution problem that is caused due to heavy traffic and air pollution has higher density. The prevention of littering problem has previously been addressed as an implicit process (Ojecdokun, 2016).

Research Questions:

Keeping in mind the covet objectives and problem statement, following research questions were proposed

Q.1 How does solid waste effect the social norms of the inhabitants of Ward-32 Quetta city?

Q.2 How does the littering of solid waste effect the behavior of inhabitants?

Q.3 How does it affect the aesthetic beauty of the area under investigation?

Hypotheses:

By keeping in mind the nature of study and to achieve the proposed research hypothesis the theory of reasoned action (TRA) was adopted by the research as the theoretical framework of the study. This theory was proposed by Ajzen and Fishbein, it explains that the behavior is likely said to be determined by intentions, which was determined by the attitude towards the behavior and social norms Ajzen, I Fishbein, M, Bull, 1984,). It is the attitude which determines that people value the attitude as positive and negative. This model states that people after having a close observation of waste conditions in their locality valued the behavior as positively and negatively. This hypothetical model for this study explains that how waste is collected by different means and the waste left dispersed influencing their social norms and ethics of their community. The behavior varies from person to person depending upon social – economic condition and genetic also. This model work in the following manner.

Research Methodology:

According to the latest survey Pakistan is regarded as the most popular country in the worked and ranked at 6th position with an estimated population of 20 million. Balochistan in the map of Pakistan is regarded as the most deprived and underdeveloped province and Quetta is regarded as the capital of Balochistan which is the 9th largest city of the country (PBS, 2017).If we talk about the boundaries of Quetta then it covers 2,655 sq-km of the total area. It is located near the Pak-Afghan border in the Northwest of Balochistan. The terrain of Quetta district varies from 1390 m to 3455 m above the sea level. If area consider the law and order then from recent years. It is unsatisfactory in Quetta (P&D, 2011,BBC, 2016, DAWN, 2016). It is a city which cover the metropolitan area and cantonment. It consisted of 66 wards in which Metropolitan department is liable for waste management there (MCQ). The production of MSW (municipal solid waste) varies in terms of population localities of cities and seasons. The research area chose for this study is the ward No – 32. Since the provision of collection of waste services varies with respect to location therefore, the researcher examined the prevent conditions of waste management services taking into account the collection frequency and facility provisions and what sort of impacts they mark on the ethical and social norms of the inhabitants of the community W-32. To meet this end, a survey was conducted to examine their conditions within the community of W-32. Since, it is a community bared study, therefore the studies area was further divided into three categories on the basis of solid waste conditions in existing areas was recorded during survey. There categories includes A. Severe Affected Area c. least waste Area. Following table represents the places of open dumping sites of ward 32. Table 3.1 places of open Dumping sites of Ward 32.

Table 3.1:Places Of Open Dumping Sites Of Ward 32

S. No	Place	Latitude	Longitude
1	Rialway Housing	30.190522	66.959072
2	Railway Society	30.189364	66.95915
3	Spiny Road	30.198248	66.964695
4	Spiny Road	30.198585	66.974988
5	EsaNagri	30.189382	66.978268
6	Spiny Road	30.199643	66.976807
7	Sabzal Road	30.184689	66.980475
8	Brewry Road	30.189806	66.979999
9	Brewry Road Lehriabad	30.189471	66.982637
10	ArbabKarm Khan Road	30.181115	66.98696
11	ArbabKarm Khan Road	30.180424	66.984609
12	Brewry Road Lehriabad	30.189243	66.985926
13	Brewry Road GGHS	30.19023	66.995845
14	KilliIbrahimzai	30.189167	66.985864
15	Sabzal Road	30.180566	66.980444

16	Spini Road	30.197613	66.955371
17	Wahdat Colony	30.191728	66.992156
18	Sabzal Road	30.184141	66.980378
19	DebaArbabGhuma Ali Rd	30.193779	66.991572
20	Gulshan Town	30.195007	66.985742

The above data which was collected through survey was compiled into a digital map with the help of Google map by using excel software as shown in the figure. 3.1

Category A			Category B			Category C		
	Red			Blue			Green	

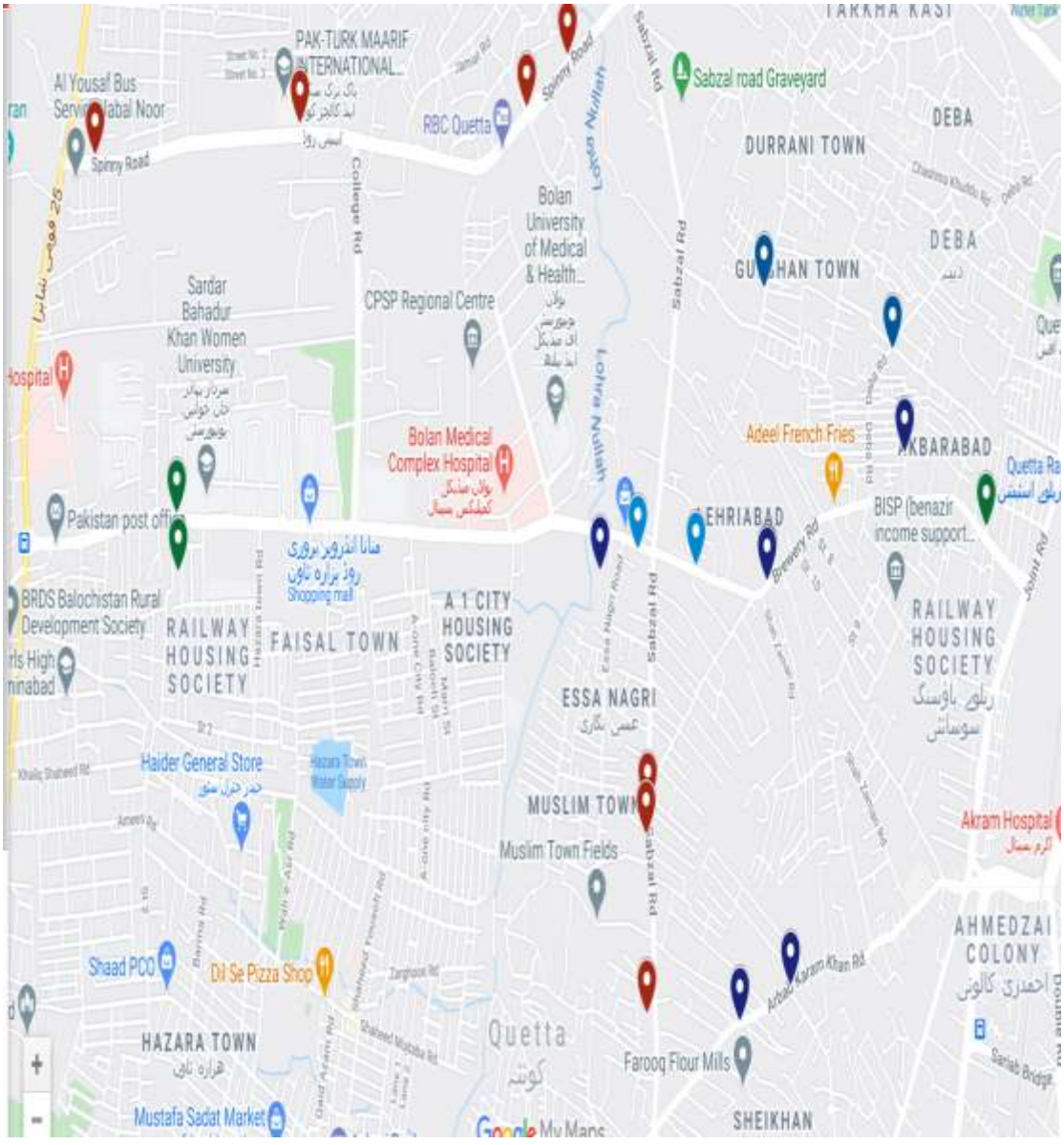

Figure 3.1: Locations of Wastes on Google Map in Ward No.32 Quetta City

Population of the study:

Since the prevent study is based on a community survey, therefore the targeted population of the study is 300 inhabitants of the community W-32. They gave their willingness to participate in the study because the researcher had assured them that all the information collected from then would be used for search purpose and their actual identity would be kept secret. Random sampling technique was used in the study for the participation of inhabitants in this study. Though the sample size is large but it helps the representatives of the respondents. The large sample size provides good coverage of the sampling frame, which include all male and females. Further there were certain officials as well who took part in the study. The data interpretation

Discussion:

This chapter throws the light on the statistically analyzed data in the light of the objective of the study .This chapter throws light on the results of the current study in the light of proposed research hypothesis. All the data collected from the questionnaire was discussed in detail with respect to physical parameters at first and the littering effect on social norms and ethics of the inhabitants of Ward-32. All the acquired responses were discussed in detail with respect to each proposed objectives.

- Discussion of findings on the basis of physical parameters
- Analysis on the basis of physical parameters

All the physical parameters were measured in frequency and percentage on the basis of opinions given by the respondents in the questionnaire..All the situations were discussed one by one below;

1.3 Situations:

Situation No.1 Current situation of solid waste:

From the analyzed data it was observed that 16.6% respondents had strongly marking the frequency of 50 in the responses showed that from the total response only 6.69%. Participants were agreeing that dust bins for the disposal of solid waste are present at their residential area. A major percentage of the responses reveals that 55% of the total participants were strongly disagree to the fact that there are dustbins at their residential area for the disposal of solids waste at their respective residential areas. In addition to this there are the participants who marked their response as no idea yielding the 11.67% of the total response. There were the respondents who marked 10% of the responses showing their disagreement to the satisfying condition related to the disposal of solid waste at their residential area.

Table 4.1: Responses of the participants related to current situation of solid waste

Situation.01								SD		D	
		NI		Agr		SA					
F	%	F	%	F	%	F	%	F	%	F	%
Current situation of solid waste				165	55%	30	10%	35	11%	20	6.67%
				50	16.6%						

Note. SD=strongly disagree, D=Disagree, NI= No idea, Agr=Agree and SA= Strongly agree.

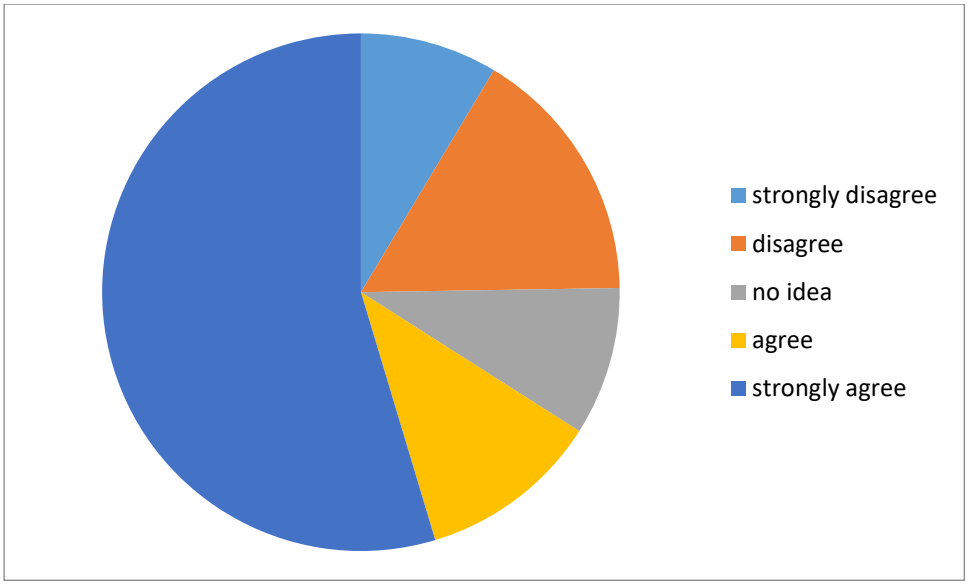

Fig 4.1: Graphic representation of current situation of solid waste

Situations No.2 Lithering situation:

In the situation the respondents were asked to mark their opinion in term of littering (irregular solid waste management) situations at their residential area 56.67% of the participants showed their strongly disagreement marking 170 of the total responses in frequency. Whereas, 6.67% of responses marked their disagreement to the littering situations at the residential area 13.33% of the participants marked their response as having no idea of related to this situation. In addition to these, there were the participants who marked their agreement and even strongly agreement to the littering situation at their residential area yielding 11% and 125 of the total responses.

Table 4.2: Responses of the participants related to current situation of solid waste

Situation.02								SD		D	
		NI		Agr		SA					
F	%	F	%	F	%	F	%	F	%	F	%
Littering Situation				170	56.6%	20	6.67%	40	13.3%		
		33	11%	37	12.3%						

Note. SD=strongly disagree, D=Disagree, NI= No idea, Agr=Agree and SA= Strongly agree

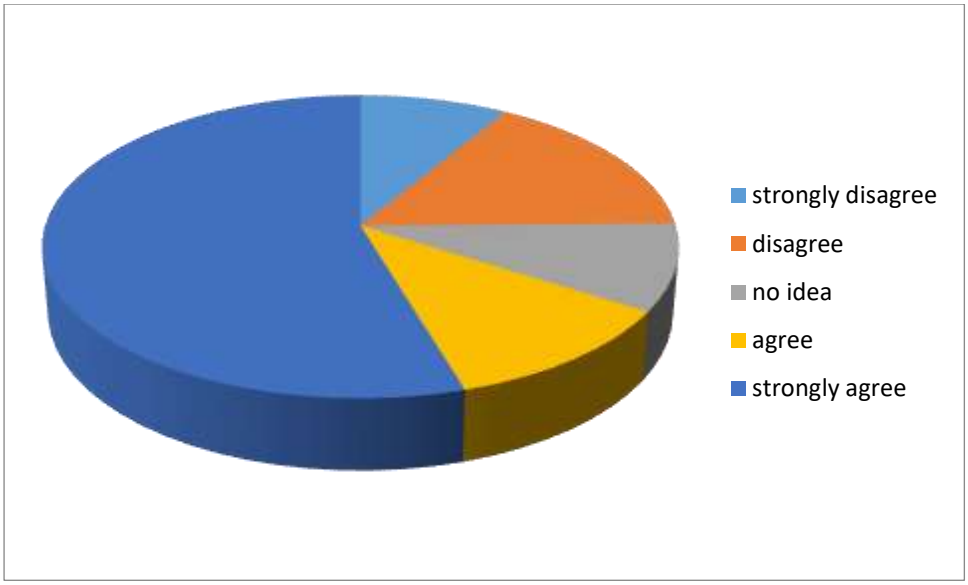

Fig 4.2: Graphic representation of littering situation

Situation No.03 Collection of solid waste:

The analyzed data revealed that there were 53.35 of the participants who depicts that the solid waste is not collected at their residential area, which demonstrate the poor sewage and sanitary conditions.6% of the participants marked their disagreements then comes the participants who marked their response as having no idea of current situation yielding 11% of the total responses.12% and 17.6% of the responses demonstrated those participants who showed their agreement and strongly agreement respectively.

Table 4.3: Responses of the participants related to current situation of solid waste

Situation.03											
		NI		Agr				SA		SD	D
F	%	F	%	F	%	F	%	F	%		
Collection of solid waste					160	56/6%	18	6%	33	11%	36
				12%	53	17.6%					

Note. SD=strongly disagree, D=Disagree, NI= No idea, Agr=Agree and SA= Strongly agree

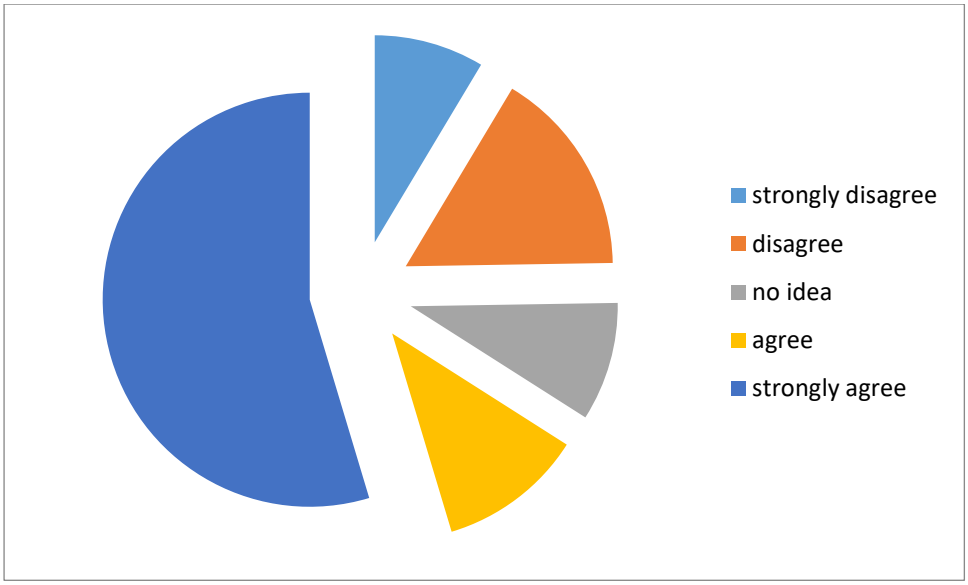

Fig 4.3: Graphic representation of collection of solid waste

1.4 Solid waste thrown in streets:

From the analysis of data collected through questionnaire, it was observed that 57% of the participants showed their agreement in strong terms that the inhabitants throw the solid waste in the streets which portrays a poor condition of the slums at their residential area. In addition to this 10% of the response marked no idea related to this situation. Further there were also those who marked their strong agreement and agreement yielding 13% and 7.3% of the response.

Table 4.4: Responses of the participants related to current situation of solid waste

Situation.01	SD		D		NI		Agr		SA	
	F	%	F	%	F	%	F	%	F	%
Solid waste thrown in street	34	13%	22	7.3%	28	9.3%	30	10%	171	57%

Note. SD=strongly disagree, D=Disagree, NI= No idea, Agr=Agree and SA= Strongly agree

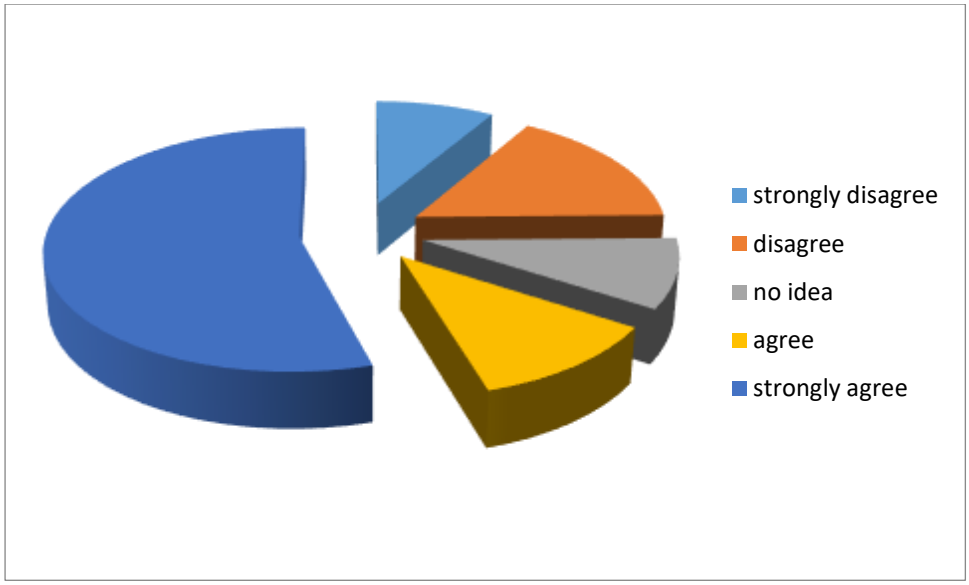

Fig.4.4: Graphic Representation of solid waste thrown in streets

1.5 Drains are choked in rainy season:

58.3% of the responses demonstrated that people are strongly agree to the fact that in the rainy and stormy the drains in their streets are choked with the solids waste disposal,whereas,10%,9.3%,7.3% mark their agreement no idea, disagreement and strongly agreement respectively related to the current situation.

Table 4.5: Responses of the participants related to current situation of solid waste

Situation.05	SD		D		NI		Agr		SA	
Drains are choked	F	%	F	%	F	%	F	%	F	%
In rainy season	35	11%	46	15.3%	176	58.3%	29	9.67%	31	10.3%

Note. SD=strongly disagree, D=Disagree, NI= No idea, Agr=Agree and SA= Strongly agree.

Fig 4.5 : Graphic representation of drains are choked in rainy season

1.6 Analysis and discussion on the basis of littering effects on social norms and ethics:

Fifteen situations were designed to check the effect of littering on the social and ethics nouns of the inhabitants of words-32 All the respondents fill in the questionnaire extracted from the responses discussed below with respect to each proposed situation.

Situation.No.1 Level of disgust at the presence of solid waste:

The findings reveal that majority of the participants were strongly agree to the fact that feel disgusting extremely at the presence of solid waste at their residential area yielding 159 responses in numbers and 53% in percentage 11% of the participants mark their agreement in the present situation. While on the other hand, there were also those people who do not bother about the prevailing situation and marked their disagreement and strongly disagreement yielding 15.4 and 8.3 of the total responses. Some of the participant marked their remarks as having no idea yielding 9% of the responses.

Table 4.06 : Responses of the participants related to littering effects

Situation.01											
		NI		Agr		SA		SD		D	
F	%	F	%	F	%	F	%	F	%		
Level of disgust						25	8.3%	47	15.6%	27	9%
		33	11%	159	53%						

Note. SD=strongly disagree, D=Disagree, NI= No idea, Agr=Agree and SA= Strongly agree

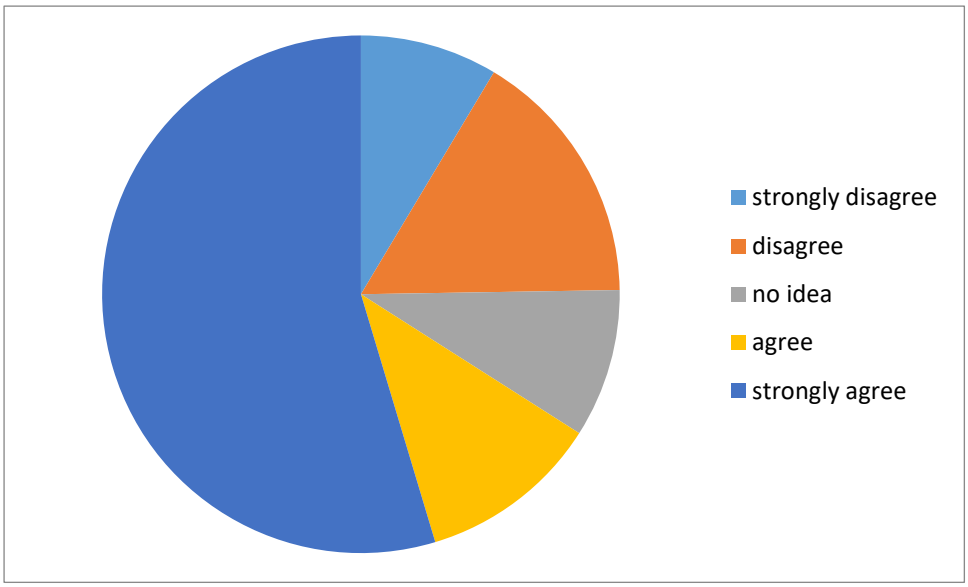

Fig 4.6: Graphic representation of level of disgust at the presence of solid waste

Situation No.02 Level of aggression:

Most of the responses showed that they were strongly disagree yielding 5% of responses having 165 frequencies out of 300.7% of the participants marked their disagreement.14% of the participants showed that they have no idea related to the

currents situation. The participants also marked their level of disagreement and strongly agreement marking 10% and 13% of the responses respectively.

Table 4.07: Responses of the participants related to littering effects

Situation.02	SD		D		NI		Agr		SA	
	F	%	F	%	F	%	F	%	F	%
Level of aggression	165	55%	21	7%	42	14%	40	13.3%	39	13%

Note. SD=strongly disagree, D=Disagree, NI= No idea, Agr=Agree and SA= Strongly agree

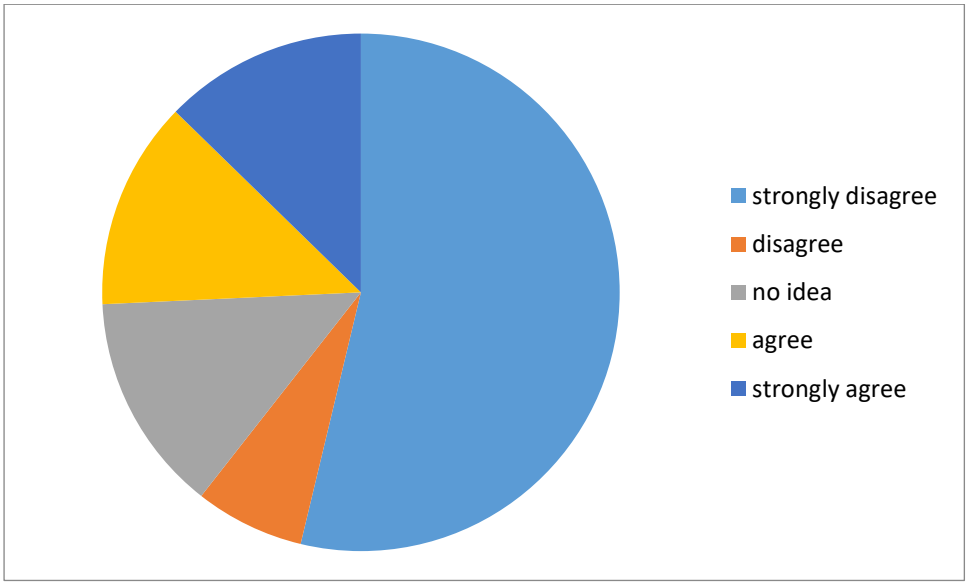

Fig 4.7 : Graphic representation for the level of aggression

Situation No 03 reaction at the presence of solid waste:

Majority of the participant strongly disagree to the fact that they feel nothing and have no reaction at the presence related to this situation. The other analyzed showed the disagreement, having no idea, agreement and strongly agreement having 8.67%,8.3%,10% and 12.3% respectively.

Table 4.08 : Responses of the participants related to littering effects

Situation.03	SD		D		NI		Agr		SA	
	F	%	F	%	F	%	F	%	F	%
No reaction at SW presences	170	56.6%	26	8.67%	25	8.3 %	30	10%	37	12.3%

Note. SD=strongly disagree, D=Disagree, NI= No idea, Agr=Agree and SA= Strongly agree

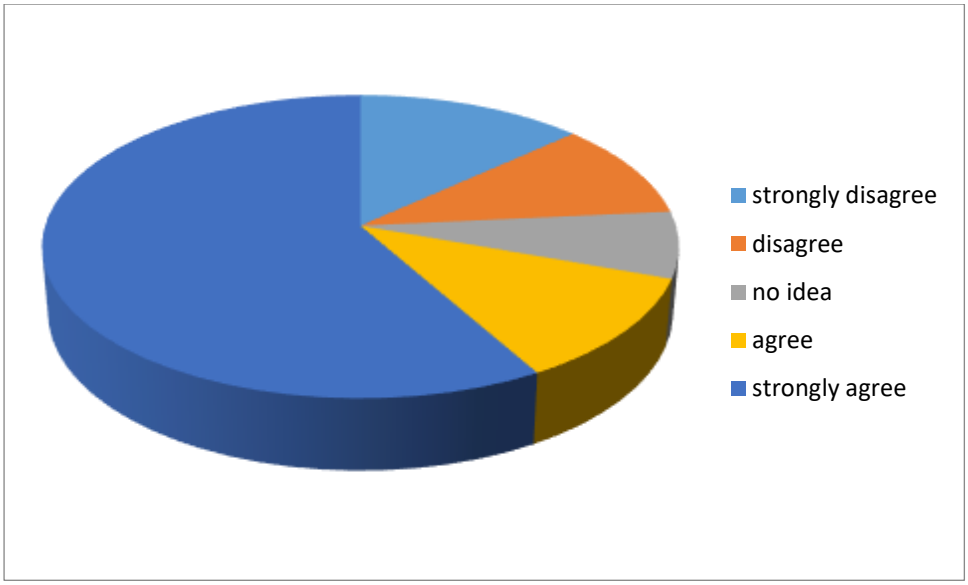

Fig 4.8 : Graphic representation No reaction at SW presences

Situation No.04 Negative effect on the appearance of your area:

The participants showed that they are strongly disagree to the fact the pressure of solid waste does not have negative effect on the physical appearance at their residential area marking 60% of the total responses related to this situation, 9.675% of the responses showed the level of agreement. Whereas, 11.3% of the responses showed that participants had no idea related to this situation 6.3% of responses marked the level of disagreement and 12% of the responses showed that participants.

Table 4.09 : Responses of the participants related to littering effects

Situation.04										SD		D	
		NI		Agr			SA						
F	%	F	%	F	%	F	%			F	%		
Negative effects of SW on area				160	60%	19	6.3%	34	11.3%	29	9.67%		
				36	12 %								

Note. SD=strongly disagree, D=Disagree, NI= No idea, Agr=Agree and SA= Strongly agree

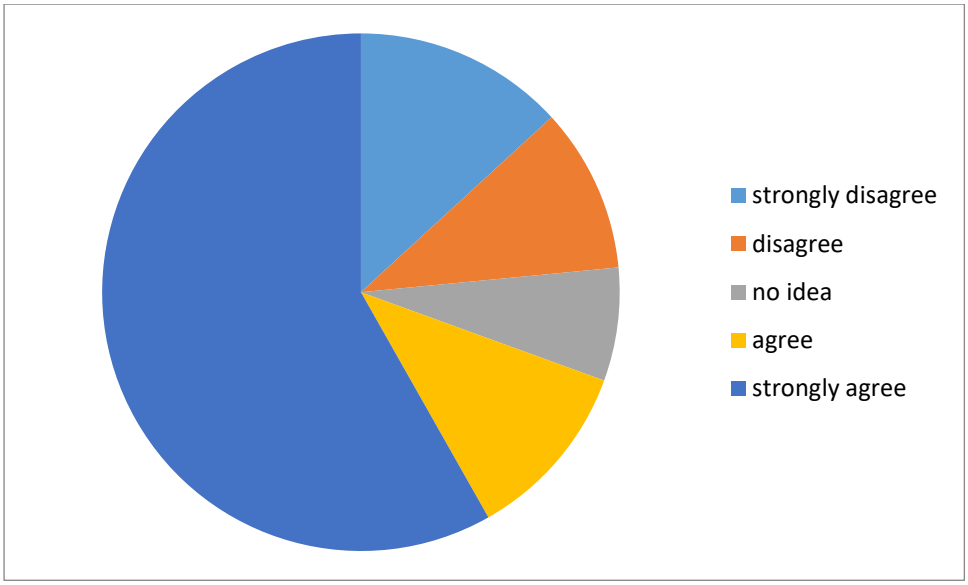

Fig 4.9 : Graphic representation of negative effects of SW on area

Situation No.5 open drains system:

The participants gave positive responses that they feel bad when solid waste flow in open during the rainy season and it depicts an ugly picture of the slums of their residential area.11.6% of the responses showed agreement on the behalf of the participants 7.3% of the responses showed no idea. The participants also marked their disagreement and even strongly disagreement yielding 10.67% and 13.6% of the total responses related to this situation.

Table 4.10 : Responses of the participants related to littering effects

Situation.05								SD		D	
		NI		Agr		SA					
F	%	F	%	F	%	F	%	F	%		
Open drain system				35	13.6%	181	60%	41	13.6%	32	10.67%	22	7.3%

Note. SD=strongly disagree, D=Disagree, NI= No idea, Agr=Agree and SA= Strongly agree

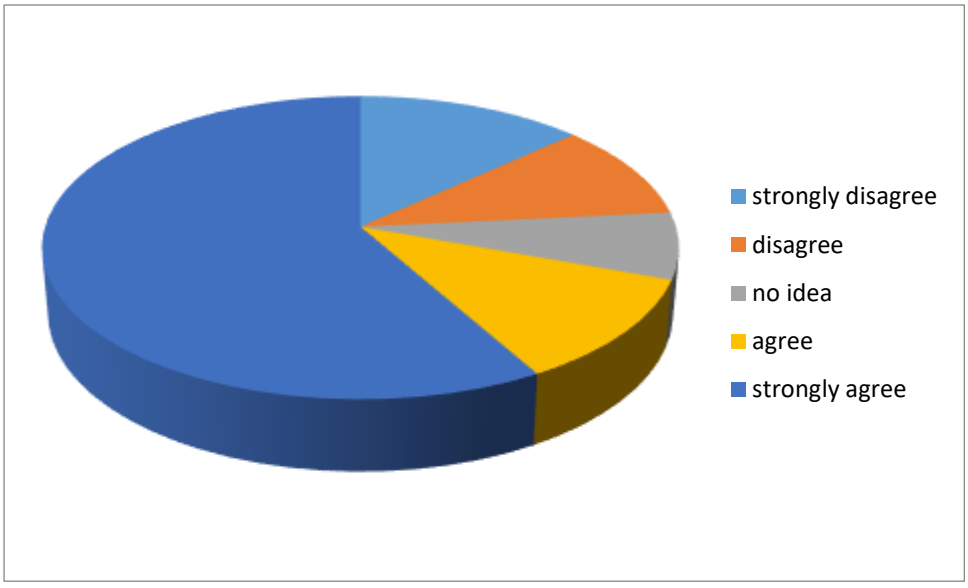

Fig 4.10 : Graphic representation of responses on open drain system

Situation No.06 Poor solid waste management system:

56.6% of the responses reveals that participants showed their disagreement in strong terms that no fights occur among disagreement, 8.67% showed that participants marked that they have no idea related to it, 11.6% showed that participants were said to have agreement to the viewpoint of the writer last but not least 15.3% of the responses represented that participants were said to be agree to the fact that inhabitants have fights due to the poor management system of solid waste.

Table 4.11 : Responses of the participants related to littering effects

Situation.06								SD		D	
		NI		Agr		SA					
F	%	F	%	F	%	F	%	F	%		
Poor SWMS						169	56.6%	29	9.6%	26	8.67%
		35	11.6%	46	15.3%						

Note. SD=strongly disagree, D=Disagree, NI= No idea, Agr=Agree and SA= Strongly agree

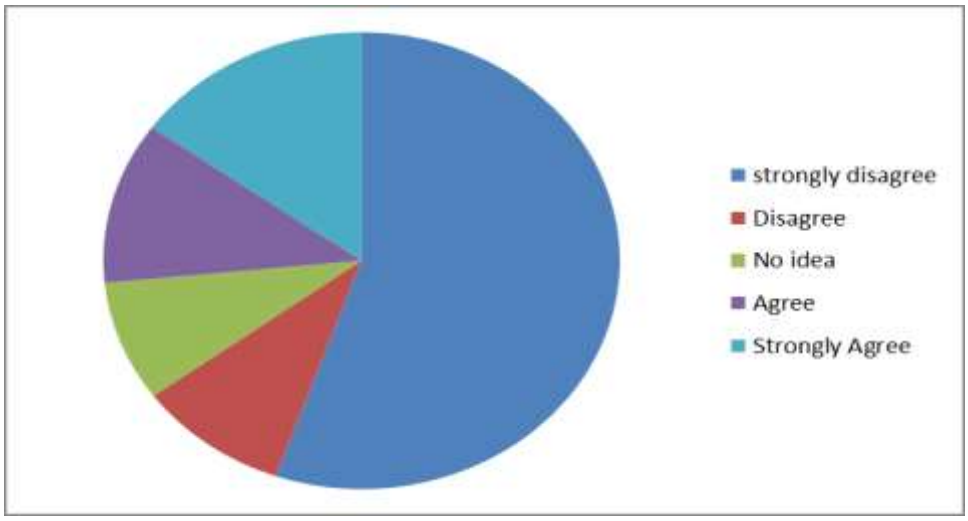

Fig 4.11 : Graphic representation of poor solid waste management system

Situation No.7 Level of Satisfaction:

It is evident from the analyzed data that respondents showed their extreme level of satisfaction on the removal of solid waste from their residential area.55% of the responses showed participants strongly agreement 10% showed agreement,10% marked that they have no idea,7.35 showed disagreement and 91.3% of the responses showed that participants were said to strongly disagree to the fact.

Table 4.12 : Responses of the participants related to current situation of solid waste

Situation.07								SD		D	
		NI		Agr		SA					
F	%	F	%	F	%	F	%	F	%		
Level of Satisfaction						34	11.3%	22	7.3%	32	10.67% 30
				10%	165	55%					

Note. SD=strongly disagree, D=Disagree, NI= No idea, Agr=Agree and SA= Strongly agree

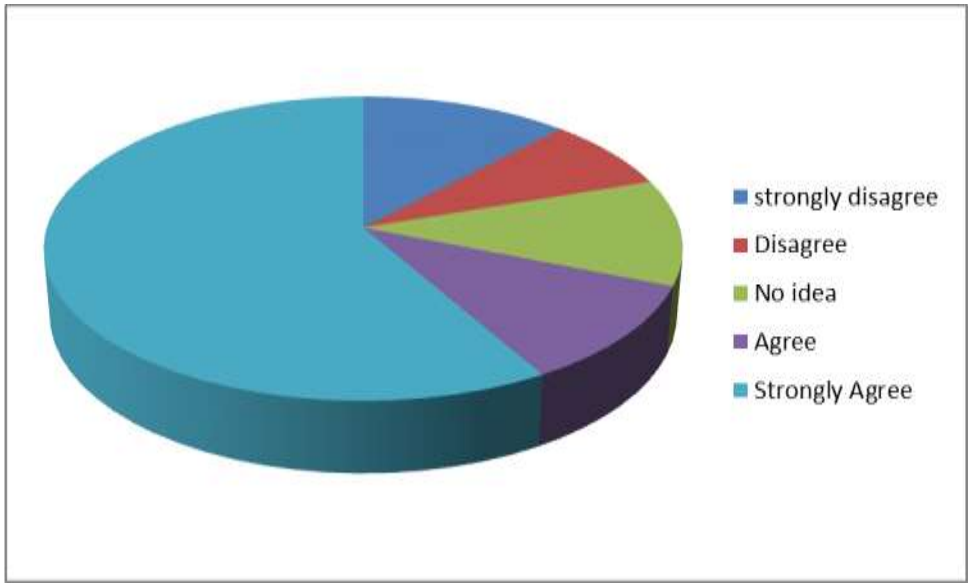

Fig 4.12 : Graphic representation of the level of satisfaction

Situation No.08 Freedom against solid waste:

48% having 145 response number that participants are said be strongly agree to the fact that they wanted their residential area free from the solid waste that the participants preferred to mask no idea through everyone want that their area should be free from such kind of solid waste,9.6% and 85 from the analyzed data showed that participants marked their strongly disagreement and agreement.

Table 4.13 : Responses of the participants related to littering effects

Situation.08								SD		D	
		NI		Agr		SA					
F	%	F	%	F	%	F	%	F	%		
Freedom against solid waste					29	9.6%	24	8%	30	10%	31
				11.3%	145	48.3%					

Note. SD=strongly disagree, D=Disagree, NI= No idea, Agr=Agree and SA= Strongly agree.

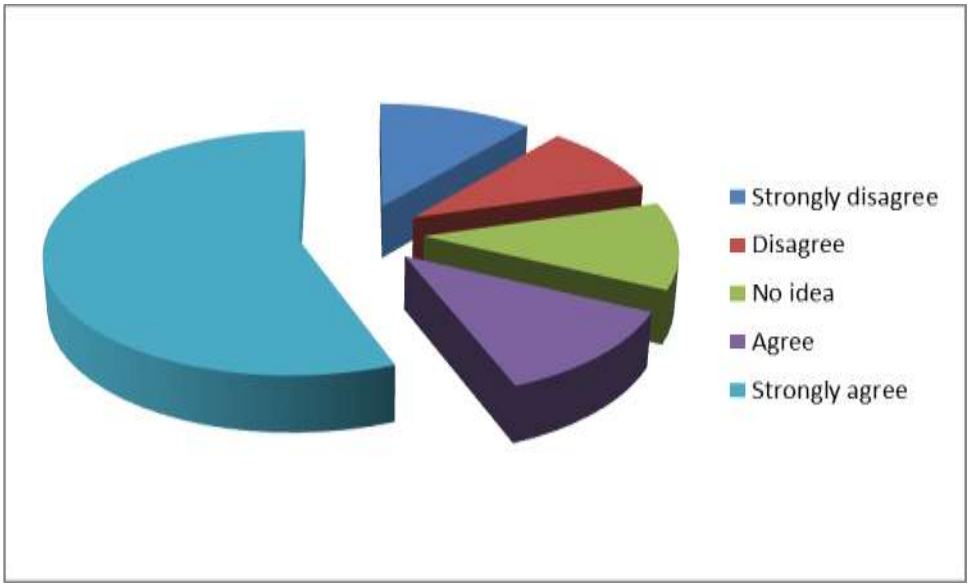

Fig 4.13 : Graphic representation of freedom from solid waste

Situation No.09 Presence of solid waste cause depression:

Finding extracted from the analyzed data showed that 62% of the responses revealed that participants were strongly agree to the fact that the continuous presence of solid waste at their residential area causes depression among the inhabitants 12.6% marked agreement, 10% showed that participants have no idea to the consequences caused due to the presence of solid waste, 10% marked their disagreement whereas 11% marked that they were strongly disagree to the fact

Table 4.14 : Responses of the participants related to littering effects

Situation.09	SD		D		NI		Agr		SA	
	F	%	F	%	F	%	F	%	F	%
SW cause of depression							35	11%	30	10%
	31	10.3%	38	12.6%	186	62%				

Note. SD=strongly disagree, D=Disagree, NI= No idea, Agr=Agree and SA= Strongly agree

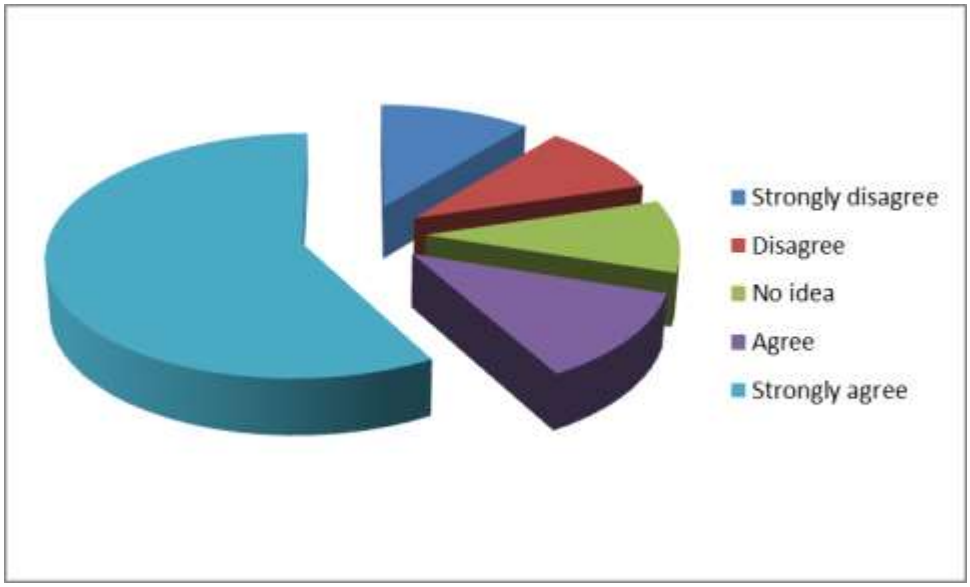

Fig 4.14 : Graphic representation of SW as a cause of depression

Situation No.10 Openly dumped SW cause smell:

57.3% of the data analyzed related to this situation showed that participants were said to be strongly agree to the fact that solid waste when dumped in open drains it causes smell that may affect the mental capability of the inhabitants 12% marked agreement, 10.3% of the total responses related to this situation marked that they have no idea. Whereas, 9.3% and 10% of the responses revealed that, some participants marked their disagreement and strong disagreement as well.

Table 4.15 : Responses of the participants related to littering effects

Situation.10	SD		D		NI		Agr		SA	
	F	%	F	%	F	%	F	%	F	%
Open dumped SW cause smell	30	10%	28	9.3%	31	10.3%	36	12%	172	57.3%

Note. SD=strongly disagree, D=Disagree, NI= No idea, Agr=Agree and SA= Strongly agree

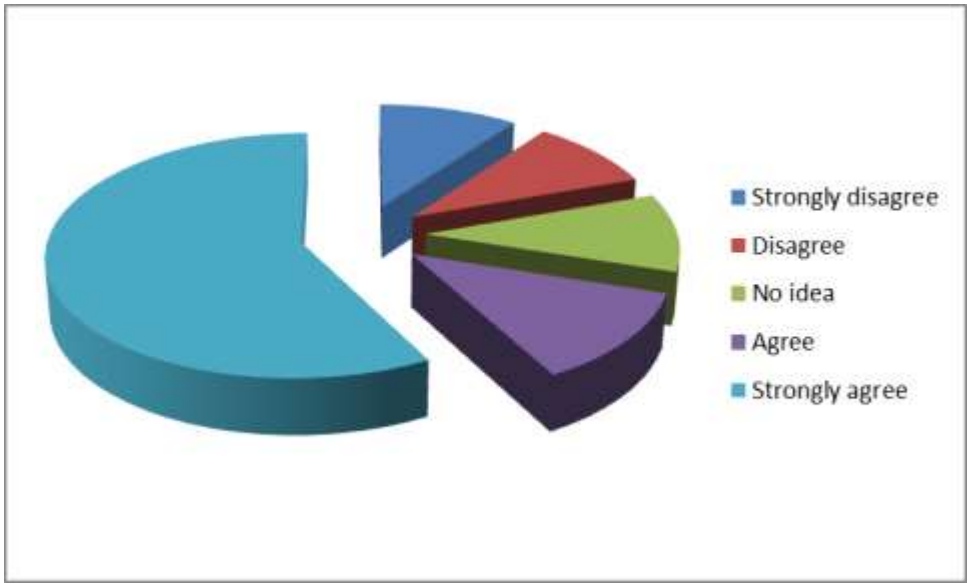

Fig 4.15 : Graphic representation of openly dumped SW causes smell

Situation No.11 Effects on the quality of life:

56% of the responses revealed that respondents marked that they are strongly agree to the facts that openly dumped solid waste effect the quality of life.21.67% of the responses showed that participants were to be agreement,15% marked no idea related to the situation,10% marked strongly disagreement and 8.67% marked disagreement.

Table 4.16 : Responses of the participants related to littering effects

Situation.11	SD		D		NI		Agr		SA	
	F	%	F	%	F	%	F	%	F	%
Effects on quality of life					30	10%	26	8.67%	45	15%
					65	21.67%	168	56%		

Note. SD=strongly disagree, D=Disagree, NI= No idea, Agr=Agree and SA= Strongly agree

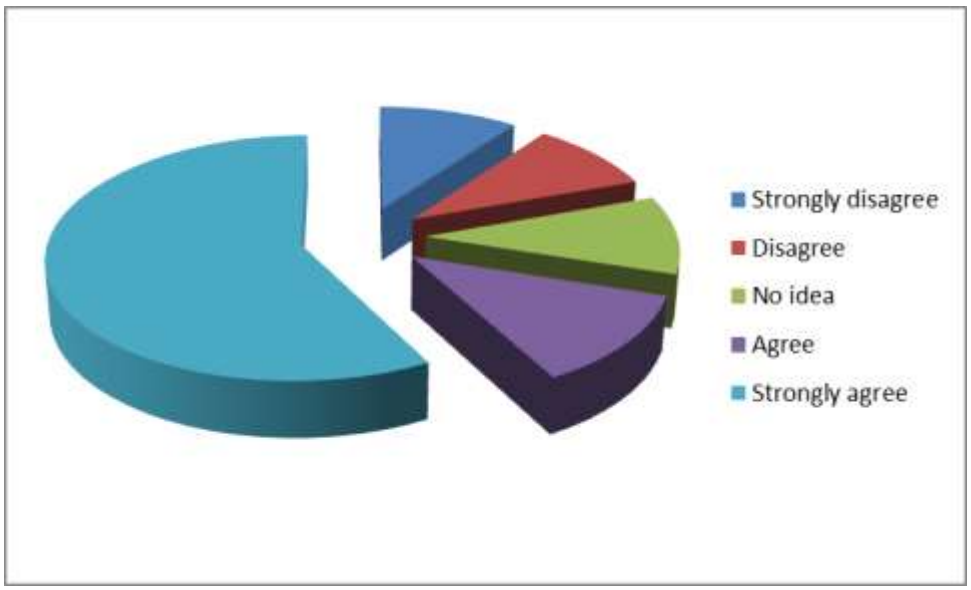

Fig 4.16 : Graphic representation of SW effects on the quality of life

Situation No.12 Effects on culture:

From the analysis of data, it was observed that majority of the participants showed their strong agreement that the disposal of solid waste in open drains has strongly effected the culture in their responses,14,67% marked disagreement and lastly 7.3% of the analyzed data collected through questionnaire marked that the participants showed their strong disagreement to the fact.

Table 4.17 : Responses of the participants related to littering effects

Situation.12								SD		D	
		NI		Agr		SA					
F	%	F	%	F	%	F	%	F	%		
Effects on culture						22	7.3%	26	8.67%	45	15%
				65	21.67%	168	56%				

Note. SD=strongly disagree, D=Disagree, NI= No idea, Agr=Agree and SA= Strongly agree

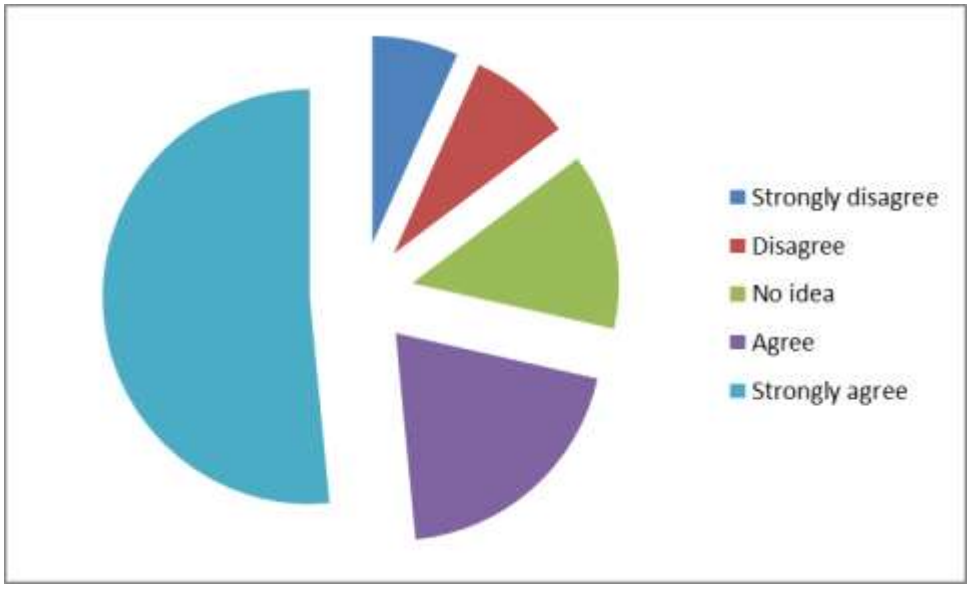

Fig 4.17 : Graphic representation of SW effects on the culture

Situation No.13 After effects on the personality:

56.6% of the responses marked that the presence of solid waste had after effects on the personality of the inhabitants 12% showed that participants have no idea related to their situation.17% showed disagreement and 7% of the marked responses showed that participants showed their strong disagreement.

Table 4.18 : Responses of the participants related to littering effects

Situation.13								SD		D	
		NI		Agr		SA					
F	%	F	%	F	%	F	%	F	%		
Aftereffects on personality						21	7%	30	10%	36	12.67%
				60	20%	170	56.6%				

Note. SD=strongly disagree, D=Disagree, NI= No idea, Agr=Agree and SA= Strongly agree

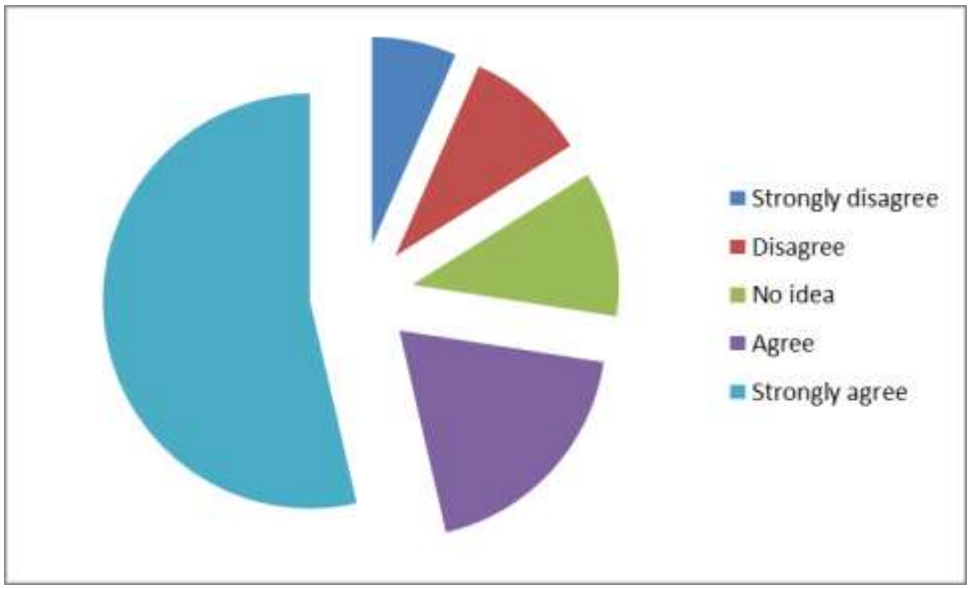

Fig 4.18 : Graphic representation of aftereffects of SW at the personality

Situation No.14 Drain causes overflow in rainy season:

52.2% of the analyzed responses showed that the disposal of solid waste in open drains caused overflow in the rain which portrays an ugly picture of their residential area.13.3% showed agreement 13% marked no idea,13% showed disagreement and 7.3% showed strongly disagreement.

Table 4.19 : Responses of the participants related to littering effects

Situation.14										SD		D	
		NI		Agr		SA							
F	%	F	%	F	%	F	%			F	%		
Drain causes overflow						22	7%			39	7.3%	39	
			13%	40	13.3%	158	52.2%						

Note. SD=strongly disagree, D=Disagree, NI= No idea, Agr=Agree and SA= Strongly agree

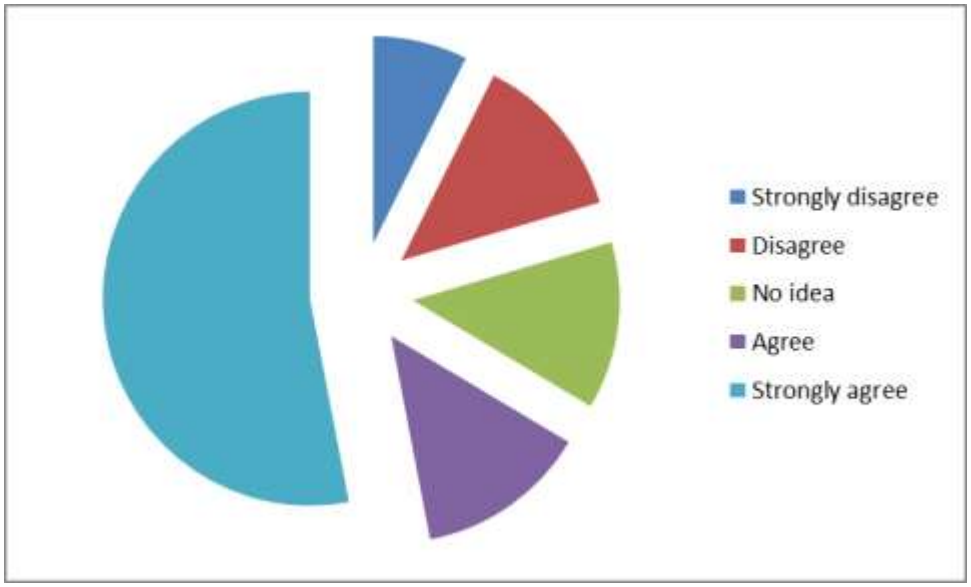

Fig 4.19 : Graphic representation of poor solid waste management system

Situation No.15 Decrease in value of area:

43.3% of the responses showed that littering has decreased the value of their residential area 24.67% showed the agreement to the above mentioned fact, 11.65% showed off having no idea, 10% marked their disagreement, whereas 10% of the total response related to this situation marked their strong disagreement.

Table 4.20 : Responses of the participants related to littering effects

Situation.15											
		NI		Agr			SA		SD		D
F	%	F	%	F	%	F	%	F	%		
Decrease in value of area				30	10%	30	10%	35	11.6%	74	24.67%
				130	43.3 %						

Note. SD=strongly disagree, D=Disagree, NI= No idea, Agr=Agree and SA= Strongly agree

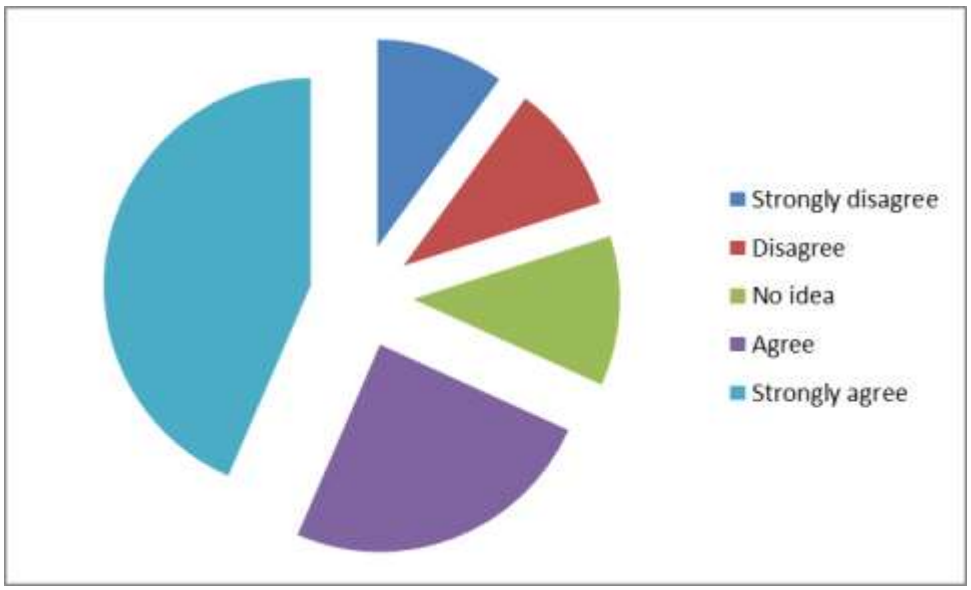

Fig 4.20 : Graphic representation of decrease in areas' quality due to SW

Conclusion:

Recently the impacts and aftereffects of improper and inappropriate solid waste management systemhas been acknowledged and it was noticed that it has disastrous effects on the natural environment and health of the inhabitants around the globe. In the developing countries this issue has gained much popularity and many strategies has been developed to cope with the prevailing situations. The current research is a little effort as a contribution to the solid waste management system field because in this research an attempt is made to investigate the effects of solid waste and littering on the social and cultural norms of the inhabitants belonging to WARD-32 in Quetta city. Through the findings it could be summarized as people are not happy and satisfied with the management system of the solid waste. They stated that there is always a demonstration of negligence related to the collection and disposal of solid waste. It has been observed that heap of garbage are present around the area, which gives a very poor depiction of the surrounding. Due to presence of the rubbish and garbage the natural environment get effected too much that it destroys the total beauty of the area.

Furthermore, it has also brought into limelight under the shadow of the findings that poor solid waste management system imparts many risks to the social norms of the society such as quarrels, immoral values, abusive language, sick mentality etc. People show ill-temper nature due to which they started to fight with each other due to the presence of solid waste in front of their streets, houses, factories etc, even though schools are not far apart. Presence of solid waste causes many problems such as sewage problems, sanitary problems, psychological problems, mental problems and health problem as well. In addition to this, from the analysis of data it has also been noticed that SW has harmful effects on the natural beauty of the area. It has strong effects on the aesthetics of their surrounding and also causes pollution in terms of air and water pollution. Because when there areheaps of garbage, they will cause blockage due to which it could result into floods and dirty smell as well. So it could be suggested that better policies should be designed for making the system of solid waste more effective and appropriate. All the member should took this issue more seriously in order to make the situation better and effective. This problem should be addressed by environmental agencies, policy-makers and strict laws and regulations should be formulated and must be obeyed by everyone to eradicate this issue from its roots in the developing countries in general and Pakistan in particular.

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