

# Strategies for attracting Public cooperation in the management of household waste in Somesara City

Mohammad Doostar<sup>1</sup>, Seyyed Mohammad Nopasand Asil<sup>2</sup>, Seyedeh Roghayeh Hasani Ziabari<sup>3</sup>

1. Faculty member at the University of Guilan, Rasht, Guilan, Iran
2. Faculty member at the University of Guilan, Rasht, Guilan, Iran
3. M.B.A Student, Pardis branch, Guilan University, Rasht, Guilan, Iran

**Abstract:** Management of household waste in new era has taken significant importance due to changes that is made in pattern and method of living; movement and activity as it is necessity of life; placed complications that are not favorable and human for continuing life should eliminate those complications; therefore hygiene is the cleaning environment is the necessity of continuing life. The goal of this research is considering the degree of function of public participation at management of household waste management. In this research firstly during an interviewing authorities and citizens in considering statistical society main variables of the research were identified and then divided in dimensions of education, culture, structure and technology. Statistical society of this research is all people resident at Somesara city. Sampling was done through Cochran formula and finally 400 questionnaires were distributed among samples. Obtained data have been analyzed through SPSS and Lisrel software. The result showed that all 4 factors don't have favorable situation in public participation at urban household waste management.

**Key words:** waste, household waste management, public participation, citizens

## INTRODUCTION

Social life in its natural and social form accompanies production of unwanted materials that is counted as household waste. The whole materials resulted from activities that is produced at residencies of human and at least is solid in the view of its owner and unwantedly are counted useless and waste are called solid waste (Saeidnia; 2009, 20).

Also the whole useless matters that are create by human activity (except matters that is disposed from body); is called waste that is produced from different household resources, public places, institutes, industrial units, constructional operation, factories of supplying food (Helm seresht and Delpisheh; 1996).

Based on regulation of environmental protection of Islamic republic government waste means kind of solid matter that is counted waste in tradition. This material are created due to daily activity of human that may enter from different resources such as urban region, rural area., household, industrial and agricultural region to the environment that includes: rubbish, food waste, trash, ash, corpse of animals, crap, industrial waste, construction debris, dangerous waste (Amir Beigi;2003). Based on the law of household waste, administrative manager of waste; is a person or legal character that is responsible for planning, organizing, caring and administrative implementation related to production; collection, saving, separating, transportation, recycling, processing, removing waste and also education and informing in this field.

Collecting operation, transportation of waste needs exact planning. This plan should be able to conduct operation properly and hygienic; because planning is a managerial tool for achieving reasonable method at decision-making. Observations show that where waste has correct performance, health of society has been located at higher level. Of course by considering this principle that methods of implementing practical management of waste in different countries and even in regions with different climate can be variable; thus household waste management can have necessary flexibility (sedough, 1994).

The concept of association is taken from the word "participation" in English. Lexically it means involvement and accumulation for especial purposes such as match, conversation, meeting and so on. About term meaning, participation is a lot of discussion but totally we can know its main component as involvement, activity and effectiveness. Participation in Persian language has been used in the form of concepts such as cooperation,

collaborative effort and cooperation and though exchange. In sociology dimension participation means dependency of a person to a group and share that it has and also means active participation in a group in the direction to achieve a social activity (Abdoli, 2011, 2).

“Shomiker” defined participation: participation is a kind of mental and affective involvement at group situation that motivate people to act for achieving group goals and become partner at doing responsibility (Shomiker et al ,1992, 78).

“KortDepfer” has also told: participation is as ratio of practical interference to required interference; regarding effective following of especial activities at distinct level of representative for group (HamedMoghadam, 1994, 288).

Citizenship participation is citizenship power. Many people interpreted participation as “helping themselves” and some other know it equivalent to “absolute control” (Karimian pour, Mafi; 2011, 112).

Therefore based on cases that were mentioned this paper is going to consider methods of attracting public participation in household waste of Somesara city. In the following and at the next section theoretical principles of the research are explained. At the third part research method and at the last part research findings and result are presented.

### RESEARCH THEORETICAL PRINCIPLE

In fact nowadays participation is one of the most necessary procedures at development process of local and constant societies. In this meaning real participation of people at planning movement changes country. As constructive plans is not introduced in the view of merely ‘physical and economic growth but change at the political power and in scientific view; technology and reasonable improvement of way of living and public participation has essential importance (Tavasoli, 2003, 64).

Participation is based on this fundamental belief that all people have the right to feel responsible in affair that is related to them; think about it; express their though without fear and meddle in decisions that affects their life. The most essential thought that is the foundation of participation is the principle of people equality. When people have equal importance and value in connection to each other than participation among them can help arising and provide many profitability for all.(Shafiei;2007,4).

Household waste management means a set of organized and systematic regulations; in relation to production; saving; collecting; transportation; process and disposal of solid waste; accordance to public health, economy, preserving resources; aesthetic and other environmental necessities and what is paid attention by people. With this definition household waste management includes all administrative, financial, legal, designing and engineering cases (ChobanooGlos et al, 1992).

In other word waste management is organizer of steps of production control, saving, collecting, transportation, changing or recycling or disposal of waste in which the optimized principle and actions for observing health, economic, social, engineering, preserving aesthetic cases is used by administrative, financial, legal and planning methods (Monavari, 2002, 30).

The following steps are necessary at planning waste management:

**a- Collecting data:** identifying capabilities and environmental talents for determining needs and available facilities: in this step the way of collecting, transportation of waste is considered and sufficient recognition is obtained.

**b- Determining priorities:** after identification of the considering problem and determining needs and problems, the next step is determining important prioritized problems; because resources and available facilities show deficiency about needs. Basically in planning priorities are determined and ranked regarding following cases:

1-It should have the highest output

2-cover more population

3-prevent health problems

4- Take the best benefits of human resources and financial resource

5-to be coordinated with new process and methods

**C-determining goals:** by explicit explanation of goals: prevent waste of time. Goals of plans should be distinct at long-term and short-term

**D- Writing explanatory plan and replaced plans:** in this step explanatory plans are provided by paying attention to the resources, cost, staff, time and required conformational framework.

**E- implementation:** In this step staff and resources should be used correctly. The function and responsibility of staff should be determined and necessary procurement should be done.

**F-monitoring:** means following daily plans and activities while implementing, for being certain about work development according to timetable and plan’s goals.

**G- evaluation:** the goal of evaluation is assessing the degree of achieving determined goals of plan. In evaluation weakness and strength points are distinguished (Azargashsb, 1996).

The first step in waste management is identifying, determining goals and in a word correct planning. As we know facilities and services for waste management are limited in villages thus we are forced to benefit the least available facilities and services. Also it should be told : here management is not only using facilities and limited conditions by administrating plans but in includes other aspects of the action that is participative management that its necessity is using people who are exposed to this plan. Waste management in villages is not only a manager of a project with unlimited financial resources but it should have the ability of informing and activating residents. Recycling waste, reducing production of waste, optimizing consumption and disposing from environment is important element at waste management and planning. Waste management has 6 necessary elements that are: production, saving at the place, collecting, transportation, recycling and disposal (abdoli, 2000, 33).

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Generally 4 factors are effective on urban waste management that are:

- condition of education
- culture
- structure
- technology

### METHODOLOGY

Statistical society includes all people resident at Somesara city that based on the last census in 2013, are 124247 people. Method of sampling is random and 400 people were chosen as final sample of the research through Cochran formula. In this research collecting data has been through questionnaire. Content validity of this questionnaire has been approved by professors and authorities and questionnaire reliability was calculated through cronbach alpha coefficient. For data analysis methods of describing and statistical analysis especially correlation analysis methods have been used and regarding that testing hypothesis needs correlation analysis and considering variables are qualitative for testing hypothesis ranking correlation coefficient and Friedman test have been used.

### RESEARCH FINDINGS

The result of exploratory factor analysis for fourth dimensions indicates that the degree of indices of KMO was higher than 0.6 and therefore there is sufficiency of sampling for doing exploratory factor analysis, also the degree of significance level of Bartlett test is less than 0.05 that denotes proper structure of data for doing exploratory factor analysis it means that the proper relationship between data structures is approved. Also the result showed that the degree of subscription of questions (determination coefficient of questions) is higher than 0.4 and it doesn't need deleting question.

Regarding analysis all questions related to variables have meaningful factor load with research variables because degree of t-test is higher than 1.96. Indices of fitting shows suitability of the model of measuring variables.

#### T-test for considering situation of each fourth factor:

**First question:** how is education condition in household waste management of Somesara city?

table1) mono sample t- test for education variable

sig	Freedom degree	T statistic	Sd	Mean	Number	
0.000	382	-21.745	0.66627	2.2597	383	Education

Regarding table 1 it is observed that obtained meaningful level for variable of education is less than 0.05 therefore there is meaningful difference between variable mean with expected mean of the society. Obtained mean of the variable education is less than expected limit. Therefore we can claim that education in considering sample doesn't have favorable situation.

**Second question:** How is culture situation at household waste management in Somesara city?

Table 2) mono sample t test for the variable culture

Sig	Freedom degree	T statistic	S.d.	Mean	Number
0.000	381	-15.752	0.76293	2.3851	382 culture

Regarding table 2 it is observed that obtained significance level for variable of culture is less than 0.05. Therefore there is meaningful relation between variable mean with expected mean of the society. Obtained mean of culture variable is less than considered limit. Therefore we can claim that culture in considering sample doesn't have favorable situation.

Third question: how is structure situation at household waste management in Somesara city?

Table 3) mono sample t test for culture variable

Freedom degree	T statistic	Sd	Mean	Number
0.000	378	-25.242	0.57422	2.2555 379 structure

Regarding table 12 it is observed that obtained significance level for the variable structure is less than 0.05 therefore there is meaningful relation between variable mean with expected mean of the society. Obtained mean of structure variable is less than expected limit. Therefore we can claim that structure in considering samples doesn't have favorable situation.

Fourth question: How is situation of technology at household waste management in Somesara city?

table 4) mono sample t test for technology variable

sig	Freedom degree	T statistic	Sd	Mean	Number
0.000	373	-33.656	0.58173	1.9876	374 technology

Regarding table 13 it is observed that obtained significant level for variable of technology is less than 0.05 therefore there is meaningful relation between variable mean with expected mean of the society. Obtained mean of the variable technology is less than expected limit (at 5 item likert spectrum 3 is expected limit). Therefore we can claim that technology in considering sample doesn't have favorable situation.

**Prioritizing fourth variables**

Table 5) Friedman test for ranking questions of fourth variable

Sig	Freedom degree	Chi-square	Rank mean
0.000	3	125.849	2.63 Education
			2.88 Culture
			2.62 Structure
			1.88 technology

Regarding table 5 it is observed that obtained significance level is less than 0.05 therefore we can say that prioritizing fourth variables has been different in the view of respondent. Regarding mean of ranks the highest rank among fourth variables was related to the variable of culture.

**Conclusion and suggestion**

Nowadays success of waste management system depends on the degree of public participation therefore citizens are as main element for success of waste management system. Therefore all motivational factors and procedures that cause increase of public participation in household waste management should be placed at waste management plan. In this research different factors that cause creation of motivation has been considered and it was distinguished that 4 factors of education, culture, structure and technology have important function in attracting public participation at household waste management.

Regarding that there is meaningful difference between variable mean with expected mean of the society and condition of four variables that is culture-education-structure and technology in samples doesn't have favorable condition at city level, therefore it is suggested to try on all levels of society in this field. As it is understood from the result of research the priority is with variable of culture and culturalization should be done about household waste management. Therefore some suggestions have been presented based on the research variable:

- 1-It is better to reduce packing of products in factories for internal consumption.
- 2-foods required for families should be bought to the sufficient amount.
- 3-By giving rubbish bags with different colors for separating recycling rubbish from other ones
- 4- Constant use of useful and attractive educational messages through media especially TV for separating rubbish and displaying short educational movies that is the result of usefulness of this action.
- 5- Holding group education with conformation of educational workshop of separating rubbish from origin
- 6- For easiness of system of separating rubbish all primary facilities such as rubbish bag, separated rubbish basin should be available for citizens.
- 7- Municipalities should have regular plan for collecting rubbish
- 8- for encouraging families in the field of separating rubbish reward should be considered for example exempt him from paying cost of collecting rubbish or by installing banner honor families.
- 9- Sending educational SMS for citizens
- 10- Using recycling rubbish bags like paper
- 11- Using new techniques for analysis of rubbishes (worm vermica)

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