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# Outsourcing and Local Public Administration: Water and Sanitation Services Delivery and Women Participation in Urban Areas

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**Abstract**

Women in developing countries are the majority of those who access and use water and sanitation services but women's low participation at decision making level in outsourcing and limited representation of women in services departments of local public administration are major obstruction to include women's interests. The purpose of this paper is to analyze perceptions of women citizens and local officials regarding water and sanitation services delivery situation, women responsive requirements and gender equality at decision making level in outsourcing. In order to conduct an empirical research, this paper has used multifactor structured questionnaire and for this purpose population of public sector local officials including women and women citizens are taken to ascertain the rationale of the study field. Women are most dissatisfied with the services, women responsive requirements and gender equality at decision making level while preparing the outsourcing requirements of services delivery but local officials hold more positive feelings. This study also finds that there is inadequate representation of women in the front line of basic public services organizations such as water and sanitation. It is important for public organizations to include women and women should get involvement in outsourcing requirements to improve water and sanitation services.

**Keywords:** outsourcing, public services delivery, gender inequality, water & sanitation

## 1. Introduction

'Services delivery' has emerged as a notion in public sector for substance of sustainability and economic wellness. Government is no longer the only relevant actor to manage services and services delivery, problems can be shared responsibility of state, market and civil society (Stoker, 1998).Public services are designed to ensure the availability of community services in effective way and this includes asking which mode of solution best reflects and serves them. Local public administration is the principal provider of services and mostly hampered by limited resources and associated costs. Over the past 20 years, "New Public Management" (NPM) has become a short-hand term with a set of management techniques and practices associated with structure and operation of public administration which brought changes in the management and delivery of public services in both developing and industrial-world (Hood, 1991; Matheson & Kwon, 2003). The various ideas and themes of NPM may be put into two strands, the one emphasizing managerial improvement and organizational restructuring, and other emphasizing markets and competition as a way of giving choice and 'voice' to users and promoting efficiency in service delivery (Denhardt&Denhardt, 2000; Hope, 2002; Pierre et al. 2003).

Water is vital for all forms of life, including human development through the use of water and water is the life blood for agricultural and industrialized growth. The water and sanitation services in developing countries have long been suffered from poor performance of financial problems. Water and sanitation services are believed to be essential for health and quality of life in developing countries. Efficient water and sanitation services provide a wide range of benefits to people including lower health costs and less time and effort devoted to managing water and waste (Evans 2005; Galiani et al. 2005).Local water and sanitation sector lacks adequate skills and resources and investment in water infrastructure is limited in developing countries. Inadequate access to safe water and poor treatment of solid waste leads to adverse health consequences and Nearly 2.4 billion people are expected to remain without access to proper sanitation in 2015 in developing world particularly Asia and Africa (J-PAL. 2012). Water and sanitation services are important to achieve and maintain good public health, reducing poverty of developing countries. Water and sanitation service delivery may be capital intensive and lack of better water and sanitation services also raise serious issues in urban areas of developing countries and are especially critical for women and children. At all levels of government, it is the responsibility of public authorities to provide clean water and sanitation services and better of water resources. Financial crux has challenged internationally the budget for water in development plans and projects, and in other decisions and the ultimate responsibility of government is to provide services whether through public utilities or contracting out with private operators (Pollitt &Bouckaert, 2000). The developments related to NPM in the practice of public administration have urged the need of outsourcing public services to enhance efficiency, accountability, and performance of public organizations (Yates, 2000). In Outsourcing of water and sanitation services, a service contract usually involve a portion of a municipal service to an external entity or form of contract the service provider will "manage" all. Public procurement is not only be viewed as a one-off process of obtaining goods and services but is also considered within the broader

context of privatization agenda with different ideas ‘deregulation’, ‘reengineering’ and ‘quality of service’ (Kakabadse&Kakabadse, 2000a, 2000b, 2001).

Socially water has been closely associated with women in most cultures throughout the history of the world. Women and girls in developing countries are the primary users, providers and managers of water in their households. Globally it is recognized that end-users – female – now has to be taken into account and involved in matters relating to water management and sanitation and gradually many women are achieving greater degrees of voice and participation in decision-making processes with the help of civil society in developing countries (Lagrosen&Lagrosen, 2003). In developing countries, social and cultural barriers to women‘s participation in water and sanitation services tend to be complex(Gender & Water Alliance, 2013).Usually the burden of inadequate access to water and sanitation falls heavily on women and girls throughout the developing world. Clean water and sanitation enables women to access social and economic power, helping them to become active and the importance of involving women in water management has long been recognized in international forums (Water Aid, 2012).

Organizational culture has turned over the public organizations into public responsive bureaucracy since 1980s and International trends in the last two decades are in the direction of reform programmes within the public sector, referred as ‘managerial revolution’ in public organizations (Pierre, J. & Aldershot, 1995). The trend of New Public Management reforms direct public organizations towards managerialism with the aim of changing the culture of public sector (Olsen, Johan, P. 1996). Christopher Hood (1991) the originator of NPM concept describes the organizational cultural trends moving public administration towards public management increasing efficiency and competition. The culture appropriateness of public organizations and how organizational culture is established relates to several literatures that points out natural developmental processes and the organization gradually adapts via internal and external pressure. Public sector organizations cultural changes intensify competitiveness, as they require dramatic changes in services delivery within the limited resources. Several theoretical approaches have been developed in relation to these changes and public choice has a role to play in this change process. Organizational studies are embedded in the management schools have led to a distortion in the interest and focus of organizational theory. Researches on the theoretical basis of organizations are composing of multidisciplinary fields and it is difficult to identify a single unified kernel for theoretical foundations (Christensen et al., 2007). Many researchers (O’Reilly 1989, Nÿstrom 1990, Pinchot & Pinchot 1996, Ahmed 1998) have worked on identifying the values and standards and assumptions involved in the measurement of the organizational culture. Very few experimental studies, in particular quantitative research, carried out on results oriented, but many of the values, norms and beliefs of organizational culture identified by researchers are to measure the determinants of organizational culture rather than responsiveness to women interests (Ellen Martins, 2002).

Developing and developed countries throughout the world have experienced service delivery with decentralized system that gives faster gains than the system of centralized. There are a number of options for national public organizations to delegate powers to local offices from

central to local government or from provincial to local level. Local governments are formal public sector institutions, formally authorized to deliver a variety of public goods and services at the local level (Dent et al. 1999). The task of service delivery responsibilities to local governments is largely based on the principle of subsidiaries to be capable of efficiently undertaking the services (Murphy, 1990). Local public sector institutions are expected to deliver services as per to local priorities and local needs. Moreover, public sector institutes needs sustainability and well suited interactive decision making (Glover & Hughes, 2000).

## 2. Study Context

Pakistan is a South Asian developing country with more than 180 million people now that became an independent state in 1947 after liberation from British in the Sub-continent. Since its independence, Pakistan cycled through a number of politicians who mostly were tarnished by inefficiency and public administration is also suffering in lack of governance and the ranges of irresponsible behaviors are the challenges to reform public employees. A large proportion of the population is not satisfied with services provided by local governments and there is need to maintain the moral standards and human values in the conduct of public affairs in democratic setup of public administration.

The issue of women and water had been generally trivialized in Pakistan and in many developing countries. Generally it is limited to drinking water management and to some essential households' uses of water such as washing, bathing and sanitary use. However we need to step beyond the myopic vision and explore its broader dimensions. In 1951 the per capita availability of water in Pakistan was 5500 cubic meters, which has now declined to about 1000 cubic meters due to population growth. Pakistan is an agrarian country and it is highly dependent on fresh water resources for its economic development. Agriculture contributes about 21% of GDP, 64% of people depend on agriculture, 80% of the rural workforce depend on water and 60 to 70% of exports are agriculture based[i].At least 45 per cent of urban population and nearly 90 per cent of the rural population in Pakistan does not have access to clean water for drinking and cooking[ii]. In 2008, over 94% of water was used for irrigation, 1% in industry and 5% in the domestic sector[iii]. Pakistan receives on the average about 141 million acre feet (MAF) of surface water annually and out of which 104 MAF is diverted from barrages to various canals. On the average about 50.3 MAF is abstracted from ground water reserves[iv]. Future projection shows that per capita availability of water in Pakistan by 2025 will be around 500 cubic meters[v]. This is a very alarming projection as it implies very scarce water availability to the extent of creating a famine situation. Estimates of the overall gap between supply and demand vary in different reports but it is estimated that it will be of the order of 26 MAF despite various measures of efficiency and productivity improvement. This situation will create much more demand for the role of women as a manager and provider of water.

Domestic water subsector is an important facet in Pakistan that accounts for societal and bio-political challenges for women in urban and rural areas[vi]. The woman is essentially the water manager, water procurer, water laborer, water user as well as a facilitator for uses of water by other members of the family. In domestic water management women are actively

involved in the use of water such as drinking water, sanitation, cleaning and bathing as household manager. Water is of primary importance for rural and urban women; however, water supply resources in the country, such as simple wells, hand and electric pumped supplies, piped supplies, springs, tanks, ponds, streams, rivers and irrigation canals differently affect women's involvement in water household work. These water supply resources determine the actual distribution of water to different uses by women in different areas and relegate diversified daily chores in the use of water for urban and rural household work.

Normally, the household work of a woman consumes one third to one half of a working day as in semi-urban and rural areas[vii]. A significant proportion of this time is devoted to fetching and storing water for domestic purpose. Women bear severe social and economic opportunity cost by spending too much time and energy dealing with water issues such as illness, safety issues and girls drop out of schools[viii]. Usually in urban areas, water is supplied through piped supplies in the household by municipal authorities such as Water and Sanitation Agency (WASA) and other local municipalities. However because of growing shortages private wells are also being bored in houses. In addition, water is procured through portable tankers. Generally there is awareness to get safe drinking water therefore in many urban areas either there are public filters plants or in more posh areas individual house filter plants. Women are responsible for cleaning, laundry, food preparation and managing drinking water in their homes. Women also do budgeting for the household consumption of water and in industrialized and urban areas water purchasing puts more constraints on household budget. In extreme summer weather, water for domestic use is purchased @ USD 10-15 per tanker, especially in highly populated cities[ix].

Tehsil Municipal Administrations (TMAs) are the basic units of local government for delivery of public services in Pakistan. TMA staff is mixture of bureaucratic district government and corporation staff for delivery of water and sanitation services, fire emergencies and local public works. On the policy level drinking water and sanitation policy is the constitutional responsibility of provincial governments but federal government usually is involved in policy development. A separate individual authority or agency is not constituted to set the quality standards of water and user participation was not considered in hygiene education until 1992when federal government launched the Social Action Plan. For a long time services provision was the legitimate responsibility of provincial governments and in 2001 Local Government Ordinance, water supply and sanitation services were delivered by the newly created Tehsil Municipal Administrations (TMAs). In current system, the district government supervises the coordination and joint implementation across TMAs. A Report in World Water Day April, 2011 on Urban Water Supply states that the current service standards of WSS services in most of the Pakistan's cites are unable to meet minimum standards. Institutional weakness, lack of capacity building, financial constraints and absence of public private partnership are the key issue of failure for the delivery of efficient services.

Massive urban growth is putting more burdens on women to maintain health and sanitation in the urbanized cities and sanitation is more pathetic in rural areas. Only 47 percent of people in Pakistan have access to sanitation[x]. Sanitary duties are women's responsibilities in urban

and rural areas either it is done by the woman of the house or by hired servants those are also females. Consequently females are more exposed to health hazards because of sanitary waste and she has to dirty her hands in dealing with waste. The poor sanitation sometimes gets worse in case of victims' serious health problems, such as cancer, lung disease or pregnancy complications due to the presence of chemicals[xi]and other materials in the environment.

Women who are exposed for long to pollutants potentially are at risk of severe health problems in old age. Young girls who are exposed to 'lead'[xii]which is a toxic metal and this increases the risk of high blood pressure and kidney damage. The factors that contribute to the vulnerability of women to the environment include polluted drinking water, indoor pollution, water having side effects of pesticides and fertilizers. As stated by the Federal Ministry of the Environment that diseases related to unsafe water and poor sanitation cost Pakistan's economy 112 billion Rupees per year in health expenses[xiii]. Women health and water are neglected sector in Pakistan and contaminated water is the main reason for many diseases such as diarrhea, hepatitis and various infections. Furthermore as reported in an article that in Pakistan, water and sanitation-related disease accounts for 60 per cent of the total child mortality cases[xiv].

The objective of this paper is to analyze perceptions of women citizens and local public administrators regarding water and sanitation services delivery situation, women responsive requirements and gender equality at decision making level in outsourcing and whether these perceptions are different between local officials and women? This paper contributes significantly towards a more informed understanding of satisfaction to water and sanitation services delivery in Pakistan where little empirical or comparative data has been published. This study also contributes to the objective of achieving more women-focused water and sanitation services. The article structure is as follows. First hypotheses are presented, discussing the concepts of services, women interest in services and women representation in public administration practices. Second, data and methods for the study are described. Third, we present results, following by a section of discussion, the limitations, implications and recommendations of the study.

## 3.Hypotheses

### *3.1. Water and sanitation services delivery situation*

Water and sanitation services delivery system need more capital and is labor intensive that require both public and private service providers to manage the services (Bovaird, 2007; Heather & Booth, 2007). The water and sanitation services are dependent on health and demand for clean water is exploded everywhere. Migration to urban area is also the reason for lack of clean water and proper wastemanagement (Chowdhury, 2011). Women are more affected (than men) due to poor quality and inadequate water for sanitation. Women play a major role in looking after family health and domestic water supply and sanitation is important in women's life to maintain general health of the family. Women responsibility in water sanitation and health has different implications in urban and rural areas.

Generally the drinking water quality in Pakistan is not up to the standard. National Drinking

Water Policy of Pakistan (2009) acknowledges equitable access to safe drinking water as the fundamental right of all citizens. Water quality test by different labs show 88% of the water supply is below standard in urban areas[xv]. Substandard quality of drinking water not only effect on health of females but also add more responsibilities such as boiling water, filtering, safe storage in uncontaminated bottles and collection of water from safe sources. Collection of water from long distance sources and contamination may also lead to adverse effects on health causing lesions, hardening of skin, dark spots and swollen limbs.Users of services demand for the best services and satisfaction is an emotional reaction for services condition. It is important to know the perceptions of women citizens as WAS services users and local public administrators to know the situation of services delivery.

*H1a. The perception of women and local officials ispositive with the present situation of water and sanitation services.*

*H1b. The perception of women and local officials is different in water and sanitation services delivery situation.*

*3.2. Women responsive requirements in WAS*

The perceptions of public depicts the needs and preferences of citizens to develop trust on government and citizen surveys lead government and public administration for better management of services (Howard, 2010;Bouckaert& van de Walle, 2003). The Government of Pakistan attaches great importance to municipal services for the provision of Water Supply services in the largest cities and the need; to improve municipal services are considered targeting better municipal services providers i.e. Water and Sanitation Agencies (WASAs). District governments with coordination of provincial Governments are investigating options for improving efficiency of Water Supply and sanitation services. Local governments usually outsource only a limited portion of their water and waste water disposal operations to private sector. According to a survey it seems difficult to meet Millennium development goals by 2015 concerning water supply because of poor regulations and monitoring. Public Sector organizations are not much concerned with gender perspectives in services delivery and in outsourcing decision making. The public sector organizations in local government are facing one of the most important challenges in gender mainstreaming in water and sanitation services sector. The services provider public organizations need to review the availability of water and sanitation services to citizens and users on the same terms that they meet the needs of women. All water and sanitation public services that directly address women needs are to be analyzed for requirements in services. Thus we hypothesize:

*H2a. The perception of women and local officials is positive with women responsive requirements consideration in water and sanitation services.*

*H2b. The perception of women and local officials is different regarding women responsive requirements consideration in water and sanitation services.*

*3.3. Gender equality of at decision making level*

In today's highly competitive environment, public sector is under increasing pressure to

reduce costs, particularly in areas of water and sanitation services operations. The public sector officials have become dependent on the experts and their consultancy to perform the specialized work. (Murphy, R. 1990). Efficiency in services delivery will improve and delivery of services will cost low if services are contracting out by local departments (Boyne, 1998).One group of theories stresses the role of costs in the service delivery and analyses of transaction costs are very important in the choice to buy services (Williamson, 1979, 1999). The market based solutions and impact of New Public Management type reforms on gender equality are scarce in past literature. This new culture of public organization in to public management has continued the traditional male chauvinism (Catlow and Linstead,2004). It is evident in research discussion of gender inequality by Davies and Thomas (2002: 478), "it can be seen that the gendered nature of the discourse of NPM, and the promotion of new entrepreneurial masculinities, presents particular problems for women professionals/managers". Janet Newman (2002) points out that NPM can have some positive implications for women and NPM has long way to go for gender equality. The depiction of outsourcing process is given by Momme, 2001,establishing and managing a contractual relationship with an outer supplier for the provision of capacity'. In recent years the trend of contracting water and sanitation services is increased most of the parts of the world particularly in middle and low income countries (Kevin et al., 2003).

In Pakistan, Public sector investments in water supply and sanitation sector are not sufficient and about one quarter of a percentage point of its GDP is spent on water supply and sanitation. Gender inequality is so apparent in Municipal offices and only female staffs are working at very low level in such organizations in Pakistan. Development plans and policy documents superficially addressed gender equality in water but no concrete steps are taken for resolving these issues. Women employed in public water sector organizations are at supporting staff level only and are not part of decision making at high levels. Moreover the working environment at these levels is not women-friendly[xvi] There is need for strong institutional framework to address equitable and gender responsive policies for employment and policy decisions.

Mostly men are trained on the engineering side in the water including purification and management of water sources & bodies. Infrastructure based water projects have also marginalized woman's exposure in water. So there is a need to involve women in programs for water sector training and education as well as for identification of women friendly technologies in water for less educated and rural women. Research and development organizations in the water sector are not mainstreaming women and water programs. Women can provide many practical inputs and better applications for water conservation and usage. Thus, we hypothesize

*H3a. The perception of women and local officials is positive on gender equality in water and sanitation organizations.*

*H3b. The perception of women and local officials is different regarding gender equality in water and sanitation organizations.*

## 4. Methodology

### *4.1. Data and Sample*

This study relies on the perceptions of different respondents spread across in various districts within Pakistan at municipal level of local public administrators as well as women as water and sanitation services users in urban areas. The data for this study come from two surveys. First, 202 local public officials at municipal level of government in water and sanitation sector were surveyed in June/July 2014 in two provinces, which we refer to as Local Officials Survey on gender and outsourcing. Respondents were randomly drawn from municipal level of government offices in three districts from each province. In total, six districts were surveyed and largest group of participants were male from local offices because of the nonexistence of females as administrators.

Second, data was collected from women as the basic users of water and sanitation services. This survey included 1,127 participants from two urban municipalities of each district. A total of 12 municipalities were surveyed in June/July, 2014 from two provinces, which we refer as Women Public Survey on gender and outsourcing. This survey utilized a stratified sampling method based on responses and respondents were randomly selected from urban municipalities' households.

### *4.2. Measurements*

A survey instrument was used for measuring the constructs for both surveys. Demographic variables are different in two samples and main constructs are: water and sanitation services delivery situation, women responsive requirements and gender equality at decision making level. Five point Likert scale was used to ask the respondents to rank the statements. Scale items are used to collect opinion data from the respondents. The study only targeted those who understood services facilities and could read and write.

Three main variables were measured using 14 items and the items distribution was as follows:

**Table 1. Constructs**

| Main Variables | Items |
|---|---|
| Water and Sanitation Services Delivery Situation (4 items) | • Overall opinion about local Government water and sanitation services |
| | • The standard of public Water supply and sanitation situation in water supply regularity, water quality, water pressure, sewerage system, household garbage collection, street garbage collection and cleaning of roads. |
| | • The reliability of Public Water service as compare to other services in water supply regularity, water quality, water pressure, sewerage system, household garbage collection, street garbage collection and cleaning of roads. |
| | • The public water supply system maintenance and improvement is done in Water Pipes System, new connections, interruption with sewerage water and in sanitation services. |
| Women Responsive Requirements (5 items) | • The local government is concerned with women interests and consults with women for water and sanitationrequirements. |
| | • Distribution of water is done on the basis of different uses by women in different areas. |
| | • The public sector local water organizations are concerned for women interest as more affected (than men) due to poor quality and inadequate water for sanitation. |
| | • In requirement of Public Water Filter Plants local government on which scale is responsive to women requirements |
| | • The local government water sector on which scale is responsive to women budgeting for the household consumption of water. |
| | • The women-friendly working environment in water and |

| | |
|---|---|
| Gender Equality at Decision Making Level (5 items) | sanitation organizations on which scale is increased. |
| | • In Public water sector organizations women hiring at decision making level on which scale is increased except than supporting staff level. |
| | • Professional qualified women in purification and management of water sectors on engineering side on which scale is increased. |
| | • On what extent expert women are consulted concerning their views on water and sanitation services decision making level. |
| | • On what extent women are considered in procurement of water and sanitation services in distribution of power and resources. |

All constructs are measured using 14 items under each construct to know the difference of perceptions of officials as service providers and household women as service users. For main constructs, descriptive statistics (means, standard deviation) are first computed to get the normality of the data before the advanced statistical analysis like factor analytical technique and once the reliability tests are done, correlation analysis is computed to know the relationship between two samples and other testing are applied to test hypotheses.

Demographic variables are tabulated to establish the degree of the relationships in two samples. In first sample, this study has202 local officials,97% men and 3% women at local public administration level and in terms of age 49 (24%) are aged between 21-30 years, 31 (15%) are between 31-40 years, 90 (45%) were between 41-50 years while 32 (16%) are over 50. In second sample 1,127 respondents are all females from public. In terms of marital status 7% women were single and 93% are married and the respondents152 (14%)are consisting of 2 members household size, 92 (8%) were having 3, 327 (29%) are 4 members, 230 (20%) are 5 members while 326 (29%) are having more than 5 members. The respondent women are also disaggregated by age and it is found that 361 (32%) are aged between 18-30 years, 236 (21%) are between 31-40 years, 411 (36%) are between 41-50 years while 119 (10%) are over 50. In terms of duration of living in the vicinity of concerned municipality are ranging from the last 2 to 50 years.

## 5. Results

In this section we analyze the similarities and differences between service providers and service users' perceptions. The reliability of the model is checked by calculating cronbach alpha (α) for all the constructs as well as for the individual scales to verify the goodness of under research model. Referred to table 2, the cronbach alpha values for water and sanitation services delivery situation scale (alpha=0.734),women responsive requirements scale (alpha=0.754) and gender equality at decision making level scale (alpha=0.797)in first sample prove more reliable and the second sample cronbach alpha values for water and sanitation services delivery situation scale (alpha=0.654), women responsive requirements scale (alpha=0.638) and gender equality at decision making level scale (alpha=0.618) show difference in the opinion scale. Overall the reliability tests are positive and model is found fit for further analysis.

Table 2. Reliability Analysis

| Variables | Women from Public | Local Officials |
|---|---|---|
| Water and Sanitation Services Delivery Situation | 0.654 | 0.734 |
| Women Responsive Requirements | 0.638 | 0.754 |
| Gender Equality at Decision Making Level | 0.618 | 0.797 |

Factor analysis enables the researcher to analyze relationships among sets of many interrelated variables and table 3 below summarizes the results from factor analysis.

Table 3. Factor Analysis Results

| **Items** | **1** | **2** | **3** |
|---|---|---|---|
| Overall opinion about local Government water and sanitation services | 0.678 | | |
| The standard of public Water supply and sanitation situation in water supply regularity, water quality, water pressure, sewerage system, household garbage collection, street garbage collection and cleaning of roads. | 0.636 | | |

| | | | |
|---|---|---|---|
| The reliability of Public Water service as compare to other services in water supply regularity, water quality, water pressure, sewerage system, household garbage collection, street garbage collection and cleaning of roads. | 0.574 | | |
| The public water supply system maintenance and improvement is done in Water Pipes System, new connections, interruption with sewerage water and in sanitation services. | 0.565 | | |
| The local government is concerned with women interests and consults with women for water and sanitation requirements. | | 0.851 | |
| Distribution of water is done on the basis of different uses by women in different areas. | | 0.835 | |
| The public sector local water organizations are concerned Women as more affected (than men) due to poor quality and inadequate water for sanitation. | | 0.827 | |
| .In requirement of Public Water Filter Plants local government on which scale is responsive to women requirements | | 0.609 | |
| The local government water sector on which scale is responsive to women budgeting for the household consumption of water. | | 0.557 | |
| The women-friendly working environment in water and sanitation organizations on which scale is increased. | | | .719 |
| In Public water sector organizations women hiring at decision making level on which scale is increased except than supporting staff level. | | | .713 |
| Professional qualified women in purification and management of water sectors on engineering side on which scale is increased. | | | .652 |
| On what extent expert women are consulted concerning their views on water and sanitation services decision making | | | .657 |

| | | | |
|---|---|---|---|
| level. | | | |
| On what extent women are considered in procurement of water and sanitation services in distribution of power and resources. | | | .628 |
| % of variance explained | 31% | 26% | 21% |
| Reliability Alpha | 0.84 | 0.83 | 0.77 |

The above table 3 presents the three components extracted from factor analysis as the determinants and using the original 14 items under three main variables used to measure factors, these items with a total variance of 78% are distributed under the three components. The first variable named ‘water and sanitation services delivery’ has four items with factor loadings ranging from 0.678 as the highest to 0.565 as the lowest with an alpha coefficient =0.84. The second variable named ‘women responsive requirements’ has five items with a total variance of 26%while reliability alpha coefficient is 0.83. This suggests a high degree of internal reliability among the items. Thirdly, five items loaded on third variable with a total variance of 21% and alpha coefficient 0.77. This suggests that these variables are reliable for explaining water and sanitation services challenges at local public administration level. The study therefore confirms that the most important determinants of water and sanitation services challenges include (1) overall opinion about local public administration water and sanitation services, (2) The local government concern with women interests for water and sanitation requirements and (3)The women-friendly working environment in water and sanitation organizations on which scale is increased.

Table 4. Descriptive Results

| | **Local Officials** | | **Women from Public** | |
|---|---|---|---|---|
| | Mean | SD | Mean | SD |
| Water and Sanitation Services Delivery Situation | 3.73 | 0.36 | 2.65 | 0.18 |
| Women Responsive Requirements | 3.54 | 0.82 | 2.11 | 0.26 |
| Gender Equality at Decision Making Level | 3.41 | 0.97 | 1.79 | 0.25 |

Table 4 shows descriptive results for the main variables and descriptive results suggest the perceptions of respondents using the mean and standard deviation scores computed on the 5-likert scale. Variables with a high mean score indicates they were highly evaluated by the respondents. On average local officials in the sample have high levels of satisfaction with water and sanitation services delivery, women responsive requirements and gender equality at decision making level, indicating that they generally providing better services and are oriented to have women requirements in water and sanitation services as compare to women responses in the sample.

Table 5. Correlation between Local officials and Women Perceptions

| | Water and Sanitation Services Delivery Situation (women) | Women Responsive Requirements (Women) | Gender Equality at Decision Making Level (Women) |
|---|---|---|---|
| | | | |
| Water and Sanitation Services Delivery Situation (Officials) | -.140* | -.076 | .004 |
| Women Responsive Requirements (Officials) | .015 | .040 | .091 |
| Gender Equality at Decision Making Level (Officials) | .008 | .26 | .048 |

*. Correlation is significant at the 0.05 level (1-tailed).

Table 5 indicates the correlation between local officials and women perceptions in variables. The three main variables are related to the main determinants of water and sanitation issues at municipal level services. The results suggest a negative correlation between perception of local officials and women perceptions in water and sanitation services delivery situation (r = -.140) and in women responsive requirements (r =-.076). There is a positive significant relationship in perceptions of local officials and women in gender equality at decision making Level (r = .004). All the results are significant at p=0.000. From table 4 and table 5, it is indicated that there is support for hypothesis 1a, 2a and no support to hypothesis 3a.

Table 6. Two Sample *t* Test

| | Women Citizens | | Local Officials | | t *Test* | | |
|---|---|---|---|---|---|---|---|
| | *Mean* | N | *Mean* | N | t | df | *Mean Difference* |
| WAS services situation | 2.65 | 1,127 | 3.73 | 202 | 9.04 | 1129.4 | 0.22*** |
| Women responsive requirements | 2.11 | 1,127 | 3.54 | 202 | 3.63 | 1097.9 | 0.49*** |
| Gender equality at decision making level | 1.79 | 1,127 | 3.41 | 202 | -2.20 | 1025.7 | -0.28 |

Measured on a five-point Likert scale (1 = lowest value, 5 = highest value).

**p<0.05; ***p< 0.001*

A two-sample *t* test allows researchers to know whether the means vary significantly between the women citizens and local officials. The results presented in table 6 show three main effects. First local officials score higher on water and sanitation situation, women responsive requirements and gender equality at decision making level and women citizen score lower. Second, overall the comparison of local officials and women perceptions provide higher level in water and sanitation situation as compare to women responsive requirements. Third, the comparison is not significant in gender equality at decision making level which shows that perception of women and local officials are not different in this sphere. We get the evidence from results for support of H1b, H2b but not for H3b.

## 6. Concluding Remarks

This study has examined the perception on water and sanitation service delivery and women participation in outsourcing at local public administration level. In general terms, respondents from local officials hold more positive feelings about water and sanitation public service delivery in the area of quality of facilities, women responsive requirements in services and outsourcing than women citizens. Both local officials and women citizens has most negative feeling in the area of equality at decision making level while preparing outsourcing requirement in water and sanitation services. This indicates that women and men do not

usually participate on an equal basis in decision-making on the management of water and sanitation which leads to the neglect of the specific roles and needs of women as water users. This paper suggests that few strategic actions should be taken for the future while strengthening water and sanitation organizations, capacity building to create women friendly environment and use of gender approach while preparing outsourcing of water and sanitations services.

Our results raise several questions about the impact of women contribution in water and sanitation services outsourcing improvement as a possible solution for local offices in municipalities. Local government offices are regarded in new public management conversion in cost consideration and services are regarded as special field. Water and sanitation services at local level government are in control of professional bureaucracies in which service providers will tend to orient towards their own silos rather than to gender equality in planning services. It is important to note that women participation at municipal level in water and sanitation organizations are very little. It may be due to male chauvinism institutional setup and cultural faiths are main hindrances for women participation.

Of course, our results need to be tested more specifically related to effect of local public administration on water outsourcing across the different portions of the country is of great interest for future research exploring the urban management of services and women interests. It means straightforward that the outsourcing of water and sanitation services is related to women requirements in their spheres and can differ across urban areas, depending on the real situation of the area. In this regard, scholars have expressed reservations about interdependencies between water and women of water services policy and practices. Procurement and all similar concerns about the services and women participation have been mounted by developed countries scholars(Kevin et al., 2003; Howard,2003) for participation of women in water and outsourcing.

These findings have a number of implications for local organizations in general, but primary for water and sanitation offices at municipal level, where awareness about women participation is still scarce at all stages of planning in services. The specific complexities facing local organizations, which must be women responsive to requirements and budget constraints of households, are the main focus in new public management. From a theoretical point of view, the findings add to the literature by introducing women requirements and women friendly local services offices in developing countries. More broadly, the study helps bridge the conceptual gap by exploring the requirements and feedback relevant to public sector offices, such as water and sanitation authorities.

The study has a number of theoretical and methodological limitations. The first constitute the generalizability of the findings. The findings reflect the effect of poor services same as in other developing countries. Therefore, the findings may not be applicable to more diversified urban areas. However, the findings suggest that all places have different requirements and (Sozen and Shaw, 2002) new public management corporates outsourcing in services management system and techniques into public services.

Moreover, the culture and environment of organizations influence on the participation of

women. In the empirical analysis, we examined the relationship between local municipal level services culture in offices and women requirements in water and sanitation services. In developing countries as in Pakistan, local offices are governed by traditional principles and values contained in social norms. Now New Public Management has taken place of public administration but the change ignores a fundamental public administration principle culture-bound by ignoring indigenous knowledge of women in water and sanitation sector. Consequently, the local services offices have experienced unmatched pretense in needs of women and water requirements in urban areas.

## End Notes

[i] Pakistan Economic Survey 2012

ii WHO/UNICEF Joint Monitoring Program (JMP) for Water Supply and Sanitation defines 'access' interpreted proportion of population access to an adequate amount of safe drinking water located within a convenient distance from the user's dwelling. JMP Access to drinking water means that the source is less than 1 kilometer away from its place of use and that it is possible to reliably obtain at least 20 liters per member of a household per day (WHO). Water Quality Status in Rural Areas of Pakistan 2010, Pakistan Council of Research in Water Resources (PCRWR).

iii The World's Water, Volume 7, 2008.

iv Ministry of Food Security, Government of Pakistan

v Water scarcity involves water stress, water shortage or deficits, and water crisis. The concept of water stress is relatively new. Water stress is the difficulty of obtaining sources of fresh water for use, because of depleting resources. A water crisis is a situation where the available potable, unpollutedwater within a region is less than that region's demand.

vi Biopolitics relates to the location (supply) of water, the ownership of (control over) water and about access (rights) to water – and the implications of these relationships with water on life as a whole. (NidhiTandon 2007).

vii Water Aid Pakistan 2012

viii Water Advocates 2010

ix Populous and water scarce cities such as Karachi, Islamabad and in other cities, water for bathing and for all domestic use is purchased from local municipalities through water containers. CDA Water Tanker Refilling Station, Islamabad.

x World Health Organization Report in UN Millennium Development Goals, 2010.

xi The largest number of Chemical substances in the environment are produced from the waste from industrial and agricultural processes. These chemicals enter the air as emissions and water as effluent and many chemicals are toxic and they are harmful to the environment and to our health. Wikipedia.

xii 'Lead is a chemical element, Drinking water can also have dangerously high levels of lead. Lead rarely found in water at its source. The water becomes contaminated as it moves through the water distribution system. The lead can come from lead pipes or connectors; lead solder used to connect pipes and fumes; brass fixtures; and lead lined tanks in water coolers.

xiii Water Aid Pakistan 2012.

xiv Saleem Sheikh in an article on March, 2011 at Dawn.com.

[xv] PCRWR Report 2012, functional Water Supply Schemes

xvi Flexible working hours, day care centers for women with kids, separate toilets and direct complaint cell & prompt redressel).

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