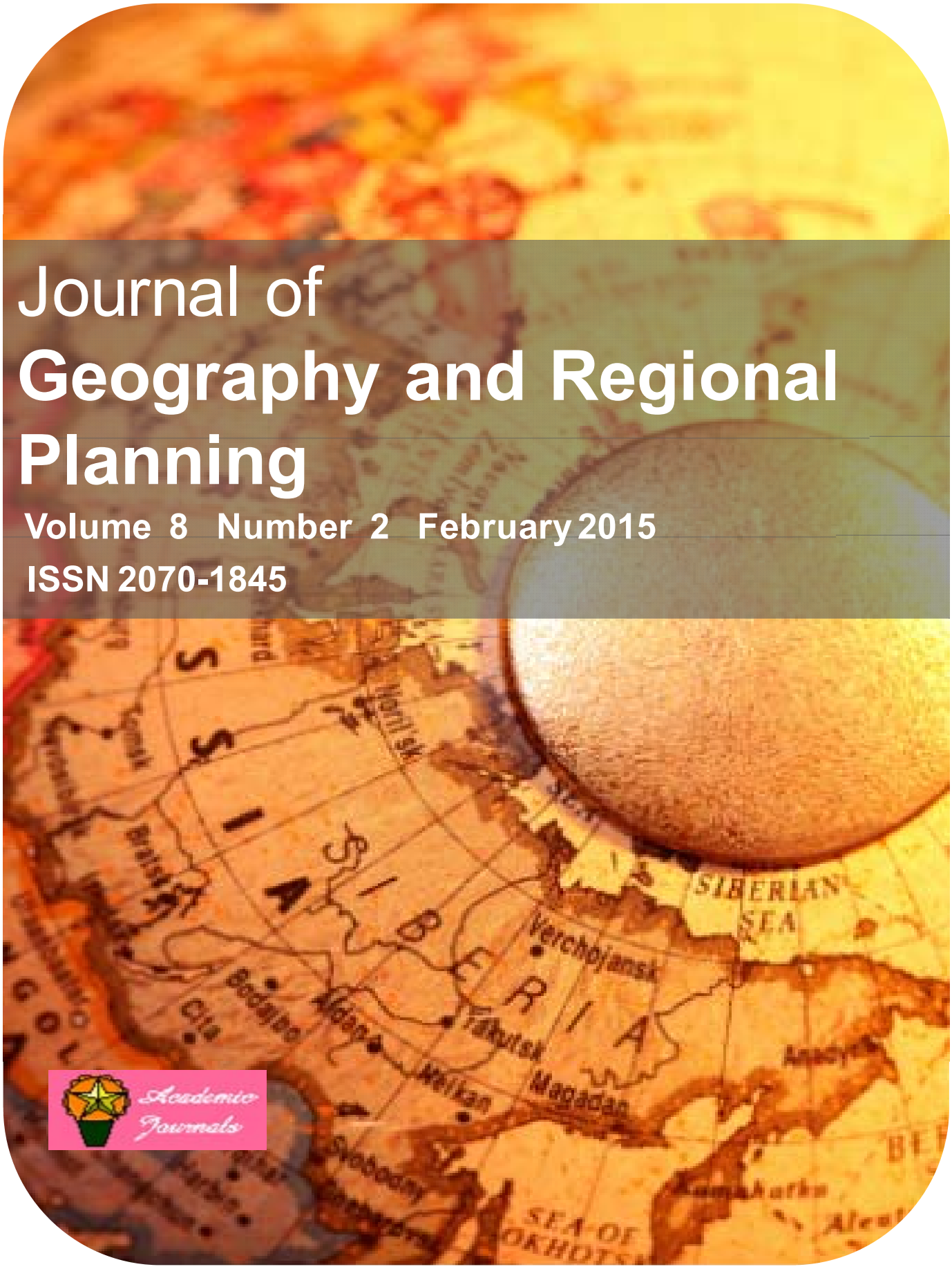

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Review

Changes in marriage practices among the Bafumbira of Western Uganda

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This paper examines changes in marriage practices of the Bafumbira, an ethnic group in Western Uganda. The paper uses data obtained from primary data that included focus group discussions (FGDs) in Kisoro District and Kampala City and compliments it with secondary data. It shows that some marriage practices threatened by modernization through formal education, migration and urbanization are still very relevant to the society. These include: "pulling"; parents' involvement in choosing marriage partners; abstinence before marriage; using traditional items in payment of bride price and rare divorce rates. The paper also recommends that practices like early marriage and polygamy be discouraged.

Key words: Bafumbira, urbanization, formal education, modernization, migration, marriage practices.

INTRODUCTION

The Bafumbira, one of the 56 tribes in Uganda are ethnically the same as the Banyarwanda of Rwanda. They were selected to represent the western region because of their heavy concentrations in some parts of Kampala. The Bafumbira were sampled from Kamwokya parish, Central division and Kyebando parish in Kawempe division. These are areas with heavy concentrations of Bafumbira who originate from Kisoro District. Kisoro district represented western Uganda in a comparative study (see map 1). Kisoro District is the indigenous district of the Bafumbira in Uganda. It experiences a high rural–urban migration of males who leave the rural areas in search of jobs in urban areas resulting into a low sex ratio of 82:100 (number of males to 100 females).

Urbanization is one of the most important geographic phenomena in today's world due to its transformative capacity. The size, density and variety of urban populations tend to have a liberating effect on people, allowing them escape the rigidities of traditional, rural society and to participate in a variety of lifestyles and behavior (Knox and Marston, 2003). With 16% of Uganda's urban population (UBOS, 2014) and 5.1% urban growth rate (UNFPA, 2007) far reaching implications on development prospects in the country are expected. Marriage practices are not exceptions. This is because urbanization emphasizes the economic aspects of marriage rather than the social ones.

Objective of the paper

This paper examines the indigenous marriage practices of the Bafumbira that are being changed by modernization

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through urbanization, migration and formal education.

Sources of data and research methodology

The data in this paper are derived from a wider comparative study that covered Kampala City whose boundaries overlapped those of Kampala district and four rural districts that represented the four regions of Uganda. Kampala was chosen because of a number of reasons. Kampala is the largest urban area of Uganda in terms of population and size. It is the capital city of Uganda Kampala remained the prime urban center throughout the period 1969-2014. The proportion of the population of Kampala city to the total urban population of Uganda was 54% in 1969, 41% in 1991, 40% in 2002 and 25% in 2014 (MOFPED, 1973; MOFPED, 1991; UBOS, 2006 and UBOS, 2014). It was therefore seen as the most representative of urban areas. Being a capital city and the most cosmopolitan urban area, all the ethnic groups in the study could be found in big numbers.

Four ethnic groups namely: Baganda; Bagisu; Lugbara and Bafumbira were studied. Each of the four ethnic groups represented one of the four regions of the country namely: Baganda (Central); Bagisu (Eastern); Lugbara (Northern) and Bafumbira for Western. In order to establish the changes in marriage patterns as a result of urbanization, rural areas in four districts of Uganda where the four ethnic groups originate were also covered. These included: Mpigi; Sironko; Arua and Kisoro respectively (Figure 2).

Primary data were obtained from all persons aged 15 years and above found in households from each of the ethnic groups qualified for interview. Age 15 was chosen because it is the one used to calculate singulate mean age at first marriage in Hajnal (1953)'s formula that assumes that no first marriages occur before age 15.

Judgmental (purposive) sampling was used to get four ethnic groups for the study. According to Kitchin and Tate (2000), judgmental sample is the most subjective sampling method. Here, sample elements are selected based on judgment derived from prior experience. Sampling elements are selected based on the interviewer's experience that they are likely to produce the required results. The Bafumbira, Bagisu, and Lugbara who come from different regions of Uganda are known to be concentrated in some areas of Kampala. It was therefore easy to find a good number of each ethnic group in Kampala to be used to compare with those who have remained in the ethnic districts of the selected tribes of Uganda. The Baganda on the other hand comprise the biggest single ethnic group in Kampala and central region as a whole.

Snowball sampling was used to get respondents in urban areas. Snowball sampling is non-random sampling method, which is used with the selection of people. This is based on a number of initial contacts that are asked for names and locations of any other people who might fulfill the sampling requirements. For example, the respondents interviewed would help to inform the interviewers the location of their fellow members of the same tribe. The Bafumbira would help to locate fellow Bafumbira and so would the Lugbara, Bagisu and Baganda. Snowball sampling was effective because, even Kifumbira in Kamwokya, which is a well known area of residence of the Bafumbira, is also occupied by other tribes. The sampling method also helped in getting cases of inter-tribal marriages.

In the rural areas, Systematic Sampling was applied. Using household lists of the villages provided by the Local Council (LC) officials, even numbered households were selected. After securing a Local Council (LC) official as a guide, the group (principal investigator, two interviewers and the LC official) moved around, interviewing all the members of the households above 15 years. To make sure that all the eligible members were interviewed, those who were not found at home would be followed where they were working, for example in the gardens.

Focus group discussions (FGDs) using an interview guide in 2004 facilitated the acquisition of detailed information on indigenous marriage patterns among the Bafumbira and other tribes. In case of the Bafumbira, two focus groups i.e. one for women and another for men from Nyakabande and Kanyabukungu villages, Gisorora parish, Nyakabande sub-county in Kisoro district were used (Figure 1). Two similar Focus groups were acquired from Kamwokya parish, Central division, Kampala City. This was because, in order to get good information from the groups, men had to be separated from the women. It was strongly believed that women would be too shy to talk about sensitive marriage issues in the presence of men. The focus group discussions (FGDs) comprised men and women above 18 years. In selecting the people to participate in the discussions the following characteristics were considered: age; religion; level of education and occupation. This was meant to avoid getting a whole group of people of similar characteristics.

The FGDs were complimented by the 2004 survey that covered four tribes in Uganda namely: Bagisu, Baganda, Lugbara and Bafumbira in the districts of Sironko, Mpigi, Arua and Kisoro as observed from Figure 2. Secondary data sources were also utilized.

Logistic regression analysis was used to test the effects of the independent variables (area of residence, religion, education, tribe and occupation) on the dependent variable (age at first marriage).

Preparation for marriage

The cultural practice of "pulling" or stretching a woman's labia minora (the inner lobes of the vagina just below the clitoris) is highly cherished by the Bafumbira as the case is with the Baganda. Among the Baganda, the cultural practice is referred to as visiting the bush ("Okukyalira ensiiko"). This is because traditionally, a group of girls is taken to the bush by an old woman for about a week and taught how to pull. After that, the girls are advised to

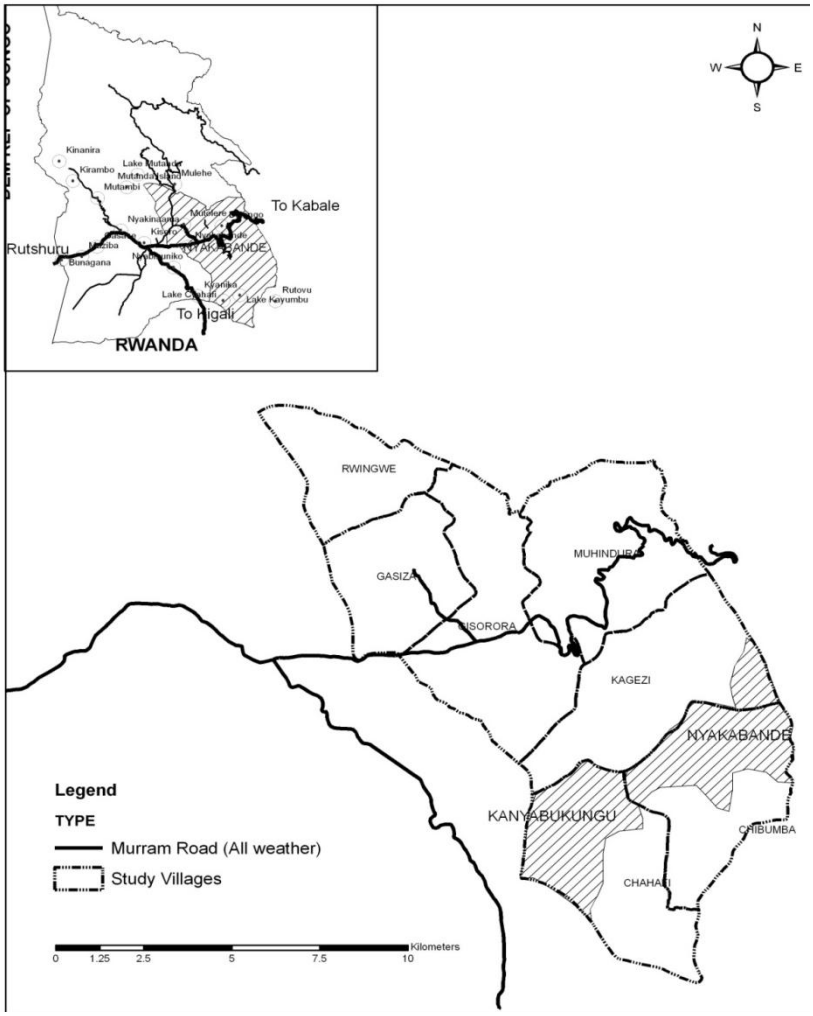

Figure 1. Kisoro District showing the sub-county, parish and villages of study. Source : The 2002 Population and Housing Census Maps.

continue pulling on their own. Among the Bafumbira, “pulling” is started by the mother of the girl when she is young and the practice is continued by the girl as she grows. This agrees with Etyang and Natukunda (2005) that elongation of the labia minora (“pulling”) is a common practice among the Baganda in the central region and some tribes in western Uganda.

Informants in focus group discussions of Bafumbira were asked whether they considered “pulling” to be important in marriage. All the groups, both in rural and urban areas highly praised the practice. The main reason given in support of the cultural practice was that it makes sex more enjoyable although different expressions were used. Given below are some of the expressions that were used: Sexual arousal and satisfaction is faster with a woman who pulled. This is because, the clitoris, the most sensitive part of the vagina, is connected to the labia, so, long labia help the woman reach orgasm quickly.

The girls were closely watched by their mothers and aunts. Virginity was highly prized. This was indeed a very good tradition that should be encouraged today as a big strategy of guarding against HIV infection before marriage because it encourages abstinence. This concurs with Lamptey et al. (2006) that abstinence is the prevention method emphasized in the programming directed at youths, the group with the highest rate of new infections of HIV. Pre-marital pregnancy was unwanted. A girl would be thrown into a forest and left to the mercy of wild animals if she conceives before marriage. This practice is no longer practiced as it would be regarded as child abuse and torture according to the constitution of the Republic of Uganda.

Choosing marriage partners

Formerly, parents would arrange marriages for their children. This method shows the social importance of marriage, especially as it concerns the families and relatives of the couple. But there was “*gufata”* or “*gaturura”.* This was an acceptable forced marriage in

Figure 2. Location of the study districts in Uganda. Source: Population and Housing Census Map, 2002.

which a boy would conspire and carry away a girl by force to become his wife (Nzita and Mbaga-Niwampa, 1997). Among the Bahutu, there was "*ukwijana*." This was a pre-arranged marriage in which the girl would sneak away from her parents and go to a boy's home to get married. This occurred whenever a girl had a pre-marital pregnancy. Both "*gufuta"* and "*ukwijana"* were socially accepted but not praiseworthy.

Informants agree with Shalita (1993) in the practices of identifying and choosing marriage partners among the traditional Bafumbira. Parents of a boy would begin planning how to get him a partner when it became clear that he was now of age. They would make "surveillance" in homes where there were young females in a bid to identify the "right" bride befitting their son. The followings were the guidelines: the conduct of the parents of the girl; the relationship of those parents vis-à-vis the neighbors (community); the wealth status of the family and the level of discipline in that family. The process of surveillance was called "*kurambagiza"*.

The father of the boy would select a person to act as a go between *("umuranga"*) to mediate between the side of the boy and that of the girl. The process of identifying the bride was known as "*kuranga umukobya".* Once the father of the boy's proposal was accepted by the father of the bride-to-be, then the former would prepare alcohol *("inzoga*") and dispatch the *"umuranga*" to the home of the bride-to-be. The father of the bride-to-be would also have assembled a team of persons and a spokesman. The "*muranga*" would say "*nshaka ubuhake bwo kuzamp'umugeni*" meaning 'I'm requesting for a girl to marry from this home'. The spokesman of the father of the bride-to-be would respond: "*tuguhaye umugeni ariko nti tuguhay'inka*", literally meaning we have given you a

bride but not a cow. Upon this pronouncement there would be clapping of hands as a sign of appreciation. This would be followed by request for bride price *("inkwano*").

Tumwine (1995) indicates that there has been a general decline in parents choosing marriage partners for their children. An extreme case was observed from the males because while about 10 percent had their partners chosen by their parents among respondents aged fifty and above, the percentage fell to zero among those aged 15 to 24 years. The change was attributed to modern education that has reduced the authority of the parents on the children. Moreover, many parents who reside in the villages may know few educated youth fit for their children because it is not common for educated people to marry uneducated ones since many formal marriages begin with cohabitation. Education also increases the chances of cross marriages between tribes and marriage partners may not necessarily have to be from the same locality as observed from the increase in the number of intermarriages. Education has also increased individualism in young people. A wife is as thus meant for the husband and not the whole family as it used to be in the past.

Bride price

Bride price refers payment in form of money, property or other valuable asset by the family of the bridegroom-to-be to the family of his bride-to-be. The Bafumbira understood bride price as a concrete symbol of the marriage covenant and security. It bound the marriage covenant, legitimized children born in that relationship, contributed to the prestige of the bride and her family. It also added to the wealth thereby giving the bride in turn the right to privileges of a legally married woman. Bride price allowed the groom, the exclusive right of sexual access to his wife. It gave the right to her productivity as a mother and worker, and allowed him a welcome reception whenever he went to his father-in-law's home and family. Bride price was understood as a kind of marriage certificate that certified as a public pledge, the husband's rights over his wife and children and empowered him to be called a man ("u*mugabo"*) among men.

The father of the bride-to-be would make arrangements for the ceremony of payment of bride price. He would brew alcohol ("*kwenga inzoga*") in ample quantities and also invite pledges and contributions of the same from relatives and friends. On the date of payment of the bride wealth, the father of the bride-to-be would send an envoy to his prospective in-laws inviting them to come. The envoy would carry alcohol *("inzoga*") as part of the ritual. The father of the bridegroom-to-be would have assembled a team of people to go for the ceremony. Upon reaching the home of the father of the bride-to-be, men would talk in a stylish manner *("kwivuga*") and the women would ululate *("gutera impundu*"). The in-laws ("*abakwe*") would be given seats and the process of ("*gukwo*") would follow.

After the bride price (animals etc) was accepted, both sides would embark on alcohol drinking. The drinking would gradually lead to traditional dancing, harping and ululating. At the end, the mother of the bride-to-be would bring alcohol in a big and special calabash. This terminal alcohol was known as "*agashingura cumu"* and would mark the end of the ceremony. The "*abakwe"* would then be given their long walking sticks ("*inkoni")* and they would depart amid *"kwivuga*".

Today, bride price has been commercialized to include cows, manufactured items like soda, bags of sugar, cartons of salt and beer, envelopes containing big sums of money for many relatives of the girl, beef and a variety of vegetables. Moreover, many people are invited unlike in the past when payment of bride price was a small family affair.

The general observation is that today, money is preferred to the traditional physical items such as animals, clothing and food. There was general consensus from the informants that commercialization of bride price that has negated the noble intentions of bride price should be fought and the positive cultural values of the system be maintained by those who cherish them (Tumwine, 2007).

The wedding day

A number of events preceded the marriage ceremony. Before the marriage itself the "a*bakwe"* would bring alcohol to remind the father of the bride –to-be, of the agreement they reached. This was called "*gutebutsa".* The family of the bride-to-be would ask for delivery of other rituals such as "alcohol for uncles, brothers, grandmother and stepfather" etc. Lastly, the *"abakwe*" would bring the "alcohol of the grandmother", a lamb and "*inzoga y'icyimutso*" literary meaning the alcohol ultimately shifting the bride-to-be. Once that happened, the bride-to-be would not stay an extra night at her father's home.

The wedding day was called "*ubukwe*" or "*ubushytsi"*. The marriage ceremony was called *"gushyingira*". A special team of elders, youths (unmarried males and females) and women would be identified to facilitate the marriage. The bride-to-be's aunt and uncle would represent the biological parents of the girl and were leaders of the delegation. The bride would be carried to the bridegroom's home on a litter *("ingobyi*"). At the bridegroom-to-be's home, the entourage would be warmly received by the groom-to-be and his mother who would present to the bride-to-be a calabash *("igisabo*") in which milk would be stored. There would be traditional dancing during the night. In the morning, the bride's aunt

and other girls would take the bride to the groom's hut *("indaro*"). Thereafter, they would depart. The groom would then enter the hut and thereafter come out and proclaim to the visitors ("*abashyitsi")* that he had consummated the marriage. Upon this proclamation, there would be ululations ("*impundu").* In case he discovered that the girl was not a virgin, he would send a hoe-stick to the bride's home as a sign of disapproval.

Soon after marriage

After the marriage, a number of events followed immediately. The bride would not take any meals until she was offered presents that included goats, cows, rings, anklets etc. This was called *"kurisha".* After four days, the bride would visit her home to greet relatives. This was called *"kuramukanya*". Two children; a boy and a girl would accompany her. Her father would offer her a goat *("ihene yindamutso")* in addition to alcohol and cooked food*.* The trio would go back in the evening. The bride would spend a long time performing domestic activities such as cooking, house/ compound sweeping, cleaning household utensils and serving food to household members when they returned from day's work. The father-in-law would not physically see her until after offering a he-goat or a cow. The period was called honeymoon *("kwarama*"). After some time the bride would be taken to her father and she would be filled with necklaces, rings and anklets. She would be given three hoes which effectively marked the end of *"kwarama*" and beginning of real public life.

Age at marriage

The Bafumbira informants agree with Kagambirwe (1972) that early marriage was encouraged. After puberty and in some cases before it, marriage was consummated and the earlier one married, the more respect and pride one had among the relatives and the sex grade. Among the Batutsi, the boys were usually pressed to marry even before they were ready. Early marriage was in consonant with practices of keeping virginity and avoiding pregnancy before marriage.

However, today, early marriage should not be encouraged because it hinders education and increases maternal mortality when women conceive before 20 years of age. This is because bodies of young mothers (10-19 years) are not yet ready to handle pregnancy. They often get difficult labour usually due to a disproportion in size between their small pelvises and the big size of the baby which cannot easily make it through the narrow birth canal. That is why 13 percent of the maternal mortality is caused by obstructed labour (UNFPA, 2005). Tumwine (2007) also notes that education significantly increases the age at marriage.

In the regression model, age at marriage was categorized into two broad groups. The first age group, 10 to 19 years represented early marriage and the second age group, 20 and above represented late marriage. Age group 10-19 was assigned value 1 while 20+ was given value 0. This grouping was based on the fact that in Uganda, marriages occur early. Although the minimum legal age for a woman married is 18 years in Uganda, this is not the case. Among women aged 20 to 29, 15% were married by age 15 and 49% by age 18 (UBOS, 2012). Logistic regression was applied to understand the effect of the selected variables on age at first marriage as shown in Table 1.

It was found that education was the most significant factor in affecting age at first marriage. The results clearly show that the lower the level of education, the higher the chances of marrying earlier. Table 1 shows that respondents with no education were 21 times (Exp (B) = 20.7) more likely to marry earlier than those with tertiary education (reference category). Those with primary education were 10 times (Exp (B) = 10.2) and those with secondary education 5 times (Exp (B) = 4.6) more likely to marry earlier than those with tertiary education. Therefore, it can be inferred that urbanization operates indirectly through education to affect age at marriage. Age at marriage has significant implications on fertility. The higher the age at marriage, the lower the fertility. High fertility increases poverty in that big families are associated with reduced savings, investments and failure to educate the children. Thus, urbanization through education may help in the reduction of poverty.

This agrees with ''the results of the 2002 Uganda Population and Housing Census'' UBOS (2006) that showed that Singulate Mean Age at Marriage (SMAM) was 18.2 for women with no education and increases with education. The SMAM was observed to be 24.9 years for women with post secondary level of education showing a difference of 6.7 years between the SMAM for women with no education and those with post secondary education. Similar observations were made for the males. Those with no education enter marriage at an earlier age (SMAM was 22.9 years) than those with post secondary level of education (27.5 years). Staying in the school system withdraws people from the marriage market and therefore raises the age at first marriage. Attainment of education influences an individual's way of living and is strongly associated with enhanced decision making. For example, educated girls cannot easily be forced by their parents to marry early as opposed to their uneducated counterparts.

Relatedly, results presented in Table 1 also show, that occupation of respondents is significantly associated with age at marriage. This is because, education influences the occupation of an individual. Farmers were 35 times (Exp (B) = 34.7) and traders 20 times (Exp (B) = 20.1) more likely to marry earlier than the students (reference category). This is partly because farmers and traders are

Table 1. Results of logistic regression analysis showing impact of education and selected variables on age at first marriage.

Age at marriage: 10-19		B	Std. Error	Wald	Sig.	Exp(B)
	Intercept	-6.996	.809	74.710	.000	
	Urban	.281	.175	2.557	.110	1.324
Residence	Rural #	0(a)	.	.	.	1.000
	Catholic	.123	.140	.769	.380	1.131
Religion	Moslem	.257	.222	1.343	.247	1.293
	Protestant #	0(a)	.	.	.	1.000
	None	3.029	.406	55.684	.000	20.685
Education	Primary	2.322	.373	38.823	.000	10.196
	Secondary	1.518	.372	16.637	.000	4.563
	Tertiary #	0(a)	.	.	.	1.000
	Baganda	1.273	.205	38.473	.000	3.571
Tribe	Bafumbira	.417	.209	3.987	.046	1.517
	Lugbara	.924	.206	20.104	.000	2.519
	Bagisu #	0(a)	.	.	.	.
	Professionals	2.661	.750	12.587	.000	14.304
	Farmer	3.548	.731	23.532	.000	34.737
Occupation	Other	3.154	.724	18.977	.000	23.429
	Trader	3.003	.736	16.659	.000	20.148
	Student #	0(a)	.	.	.	1.000

= Reference category.

also likely to have low levels of education and the latter affects occupation of respondents. The professionals were 14 times (Exp (B) = 14.3) more likely to marry earlier than the students.

Polygamy

Polygamy (plural marriage or where a person is married to several persons simultaneously) was an acceptable practice among the traditional Bafumbira. They liked and encouraged polygamous marriages because of the following reasons: A polygamous family provided many social services to the family as well as the clan. It also provided a guaranteed security in old age. It protected fathers from attacks of both wild animals and enemies. Chances of all children dying were fewer with many children. The Bafumbira informants also agreed with Katahwaire (1989) that inheritance custom was one of the causes of polygamy. If a man did not get any children from his first marriage or if the first wife bore him only daughters, he married another wife. The aim of multiple marriages was to get at least a son, who would inherit one's property and continue one's lineage. Traditionally, a woman could not inherit the property of the departed. This was attributed to the patrilineal nature of the society. If the deceased had no son, a close relative of his would be chosen to be his heir.

However, it was observed that only the old people are polygamous because at the time they married, there was more land per individual than the case now. The focus group discussions revealed that polygamy is becoming unpopular in the area and that they would wish to see it disappear. This is regarded as a positive development in poverty reduction. Large family sizes and poverty are closely related. The Uganda Participatory Poverty Assessment Report (UPPAP) (2002) identified large family sizes as the primary cause of poverty. Tumwine (2010) further observes that the southern districts (Kisoro and Kabale) have the highest population densities. High population densities are associated with problems of land fragmentation, soil erosion, landslides and encroachment on forest reserves and national parks.

UBOS (2012) shows that polygamy has declined steadily over the last decade from 32% in 2000/2001 UDHS to 28% in 2006 UDHS and 25% in 2011 UDHS. There is an inverse relationship between education and polygamy. Therefore, with Universal Primary Education (UPE) and Universal Secondary Education (USE) polygamy is more likely to continue declining.

Table 2. Percentage distribution of the causes of divorce according to sex and area of residence.

Rural areas	Male		Female		Total	
Reason N	**N**	**%**	**N**	**%**	**N**	**%**
Failure to understand each other	9	42.9	4	20.0	13	31.7
Partner hash / mistreatment	1	4.8	7	35.0	8	19.5
Poverty. Not buying necessities /no bride price	4	19.0	2	10.0	6	14.6
Adultery	2	9.5	2	10.0	4	9.8
Barrenness/ impotence	1	4.8	2	10.0	3	7.3
Partner married another wife	0	0.0	3	15.0	3	7.3
Wife failed to cope with partner's relatives	2	9.5	0	0.0	2	4.9
Wife aborted	1	4.8	0	0.0	1	2.4
Alcoholism	1	4.8	0	0.0	1	2.4
Total	12	100.0	20	100.0	41	100.0
Urban areas						
Adultery	2	13.3	10	30.3	12	25.0
Failure to understand each other	8	53.3	4	12.1	12	25.0
Poverty. Not buying necessities /no bride price	3	2.0	5	15.2	8	16.7
Partner hash / mistreatment	0	0.0	6	18.2	6	12.5
Alcoholism	0	0.0	4	12.1	4	8.3
Partner married another wife	0	0.0	3	9.1	3	6.3
Wife aborted	1	6.7	0	0.0	1	2.1
Barrenness/ impotence	1	6.7	0	0.0	1	2.1
Wife failed to cope with partner's relatives	0	0.0	1	3.0	1	2.1
Total	15	100.0	33	100.0	48	100.0

Source: Tumwine (2007)

Divorce

Divorce is one of the indicators of marital instability. It is a legal dissolution of an established family. Mbiti (1986) looks at divorce as the final culmination of other marriage problems. It is the final stage brought about by a number of other factors. Among the traditional Bafumbira, it was very rare. Divorce *("kwahukana")* was however accepted due to the following reasons: drunkenness, ill treatment, adultery, gluttony, refusal or inability to offer sex and other socially undesirable instances. It would be allowed after the father of the girl reimbursed the bride price. This was called *"kuzimura inkwano*". The pot in which the father of the boy initially carried alcohol at the time of making the marriage proposal would also be returned. Re-marriage was allowed after divorce and reimbursement of bride price.

Tumwine (2007) observes that divorce has increased due to the following reasons: Lack of patience and disrespect by women as a result of women emancipation. The respondents were of the view that women who regard themselves as liberated and independent do whatever they want. Whereas in the past, a woman knew that a man was supreme. Today, women are more involved in family decision making, pursuing their own needs and interests. They expect their husbands to share in the household chores such as childrearing responsibilities. With more economic power and slightly better laws in place, women are increasingly dragging their husbands to courts of law due to mistreatment. Women can own or buy land and other property and can therefore fend for themselves after divorce.

Poverty, which includes the failure of the husband meeting simple needs of their wives and failure to pay bride price was yet another leading cause of divorce. It was emphasized that until all the bride price is paid the bride is not fully regarded as one's wife. However, after it has been paid the woman is encouraged as much as possible not to divorce since the man has the right to claim the bride price from her kin. Related to poverty is alcoholism. UNFPA (2006) shows that excessive consumption of alcoholic drinks is a major cause of poverty in terms of the amount of money spent on it and its effects. Large numbers of chronically poor households and those that later fell into poverty devoted more than one quarter of their household's budget to purchases of alcoholic drinks. In addition, alcohol deprives the partner of the company and comfort because the partner is always away from home. Bafumbira women FG in Kampala said: "alcohol increases interest in sex yet it reduces performance of the man".

Table 2 shows causes of divorce were viewed differently according to urban and rural respondents. The main causes of divorce in urban areas included adultery

(25%) and failure to understand each other (25%). With the HIV/AIDS scare, adultery cannot be taken lightly. The most common mode of HIV transmission is sexual contact. Men and women with multiple sexual partners are among the groups with the highest risk of sexual transmission. Therefore, mutual fidelity as well as limiting the number of sexual partners are some of the most effective preventive behaviors of HIV infection. Adultery is therefore a cause of worry because of the AIDS pandemic. Husbands need to consider the views of their wives and vise versa. This is because without consulting each other one will not be able to know the needs and interests of the partner.

On the other hand, the most common cause of divorce for female respondents in rural areas was mistreatment by their husbands (35%) and husbands marrying other wives (15%). This is not surprising because Christianity stresses monogamous marriages and therefore Christian women would find it difficult to keep in marriages when their husbands marry other women and start mistreating them.

The rural respondents had unique reasons such as wives failing to cope with relatives of the husband (5%). In the rural setting, although married sons construct houses spatially separate from those of their parents, the absolute distance between them due to the increasing population density may not necessarily be long enough to provide the independence required by the young couple. Couple's scope of independence in managing their own affairs is reduced and controlled by a large family or a group of relatives who interfere in matters that would otherwise be left to the husband and wife. In case the parents of the husband who would want to dominate the new couple to achieve their expectations, results in creating antagonism. Sometimes competition develops between the mother-in-law and the daughter-in-law for affection of the son and husband respectively.

RECOMMENDATIONS

Preparation for marriage was a good practice that is neglected in many societies of Uganda. It is recommended the example of the communal cultural learning *"ekisagate"* of the queen "Nabageleka" of Buganda should be emulated by all the tribes in Uganda. In the same vein the practice of "pulling" should be continued as it is meant to make sex enjoyable. This is because, sex is the foundation of a happy marriage and without it, marriage can break. The traditional practice of discouraging pre-marital sex should be continued. Abstinence is one of the core teachings in Uganda in the fight against HIV/AIDS.

In order to avoid spread of hereditary diseases such as tuberculosis, asthma, sickle cell and elephantiasis as well as bad practices such as witchcraft and theft, young people are encouraged to find out about the families of the intended spouses before making commitment to marriage.

Bride price has been commercialized. Modern families should accept what in-laws can afford to provide instead of fixing for them exorbitant items and money. This is because educated girls are expected to get married to educated boys and both parents spend money to educate both sexes. Universal Primary Education (UPE) and Universal Secondary Education (USE) should be improved by the parents contributing to the education of their children through provision of school uniform, books, meals, supplementing teachers' salaries as well as building funds. This will go a long way to increase age at marriage, reduce fertility and poverty.

Alcohol has been noted to cause poverty and divorce. Therefore, alcohol consumption should be limited between 5.00 and 10.00pm. This is to prevent the consumption of alcohol throughout the day and night as is the case in most of the parts of the country.

Conclusion

Traditional marriage is a social event that involves many members of society. Due to modernization through urbanization, formal education and migration some marriage practices such as abstinence before marriage, parent involvement in choosing marriage partners for their children and strong families as exemplified by rare divorce, are under threat. The paper also shows that some traditional marriage practices like early marriage, polygamy and commercialization of bride price should be discouraged to foster better health for women and reduction of poverty.

Conflict of Interests

The author has not declared any conflict of interests.

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Health impact assessment of community-based solid waste management facilities in Ilorin West Local Government Area, Kwara State, Nigeria

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Adverse inter-relationships between man and his environment has been the main cause of disequilibrium, which usually result in negative effects to man himself, his environment and his survival as epitomized by the current global climate change phenomenon. This study applied the concept of Health Impact Assessment (HIA), an evolution of Environmental Impact Assessment (EIA) to predict the health impact of the proposed community-based solid waste management facility in Ilorin metropolis; which is a part of the Millennium Development Goals' (MDG) Health and Environmental Sustainability Projects (Goals 4-7). Through systematic sampling methods data was collected from four administrative wards in the metropolis for this work. Using The Nigerian Institute of Town Planners' (NITP) guidelines on impact assessment, the study was able to discover that there are many benefits derivable from the proposed project, however, there can be negative impacts too even if the Environmental Management Plan and project operational guidelines are strictly adhered to. This gives the need for overall assessment of such projects as against the practice of benefit analysis usually embarked upon by proponents of such investments. The study further suggested different participatory approaches in establishing the sustainability of projects.

Key - words: Environment, man, millennium development goals, municipal wastes.

INTRODUCTION

Solid waste management can be regarded as the collection, storage, transporting, processing and disposal of solid waste in a manner that is in accordance with best principles of public health, conservation, aesthetics, and environmental considerations. Waste management practice in Nigeria is appalling. It is reported that only about 14% of Nigerian households have access to satisfactory refuse disposal system (FOS, 2004; NPC, 2005), and in both rural and urban areas of the country, refuse is buried, burnt or disposed-off haphazardly into rivers, streams, canals, , forest, and open spaces. As a result, solid wastes are found everywhere especially in the country's populated urban centres (Adedidu, 1988). Urban wastes are known to pose serious environmental and health problems, promote the growth of insect vectors, cause fire hazards, flooding of streams, and other environmental nuisance.

Certain toxic and heavy metals like lead, mercury, cad-

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mium, minerals and synthetic chemicals present in wastes can contribute to the pollution of surface and underground water, and environmental degradation. This can escalate with increasing rates of urbanization and the equally increasingly range of economic activities in cities and towns. This unplanned and fortunately unmanaged situation has the capacity to reduce the capability of local governments and urban authorities to effectively manage waste in their domains. However, governments and urban authorities have continued to invest enormous resources in fighting this menace in order to ensure healthy living conditions and livelihood of their citizens. Hence, the increasing calls for the need to employ strategies to evaluate these engagements. The impact assessment process - a tool in planning, providing a veritable opportunity to integrate the views, concerns and values of the affected population, is one of such approaches known for impact assessment.

Justification for the study

Indiscriminate disposal of solid wastes has the potentials to cause damage to the environment and the health of people. In Nigeria, waste management is at the lowest ebb in most towns and cities. At many inner and peri-urban centres, refuse heaps are left unattended to, and where the Local Government Authorities do the collection, it is often irregular and sporadic. The recycling of waste is almost unknown, while methods of collection and final disposal are very much unsatisfactory. The alarming rate at which heaps of solid waste continue to occupy cities, coupled with the fact that 87% of Nigerians use disposal method adjudged unsanitary, has not only contributed to visual blight and odour, but has also encouraged the breeding of rodents, mosquitoes, and other pests raising serious concerns over public health (Ónibokun, 2000). For instance, about 50% of Nigerians suffer at least one acute episode of malaria every year with grave socio-economic implications in terms of productivity and cost of medications, in addition to infant and Child Mortality Rates 100 and 201 per 1000 live births, respectively (NPC, 2005).

The situation in Kwara State and Ilorin in particular, is a replica of similar issues in Nigeria. The establishment of Millennium Development Goals' (MDGs) Community Based Solid Waste Management facilities for the cities is seen as a panacea to the Solid Waste Management Problems. The facility involves processing and transforming municipal solid wastes into useful end products such as domestic goods, fertilizers, and steel implements, under a congenial and healthy environment. It is imperative that projects such as this, designed to alleviate the problem must be validly assessed for its potential health impacts in the context of the target population, hence; the application of the Health Impact Assessment (HIA) technique which has much in common with Environmental Impact Assessment (EIA).

Aim and objective of the study

The aim of this study is to assess the potential health impacts of the execution of solid waste management facility on the population and the environment with a view of arriving at informed planning policy decisions to be made for improving public health in Ilorin West Local Government Area and beyond. The specific objectives of this study include:

- Identification of the target communities in the old dump sites and around the location of the proposed facility
- Socio-economic characteristics of the communities
- Assessment of existing waste management practice
- Assessment of environmental and health impacts of proposed facility.

Study area

Ilorin metropolis is the administrative capital of Kwara State. It lies on latitude 8°30'N and longitude 4°30'E. Its elevation ranges from 250 to 400m above sea level. It is also the headquarters of the Ilorin West Local Government Area (LGA) which is surrounded by other LGAs of the state. This gives her roles as the commercial and administrative capital of the State, the headquarters of Ilorin West LGA, and together with Ilorin East, Ilorin South, Asa and Moro LGAs they constitute the Ilorin Emirate. The location of Ilorin west is shown in Figure 1.

Ilorin has diverse ethnic groups of mainly Yoruba, Fulani, Hausa, Kambari, Gobir, and Nupe, that constituted it. The multi-linguistic and multi-cultural nature of the people could be traced to their historical background. Ilorin is said to be founded as hamlets in 17th century by an itinerant farmer called Ojo from Gambe near Oyo-Ile. The hitherto existing hamlets were in 1830s consolidated under the sovereignty of Fulani hegemony by Abdul-Salam, the son of Sheikh Alimi. The total population of Ilorin West LGA is 365,221 in 2006. This is comprised of 180,387 males and 184,834 females; being the most populous LGA in Kwara State that has 3.0% as its growth rate (NPC, 2006).

The major occupation of the people is mixed farming. The wide expanse of arable and fertile soil and favourable climatic conditions supported the cultivation of variety of food and cash crops, including cashew, yam, beans, groundnut, varieties of vegetables, maize and guinea corn.

The rearing of animals is made possible due to the existence of savannah type of vegetation. Other prominent economic activities include cloth weaving, pottery making, blacksmithing, Shea butter production, and gum processing.

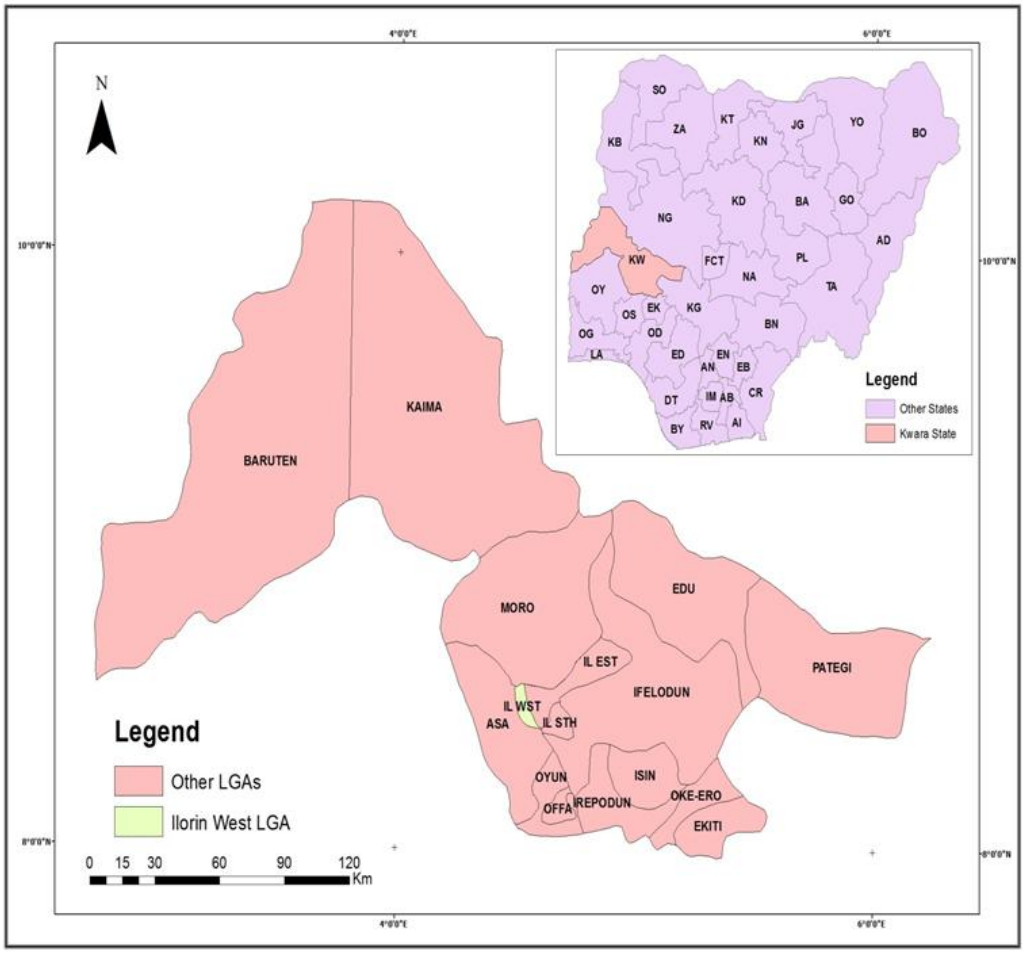

Figure 1. Location of the study area. Source: Ministry of lands and housing, Ilorin.

LITERATURE REVIEW

Participatory Development and Sustainability Analysis (PDSA)

Participatory Development and Sustainability Analyses (PDSA) as noted by Ohakweh and Ezirium (2006), involves getting all key people and institutions involved in the development decisions that affect them as an indispensable ingredient in achieving sustainable development. When a beneficiary community is involved in project development and implementation, it helps to build local capacity to solve problems and make sound decisions. This in turn leads to an improved chance that facilities and services will be used and maintained on a sustainable basis. Thus, one of the most important determinants of project success is the attention given to institutional arrangements particularly with respect to the receiving side or the inputs by the beneficiary groups (Yahie, 1993; Narayam, 1996, cited in World Bank, 1998). Participation implies that people require a greater voice in local affairs and an expanded role in decision - making processes. The benefits of participation derive not only from mobilizing additional community resources but, more importantly, from increased effectiveness in the use of available resources - skills and knowledge (Honadle and Vansant, 1995, cited in World Bank, 1998).World Bank (1998) defines project sustainability generally as the capacity of a project to continue to deliver its intended benefits over an extended period of time. However, this depends on whether or not a balance can be achieved in the use of the principal forms of capital namely, human, natural, cultural, institutional, physical and financial.

Health Impact Assessment (HIA): An evolution from EIA

The environment has many connotations. For many persons, it is the natural world of plants and animals. In planning, environment includes not just the natural

surroundings but, it also includes such natural factors as water and wildlife and such economic and social features as employment and housing (Frank et al., 1977, cited in Nwafor, 2009). EIA thus involves just about everything, from environment, economic or political matters to concerns such as energy and air pollution. It is also a statutory requirement in many countries before a proposed project is approved.

The main purpose of EIA is to determine the outcome of a development proposal through the process of generating information on various changes that may occur in the environment in response to the implementation of a particular proposed activity and to be an aid to decision -makers about the possible or likely impacts of a proposed project (Ortolano, 1984: Wathern, 1990). The other purpose of the assessment is to ensure that decision makers consider the ensuing environmental impact whether to proceed with the project. Hence, predictions constitute much of the basis of EIA. Indeed the whole of EIA exercise is about prediction (Glasson et al., 1999).

Health Impact Assessment (HIA) is the stock taking evaluation of the overall or marginal gains and deficiencies in the total well-being and aspects of health status of a defined population as a result of natural occurrences or other man-made interventions. Such gains or deficiencies can be measured in terms of longevity, wellness and health promotion and productivity (Abanobi, 1997). HIA, therefore, is the estimation of the effects of a specified action on the health of a defined population with a view to assessing the potential health impacts (positive and negative) of polices, programmes and projects; and to improve the quality of public policy decision making through recommendations to enhance predicted positive health impacts and minimize negative ones.

Impact assessment in the planning process

All planning processes have the same principal elements: Identifying problems and goals; specifying objectives; compiling an inventory of conditions and resources; developing alternatives; evaluating alternatives; and plan implementation and monitoring. Impact Assessments applied to all these planning elements is aimed at avoiding, reducing or mitigating any adverse effects of implementing a program or a project. They are more than the coverage of economic, physical and social concerns in the planning process (Frank, 1977); therefore, it is not an activity that is handled separately from other planning functions.

When undertaking HIA, the stages involved are progressively outlined; however, they may not be necessarily implemented in a strict serial fashion. In practice, one often has to return to an earlier stage when there is more information (Sridhar, 2007). Key features to be considered according to Abanobi (2008) include: Screening, Scoping, Identifying impacts, Assessment impacts, Making recommendations, and Monitoring impacts. The first step in the HIA process, having decided to do it is to have a quick review of the possible health impacts as shown in Table 1, and also to consider the size and importance of the proposal and availability of resources to do the assessment. A good way is to use a checklist that covers questions like: Does the proposal impact on one or more determinants of health? What are the personal and family lifestyles and characteristics; socio-economic environment, physical environment, and access to and quality of health and other services? Will any of the results of the proposal be irreversible? What population subgroups will be affected by the proposal? Who might be disadvantaged by the proposal? What is the geographical and population scale of the proposal? Is there conflict or disagreement about the proposal? If so, would a HIA help to resolve it? Are there time, money and expertise to do a HIA? Is it possible to change the proposal if necessary?

RESEARCH METHODS

The study area is officially structured into twelve (12) political and administrative wards in the LGA. From these, four (4) Wards were randomly selected for intense study. These are: Alanamu, Ajikobi, Baboko and Magaji Ngeri. These wards, situated within Ilorin Metropolis, were selected to provide estimates on demographic and other socioeconomic characteristics for the entire Local Government Area. The four wards were further stratified into 36 clusters as shown in Table 2. The study area has only 4 wards with an estimated population of 470,400 residents. Since the study is household based, a total of 8,231 households were listed in the 4 wards out of about 33% (of the LGA total) or 19,856 households found there (Table 2). The number of sampled households came to 2000 or 10% of the 33% households at 1 in every 3 systematically sampled.

Devices used to collect first hand primary information include; structured questionnaires on Demographic and socioeconomic characteristics and the identification. In addition, land survey of the area was also carried out using theodolite and high precision GPS equipment to obtain coordinates and other characteristics of the sites. Secondary data such were sourced from published and unpublished sources like academic journals, books, internet materials and so on.Descriptive statistical methods were used to analyse data on demographic and socio-economic variables of target communities including population characteristics-size, and composition, size of households, projection, economic activities, social and cultural structure, and property characteristics. Both quantitative and qualitative statistical techniques of data analysis were further used as designed for impact assessment studies.

RESULTS AND DISCUSSION

Economic activities and livelihoods

The people are engaged in numerous occupational activities. The major economic activities in the area

Table 1. Key features of HIA.

- Undertaken on policies, programs, projects, plans or other detailed strategic proposals.
- Undertaken when it will add value to decision-making processes.
- Undertaken prior to the implementation of the policy, programs and project that is being assessed. It is prospective, pre-emptive, based on forecasts and predictions.
- Should assess or identify the potential positive and negative impacts on health.
- Should look at the impact on populations both directly and indirectly affected by the proposal.
- Should include equity as a central concern.
- Should engage key stakeholders in the formulation of recommendations.
- Should be solution - focused.
- Should aim at enhancing the benefits of health and minimize any risks to health.
- Should include explicit consideration of the differential impacts on different groups in the population.

Source: Abanobi (2008).

Table 2. Survey design.

Ward	No of Census EA	No. of Building	No of Cluster	No of Hhld listed	No of selected HHLD	% Hhld allocated for sampling	No of Institutional Hhlds	No of Existing Dump site, Canals/streams
ALANAMU	446	5087	10	2517	600	30	35	24
AJIKOBI	375	4231	10	2321	600	30	30	22
BABOKO	190	1905	8	1935	300	15	35	3
MAGAJIN GARI	165	1860	8	1458	500	25	28	5
Total	1176	13083	36	8231	2000	100	128	54

Source: Fieldwork, 2009.

include farming, cloth weaving, pottery - making, teaching, black smiting, petty - trading. In Ajikobi Ward, 68% of the respondents recognized farming as one of the major occupation of the people in that Ward, about 51% in Alanamu Ward, 10% in Baboko and 14% in Magajin Geri. In the same vein, about 92% believed that cloth weaving is foremost in Ajikobi Ward, 96% in Alanamu, 86% in Baboko and 39% in Magajin Geri. Meanwhile, Quaranic teaching is general found in all the Wards (Table 3).

Facilities and services

Meanwhile, the areas lacked modern facilities and infrastructures that can enhance their well-being as also indicated in Table 4. The only source of water at Gaa Saka is the water well, which is just one serving the whole community of seventy-two people. In Modi, there is also a single water well while the only borehole found there were inactive. However, it is the only place among the five with primary schools. While Gerewu has a borehole and water well, Peke has a natural stream and Idi-Ape has natural spring water as their sources of water supply, but no school. Finally, basic health facilities, such as maternity, primary health centre, dispensary and, patent medicine store, are totally absent in these communities. None of their roads is tarred also or graded this makes them inaccessible in rainy season.

Housing facilities

Although there are several facilities a housing unit is expected to possess, the study shall restrict its analysis to two variables of toilet facility and source of domestic water which are directly related to man's health and sanitation. While in the entire study area Pit latrine (51%) is the commonest toilet facility, in Magaji Ngeri ward 64.2% of the facility is Bucket Latrine. Other 3 wards are characterized by Pit Latrine, specifically Ajikobi (58%), Alanamu (54%) and Baboko (66%). The modern water closet types are distributed minimally within Ajikobi (6%), Alanamu (14%), Baboko (10%) and Magaji Ngeri (6%). Ajikobi is also second in line with 24% of Bucket Latrine (Table 4).

In the study area, interestingly about 72% of the sources of domestic water are from improved sources comprising of 31% tap water and 41% borehole water.

Table 3. Responses on major economic activities of the beneficiary communities.

Wards	Farming%	Cloth weaving%	Pottery%	Quaranic teaching%	Black smithing%	Others%
Ajikobi	68	92	54	94.5	6.5	7.5
Alanamu	50.5	95.5	3	87.5	-	9.5
Baboko	9.5	86	55.5	97	18.5	-
Magaji-Gari	13.5	38.5	33	87.5	42.5	26.5

Source: Fieldwork, 2009.

Table 4. Types of toilet facilities used by the households.

Ward	Water closet	Pit latrine	Bucket latrine	Nearby bush/river	Other	Total
Ajikobi	6.3	58.1	23.6	12.0	-	100
Alanamu	14	54.2	18.7	13.0	.2	100
Baboko	10.3	66.1	5.0	10.0	8.6	100
MagajiNgeri	6.2	28.8	64.2	.8	-	100
Total	9.2	51	29.2	9.2	1.4	100

Source: Fieldwork, 2009.

The borehole source (67%) is commonest in Magaji Ngeri while the tap source (63%) is commonest in Baboko. Alanamu ward has the greatest percentage (30%) of well water followed by Ajikobi and Baboko with about 29% each and Magaji Ngeri 20%. The dependent on stream or rains in this area is virtually non-existent with only Alanamu having 0.5% of each.

Methods of disposal of wastes by the households

The waste disposal methods include burning, dumping in Kwara State Wastes Management Company refuse bin, along the street, at the central dump, communal dumps, open dumps, drainage/canals/stream and others. As shown in Table 5 and Figure 2, the communities disposed -off their solid waste in many ways, Majority of the households in Ajikobi (about 56%) dump their wastes along the street while about 41% in Alanamu burn theirs. In Magaji Ngeri about 33% dumps in the refuse bin of Kwara State Waste Management Company (KWMC). However, it is common in all wards to dump refuse at unauthorized places, like central dump, commercial bins dump, drainage/canal/streams and other sensitive places.

Impact analysis of the project

Description of the project

This project is about the establishment of Millennium Development Goals (MDGs) Community-based Solid Waste Management facilities for the cities in Nigeria. It is conceptualized, supervised and managed by the Federal Ministry of Environment and financed by the World Bank. It is designed with expectation of being handed-over to the State and Local Governments for day-to-day running.

The establishment of Millennium Development Goals (MDGs) Community-based Solid Waste Management facilities for the cities in Nigeria is seen as a panacea for the Solid Waste Management Problems. The facility involves processing and transforming municipal solid waste into useful end products such as fertilizers, steel implements and so on; under a congenial and healthy environment.

Potential positive and negative impacts of the project

The impacts assessed in this work are broken into two: positive and negative impacts. There is a thin line between the health impacts and their socio-economic and environmental counterparts; as they are interwoven and intertwined in many respects. The level of environmental friendliness of an area and its socio-economic well-being are a function of the health status of its people and their communities. The following are the potential positive and negative impact of the project (Table 6).

Potential positive impacts on the communities

Creation of employment opportunities: With the take-off of this project, jobs will be created to the benefits of the people in the localities. Such jobs may however,

Table 5. Methods of disposal of wastes by the households.

Ward	Burning		In KWMC refuse bin		Along the zstreet		At the central dump		In communal bins		At the nearest open dump		In drainage/ canal/ stream		0ther		Total	
	No	%	No	%	No	%	No	%	No	%	No	%	No	%	No	%	No	%
Ajikobi	102	17	60	10	132	22	84	14	120	20	126	13	6	1	18	3	**600**	**100**
Alanamu	84	14	54	9	42	7	84	14	72	12	48	8	42	7	174	29	**600**	**100**
Baboko	21	7	27	9	18	6	39	13	15	5	27	9	141	47	12	4	**500**	**100**
Magaji Ngeri	30	6	180	36	75	15	15	3	40	8	160	32	0	0	0	0	**300**	**100**

Source: Fieldwork, 2009.

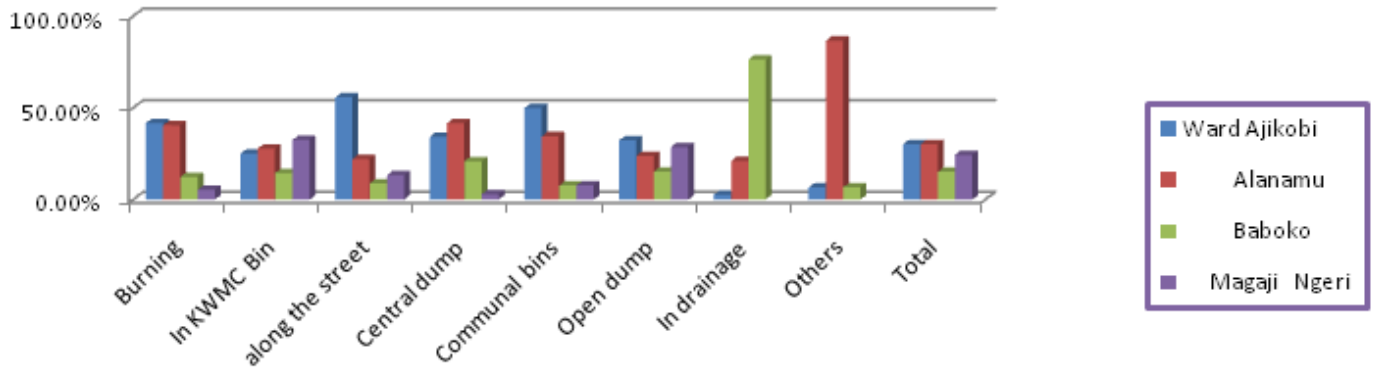

Figure 2. Methods of disposal of wastes by the households. Source: Fieldwork, 2009.

involve low-skilled labour such as watchmen, labourers, artisans, gardeners, and petty-trading; thereby enhancing the standard of living of these ordinary people.

Increase demand for basic goods and services: The functioning of the waste management facility in the area will lead to increase in demand for basic goods and services by and to all stakeholders like petty traders, artisans, property-owners, water sellers, restaurant operators. This will improve the economic well-being of the communities. There is also the improvement of basic infrastructures such as roads, water supply, and power supply; especially in these rural communities.

Increase urbanization: Due to in-migration of recycling plants workers and traders, there is bound to be increase in population of these localities as workers tend to settle down in them.

Table 6. Potential impacts on the communities around the dumpsites.

Positive	Negative
- Creation of employment opportunities.	- Increase environmental and health problems.
- Increase demand for basic goods and services, hence improved economy.	- Likely chemical explosions and fire hazards.
- Upgrading of infrastructures and facilities.	- Pollution of source and channels of water.
- Increase urbanization, due to immigration of Recycling plant workers and traders.	- Increase noise pollution / Erosion.
	- Reduction in size of cultivable arable land.
	- Abandonment of agriculture for formal jobs.

Source: Fieldwork, 2009.

This will lead to increase social and economic activities as the localities are changing face gradually from rural to urban.

Potential negative impacts on the communities

Increase environmental and health problems:
The location of the existing dumpsites around the rural communities could lead to potential environmental and health problems. With the location of the proposed one not far away from the former, the problems are bound to be aggravated, unless pro-active measures are taken. In the five communities wherein the study were carried out, problems of nauseating odour and smell, swarm of flies, mosquitoes, rodents and air pollution were so endemic, with their attendant cause of diseases such as fever (malaria, typhoid), TB, and related diseases. The large-scale poverty of the people coupled with inadequacy of basic facilities such as pipe-borne water, electricity, modern and adequate shelter, food, tarred roads, schools, markets exacerbated the problem.

Possibility of chemical explosions and fire hazards:
Gas, liquids and fumes produced by the decomposition of wastes can be explosive if it accumulates in confined space e.g. cellars of buildings. This may also lead to great fire occurrence with its attendant effects such as air pollution, decrease visibility, and fire hazards.

Water pollution and general environmental pollution:
The tendency for the source and channels of water supply to be greatly polluted is very high in the communities. Polluted water flowing from waste dumps and recycling plants can cause serious pollution of water supplies. The careless and disorderly way of the Waste Management Trucks' drivers usually results in noise pollution which may impede the peace and tranquillity of these rural communities.

Heavy trucks also cause significant damage to roads that were not designed for their weight and frequencies, creating pot holes resulting in intense erosion.

Deforestation: The clearing of trees for this project results in a negative impact with its attendant distortion of the ecosystem and destruction of flora and fauna lives. It also leads to reduction in the size of arable lands, loss of food sources, hunting, fuel energy, raw materials for building, and herbs. To mitigate this, afforestation programme policy must be adopted for the remaining lands to curb indiscriminate clearing of land. Erosion control strategies must also be employed to protect the already distorted ecosystem of the project site and surrounding area while environmental and forestry protection laws must be strictly enforced.

The establishment of a recycling plant which necessarily will generate other forms of occupation different from conventional agriculture will not only encourage the abandonment of the latter but will result in the reduction of available cultivable land. Hence, reduction in the volume of food produced in the area.

General evaluation of the impacts of the project

An assessment of the key impacts earlier identified becomes pertinent, in order to arrive at an objective and independent decision. Consequently, the authors used mathematical weighting technique, which involves assignment of weights ranging from 1 to 5 for the environmental and health factors impacts for the analysis. This is in accordance with the Nigerian Institute of Town Planners (NITP) scores guide as follow: 5 (Very Positive Impact), 4(Fairly Positive Impact), 3 (Neutral Impact), 2 (Fairly Negative Impact) and, lastly, 1 (Very Negative Impact) (Table 7). The percentage score is thus 87.2%. The rating as interpreted by the NITP scoring guide as Acceptable.

RECOMMENDATIONS

HIA's strength lies in its being a tool which enables informed policy decisions to be made based on a valid assessment of their potential health impacts, at the same time adding health awareness to policy making at every

Table 7. Summary of the project impact statement.

S/N	Parameters	Score	
		Maximum points obtainable	Points obtained
1.	**Physical**		
	Location	5	4
	Landform/landscape	5	4
	Weather and climate	5	4
	Flora and Fauna	5	4
	Soil	5	4
	Zoning	5	5
	Setbacks	5	5
	Plot coverage	5	5
	Parking	5	4
2.	**Environmental and health**		
	(a) Pollution		
	Reduced air pollution	5	4
	Reduced noise pollution	5	4
	Reduced water pollution	5	4
	Reduced odour	5	5
	(b) Environmental degradation		
	Deforestation	5	3
	Reduced erosion	5	4
	Reduced Blockage of drainage	5	4
	(c) Potential health hazards	5	4
	Reduced chemical explosion	5	4
	Reduced fire hazards	5	4
	Reduced epidemic diseases	5	5
	(d) Improve aesthetics		
3.	**Infrastructure / services**		
	Upgrading of:		
	Water	5	5
	Electricity	5	4
	Refuse collection	5	5
	Drainage and sewage	5	5
	Road network	5	4
	Telephone /Communication	5	4
4.	**Socio-economic**		
	Increase employment	5	5
	Improved property value	5	5
	Enhanced income	5	5
	Private companies revenue	5	3
	Improved economic well-being	5	5
	Improved taxation	5	5
	Improved behavioural attitude	5	5
	Total	**165**	**144**
	Percentage score	**100**	**87.2%**

Source: Authors' computation (2010).

level. This study has shown that it is more than just a monitoring or evaluation tool, though it has much in common with the more established EIA. HIA provides a practical framework for identifying health impacts and ways of addressing them within its principles of social model of health, equity and social justice, multidisciplinary and participatory approach, use of qualitative and quantitative evidence, explicit values and openness to public scrutiny.

Through evaluation of impacts and other assessments the proposed establishment of the Solid Waste Management facility at Ita-Amo Area of Ilorin West LGA with performance of over 87%, is considered acceptable. The study vividly shows that the establishment of a modern solid waste management facility for the communities is a right step in the right direction as it will bring about several benefits. In addition, it was revealed that most HIAs need input from people with different perspective and from different organizations. It is a veritable opportunity to integrate these views, concerns and values of the affected population in the planning of projects that may have potential impact on their lives. The following recommendations are made to further strengthen these points.

- Efforts should be made by planners to seek harmony in partnership with public health workers in particular and the community in general in the process of conducting HIA studies.
- HIA studies should be integrated formally into the planning process in Nigeria with necessary statutes.
- Advocacy and sensitization of the members of the public, community participation in all waste management projects, plans, policies and programmes and institutionalization of good governance at all levels are necessary impetus for the success of the project.
- Embrace Integrated Waste Management (IWM) strategy which is "the selection and application of suitable techniques, technologies, and management programme to achieve specific waste management objective and goals." Every component of the waste should be taken into consideration in the management practice.
- Guidelines of the design for effective environmental laws should include management instruments that are well thought out, sound and result-oriented. For example; Environmental Management Plan, Health and Safety Plan, Monitoring and Evaluation Plan, Action Plan, and so on.
- The current and future Environmental Policy and in particular waste management policy on ground must have a well – specified guidelines. For example, it should specify and implement source segregation of non-hazardous recyclable waste, so that the economic incentive for waste picking at disposal sites is reduced.
- Waste pickers should be integrated into the main stream of Waste Management and provide basic health-care facilities for their operations and healthful living. There should be the registration of these and other workers in the waste management chain including like waste pickers, and be provided with medication and adequate vaccination.
- Waste pickers in addition should be provided with quality education to enhance their work, about personal hygiene, and safe care.
- They can also be trained on areas to diversify their skills in areas like livestock rearing, solid waste re-use and recycling.
- The management of hazardous chemicals is not only a matter of technology and legislation, but also enforcement and funding. Some wastes are so hazardous and expensive to treat that priority attention should be focused on changing to processes that use substitutes that are less hazardous, and to minimizing the quantities that are discarded. Indeed minimization and substitution should be seen as the preferred options in dealing with difficult waste.

Conflict of Interests

The authors have not declared any conflict of interests.

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Menace of illegal motor parks in Nigerian urban environment: Example from Ilorin city

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Parking lots are areas designated and fixed by the authority of city's management or its agents to ease inter and intra-transport systems for long or short journey passengers. Parking lot is an essential part of the transport system; it plays a crucial role in the management of traffic and congestion. But where these lots are not authorized they become illegal parking. Illegal parking lot forms one of the major problems that makes traffic situation frenzied in some Nigeria cities. Most roads in Nigeria cities are narrow, helix and lack pedestrian lanes (Asiyanbola and Akinpelu, 2012). These challenges at times make them potently tainted with traffic holdups and traffic congestion. There are cases of double parking along these narrow roads thereby causing traffic clogging. Current problems emanate from few availability of parking facilities along the transportation routes or where they are designated and fixed; the transporters misused, abused or abandoned them, just as in the case of Ilorin metropolis. This work examines the menace of on-street illegal parking within Ilorin metropolis, Nigeria. Both primary and secondary data which were collected in 2013 were used in the study. Among the issues examined in the study are the situation of existing parking facilities along the transportation routes; perception of road users (drivers and passengers) about motorist's parking behavior and the effect of on-street illegal parking in the area. Policy implications are discussed in the paper.

Key-words: Parking lots, on-street illegal parking, parking facilities, transportation routes, metropolis, traffic clogging, Nigeria.

INTRODUCTION

Cities are the engine of sustainability of any country as they are the sources of economic growth and development, but the environmental implications of such growth and development need to be thoroughly managed to suppress its consequences which are copious and hazardous. Ilorin city and the capital of Kwara state, is one of the major cities in Nigeria today and its growing strength in both socio-economic relationships is commendable (Ahmed, 2013). However, the city is potently polluted with inadequate parking space, emergence of mini inter-urban motor parks and garages in both nooks and cranes of the city as well as illegal motor parks. The menace of this un-authorized parks occasionally resulted into free-fight among road users include drivers, motor cyclists and pedestrians in some places around the city hub (Ahmed, 2013).

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Figure 1. A typical legal park in Ilorin city Nigeria.

This work examines the menace to which inception of illegal parks and its attendance effects have on socio-economic and movement of people of Ilorin in the recent time. Many roads in Ilorin like; Maraba in old Jebba road, Ipata-Gambari road, Agaka-Ojaoba road, Baboko-Oja-titun road, and Taiwo-Sawmill road, to mention but a few, constitute a keg on the will of economic development of these areas if we talk of un-authorized motor parks. The areas are known to be the hub of economic growth of the city, most of the adjoining land uses of these areas have legal garages but these garages have been abandoned and the nearest road that provide access to pedestrians and vehicular transportation for inter and intra movement of vehicles are now being used as illegitimate parks (Ahmed 2013).

The role of transport in our daily activities cannot be overemphasized and without it, the necessities of life would be difficult to achieve. As wonderful as the role of transport may be in our daily activities, it has been noted to possess myriads of negative effects. This is why in the literature, transport is described as the maker and breaker of the cities. Ogunsanya (2002) confirmed how transport has built cities over the years in some cities/urban areas in Nigeria and how it has gradually destroyed them. Cities function as commercial and industrial centres worldwide where buses, trucks and cars move goods and passengers in and out, on daily basis. Motor-park-lots are vital to ensure people have access to goods and services which they need by road sides or at commercial boulevards. They play a significant role in city's economy. Parking becomes a necessity when one recognizes the fact that urban centres are characterized by interrelated and complex land use activities which requires well-planned and efficient performance of the transportation system.

More and again, on-street parking is a form of parking that involves all metered and unmetered parking lots along the road sides. It is temporary driving a vehicle or maneuvering a vehicle in a certain location for different purpose e.g. commercial purposes. On-street parking exists as a result of non-availability of space for off-street parking and it is known as nearest to destination routes. On-street or surface parking are located and developed on a place of vacant land. On-street parking tends to be safe where they are available, and in case whereby charges are been paid for each parking space occupied. Otherwise, it is unsafe especially where parking is on-street kerbs and where they are not under control by the government regulations or its agents. Motor park in the past was designed for reason of prestige to promote government's or a company's image and to give the passengers a feeling of well being and safety in their new destinations. Parking is one of the experiences that people have when traveling to a destination and it plays a crucial role in managing traffic and congestion as it is generally recognized that town center depends on a rapid turn-over of parking to meet the demand for short-stay visit. Well-situated and affordable parking is believed to be a sign of welcome to a new area, but the case is contrary in the case of Ilorin city. It is highly discouraging that parking has become a serious problem that confronted the road users in Ilorin city environment (Figures 1, 2, 3).

Legal parks refer to areas specify as parking space for inter and intra- transportation systems within a city or town and are approved by the government and its

Figure 2. Example of an illegal park in city of Lagos, Nigeria.

Figure 3. An arrow shows a street Illegal Park in Ilorin city causing a traffic clogging. Congestion is showing through Author's screen in the hold-up.

agencies which includes; the Federal Road Safety Corps (Ahmed, 2013). However, an area allotted as motor parks which is not served as a moderate breather or not approved by the government/agencies is regarded as 'Illegal Park' (Nathaniel et al., 2013). While in Ilorin at present, people are not having good access to organized motor parks and nearest parking lots or kerbs in the city, and this causes a lot of problems such as; traffic clogs, poor traffic flow, hold-up, among others (Tables 1 and 2). Current and other related problems are;

- Lack of parking space on major roads
- Lack of parking meter/parking ticket where there are parking lots,
- Narrowed major and feeder roads
- Bad constructed roads with attainable pot holes

Table 1. Legal and authorized motor parks around Ilorin city.

S/No	Park	Location	Route
1	Ajasse-Ipo/Offa	Offa-Garage Area	Offa/Osogbo
2	Kaiama	Oloje-Garage Area	Okuta/Kaiama-Baruten Area
3	Lagos/Ibadan	Saw-Mill Area	Lagos
4	Jebba	Maraba Area	Jebba/Minna
5	Kano/Kaduna	Akerebiata (New)	Kano/Jos
6	Lokoja/Abuja	Offa Garage	Okene/Abuja/Onitsha-Eastern Area
7	Kaduna/Sokoto	New Garage/Park Akerebiata/Sobi Road	Yawuri/Sokoto/Kaduna
8	Ogidi	Oko-Olowo Junction	Igbeti/Saki/Igboho & Kaduna/Abuja/ Kano-Northern Area

Source. Author's Compilation 2014**.**

Table 2. Illegal/unauthorized motor parks in Ilorin.

S/no	Park	Location	En-route
1	Saw-mill	Odota	Ilorin-Lagos
2	Oja-Tuntun	Baboko(Abdul Azeez road)	Ogbomoso
3	Queen Elizabeth	AP Petrol Station-Surulere	Ilorin- Ibadan-Lagos
4	Bata Shop	Agaka	Gambari/Ogbomoso
5	Isale Oja	Oja-Oba	Onisha/Portharcourt
6	Adifa	Oja-Oba	Oke-Oyi/Jebba
7	Palace Cinema	Okeita	Afon/Amoyo/Idofian
8	Gambari Junction	Gambari	Shao/Babanloma/Jebba
9	Shao Garage (Old)	Ode Sanda	Shao/Bacita/Jebba
10	Opomalu-Junctio	Emir's road	Lagos
11	Oja Ipata	Okesuna	Oke-OyiAgbeyangi
12	Obbo road	Off-Taiwo road	Ibadan/Lagos
13	Railway junction	Total Petrol Station(Emir's road)	Onisha/Calabar/P-harcout
14	First bridge (Asa)	Emir's road	Lagos
15	AP petrol	Murtala Way	Abuja/Kaduna/Kano/Jos
16	Challenge Bookshop	Murtala Way	Lokoja/Okene/Abuja
17	Keystone Bank	Unity road	Lagos
18	IBTC Bank	Unity road	Lagos
19	Opposite Ijaiya House	Offa Garage Road	Kaduna/Kano
20	Sango	Kulende Estate Junction	Lagos
21	Tanke Oke-Odo	Tanke	Ibadan/Lagos/Onisha/Calabar/Port-Harcourt
22	Pipeline Road	Tanke	Abuja
23	Tanke-Opposite Tower Hotel	Tanke	Abuja
24	On-the-bridge park	Unity Road	Ibadan-Lagos

Source. Author's compilation (2014).

- Abandoned heaps of sand for building and construction
- Inadequate orientation to road users that is, motor cyclists/tri-cyclists (Okada riders),
- Parades of advertisement by different individual/organization on the major roads,
- Un-organized legal motor parks
- Legion of traders on the highway/major roads displaying wares.

The explanation so far on the roles being played by transportation in the city anywhere in the world denotes that transportation is a potent to influence any city growth and development. But on the contrary, what is being witnessed today in the emerging city like Ilorin and many others in Nigeria, is beleaguered by mobility problems, and this is what Ogunsanya (2002) declared as "negative externality" or "maker or breaker of the cities". In Ilorin,

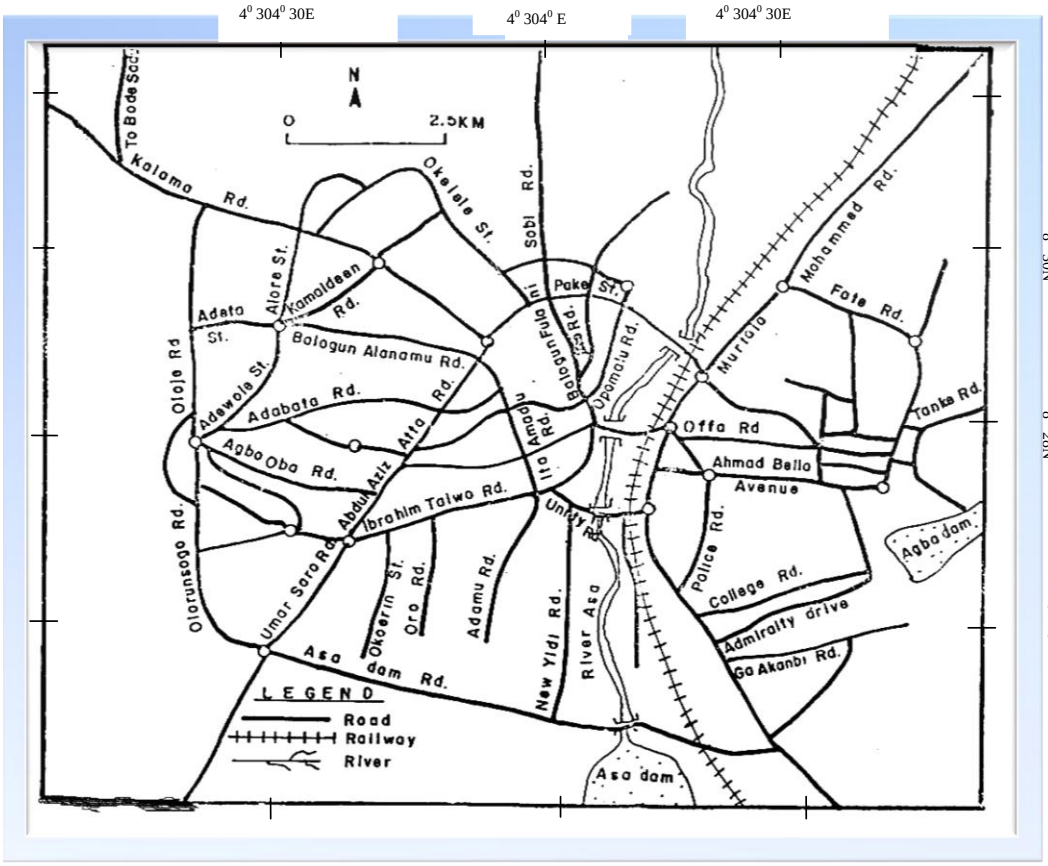

Figure 4. Major roads arteries in Ilorin city, Nigeria (2013).**Source:** Ministry of Land survey, Ilorin Kwara state, Nigeria.

the population of new settlers into the city from other major urban areas is hectic due to incursion by a segment group of people most especially new comers moving away from the northern parts of the country as a result of occasion religious uproar and sectoral killings. Ilorin city, no doubt about it, is one of the peaceful living areas in Nigeria. However, the increase in the population of new arrivals is becoming more difficult to ease of traffic flow in the city as reflected in the increasing 'bumper to bumper' traffic experienced in the major junctions in Ilorin in recent time.

This work aims at examining the menace of illegal motors parks that are continually springing up in and around Ilorin city. The focus attention on the city which is now potently polluted with traffic holdups occasion with traffic clogging, scuttle accidents and/or free-fight between and among road users shall be the main objectives of the study.

The study area

Ilorin, the capital city of Kwara State is located on Latitude 8^0 30'N and Longitude 4^0 33'E, it lies in the plain of the South Western part of Nigeria. The city which lies along Lagos Kaduna highway is about 306 km from Lagos, 600 km from Kaduna and about 500 km from Abuja, the Federal capital city of Nigeria. At present, the city of Ilorin cuts across three Local Government Areas namely Ilorin West, Ilorin East and Ilorin South Local Government Areas, and it has about twenty political wards. The evolution of Ilorin began with the early traditional areas built up around the township centre (Aderamo, 1990). The creation of Kwara State in 1967 and the choice of Ilorin as the state capital had resulted in its rapid population increase and area expansion.

Today, Ilorin city has witnessed more physical expansion and open-up of new road networks resulting in the city enveloping many of the smaller settlements surrounding it (Figures 4, 5, 6). Ilorin is very accessible both from outside and within the city, new roads are being constructed, while old ones are being rehabilitated, these accessibility roads are always clogged up when workers are going or returning from work. Ilorin population was projected with an annual growth rate of 2.84% (NPC, 1991) and at the 2006 head counts; the city

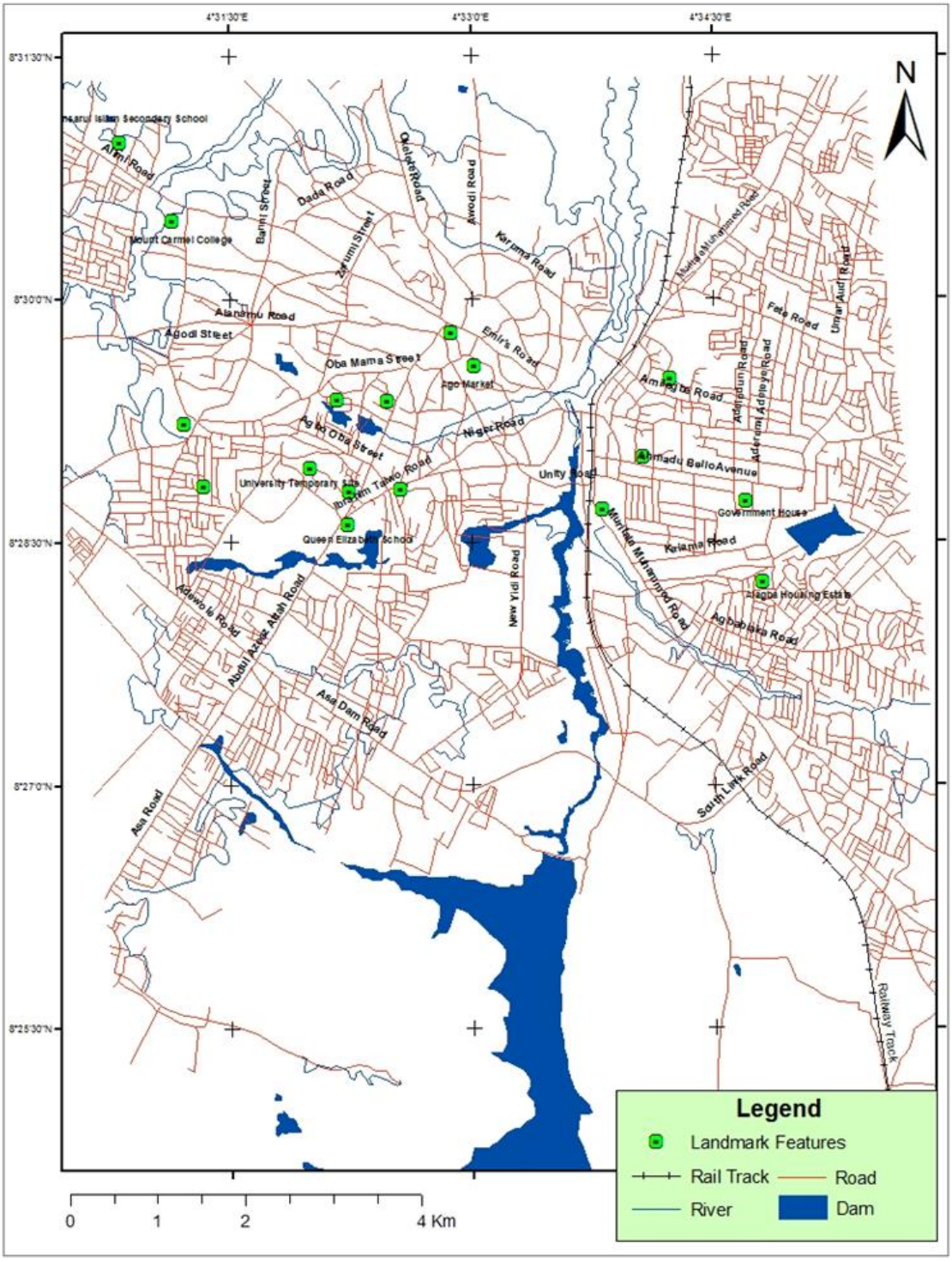

Figure 5. Major roads arteries in Ilorin city, Nigeria (2013). **Source:** Ministry of Land survey, Ilorin Kwara State Nigeria.

has reached 766,000 by population (NPC, 2006).

Although, Ilorin developed as an administrative centre both economic and social activities have greatly influenced its growth in recent times. The major occupations of the indigenes are farming, pottery making, and weaving. There are also a greater percentage of the people who engaged in trading activities, while others are self employed in various other areas such as mechanics,

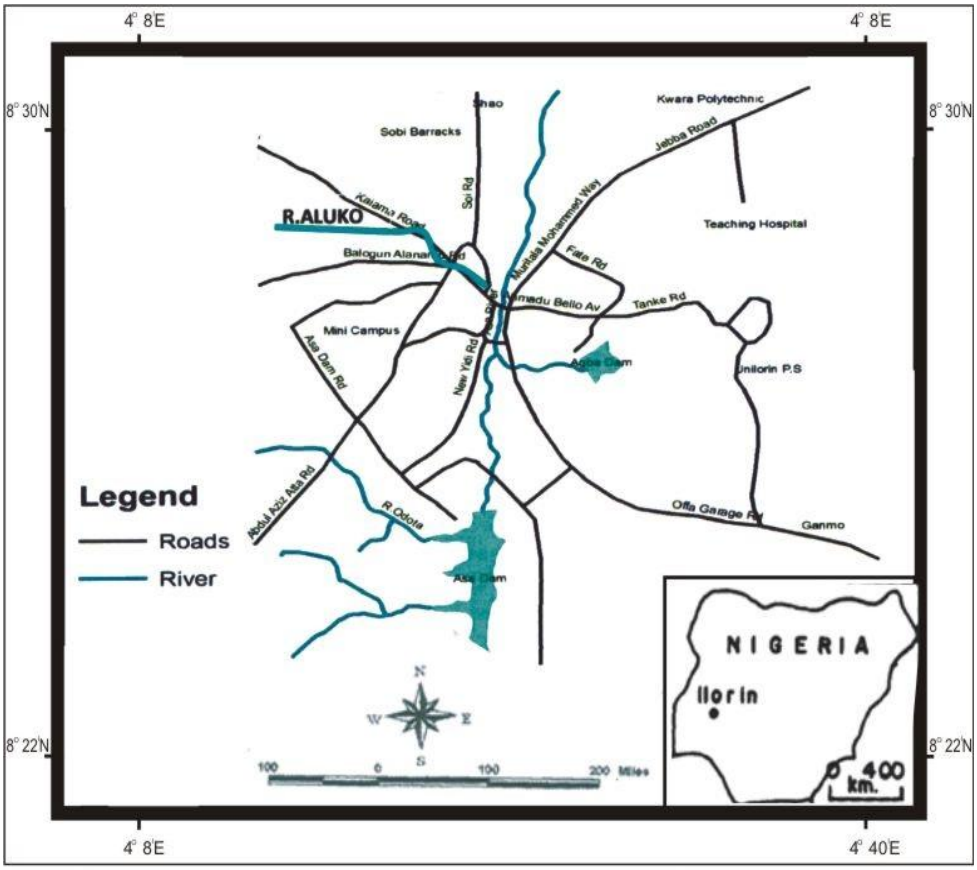

Figure 6. Map of Ilorin city, Nigeria. **Source:** Ministry of Land Survey, Ilorin Kwara State Nigeria.

carpentry, artisans among others.

METHODOLOGY

The methods employed for this work are highlighted below: In the first place, reconnaissance visits were carried out by the researcher on different locations within city of Ilorin for on-spot evaluation in order to update information collected from the secondary data source. Primary data were directly collected through the use of structured questionnaires in line with the objectives of the study and this complement with the on-spot assessment mentioned above. The structured questionnaires were administered to two major set of transport operators- the National Union of Road Transport Workers (NURTW), the Road Transport Employer's Association of Nigeria (RTEAN), while verbal to verbal interviews were carried out among Government Agencies/officials - such as the police/traffic control officers in their various duty-posts in selected road junctions around Ilorin city to obtain information on poor parking spaces that usually caused on-street parking problems when they are at work. Apart from this, parking space inventory and parking concentration survey was carried out to obtain information on total length and width on city roads, and other road characteristics were simultaneously carried out in order to obtain information on the number of and the classes of vehicles parked at on-street parking spaces at the period of 30 min interval. This was done between 8 to 10 am and 3 to 6 pm, these are peak periods of traffic congestion where workers are on the roads for a daily job and periods of their coming back home, and this runs from monday through friday and saturday through sunday (Tables 3, 4, 5).

RESULTS AND DISCUSSION

On-street parking facilities where available, includes kerbs, bus-stops and pay parking lots for commercial motors and car parks for private cars all which are not totally found around Ilorin city especially pay parking lots. It was discovered that only few bus-stops are found in streets/roads in the city of Ilorin thereby causing traffic congestion, hubbub and in some occasions resulted into accident. In some areas within this city there are narrow roads/streets which lack pedestrian lanes. There are cases of double parking along the narrow roads or by, at the kerb's spaces thereby causing traffic congestion; this was due to the non-availability of off-street parking lots in the city areas. Also, there are no parking bays or loading bays for transit vehicles such as taxis and buses either to pick up loads or unload goods and passengers along the routes. Consequently, drivers resort to haphazard parking which not only erodes the aesthetic values of the road

Table 3. Parking concentration and Volume of Parking Survey on selected areas in Ilorin city. Monday traffic count from 7.00 - 5.00 pm.

Location	Period	Bus	Private car	Taxicab	Motorcycle	Truck	Total
Saw-mill –Ojaoba	Morning	98	221	317	33	55	724
(Abdulazee-Attah road)	Evening	117	298	404	37	43	899
Oja-Tuntun- Taiwo	Morning	55	94	88	26	32	295
Road (Baboko Area)	Evening	37	46	41	18	29	171
Taiwo Oke-Unity	Morning	142	181	154	18	111	606
Road (Wahab Folawiyo)	Evening	134	162	139	11	97	543
Sango-Post Office	Morning	512	445	477	123	99	1656
(Old Jebba Rd)	Evening	492	399	442	109	61	1503
First bridge-Opomalu	Morning	122	228	532	267	85	1234
(Emir's Road)	Evening	151	249	504	241	56	1201
Post Office-Offa	Morning	377	486	324	250	112	1549
Garage (Offa Rd)	Evening	497	333	397	447	122	1796

Source. Author's field work.

Table 4. Parking concentration and Volume of Parking Survey on selected areas in Ilorin city. Wednesday (Mid-week) traffic count from 7.00am-5.00pm.

Location	Period	Bus	Private car	Taxicab	Motorcycle	Truck	Total
Saw-mill –Ojaoba	Morning	67	121	321	24	46	579
(Abdulazee-Attah road)	Evening	101	281	330	31	39	782
Oja-Tuntun- Taiwo	Morning	33	77	75	22	39	246
Road (Baboko Area)	Evening	23	39	33	11	20	372
Taiwo Oke-Unity	Morning	99	93	111	12	91	406
Road(Wahab Folawiyo)	Evening	97	132	112	09	84	434
Sango-Post Office	Morning	399	301	352	89	75	1216
(Old Jebba Rd)	Evening	300	343	397	92	59	1191
First bridge-Opomalu	Morning	89	154	392	254	78	967
(Emir's Road)	Evening	100	222	489	190	55	1056
Post Office-Offa	Morning	342	401	367	211	93	1414
Garage (Offa Rd)	Evening	478	301	388	420	98	1685

Source. Author's field work.

way and city structure but also constitutes risks to lives and properties. Also, motorists suffer stress in searching for parking space at destinations or when private vehicle owners looking for areas to buy needed items within shopping or market centers. The areas where this situation usually lead to serious traffic congestion at peak hours of the day include; Post office area of Ilorin, Maraba Garage areas, Ipata area, Oja-Oba area and opposites of Challenge Bookshop. Lack of loading or parking bay in these points always leads to illegal on-street parking by motorist which has already reached crisis proportion in the areas. Roadside hawking and trading along these roads reduce road - lane capacity. Rapid increase in the number of motor vehicles in these areas has always made the areas inaccessible and reduced the traffic speed and thus increasing traffic congestion as well as longing journey time within trans-urban inter and intra movements.

More of the findings also revealed the effects of Vehicular Concentration Survey Volume (VCSV) in various locations in Ilorin city, for instance, as a result of lack of parking space and large movement of vehicles from Sango area to Post office especially in peak period of Monday morning show a total number of 1656 vehicles passed through these city road. While Post office-Offa garage road have 1549 vehicular concentration survey volume. In the same Monday and at the same period, Saw-mill to Oja-Oba has a lighter traffic movement which was 899. In the evening and again, Post office to Offa garage has 1796 vehicular movement (highest so far)

Table 5. Parking concentration and volume of parking survey on selected areas in Ilorin city. Sunday (week-end traffic count from 7.00 - 5.00 pm.

Location	Period	Bus	Private car	Taxi cab	Motorcycle	Truck	Total
Saw-mill –Ojaoba	Morning	19	52	118	91	2	1967
(Abdulazee-Attah road)	Evening	252	96	225	122	3	698
Oja-Tuntun- Taiwo	Morning	299	95	223	88	9	714
Road (Baboko Area)	Evening	226	113	265	111	15	730
Taiwo Oke-Unity	Morning	346	103	335	128	4	916
Road (Wahab Folawiyo)	Evening	441	88	378	210	7	1124
Sango-Post Office	Morning	380	98	196	75	8	757
(Old Jebba Rd)	Evening	460	143	189	66	18	876
First bridge-Opomalu	Morning	363	99	258	71	33	824
(Emir's Road)	Evening	241	192	376	65	25	899
Post Office-Offa	Morning	169	83	413	77	6	748
Garage (Offa Rd)	Evening	278	88	375	62	8	811

Source. Author's field work.

Table 6. Response of respondents to effects of on-street parking.

Effect of on-street parking	Transport operators	Commuters	Government agencies	Others	Total frequency(%)
Traffic clog up	56	20	4	20	100
Accident	35	40	2	23	100
Traffic delay	14	60	5	21	100
Restrict Movement	5	10	4	81	100
Fight/hubbub	18	10	1	71	100

Source. Author's field work.

and followed by Sango to Post office which was 1503 respectively. The effects of all these movements of vehicles are felt more by those who are not only going to a destination but those who wanted to do transactions along these major road arteries but have no authorized parking lots to stay for awhile (Table 3).

There was little difference on the Mid-week (Wednesday) where in the peak period of vehicular movement in the morning from Sango to Post office vehicle counts attained 1216 and Post office to Offa garage depicted 1414, whereas, Oja Titun to Taiwo showed a lower vehicular movement which was 246. But in the evening, Post office to Offa garage have another higher vehicular movement/concentration of 1685 followed by 1216 Sango to Post office (Table 4) respectively.

On Sunday (weekend period) Saw-mill to Oja-Oba have 1967 due to movement of people to churches along these routes and is followed by Taiwo-Oke to Wahab Folawiyo (Unity) road which showed 916 volume of vehicles concentration. In the evening periods and the same roads witnessed more volume of vehicles concentration with 1124 when compared with Emir's road from Post office with 899 Vehicle Counts Survey (Table 5).

Problems of illegal Parks in Ilorin city.

There are sequences of problems commonly appended to parking lots- legal or illegal/unauthorised from the past and to recent time in Ilorin city. Ironically, most of these problems are partly caused by the governments or its agencies and/or partly caused by transport operators. The proliferation of parks in some nooks and crannies of Ilorin city with little or no proper administration and this made it difficult for other roads users and/or commuters to patronize the authorised and legal parks where they were located in the city. Major complaints arise from the authorized parks that; before commuters/travellers board their vehicles it takes long time than necessary, this makes it preferable for them to patronize some mushroom parks that spring up all over the places and which make journey more faster (Ahmed, 2013). Also, the mushroom parks get their passengers cheaply and this situation is really affecting the smooth running of the authorized parks. This problem apart, the activities of criminals in and around some legal parks are becoming notorious. The adjoining roads and the premises of the legal parks are a 'no-go' area the moment it is dark and at early

morning of the day. It is always being the case when you see all manner of criminals and pickpockets harassing innocent passengers.

The beauty in any city is not only found on its organized space to ease accessibility to various locations of desired requirements by effective transportation system, but it is also found in motor parks/parking lots where people use for both inter and intra urban transportation systems (Ahmed, 2013). Unfortunately, the arrangement and use of space is not properly organized in major urban centers in Nigeria and Ilorin in particular. However, in Ilorin at present time, people are not having good access to the organized motor parking lots and garages in the city, and this causes a lot of problems which few of them are just mentioned.

RECOMMENDATIONS AND CONCLUSION

The following are important solution towards the improvement of the chaotic parking situation in the Ilorin city of Nigeria.

- Provision of bus-stops and kerbs for commercial motors and parking lots for private motors.
- Provision of pedestrian walkways and pedestrian overhead bridge crossing at appropriate location.
- Provision of designated and specified park for different vehicles plying different routes as well as off-street parking for inter-city transport.
- Re-organization of market system so that all forms of street-hawking and roadside selling must be totally scratched-off, while the government should provide a ready-made alternative place for commercial activities.
- Strict enforcement of traffic rules and regulations in the area which would involves law enforcement agent to be compelled to do the works with pride and more elements of efficiency and submissiveness in which vehicle found on illegal traffic routes should be punished according to the rules of law.
- Provision of parking guidance system that will cater for parking of vehicle during the peak hours of the city.
- The efficient movement of people and goods are vital task and upon it rest the quality of life as observed in the literature; there is no escape from transport because immobility perpetrate poverty. It affects smooth flow of traffic and causes traffic congestion, lateness to work, accident and hampering other economic activities.
- Pay - parking serving space must be provided for road users on number of hours they use in the lots, this has been the practice in advanced world, and it equally serves as one of the methods of traffic control.

Conflict of Interests

The author has not declared any conflict of interests.

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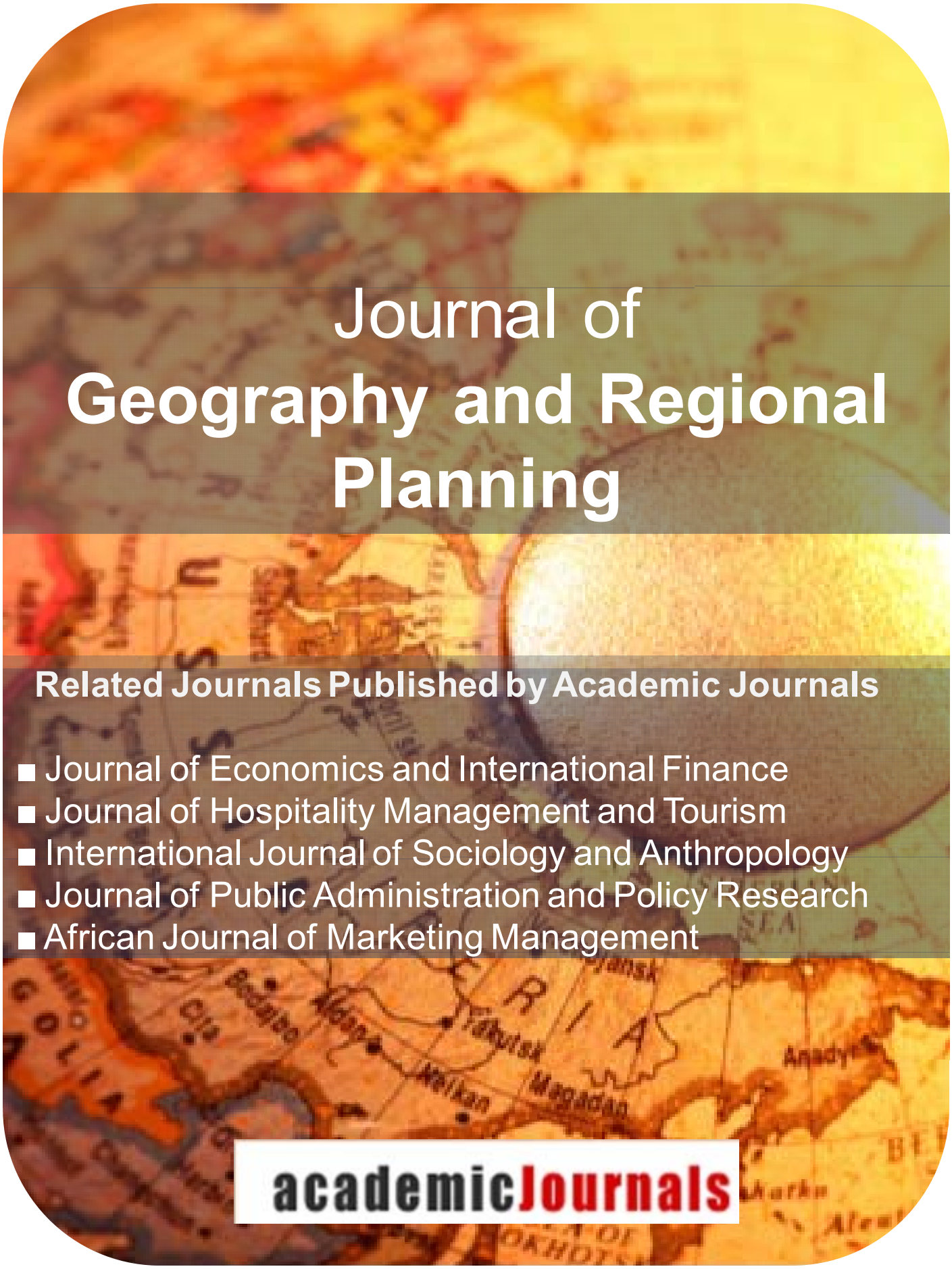

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