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**Abstract** - The poor condition of urban transport system in Nigerian cities has now reached a crisis level. Although the situation affects women and men, previous empirical and theoretical discussions most of the time assumed the uniformity of women and men's experience. Transportation Planning and Engineering have been gender neutral. It is against this backdrop that the study examines the differential effects of transportation on the varying psychological well-being of male and female in Nigeria using Ilorin as case study. The study uses primary data, which were obtained through a random systematic sampling of 500 households in Ilorin, Nigeria. Variables used for the study include conditions of urban transport activities and psychological distress information. Data collected were analyzed using descriptive and inferential statistics. The results showed unprecedented fear that people have for engaging in transport activities. Feeling sad and level of worrisome people subjected to while using transport facilities is also high. The study also revealed from the regression analysis that transportation have significant effects on the psychological well-being of male and female. These findings shows that urban transport condition constitute major threat to psychological well-being of women and men and the effect is more on the women than of men due to gender differences in the socially prescribed roles. The study recommends among others the need to improve safety on the street. A design of integrated metropolitan transport master plans with a clear vision of train, bus and taxis as well as urban motorcycle and non-motorized transport roles are needed. The study concludes by emphasizing the need to improve the current state of transport infrastructure in the study area.

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## I. INTRODUCTION

Over the course of last decade, gender analysis is becoming a major issue in transport sector; as the huge cost of transport externalities to national economies and individual households becomes increasingly apparent. Indeed, transport planners and policy makers all over the world have increasingly recognized the fact that, the differences in travel and activity pattern between men and women are a central and recurring feature in transportation systems all over the world (Peters, 2001).

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Despite improvement in building women's capabilities, gender gaps in efficient means of travel continue to persist (Oyesiku, and Odufuwa, 2002). This is often reflected in unequal opportunity and capabilities to access and utilize existing means of mobility (Okoko, 2007). Mobility disparities have serious implications on the livelihoods of not only the women, but also their families and the society at large (Odufuwa, 2007; Oyesiku and Odufuwa, 2002). In Sub-Saharan Africa, women have less access to transportation services than their male counterpart (Okoko, 2007; Odufuwa, 2007; Starkey et al., 2002). It should be noted that, the right to own, use and manage private automobiles or vehicle is often limited among Sub-Saharan African women (Odufuwa, 2007; Starkey et al., 2002).

World Health Organization (2000) recently articulated that health concerns related to traffic and transportation have become a worldwide phenomenon and will likely become more of an issue in the future. Findings from other recent studies suggest that stress from transportation may represent an important factor that influences the well-being of urban population (Asiyanbola, 2004; Gee and Takeuchi, 2004).

The focus of this study is to examine gender differential effects of transport on the psychological well-being of women and men in Nigeria using Ilorin as a case study. Although research findings have shown that women's transportation patterns differ from men's, and a significant positive relationship have been found between intra-urban travel and psychological distress (Asiyanbola 2002; 2004), there has not been many empirical study that examined gender differences in the effects of urban transport infrastructure condition and intra-urban travel on the psychological distress of women and men. The present work is an addition to the existing literature and an attempt to make contribution along this line.

## II. AIM AND SCOPE OF STUDY

This study aims at examining the differential effects of urban transport on the psychological well-being of male and female in the city of Ilorin, Nigeria. This is with a view to understanding the impact which transport infrastructure has on people psychologically. To achieve this, the operational objective involved is the assessment of transport activities that brought psychological trauma to male and female in the study area.

### III. LITERATURE REVIEW

#### a) Gender and Transport

Although the situation of urban transport system in the Nigerian cities affects women and men, previous empirical and theoretical discussions most of the time assumed the universality of women and men's experience (Seager 1992; Moser 1992; 1993; McDowell 1983; Weisman 1992; Robinson 1998 etc.). Hitherto, every attempt at solving intra-urban mobility problems was made without gender considerations. The assumptions have always been such that the solutions are applicable equally to both men and women. In most

cases, pure traditional economic variables, which ignore crucial cultural roles and the salience of the life course, are used to derive some of these solutions (Rosenbloom, 1993). Yet those missing variables are parts of our realities, which of course need to be applied in formulating any transportation policy. The place of gender has been found to be very important in effective policy formulation because man and woman are not equal urban space users and actors (Townsend 1991; Seager, 1992; Moser, 1993; Bowlby et al, 1989; Short, 1996; etc). In Nigeria, women constitute about half of the total population as shown in Table1.

*Table1 : Nigerian Population by Gender (2001 – 2006)*

Gender	2001 ('000')	2002 ('000')	2003 ('000')	2004 ('000')	2005 ('000')	2006 Population Census figure
Total Female Population	59,519	61,203	62,936	64,716	48,531	68,293,683
Total Male Population	59,282	60,960	62,685	64,459	67,111	71,709,859
Total Population	118,801	122,163	125,620	129,175	133,767	144,003,542

*Source : National Population Commission (NPC) & Federal Office of Statistics, Lagos (2008).*

Up till the 1970s, women generally, are noticeably absent from the discussion of development theory and practice. They have remained invisible in many analyses of social space. In fact, Robinson (1998) notes that with respect to the human geography techniques and models many of which originated within geography from the pioneering studies in the 1960s, they were applied in research and completely ignored gender. According to him, although there were references to consumers, decision makers and heads of household, there was no attempt to distinguish between the different realities confronting men and women, and the differential power relations associated with gender (Jackson 1990). Gender was largely a taken-for-granted variable and the different nature of women's lives was simply ignored.

Not until recently, studies, mostly in the advanced countries, have sought to uncover women's experience of different places. Such studies according to Robinson (1998: 456) have often thrown into sharp focus the different types of experience of place had by men and women. Some of such recent researches based on sex differentiated data have shown clearly that there is gender differences in spatial experiences and that differences between women and men run through all aspects of urban life: in commuting patterns and transportation use; in patterns of housing and homelessness; in labour force participation and work opportunities and in the use of urban social space (Seager, 1992; Weisman, 1992; etc).

In the developing countries and in Nigeria in particular, studies have shown that there are significant

differences between women and men intra-urban travel behaviour (Asiyanbola 1999; 2002; Fadare and Morenikeji, 2001; Oyesiku and Odufuwa, 2002). A study carried out in Abeokuta, Ogun State revealed that women linked-trips to and from work; women make more activity trips weekly than men and women and children depend heavily on public transport for their intra-urban travel (Asiyanbola, 1999). Observation in Ibadan city revealed that work trip distance is shorter for women than for men, women make domestic related non-work trips more than men and walking as well as public transport are crucial in enabling access to various activities centers; and in a household where there is one car, men use the car most (Asiyanbola 2002). In Niger State, Fadare and Morenikeji, (2001) found that among people without means of transport women make more trips than men, but among the group with means of transport men have a higher mean trip rate than women. Also, study by Oyesiku and Odufuwa (2002) on gender perspectives in travel behaviour of motorcycle passengers in Nigerian intermediate cities shows that females frequently use motorcycle mode for short and long distance trips more than males; the use of motorcycle has significant effects on the pattern of dressing of women and that two of every three passengers that have motorcycle accidents are women. Although, recent study have shown significant relationship between intra-urban travel and psychological distress as well as between intra-urban travel stress experience and the household income, educational level, occupation and household size (Asiyanbola, 2004), there is no empirical study that has

examined gender differences in the effects of urban transport infrastructure condition and intra-urban travel on the psychological distress of women and men.

#### IV. PSYCHOLOGICAL DISTRESS: SOCIALLY PREVAILING PHENOMENON

Coping and struggling with life's problems is more of a rule than an exception. At any given time, many people are affected by acute and chronic illness, accidents, and by disasters of one sort or another or problems related to crime, delinquency, HIV and AIDS pandemic, drug addiction, and alcoholism (Levine and Perkins, 1997). Marriage, divorce, cohabitation and parenthood present problems of their own, and large numbers of people have serious financial problems especially with the rising rate of inflation.

Furthermore, we are presented with problems of unemployment and people having to adjust to their employment challenges. Over all, a large number of people regularly experience stressful events, which often lead to psychological distress. Today in the developing countries, particularly in Nigeria, stresses being experienced with transportation activities are getting to alarming rate.

Psychological distress according to Lerutla (2000) is the emotional condition that one feels when it is necessary to cope with unsettling, frustrating or harmful situations. Mirowsky and Ross (1989) add that psychological distress is the unpleasant subjective state of depression and anxiety, which has both emotional and physiological manifestation. Chalfant et al, (1990) also define psychological distress as a continuous experience of unhappiness, nervousness, irritability and problematic interpersonal relationships.

The existence of psychological distress has been recognized for thousands of years. For example, the book of Job illustrates a classic case of psychological distress. Job is seen as a profoundly distressed man, he lost interest in things he used to like doing, become hopeless; he became withdrawn, self-blaming, self-deprecating and had sleep disturbances. Kovacs and Beck (1978) states that even 3,900 years old Egyptian manuscript provides a distressingly accurate picture of the sufferer's pessimism, his loss of faith in others, his inability to carry out the everyday tasks of life and his serious consideration of suicide. These historical descriptions are congruent with some of present accounts of the phenomenon of psychological distress. Understanding of psychological distress has been controversial for many years. The major dispute among students of psychological distress has been over the meaning of the concept, and about what actually is meant by the assertion that a person is psychologically distressed (Torkington, 1991).

There are three basic questions, frequently asked in the context of psychology and psychiatry when

trying to make sense of behaviour: What kinds of behaviour are judged to be abnormal, whether by professionals or laypersons? What are the various patterns or forms of disturbed behaviour? How can one make sense of the apparently senseless or irrational behaviour of disturbed persons? (Halling and Nill, 1989).

Perhaps questions of this kind appear to be taking pedantic route of rather debating definitions than helping people. But these are important questions that affect who is seen as psychologically distressed as well as how being distressed is interpreted and how treatment is carried out (Phatares, 1988). According to the social control perspective, psychological distress refers to a category that observers uses to classify particular individuals, thus the concept psychological distress is located in observers categories rather than actors' symptoms (Tokington, 1991).

#### V. RESEARCH METHODOLOGY

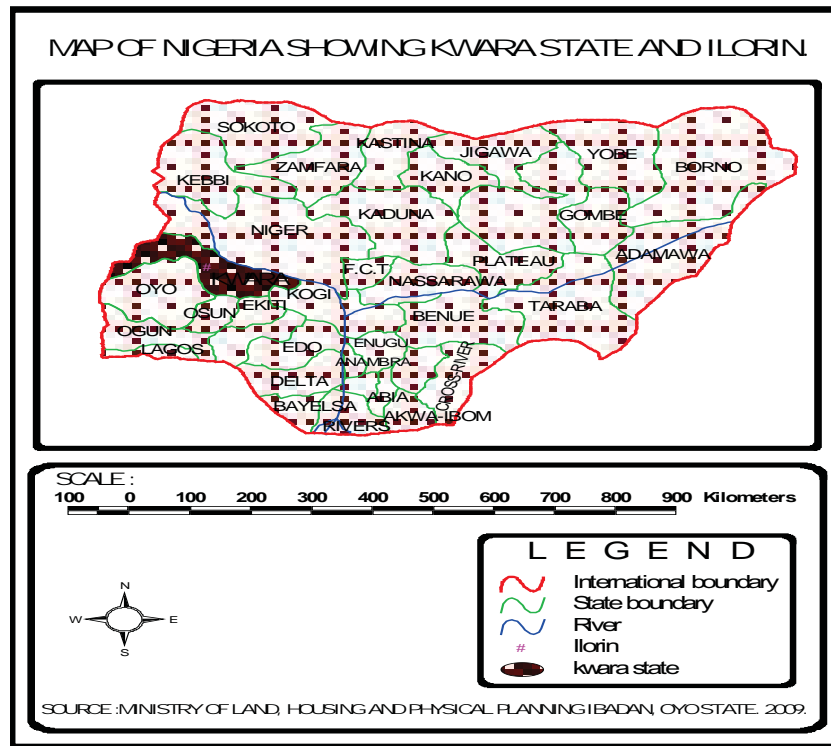
The data needed for the study were generated from field survey. This was achieved with the use of structured questionnaire which was administered in the study area. Some of the variables used are the transport activities that subject people to psychological ordeal. They include traffic congestion, road accidents among others, psychological distress information, which comprises the following variables that reflect various symptoms, were used in the study: Fear of transport activities, Feeling sad with transport situation, Worried with transport condition, Hopeless with persistent poor transport condition.

The Data used in the study were obtained from a cross-sectional survey of households through questionnaire administration. In this household survey, the sampling frame utilized is the total number of estimated households in Ilorin municipal area. The average household size declared for Nigeria in the result of the National Population Commission (NPC) 2006 household survey is 4.48. This was used to divide the 2006 population of each locality as defined by the NPC in the Ilorin municipal area to get an estimate of the number of households.

To make for effective and objective coverage, due to non-availability of the list of all households in each locality in Ilorin, the number of questionnaires administered in each locality was proportional to the total number of estimated households in each locality. Random Systematic Sampling was used in the selection of houses along the streets. The first house was selected by the use of random numbers and all subsequent units in the sample were chosen at uniform intervals of twenty houses. Descriptive and inferential (e.g. Regression) analysis were used to analyze the data collected. This is done with the aid of computer software program known as Statistical Package for the Social Sciences (SPSS).



Figure 1 : Map of Nigeria showing Kwara State and Ilorin



## VI. RESEARCH FINDINGS

### a) Transportation and Psychological Distress in Ilorin

Table 1 : Respondents fear of using Public Transport

Reasons for being Afraid		Gender		Total
		Male	Female	
Road Accident	Frequency	135	222	357
	%(Row)	37.8	62.2	100
	%(Column)	68.2	73.5	71.4
Over Speeding	Frequency	46	23	69
	%(Row)	66.7	33.3	100
	%(Column)	23.2	7.6	13.8
Drunkenness of the operators	Frequency	15	35	50
	%(Row)	30.0	70.0	100
	%(Column)	7.6	11.6	10.0
No Response	Frequency	2	22	24
	%(Row)	8.3	91.7	100
	%(Column)	1.0	7.3	4.8
Total	Frequency	198	302	500
	%(Row)	39.6	60.4	100
	%(Column)	100	100	100

$$X^2 = 33.346, df = 3, P < 0.05 = 0.000$$

Source : Author's Fieldwork, 2010

Table 2 : Respondents feeling sad with Transport Activities

Reasons for feeling sad		Gender		Total
		Male	Female	
Seeing victims of	Frequency	183	267	450

Road accidents	% (Row)	40.7	59.3	100
	% (Column)	92.4	88.4	90.0
Insensitivity of Traffic law officer	Frequency	13	13	26
	% (Row)	50.0	50.0	100
	% (Column)	6.6	4.3	5.2
Pollution from Transport	Frequency	2	22	24
	% (Row)	8.3	91.7	100
	% (Column)	1.0	7.3	4.8
Total	Frequency	198	302	500
	% (Row)	39.6	60.4	100
	% (Column)	100	100	100

$\chi^2 = 11.199$ ,  $df = 2$ ,  $P < 0.05 = 0.004$

Source : Author's Fieldwork, 2010

Table 3 : Respondents Worried with Traffic Situations

Reasons for being Worried		Gender		Total
		Male	Female	
Traffic Congestion	Frequency	187	256	443
	% (Row)	42.2	57.8	100
	% (Column)	94.4	84.8	88.6
Hike in Transport Fares	Frequency	7	14	21
	% (Row)	33.3	66.7	100
	% (Column)	3.5	4.6	4.2
Fuel Scarcity	Frequency	0	4	4
	% (Row)	0.0	100	100
	% (Column)	0.0	1.3	0.8
Bas road users (non-compliance with Traffic regulations)	Frequency	2	6	8
	% (Row)	25.0	75.0	100
	% (Column)	1.0	2.0	1.6
No Response	Frequency	2	22	24
	% (Row)	8.3	91.7	100
	% (Column)	1.0	7.3	4.8
Total	Frequency	198	302	500
	% (Row)	39.6	60.4	100
	% (Column)	100	100	100

$\chi^2 = 14.753$ ,  $df = 4$ ,  $P < 0.05 = 0.005$

Source : Author's Fieldwork, 2010

Table 4 : Effects of Traffic Hold up (Congestion)

Effects of traffic congestion		Gender		Total
		Male	Female	
Late to work	Frequency	106	169	275
	% (Row)	38.5	61.5	100
	% (Column)	53.5	56.0	55.0
Fail to meet Appointments	Frequency	51	41	92
	% (Row)	55.4	44.6	100
	% (Column)	25.8	13.6	18.4
Unable to meet Health emergency	Frequency	11	52	63
	% (Row)	17.5	82.5	100
	% (Column)	5.6	17.2	12.6
City ground to a Halt	Frequency	24	4	28
	% (Row)	85.7	14.3	100
	% (Column)	12.1	1.3	5.6
Economic activities	Frequency	4	14	18

Paralyzed	%(Row)	22.2	77.8	100
	%(Column)	2.0	4.6	3.6
No Response	Frequency	2	22	24
	%(Row)	8.3	91.7	100
	%(Column)	1.0	7.3	4.8
Total	Frequency	198	302	500
	%(Row)	39.6	60.4	100
	%(Column)	100	100	100

$\chi^2 = 59.659$ ,  $df = 5$ ,  $P < 0.05 = 0.000$ .

Source : Author's Fieldwork, 2010

## VII. DISCUSSION OF FINDINGS

It is observed in table 1 that Majority of the respondents (71.4%) give prevalent incidence of Road Accident as reasons for being afraid, 13.8% talks about over speeding, while 10% decry drunkenness of the public transport operators.

It is established in the table 2 that people feel sad with transport activities in Ilorin. The highest proportion of respondent (90%) said they feel sad when seeing Victims of Road Accident, while 5.2% frowned at the Insensitivity of Traffic Law Officer. This might be due to the incidence of nepotism that has eaten deep into our fabric in the country. Another 4.8% decries pollution from transport.

In table 3, many reasons were advanced for being worried with traffic situations in the study area. Majority of them (88.6%) sited Traffic Hold up (Congestion) as their reasons, 4.2% give cases of Hike in Transportation Fares, 0.8% adduced worried with lingering Fuel Scarcity, while 1.6% reported Bad Road Users (non compliance with traffic regulations) as their reasons. 4.8% refused to respond.

The effects of Traffic Hold Up (Congestion) is x-rayed in table 4, in which majority of the respondents (55%) said it makes them come to work late, 18.4% decried their being fail to meet appointment, 12.6% said they were unable to meet health emergency. Others (5.6%) said city ground to a halt and 3.6% noted that the economic activities of the city used to be paralyzed as a result of traffic hold up.

### a) Gender Socially Prescribed roles, Transportation and Psychological Distress

The variables used for Gender social roles are independent variables and listed below: it is important to note here that they were generated with the aid of cross tabulation of raw data using variable of Gender, Occupation and Locality. Men Generally, Women Generally, Working Men, Working Women, Nursing Mother, Working Nursing Mother The dependent variable is transport activities.

The intention here is that, in as much as we have established that transport activities affect people psychologically, we want to see these effects on each socially prescribed roles and the result is shown in the table below:

Table 5 : Regression Analysis showing effect of urban transport on Psychological distress of male and female

Gender	R	Effect (R <sup>2</sup> )	Std Error of The Estimate	F	Sig.
Men Generally	.508	.258	1.14512	16.660	.000
Women Generally	.573	.328	1.08924	23.465	.000
Working Men	.367	.134	1.23656	7.451	.000
Working Women	.534	.285	1.12364	19.156	.000
Nursing Mother	.554	.307	1.10678	21.218	.000
Working & Nursing Women	.585	.343	1.07770	25.004	.000

Source : Author's Computation, 2011.

The effects of urban transport activities on the psychological well-being of different categories of women and men are shown in table 5. The result shows that urban transport activities have significant effects on the psychological well-being of women and men. Generally, the effect is found to be higher for women ( $R^2 = .328$ ) than for men ( $R^2 = .258$ ). However, the effect are found to be more on working/nursing women ( $R^2 = .343$ ) followed by nursing mothers ( $R^2 = .307$ ), and, working women ( $R^2 = .285$ ) compared to the effect on working men ( $R^2 = .134$ ). However, there are significant differences among the categories of respondent as shown in table 5. Accordingly, the significant are at  $P < 0.01$  and  $P < 0.05$ .

The results of gender differences in the effects of urban transport are due to the fact that the responsibility for housework and child caring falls more heavily on women and yet women still engage in productive work activities. In Nigeria, patriarchy structure has been a major feature of the traditional society (Aina 1998). It is a system of social stratification and differentiation on the basis of sex, with clearly defined sex roles (Aina 1998). Traditionally men do not participate in domestic work including child rearing –

such tasks are considered to be the exclusive domain of women. The traditional stereotype in the division of labour within the domestic units is still rampant and women even if employed and regardless of social class still do the greatest share of household and childcare activities (Asiyanbola, 2006a). Grieco and Turner (1997) notes that women's greater domestic responsibilities, coupled with their weaker access to household resources have significant consequences on their transport and travel status. According to them, the lower the income of a household, the more probable it is that women experience greater transport deprivation than men which may take the form of women's journey having multiple purposes and thus generating greater anxiety in the travel context (Grieco and Turner 1997:46-47). In most communities and neighborhoods where basic amenities and infrastructures are in a very deplorable situation, women are forced to make several daily trips e.g. to the water source. This result suggests that policies that reduce the frequency of trips made by women could reduce the psychological distress due to intra-urban transportation of women.

## VIII. POLICY ISSUES AND CONCLUSION

The study examines the differential effects of urban transport on the psychological well-being of women and men in Nigeria using Ilorin as a case study. The study show that urban transport constitutes a major threat to psychological well-being of women and men and the effect is more on the psychological well-being of women than of men due to gender differences in the socially prescribed roles. To this end, services which are gender-sensitive would improve the potential of women to enjoy and exercise their full human rights-political, economic, social, civil and cultural; and would contribute to greater equity (O'Connell, 2000).

To achieve this: There is the need for the involvement of women in discussions and decision-making that shapes service delivery. Of course policies to improving the socio-economic status of women should be pursued as this will increase the number of women that could be involved in policy making process. This is because, studies have shown that women and men do not have equal access to, or influence on, decision-making and that socio-economic status of women is an important factor that make women participate more or less in decision-making (Olatubara, 2003; Asiyanbola, 2006b).

In addition, and more importantly there is the need to invest in reducing and redistributing women's workload, as this will enhance women empowerment and facilitates the achievement of the Millennium Development Goal Number 3. Improving safety on the street is very crucial. Routes should connect homes with other activity centers.

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