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By AMOO Emmanuel O, Ola-David Oluwayomi, Ogunrinola I.O & Fadayomi, T.O Covenant University, Nigeria

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Street Trading Activities and Maternal Health in Urban Areas of Nigeria

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I. Introduction

enerally, both women and men are found concentrated in certain occupation, face similar conditions at work and experience the same workplace hazards. In sub-Saharan Africa region, working women are also traditionally responsible for the household chores. However, both sexes are physically different and women are more sensitive considering their reproductive roles. It is therefore expedient to recognise these differences and examine critically the exposure of women to workplace hazards in order to enhance reduction in maternal mortality and morbidity that are rampant among the developing nations.

Deaths, accidents and infections from the workplace have been contributing immensely to the global mortality rate. Annual death toll from unsafe occupation reported for 2006 was 1.1 million people. The recorded cases of fatalities in the workplace that led to complete disability was about 300,000 out of 250 million while over 160 million people were victims of work-related diseases (ILO, 2006; WHO, 2006; ILO, 2008; WHO, 2010). Gender variations are difficult to specify especially for a low-income economy. The global figures for 2008 show that out of 337 million occupational accidents, 358,000 were confirmed as fatal, while deaths from occupational related illnesses

Author α: Demography and Social Statistics, School of Social Sciences, College of Development Studies, Covenant University, Nigeria. E-mail: amco50amoo@gmail.com, emma.amoo@covenantuniversity.edu.ng

were 651,000 (WHO, 2010; ILO, 2006; ILO, 2008; Lu, 2011). Observation from these data show that there is a 77 percent increase in death toll from unsafe workplace between 2006 and 2008, 35 percent increase between the same period while the number of fatal accident increased by 19 percent.

Women make up 45% of the employed population in the EU (European Agency for Safety and Health at Work, 2012), they constitute about 31.2 percent of Nigeria labour force (Eweama, 2009; National Bureau of Statistics (NBS), 2010). Across the Eastern, Middle, Western and Southern Africa regions, about 37, 25, 22 and 2 percents of girls respectively in age between 10 and 14 were economically active in the year 1990 (ILO, 1990; Bledsoe & Cohen, 1993). proportion in the next older age (15-19 years) was 62, 39, 45 and 29 percent respectively in the same year (ILO, 1990; Bledsoe & Cohen, 1993). In Nigeria, the proportion of women in labour force is unfavourably compared to the men. A change in this paradigm as currently been driven by gender equality agenda (including equal employment opportunities and support for women enterprises that were enshrined in MDG 3 (UN, 2003; NPC & USAID, 2004; Oyekanmi, 2008; Commission on Legal Empowerment of the Poor, 2008) can only be successfully achieved with the provision of safe working environment for women. concentration of women in micro-enterprises with diverse methods of operations makes it more important to address the gender dimension in health and safety at workplace. Healthy and safe work environments can enhance, and are synonymous with quality jobs and output (Muir, 1974; Alli, 2001). It is envisaged that quality outputs would impact on women's earnings and might keep them in employment. Thus, attention must be paid to the health and safety of the jobs that women do.

However, men and women are not the same neither is their jobs and the working conditions they are exposed to the same. Likewise, the way they are treated in the society also differ. These factors can affect the hazards they face at work and the approach that needs to be taken to assess and control them. Women are always at the receiving end of most social and economic hazards (National Population Commission and USAID, 2004) and street trading is not an exception. While studies have shown some interrelationships between unemployment, earnings and poverty and economic growth, the impact of work conditions on the

most vulnerable gender in terms of their reproductive well-being has not been conspicuous in the literature (Kwankye, Nyarko. & Tago, 2007; Beavon, 1990; Callaghan & Venter, 2011; Lantana, 2010, Motala, 2002, NBS, 2011; Walker & Gilbert, 2002).

In general, women's health is not only in terms of the well-being in female anatomy, it is a constellation of medical situations, their susceptibilities and responses to treatment for sicknesses and diseases (WHO, 2006). It also includes those bio-demographic problems which they face directly or indirectly in their day-to-day activities (Walker & Gilbert, 2002; WHO, 2006). While the medical dimension concerns with sensitive areas especially female genitalia, breasts, pregnancy and child birth, the social dimension encompasses physical fitness, mental and social wellbeing (WHO, 2006). Also, while most medical challenges are addressed in the health centers, the aspects would require social interdisciplinary approaches like epidemiology, biostatistics. environmental and community health, behavioral and occupational health synthesis (Public Health Agency of Canada, 2005). In this context, the social aspects of women are considered as they relate to the health risks inherent in their day-to-day trading activities especially on the street.

II. OBJECTIVES OF THE STUDY

The thrust of this study is to assess women in street trading business in urban centres of Nigeria and the implications of the job on their health. It is specifically meant to share information on the interrelationships between women's health and associated street trading risks. Also, the study examines the association between the incidence of injury experience by street hawkers, harassment and traders' socio-economic background. It thereafter proffered applicable strategies for formal re-structuring of street trading business in Nigeria.

III. LITERATURE REVIEW AND CONCEPTUAL FRAMEWORK

Comprehensive data on occupational hazards and illnesses due to street trading activities are not common especially in developing nations. Available information relates to street trading activities in South Africa, Ghana, Kenya and India (Mitullah, 2004; Lund, 1998; Lund & Skinner, 2003; Ebigbo, 2003; Nirathron, 2006; ILO, 2006; Kusakabe, 2006; Skinner, 2008; Sylvia, 2010). Studies that dissect gender variations in street hawking activities and their health are not popular in Nigeria. However, with the magnitude of people engaging in the trade, the bad road and unmanageable manner of traffic suggests that such activities cannot be free of hazards. By definition, "work hazard" means the danger or risk encountered in doing or carrying out

specific operation in the workplace. A work hazard is a potential damage, harm or an adverse health effect the worker experienced from working or exposure to certain working conditions that include the materials, substance they use, the process and the practice involved in that job (Lu, 2005). Lu (2011) observed that occupational hazards and health challenges vary by occupational sector and the specific job of the individual.

The nature of street trading in Nigeria is such that can be engaged in by anyone because the job only requires low human and financial capital unlike like other businesses in the informal sector. It is a form of microentrepreneurial business. Besides, in most countries, street hawking forms a crucial part of the logistics structure and in most cases serves as the last channel in the chain of production, distribution and consumption.

Specifically, street trading entails displaying wares by the roadside, carrying head pan or raising a sample of wares to the commuters while these vehicles are moving. Thus, the road is being shared between sellers and the motorists. Although, the congestion emanated therein could slow down vehicular speed, the ensuing hustling and bustling in the midst of seemingly uncontrollable 'traffic jam' is likely to be dangerous for women health (Wayne, 1997; Lee, 2004; Ekpenyong & Sibiri, 2011). The health hazards involved in running after a moving vehicle in an attempt to sell goods to the buyers is risky in nature taking into consideration that they (the hawkers) have no control over the traffic. Therefore, cconsidering street trading, it is not unlikely that women could suffer from musculoskeletal disorders as a result of the nature of the trade which entails long standing or running on the roads. Lu (2011) categorically indicates that certain hazards can lead to some forms of occupational illnesses, and that in most cases, women are more vulnerable. Their exposure can lead to tiredness, pains, headache, lesser birth weight and risk of spontaneous abortion in the case of pregnant women. These sicknesses cannot by any means exclude other reproductive dysfunctions that are medically associated with stress, high blood pressure and unhealthy job conditions.

Vagaries of adverse health effects related to street trading include but not limited to body injuries (accidents), diseases, changes in the way the body functions, growths, effects on a developing fetus (teratogenic and fetotoxic effects), decreases in life span, change in mental condition resulting from stress, traumatic experiences, to mention but few (Lu, 2005; ILO, 2009; Canadian Centre for Occupational Health and Safety, 2009; Agius, 2010). While some of these diseases manifest immediately, others are delayed, and some may not be revertible. Workplace hazard can cause harm or adverse effect to an individual or the organization. Hazard is simply conjectured (in this context) as those working conditions that pose threats to worker's health, life, properties and

communities they impact. The chance or probability that a worker will be harmed or experienced adverse health effect if exposed to a hazard is regarded as risk. It also necessary to indicate here that the gravity of the adverse health the worker suffers is a function of the duration of the exposure, health status of the person exposed and the severity of such conditions the work exposed to (Agius, 2010). Therefore, considering the seemly 'fragile' health condition of women and the 'modus operandi' of street trading, it is not likely that their feminine nature will be able to cope adequately with trading activities on the highways. Perhaps if they are able, the long-run effects could be dangerous. Where both men and women traders compete for the same customers under the same conditions, it is not unlikely that women will be more exposed to hazards therein.

a) The Theory of Work Stress

The theoretical model adapted is the Model of Work Stress as developed by Palmer et al 2003 (Palmer, Cooper & Thomas, 2003). The model explains that the exposure of the worker to higher volume of workload, complexity of work and hazardous work environment produces stress in the worker (Palmer et al. 2003; 2004; Blaug, Kenyon & Lekhi, 2007). The theory indicates that stress raises blood pressure, engenders sleep and gastro-intestinal disturbances, cause back pain, tension, headache and palpitation. Adapting this theory, Irniza (2011) confirms that there is a significant correlation between urban traffic policing and respiratory symptoms of asthma, exposure to particulate matter, mental stresses and so on. It is indicated that the prevalence of stress is higher among urban traffic police officers compared to others (Irniza, 2011) and that exposure to air pollution have negative effects on mental health and well-being. Thus, if traffic police are susceptible to the above health challenges, then women that trade in the traffic (street traders) should be more vulnerable taking into consideration that they are already overwhelmed with fear of harassment by government authorities or

Besides, these highlighted symptoms and their effects (both in the short and long run) would be inimical to women generally and could be more dangerous to those in child bearing age and the young folks who are the future mothers. In another perspective, work stress has been confirmed capable of influencing coronary heart disease, heighten anxiety, depression and burnout, to mention but few of them (Folkman, et al, 1986; Palmer et al. 2004; Blaug et al. 2007). While this study is not a causality study, the suspicion correlation between health challenges and workplace health hazards in a country with high level of maternal mortality coupled with innumerable number of women in the business, should be worrisome. Street hawking is a stress generating activity and its effects on women operators in Nigeria are examined in this study.

b) Research Methods

The study assessed women in street trading business in urban centres of Nigeria and the implications of their jobs on their health. It adopted quantitative research and 'non-participatory direct observation approach' in gathering information on the "modus operandi" of street trading activities in Nigeria. The study also dissected the health risks associated with street trading activity and proffer 'auctionable' strategies towards free-health-risk hawking in Nigeria and sub-Saharan Africa. The data used in the qualitative segment were extracted from 3,873 street traders data collected from the Central Business Districts (CBDs) areas across three major cities of Nigeria, namely, Lagos (in the South-west), Kano (North west) and Port Harcourt (South-south). The data was collected through structured face-to-face interview among the street traders. Only the women data (n =1,613) was therefore extracted and analysed for this section. Since, there is no doubt that economic effects impact on individuals differently and by age, it was considered necessary, to analyze the data according to specific age grouping. Also, more than 22 items of trade were recorded in the open-ended question but only 9 categories emerged after the 'axial coding' procedure. Quantitative data were thus analyzed using a combination of univariate and multivariate analyses in determining the interrelationship among the variables of interest. The information from non-participatory direct observation was also presented as complement to survey results.

IV. Results and Discussions

a) Socio-demographic profile of respondents

As typical of any nation with younger population, the result shows that there is higher proportion of women street traders in the younger age group (15-34). The average age of women traders is 26 years indicating that the majority of women street traders are young women in their prime of age (Appendix I, Table 1). More than half of the women (53.2 percent) were single as at the time of the survey while the separated, widowed or divorced were 4.1 percent and about 42.7 percent were married as indicated in table 1. The high proportion of singles accounts for the migratory nature of the traders. Respondents in this category could be regarded as 'adventurers' who move in and out of the environment in search of greener pasture. The age distribution of the women street traders depicts a normal distribution with the peak concentrated at age 25-34 years and declining after age 44 (Table 1). The result among others also indicated that 1.1 percent of the traders are below 15 years of age. While the under-15 are not expected to be working by the law, it attests to the prevalence of child labour in Nigeria similar what obtains in other developing nations. This is primarily fueled by poverty

and government's inadequacy to cater adequately enough for the population.

Out of the three geo-political zones selected for the study, women from the south-east geo-political zone constitutes about half of the traders interviewed. The proportion from the south west is 44.6 percent while only 6.5 percent of the women are from the north-west. The reason that could be adduced for this lower proportion could be the 'pudah' practice in the North. The women are not permitted by Islamic tenets to work and their movements are so restricted to the households. The religion affiliation statistics indicated that Muslim only constitutes 19.2 percent while eight out of every ten women street traders interviewed are Christians.

Another important socio-demographic variable analyzed is the number of children ever born (CEB) by the respondents. This typically measures the average number of children that a woman has ever given birth to. In this context, all the women interviewed were asked to indicate the total number of children they have ever had. This is used among other things, to evaluate their fertility behaviour and to provide an overview of the likely economic burden of children on their trading activities. The result (as indicated in table 1) shows that average CEB is 4 children and 71.4 percent of the respondents are at zero parity. This corroborates the earlier findings that larger numbers of the traders are singles. This is a fundamental characteristic that makes them more vulnerable to physical and job mobility. In addition, the proportions that have five children and above are only 3.8 percent (table 1).

The employment status is used to categorize the ownership of business into employees, apprentices, family workers or own-account workers. The result of the analysis shows that eight out of every ten women street traders are 'own-account workers'. Precisely, 84.1 percent claimed to own the business they are doing (Table 1). Those that are working for family members or directly receiving wages from the activities and the volunteers are 7.6 percent. The employees constitute only 6.5 percent while those that are under training (i.e. apprentices) are less than one percent (Table 1).

Several variables were used in evaluating the vulnerability of women in street trading activities to workplace hazards. Prominent among them are the nature of the trading, product category, frequency of selling articles on the roads, experience of harassment, frequency of engaging in other secondary occupations, etc. These variables are selected to assess the vulnerability to stress and other associated health risks inherent in them. The result shows that about half of the respondents (48 percent) are peddlers who rove (move along) on the roads to sell their wares while the sedentary traders are 52 percent. This latter group involve individual sellers who are seemingly desk-bound e.g. sellers that uses table tops, makeshift shops, spread their wares on the ground or use display glass

boxes by the road side. The result also indicates that half of the women interviewed are constantly 'sharing' the road with the 'moving vehicles' in an attempt to sell their wares. The non-participatory observation shows that an average peddler runs after a moving vehicle to sell his stock. Where the transaction could not be completed before the vehicle accelerates or moves away speedily, the ware or the money is flung to the road by the 'boarded buyer' and the peddler tactically wait for a safe opportunity to pick up the money or the wares as the case may be. Occasionally, those goods are driven on by careless drivers which results into losses for the seller. As indicated in the theory (Palmer et al, 2003; Blaug, Kenyon & Lekhi, 2007; Irniza, 2011), this practice demonstrates the high degree of vulnerability of women to accidents, musculoskeletal disorders, pains, psychological disorders if big losses are recorded in addition to other health challenges like tiredness, respiratory problem due to inhaled combustive flame from the vehicles and other air pollution health problems (Palmer et al. 2003; Lee, 2004; European Agency for Safety and Health at Work, 2005; Abama & Kwaja, 2009; Blaug, Kenyon & Lekhi, 2007; Lu, 2011; Irniza, 2011). Because they have no control over the movement of the vehicles, they can suffer extortion. Commuters may not pay the correct amount before the vehicles 'roll away'. Notwithstanding that higher proportion of them are not married, the stress in street trading can make their bodies to be worked-up. This might become dangerous to their reproductive lives either presently or in the future.

Among the profound discoveries from this study is the rising rate of assault or harassment suffered by the street traders. The survey indicates that more than half of the women street traders have experienced one assault or the other in the course of plying their trades. Precisely, 55.4 percent of the women have fallen victims to such harassment while trading on the streets, 43.6 percent claimed they have never experienced any harassment as shown in table 2 (Appendix II). In the same vein, one in every five women street traders has been injured while trading on the road and 52.1 percent of respondents have witnessed or seen their colleagues injured in the course of trading on the road (Table 2). These revelations are pointers to the degree of work hazards that the women are exposed to. harassments indicated range from bullying, beating, seizure of wares, forceful extortions while rape is not impossible (Palmer & Cooper, 2004; Lee, 2004). Although, there is no causal link between the harassment suffered and the injuries sustained, it could be conjectured that these kinds of harassment as observed and also indicated by the respondents could possibly lead to injuries. Harassing these traders in the midst of traffic is considered extremely dangerous and physical accident and loss of lives are not impossible.

The study further assessed the respondents' earnings notwithstanding the sensitive nature of the measurement and that it is always fraught with challenges (Moore, Stinson & Welniak, 1997; Davern, Notwithstanding however, respondents were asked to indicate their total income per week and their average daily expenditure. The result shows that the average sale per day is less than \$\frac{\text{\tin}\text{\texi}\text{\text{\texi}\text{\text{\texi}\text{\texi}\text{\text{\text{\text{\text{\text{\texi}\titt{\text{\text{\texi}\text{\text{\text{\t of the women sell below \$\frac{1}{2}\$10,000 worth of goods daily. Those that record between ₩10,000 but less than N20,000 worth of goods are 9.2 percent while only 2.2 percent sell goods worth ₩20,000 and above as shown in table 1. The observed daily expenditure is not commensurate with the total weekly sales observed. Majority of the respondents expended up to \$\frac{\text{\text{\text{\text{\text{M}}}}}{2000}\$ as their daily expenditure while 13.2 percent indicated more that amount as their daily expenditure. Although, no further verification was made on these claims, the nonparticipatory observation indicated that it is not likely that their businesses cannot cater for their daily upkeeps on the basis of the volume of wares they carry or sell on the street. Among the specific reasons for involving in street hawking are inability to secure formal jobs, constraints (including finance) in gaining admission to higher school and joblessness of the family's breadwinners.

b) Logistic regression estimating the relationship between selected profile of respondents and vulnerability to workplace hazards

Only one hypothesis was tested to confirm the interrelationship between activities inherent in street trading and the incidences of injuries among the operators. The variable "ever injured" is interchanged with workplace hazards. A logistic regression analysis was used in testing this hypothesis. The model is depicted as:

$$Ln\left\{\frac{p_1}{(1-p_1)}\right\} = \alpha_0 + \beta_1 X_{1i} + \beta_2 X_{2i} + \beta_3 X_{3i} + \beta_n X_n + e \dots \dots \dots \dots (i)$$

Where, $\alpha_{_0}$ represents the intercept, e implies the residual value (or the error term). The Xs are the various street trading activities selected as predictors while the Beta (β) denotes the coefficients of the Xs. The Pi and (1-P1) means the probability of sustaining injury and the probability of not sustaining injury respectively.

$$Ln\left\{\frac{p_i}{(1-p_i)}\right\}$$
 is therefore represents the log of the ratio

of probability of incidence of injury to the log of probability of no injury.

The result of the analysis shows that all education categories, nature of trading, religion affiliation, and the intermediate age group (15-24 years) are negatively associated with incident of injury. Positive associations were observed among location of study, employment status, marital status searching for other jobs, employment status, marital status and the intermediate age group of the respondents and incident Specifically, the result indicated that of injury. respondents with primary, secondary and tertiary education are 0.879, 0.553 and 0.818 less likely to be injured while trading on the street compared to individuals who have no formal education. However, only secondary education is statistically significant (Pvalue = 0.015). Similarly, while migrants from the south are 1.827 times more likely to experience workplace hazards, their counterparts from the north will be 2.678 times more likely to be exposed to incidence of injury. The results are statistically significant at p-values 0.014 and 0.005 respectively. The significance influence of religious affiliation indicated that the Christians and Moslems traders are 0.153 and 0.235 times less likely to experienced injury on the road compared to the tradition region (p-values of 0.019 and 0.075 respectively).

The result further indicated that only the intermediate age (15-24 years) is negatively related and

are 0.801 times less likely to be involved in accidents on the street than other age categories. This group is more agile in nature and possesses the ability to swift movement which could aid them to escape or 'dodge' accident. In the same vein, those in age group 25-34, 35-44 and the under aged (less than 15 yrs) are 1.023, 1.024 and 1.599 more likely to experience workplace accidents vis-à-vis the reference category (age 45 and above). Marital status is observed not be significantly related to the incidence of injury.

Women who have experienced harassment are 1.195 times more susceptible to injury compared to those who have never experienced any form of harassment while running their businesses on the streets. Overall, the model summary shows 81 percent accuracy though the interrelationship evaluated is relatively week as shown by Cox & Snell R Square of 0.043 and Nagelkerke R Square of 0.068.

V. Conclusion and Recommendations

The result of the analysis shows that street trading is a risky type of business activity that makes women to be more vulnerable to workplace hazards. The exposure of women in this regard should not be taken for granted. Besides, maternal health could undoubtedly be negatively affected as a result of perennial physical exhaustion, physical abuse and inherent stress in street trading. However, the fact that the magnitude of women participating in street trading is high implies that its re-organization will yield economic dividends for the nation. Without gainsaying, the job has provided opportunities for entrepreneurship and self-employment. However, the impact of the business on the welfare of the operators is not very obvious at least if weekly income is compared with high weekly

expenditure recorded in the study. This would be likely impairing opportunity for re-investment and as such keep the women poor continuously. The authors suggest that due recognition be given to the activity and street traders-government initiative or partnership be put in place in order to safeguard the health of the operators.

References References

- 1. Abama Elizabeth & Kwaja Chris, M. A. (2009). Violence Against Women in Nigeria: How the Millennium Development Goals. The Journal of Pan African Studies, Vol.3, No.3, September 2009.
- 2. Agius Raymond (2010). What is occupational Health. Health, Environment and Work. December, 2010 http://www.agius.com/hew/inde x.htm
- Alli Benjamin O (2001). Fundamental Principles of Occupational Health and Safety. International Labour Office, Geneva. 2001. ISBN 92-2-110869-4.
- Beavon, K. S. O & Rogerson, C. M (1990). Temporary trading for temporary people: The making of hawking in Soweto. In: Drakakis-Smith, D (ed.) Economic Growth and Urbanization in Developing Areas. Routledge, London. 1990.
- Blaug Ricardo, Kenyon Amy & Lekhi Rohit (2007).
 Stress at Work: A report prepared for The Work Foundation's Principal Partners. The Work Foundation.
- Bledsoe Caroline H. & Cohen Barney (1993). Social Dynamics of Adolescent Fertility in sub-Saharan Africa. Population Dynamics of sub-Saharan Africa. National Academy Press. Washington D.C., 1993.
- 7. Callaghan C & Venter R (2011). An investigation of the entrepreneurial orientation, context and entrepreneurial performance of inner-city Johannesburg street traders. Southern African Business Review Vol.15 No 1, 2011.
- 8. Canadian Centre for Occupational Health and Safety (2009). Hazard and Risk. Canadian Centre for Occupational Health and Safety, 2009. http://www.ccohs.ca/oshanswers/hsprograms/hazard risk.html
- Commission on Legal Empowerment of the Poor (2008). Making the Law Work for Everyone. Vol. I, Commission on Legal Empowerment of the Poor, 2008. United Nations Development Programme, New York. ISBN: ISBN: 978-92-1-126219-3.
- Davern Michael (2003). Measuring Income in Health Insurance Surveys. State Health Access Data Center (SHADAC) Survey Guidelines Series. University of Minnesota School of Public Health, Minneapolis. May, 2003.
- 11. Ebigbo P.O. (2003). Street Children: The Core of Child Abuse and Neglect in Nigeria. *Children, Youth and Environments, Vol. 13, No 1, Spring 2003.* http://cye.colorado.edu.
- 12. Ekpenyong Stephen Nkereuwuem & Sibiri Asain E

- (2011). Street Trading and Child Labour in Yenogoa. *International Journal of Scientific Research in Education,* March 2011, Vol. 4 No 1, p36-46.
- 13. European Agency for Safety and Health at Work (2005). Mainstreaming gender into occupational safety and health. European Agency for Safety and Health at Work. Proceedings of a seminar organised in Brussels on the 15 June 2004. European Agency for Safety and Health at Work, 2005. ISBN 92-9191-169-0.
- 14. Eweama Patricia (2009). Gender Statistics in Nigeria: Issues and Challenges. Presented at UN Global Forum on Gender Statistics, Accra Ghana. 26-29 January, 2009.
- Folkman Susan, Lazarus Richard S., Dunkel-Schetter Christine, DeLongis Anita, & Gruen Rand J. (1986). Dynamics of a Stressful Encounter: Cognitive Appraisal, Coping, and Encounter Outcomes. *Journal of Personality and Social Psychology*, 1986, Vol. 50, No. 5, 992-1003. American Psychological Association, Inc.
- Institute of Development Studies (2009). After 2015: Promoting Pro-Poor Policy after the MDGs. IDS In Focus Policy Briefing Issue 9, No.1, June 2009. Institute of Development Studies, University of Sussex Brighton, UK.
- 17. International Labour Office (1990). Economically Active Population 1950-2025. Vol. 6. *(Methodological Supplement).* International Labour Office, Geneva.
- International Labour Office (2009). ILO standards on occupational safety and health. Promoting a safe and healthy working environment. First edition 2009. International Labour Office, Geneva. P1-171. ISBN 978-92-2-120634-7, ISSN 0074-6681.
- International Labour Organization (ILO) (2006).
 Southeast Asia Countries. Available from www.ilo.org/public/libdoc/ilo/2006/16B09_343_engl. pdf
- 20. International Labour Organization (ILO) (2008). Beyond deaths and injuries: the ILO role in promoting safe and healthy jobs. International labour Organization Office, Geneva. Available from. www.ilo.org/global/..ILO..index.htm.
- 21. Irniza, R (2011). Work demands, air pollution and asthma: risk factors for stress among traffic police officers in Malaysia. Conference Proceedings, 9th Biennial Conference on Environmental Psychology. 260 28th September, 2011, Eindhoven University of Technology, Netherland.
- 22. Kusakabe Kyoko (2006). Policy issues on Street Vending: An overview of studies in Thailand, Cambodia, and Mongolia. Bangkok, International Labour Office, 2006.
- 23. Kwankye Stephen O, Nyarko Philomena E. & Tagoe Cynthia A. (2007). Reproductive Health implications

- of Street Hawking in Accra. Paper presented at the Fifth African Population Conference organized by Union for African Population Studies, Arusha, Tanzania, 10-14 December 2007.
- Lantana M. Usman, (2010). Street hawking and socio-economic dynamics of nomadic girls of Northern Nigeria. *International Journal of Social Economics*, Vol. 37 Issue 9, pp.717 – 734. Emerald Group Publishing Limited. ISSN: 0306-8293.
- Lee Sabrina (2004). Assessing the vulnerability of women street traders to HIV/AIDS: A Comparative Analysis of Uganda and South Africa. HEARD, July 2004.
- 26. Lu Jinky Leilanie (2011). Occupational Health and Safety of Women Workers: Viewed in the Light of Labour Regulations. Journal of International Women's Studies, Vol. 12 No. 1. 2011. pp68-78.
- 27. Lu, Jinky (2005). Gender, Health and Information Technology. Quezon City, Philippines: University of the Philippines Press. P210-218.
- Lund F (1998). Women Street Traders in Urban South Africa: A Synthesis of Selected Research Findings. <u>CSDS Research Report</u> No 15. University of Natal, Durban.
- 29. Lund, F., & Skinner, C. (2003). The Investment for the Informal Economy: A Case of Durban, South Africa. *Background Paper forthe 2005 World Developmen Report*
- 30. Mitullah, Winnie V. (2004). A review of Street Trade in Africa; Working draft. Nairobi: University of Nairobi, Institute for Development Studies.
- 31. Motala Shirin (2002). Organizing in the Informal Economy: A Case Study of Street Trading in South Africa. Series on Representation and Organization Building. SEED Working Paper No. 36. Development Job Creation and Enterprise Department, International Labour Office. Geneva. ISBN 92-2-113573-X.
- 32. Muir Par J. D. (1974). Employment, Income and Equality: A Strategy for Increasing Productive Employment in Kenya. A Report of an Inter-Agency Team Financed by the United Nations Development Programme and Organized by the International Labour Office, Geneva, ILO, 1972, Relations industrielles / Industrial Relations, Vol. 29, No 1, 1974. p232-234.
- 33. National Population Commission (NPC) and United States Agency for International Development (USAID) (2004). Population and the Quality of Life of Nigeria First Edition, National Population Commission, Abuja. 2004.
- 34. Nirathron Narumol (2006). Fighting Poverty from the street: A survey of street food vendors in Bangkok. Bangkok, International Labour Office, 2006.Sen, Amartya; Development as Freedom (New York: Anchor Books, 1999), pp. 87-110.
- 35. Oyekanmi Durojaiye Felicia (2008). Linkages

- between Census data and Sustainable Development: MDGs, NEEDS and the Population and Household Census 2006 (eds) Oyekanmi and Ogunlade in Appraisal of the Preparation for Population 2006 Population and Housing Census in Nigeria. Department of Sociology, University of Lagos, Nigeria. ISBN: 978-978-083-696-2
- 36. Palmer Stephen, Cooper Cary & Thomas Kate (2003). Revised Model of Organization Stress for use within stress prevention, management and well-being programmes. *International Journal of Health Promotion and Education.* 41(2), 2003. P57-58.
- 37. Palmer Stephen, Cooper Cary & Thomas Kate (2004). A Model of Work Stress to underpin the Health and Safety Executive advice for tackling work-related stress and stress risk assessments. *Counseling at Work, Winter, 2004.* Center for Stress Management, London.
- 38. Skinner, C. (2008). *Street Trade in Africa: A Review.* School of Development Studies Working Paper No 51.
- 39. Sylvia Chant (2010). Towards a re-conceptualisation of the 'feminisation of poverty': reflections on gender-differentiated poverty from The Gambia, Philippines and Costa Rica 111 (Ed) Sylvia Chant. The International Handbook of Gender and Poverty: Concepts, Research, Policy. Edward Elgar Publishing Limited, UK. ISBN 978 1 84844 334 1.
- United Nations (2003). Indicators for Monitoring the Millennium Development Goals: Definitions, Rationale, Concepts and Sources. United Nations Development Group, Department of Economic and Social Affairs–Statistics Division. United Nations. 2003. ST/ESA/STAT/SER.F/95.
- 41. Walker, L. & Gilbert, L. (2002). HIV/AIDS: South African Women at Risk. African Journal of AIDS Research, Vol. 1, No. 1, 2002. P75-85.
- 42. Wayne Carlisle (1997). Women in Dual-Career Marriages in Dunn Dana (ed.) Workplace / Women's Place: An Anthology. Roxbury Publishing Company, California. ISBN 0-935732-81-0. Pp125-131.
- 43. WHO (2006). The Constitution of the World Health Organization as adopted by the International Health Conference, 1946. Basic Documents, 46th Edition, Supplement, October 2006.
- 44. World Health Organization (2000). Extracts from the Occupational hazards section of the In Anthology on Women, Health and Environment, published in 1994, WHO/EHG/94.11.

Table 1 : Socio-demographic profile of women street traders.

Socio-demographic Variables	No	<u></u> %	Socio-demographic Variables	No	 %
Geo-political Zone			Employment Status		
South-West	720	44.6	Self Employed	1356	84.1
South-East	788	48.9	Employee	105	6.5
North-West	105	6.5	Unpaid family worker	115	7.1
Total Age Group	1613	100.0	Apprentice Volunteer & Others	28 9	1.7 0.5
Less than 15 years	17	1.1	Total	1613	1 00.0
15-24 years	536	33.2		1010	100.0
25-34 years	557	34.5	Earning per week (N)		
35-44 years	241	14.9	Less than N 2,500	659	40.9
45-54 years	87	5.4	N 2,500 - N 4,999	472	29.3
55-64 years	23	1.4	N 5,000 - N 9,999	264	16.4
65 & above	152	9.4	N 10,000 - N 14,999	109	6.8
Total	1613	100.0	N 15,000 - N 19,999	39	2.4
Mean age = 25.9 years ≈ 26 years			₩20,000 & Above	34	2.1
Marital Status			Total	1577	97.8
Never married	858	53.2			
Married	689	42.7	Average Expenditure per Day		
Separated/Divorced	24	1.5	Less than N 1,000	870	53.9
Widowed	42	2.6	N 2,000 - N 2,499	408	25.3
Total	1613	100.0	N 2,500 - N 4,999		7.6
Religious Affiliation			N 5,000 - N 7,999	38	2.4
Christianity	1296	80.3	N 8,0,00 & Above	175	10.8
Islam	309	19.2	Total	1613	100.0
Traditional	8	.5			
Total	1613	100.0	Children Ever Born (CEB)		
Educational attainment			Zero parity	1152	71.4
No Schooling	195	12.1	1-2 children	175	10.8
Primary Education	277	17.2	3-4 children	225	13.9
Secondary Education	761	47.2	5-6 children 55		3.4
Tertiary Education	380	23.5	7 & above 6		0.4
Total	1613	100.0	Total	1613	100.0

Source: Street Trading Survey 2011.

Appendix II

Table 2 : Logistic regression illustrating the interrelationship between street trading and exposure to hazards.

Selected Variables	В	S.E.	Wald	df	Sig.	Exp(B)	
Location						,	
Lagos	0.288	0.368	0.609	1	0.435	1.333	
Port Harcourt and Aba	0.677	0.372	3.307	1	0.069	1.967	
Kano	RC						
Employment Status							
Self-employed	0.198	0.254	0.611	1	0.434	1.219	
Employees	0.361	0.354	1.043	1	0.307	1.435	
Others Employment Status	RC						
Job satisfaction							
Looking for another job	0.103	0.148	0.490	1	0.484	1.109	
Not searching for other job							
Education Attainment	RC						
Primary Education	-0.129	0.250	0.264	1	0.607	0.879	
Secondary Education	-0.592	0.243	5.951	1	0.015	0.553	
Post Secondary Education	-0.201	0.253	0.627	1	0.428	0.818	
No schooling only	RC						
Marital Status							
Single	0.756	0.407	3.452	1	0.063	2.129	
Married	0.116	0.382	0.091	1	0.762	1.122	
Separated /Widowed	RC						
Nature of Trading							
Sedentary	-0.042	0.143	0.086	1	0.770	0.959	
Peddlers	RC						
Religion Affiliation							
Christians	-1.878	0.800	5.507	1	0.019	0.153	
Moslems	-1.450	0.814	3.169	1	0.075	0.235	
Tradition	RC						
Migration							
North-west	0.985	0.350	7.905	1	0.005	2.678	
South (All)	0.603	0.245	6.043	1	0.014	1.827	
Non-Nigerians	-18.837	40192.769	0.000	1	1.000	0.000	
Age Group							
Less than 15 yrs	0.469	0.619	0.575	1	0.448	1.599	
15-24 yrs	-0.221	0.260	0.727	1	0.394	0.801	
25- 34 yrs	0.023	0.253	0.008	1	0.928	1.023	
35- 44 yrs	0.024	0.316	0.006	1	0.940	1.024	
45 yrs & above	0.178	0.370	0.231	1	0.631	1.194	
Harassment							
Harassed	0.178	0.148	1.459	1	0.227	1.195	
Constant	18.169	40192.769	0.000	1	1.000	77719441	
Overall Percentage = 80.8					Cox & Snell R-Square = 0.043		
-2 Log likelihood = 1398.784					Nagelkerke R-Square = 0.068		

Source: Street Trading Survey 2011,

