PERCEPTION, ATTITUDE AND COMPLIANCE WITH THE USE OF CAR SAFETY SEATBELTS AMONG WORKERS IN LAUTECH TEACHING HOSPITAL, OSOGBO, SOUTHWESTERN NIGERIA

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ABSTRACT

Injuries associated with road traffic accidents is a major cause of morbidity and mortality in our environment. Despite the enactment of laws mandating the use of car seatbelts by motorists, expected behavioral change has not been achieved to effectively influence occurrences of these accidents. This study aims to determine the perception, attitude and compliance to the use of car seatbelts amongst workers in a teaching hospital in south western Nigeria. This was a descriptive cross-sectional study of 386 workers of LAUTECH Teaching Hospital Osogbo using stratified sampling technique. Research instruments employed were semi structured; self administered pre tested questionnaires and data analyzed using the SPSS software version 13.0. Mean age of respondents was 34 (+ 1.4) years. One hundred and ninety five (50.5%) of the respondents were females, 226 (58.5%) were married, 360(93.3%) had tertiary education, 329(85.2%) drives at least a vehicle while 218(56.5%) of them often travel outside their locality. Three hundred and one (78.0%) strongly agreed that use of seatbelt provides safety in road traffic crashes, 291(75.4%) agreed that seatbelt should be used regularly, 257(66.6%) strongly agreed that seatbelt enforcement will improve usage while 224 (58.0%) strongly agreed that people should be fined for non-usage of seatbelt. Compliance with the use of seatbelt showed 360 respondents (93.3%) using seatbelt for safety reasons. Other reasons for compliance include to avoid sanctions by police 199(52.4%) and FRSC officials 222(57.5%). Common reasons for non compliance include feeling of discomfort 45(11.7%), difficulty with fastening or unlocking the seatbelt 9(2.3%) and sense of insecurity with seatbelt use among 12(3.1%) of respondents. Health care workers with a tertiary education and age above 30 years are twice fold more likely to use seat belts for

safety reasons compared to the much younger and less educated respondents (OR=0.06, and p=0.019). Compliance with the use of seatbelt from the study is high coupled with fair perception and good attitude towards its proven and effective methods of reducing morbidity and mortality. To compliment efforts of government and non governmental agencies towards this drive, health workers should be adequately informed about the importance of seatbelt in order to reach out to the public at large.

Key words: Perception, attitude, compliance, seatbelts, road traffic accidents

INTRODUCTION

Motor vehicle crashes represent a major cause of morbidity and mortality, both in highly motorized as well as developing countries. It is an issue of major public health importance[1], predicted to become even more of a global problem, with greater proportion of the burden falling on developing countries. [2] Several measures have been introduced to reduce the incidence of and severity of road traffic accidents and injuries when they occur. One of such is the use of seatbelts. Out of 5,849 fatalities registered in 2001 in Malaysia, car drivers accounts for about 9.0% (527) of the deaths and 8.6%(4,335) of the casualties. Passenger fatalities for the same period stood at 797(13.6%) and casualties at 4,712(9.3%). Combined, the results indicate 1,324 fatalities (22.6%) and casualties of 9,047(17.9%) for car occupants which stands next to motorcyclists in terms of number of fatalities and causalities. [3]

The major cause of car occupant fatalities in car accidents are head injuries. [4] This usually occurs when car occupants are thrown out of the vehicle through the windshield or when they collide with the car seat or dashboard. Thus this observation leads to the inevitable conclusion that the head and body are the most susceptible parts to injury, and that restraining the head and the body in the initial position is important in any injury control strategy involving car-users. [3]

According to the Nigerian Federal Road Safety Corporation (FRSC), there were a total of 14,544 accidents in 2002. Out of these, 22,112 people were injured and 7,407 killed. The FRSC Oshogbo division reported, approximately 3500 cases of road traffic accidents between 2003 and 2007, in which 1,481 were killed and 4,325 injured. [5] With the passage of laws mandating use of seatbelt by motorists and prescribing fines of up to eight hundred naira for non-compliance in Nigeria in January 2003, the global burden of disease due to road traffic injuries is expected to move from 9th position in 1990 to 3rd position in 2020 mainly as a result of incidence of road traffic accidents in low and middle income countries. [6]

It has been discovered that there are a number of risk factors which are interrelated with perception, attitude and compliance to the use of seatbelt namely gender and age, [7-9] rural/urban living [7] and level of education.[7,10]

Compliance with the seat belt law was higher among drivers and educated car user.[11] Despite these findings and awareness, the problem of non-compliance to the use of safety belts still perisists.[12]

In order to further determine reasons for non-use of seatbelt based on driver's perception and attitude, the 1998 motor vehicle occupant safety survey (MVOSS) reported several reasons for not using seatbelts. [13]

Without adequate efforts at changing attitude and perception towards use of seatbelts, enforcement of its use through legislation may not significantly reduce hospital admissions due to road traffic crashes. Findings from this study could serve as baseline for stakeholders in ensuring road safety for planning, implementation and monitoring of safety awareness programmes. This study was carried out to determine the perception, attitude and compliance to the use of seatbelts amongst workers in the LAUTECH teaching hospital in Oshogbo, South western Nigeria.

MATERIALS AND METHODS

This is a cross-sectional descriptive study of perception, attitude and compliance with the use of seatbelts in south western Nigeria. LAUTECH Teaching Hospital (LTH) Oshogbo is a state owned tertiary health facility with a total population of workers up to 1,600 comprising of doctors, nurses, paramedics and other workers. Many of the workers in the hospital have vehicle that serves as a means of transportation from and to the teaching hospital. Health care workers below 18 years and above 65 years were excluded from this study. With a calculated sample size for population less than ten thousand, [14] a total of 401 health care workers were recruited into the study using stratified random sampling technique.

Hospital workers were stratified into four groups using their profession as the stratifying factor. Using a ratio scale of the number of eligible workers, a total of 69 doctors, 108 nurses, 25 paramedics and 199 other hospital workers were proportionally selected from the total population of workers in each stratum/group using a systematic sampling method with pre determined class interval. Questionnaires were administered to respondents in their respective places of work within a one month study period.

A pre-tested, semi- structured questionnaire was self administered for literate respondents and by interview method for semi or non- literate respondents. The questionnaire consists of 4 sections: socio- demographic characteristics of the study population, perception about seatbelt use, attitude and compliance of respondents towards seatbelt use and reasons for non- compliance. Ethical issues were settled at the level of the hospital authority including a written permission showing willingness to take part in the study obtained from eligible respondents.

Data was analyzed using the SPSS software version 12.0 after data validation through random checks, double entry and looking for outliers. Frequency tables and relevant measures of central tendencies were generated. Associations between categorical variables were computed at a significant p value less than 0.05. Further logistics regression showed cause-effect associations between relevant variables that may contribute to occurrences of relevant indices of use of seatbelts among studied respondents.

RESULTS

Out of 401 questionnaires that were administered during the study period, 386 questionnaires were correctly and completely filled giving a response rate of 96.3%.

Table 1 shows socio-demographic characteristics of the respondents with the mean age of 34 ($\pm$ 1.4) years and modal age group of 30-39 years. One hundred and ninety five (50.5%) were females, 226 (58.5%) were married and 360(93.3%) had tertiary education.

Doctors represented 105(27.2%), respondents while 218(56.5%) often travel outside their locality.

Table 1. Sociodemographic data of respondents.

Variable	Frequency (%)
Age group(in years)	
20-29	119(30.8)
30-39	189(49.0)
40-49	65(16.8)
50-59	9(2.3)
60 and above	4(1.0)
Sex	
Male	191(49.5)
Female	195(50.5)
Marital status	
Single	143(37.0)
Married	226(58.5)
Divorced	9(2.3)
Widowed	8(2.1)
Level of education	
Primary	2(0.5)
Secondary	24(6.2)
Tertiary	360 (93.3)
Occupation	
Medical doctor	105(27.2)
Nurses	81(21.0)
Paramedics	43(11.1)
Others	157(40.7)

Table 2 shows perception of respondents about the importance of car seatbelt. Majority of the respondents (78.0%) strongly agreed that use of seatbelt provides safety in road traffic crashes, 236(61.1%) strongly agreed that there are potential dangers in not using seatbelt while 91(23.6%) strongly disagreed that the family has little role to play in enlightening people about the importance of seatbelt use.

Table 3 shows attitude of respondents towards usage of car seatbelt. Majority of the respondents (74.6%) strongly agreed that seatbelt should be used always, 257(66.6%) strongly agreed that seatbelt enforcement will improve usage and 224(58.0%) strongly agreed that people should be fined for non-usage of seatbelt.

Table 4 shows compliance of respondents with the use of seatbelt out of which 360(93.3%) were using seatbelt for safety reasons and 222(57.5%) because of FRSC sanctions.

Table 5 shows association between respondents' socio-demographic characteristics and their compliance towards the use of seatbelts with a significant association between sex of respondents and perception ($p=0.011$) and compliance ($p=0.003$) with use of seat belts.

Table 2. Perception of respondents about the importance of car seatbelt.

Variable	SA (n/%)	A (n/%)	I (n/%)	D (n/%)	SD (n/%)
Seatbelt provide safety in road traffic crashes	301(78.0)	76(19.7)	4(1.0)	5(1.3)	-
There are potential dangers in not using seatbelt	236(61.1)	109(28.2)	11(2.8)	10(2.6)	20(5.2)
Seatbelt usage has disadvantages and hazards	49(12.7)	133(34.5)	48(12.4)	73(18.9)	83(21.5)
Family has little role to play in enlightening people about its importance	72(18.7)	86(22.3)	24(6.2)	133(29.3)	91(23.6)
Seatbelts are to be used regularly	291(75.4)	80(20.7)	4(1.0)	4(1.0)	7(1.8)
Everybody should not use seatbelt	41(10.6)	95(24.6)	33(8.5)	124(32.1)	93(24.1)
The media has a great role to play in enlightening people about importance of seatbelt	234(83.9)	59(15.3)	-	3(0.8)	-

Keys: SA= Strongly agree, A=Agree, I=Indifferent, D=Disagree and SD=Strongly disagree

Table 3. Attitude of respondents towards usage of car seatbelt.

Variable	SA (n/%)	A (n/%)	I (n/%)	D (n/%)	SD (n/%)
Seatbelt should be used					
Always	288(74.6)	67(17.4)	12(3.1)	4(1.0)	15(3.9)
Often	37(9.6)	45(11.7)	180(46.6)	77(19.9)	46(11.9)
Seldom	4(1.0)	5(1.3)	182(46.6)	100(25.9)	95(24.6)
Enforcement of seatbelt will improve usage	257(66.6)	106(27.5)	11(2.8)	8(2.1)	4(1.0)
People should be fined for non-usage of seatbelt	224(58.0)	117(30.3)	22(5.7)	20(5.2)	2(0.5)
Damaged seatbelt should be replaced	239(61.9)	126(32.6)	6(1.6)	7(1.8)	8(2.1)

Keys: SA= Strongly agree, A=Agree, I=Indifferent, D=Disagree and SD=Strongly disagree

A significant association also exists between attitude towards the use of seat belt and level of education of respondents (p=0.018). Health care workers with a tertiary education and age above 30 years are twice fold more likely to use seat belts for safety reasons compared to the much younger and less educated respondents (OR=0.06, and p=0.019).

Table 4. Compliance with the use of seatbelt.

Variable	Yes (%)	No (%)
Use seatbelt because of police	199(52.4)	187(48.4)
Use seatbelt because of FRSC	222(57.5)	164(42.5)
Use seatbelt for safety reasons	360(92.3)	26(6.7)
Use seatbelt for no reasons	40(10.4)	346(89.6)
Feels uncomfortable with seatbelt use	120(31.0)	266(68.9)

*Table of multiple responses.

Table 5. Association between respondents' selected socio-demographic characteristics and their attitude, perception and compliance towards the use of seatbelt.

Variable	Good (%)	Poor (%)	X^2	Df	P value
Level of Education	Attitude	Attitude	11.690	5	0.018
Primary	50.0	50.0			
Secondary	29.2	70.8			
Tertiary	125.8	74.2			
Sex	Perception	Perception			
Male	52.9	47.1	6.512	1	0.011
Female	65.6	34.4			
Sex	Compliance	Compliance			
Male	57.6	42.4	8.530	1	0.003
Female	71.8	28.2			

DISCUSSION

Majority of respondents in this study agreed that use of seat belts constitutes safety against RTA, that it should be used regularly of which not using it may portray danger. This supports another study in which respondents said that seatbelts should be used regularly and always, half were convinced about the importance of seatbelts while some said they would insist on their passenger's use of seatbelts.[15] In another study conducted, more than 90% of all motorists believe use of seatbelt is a good idea but less than 14% actually use them.[16] Safety belts are constructed and fixed in such a way that it restricts the head and the body from its initial position, prevents excessive movements in event of an impact and may prevent the user from being fling out of the vehicle in the event of an accident. All these arguments supports a general experience from developed nations indicating that the use of seatbelts is one of the most effective ways to reduce road accident fatalities,[17,18] Increasing safety belt use has tremendous potential for saving lives, preventing injuries and reducing the economic costs associated with crashes.

This study suggested that enforcement of the use of seatbelts will improve usage while more than half of respondents strongly agreed that defaulters should be fined for non-usage. Apart from safety reasons, the fears of being caught by the police or members of the FRSC were reasons for complying with the use of seat belt. This supports another study.[19] Though, legislation may work out as a way of enforcing the use of seat belt, road

safety officers cannot be everywhere on the road all day long to arrest defaulters. This still brings into focus the need for continued and sustained safety awareness for all drivers using various media of communication to bring about a positive attitudinal and behavioural change. In a supportive study, car users with a positive attitude towards the risks of speeding and night driving recorded higher compliance with use of safety seat belts.[11]

From the study, there was a significant association between level of education and sex of the respondents and attitude, perception and compliance to the use of seat belt. This supports other studies with similar findings [7-10,11, 20], in which compliance with the seat belt law was higher among drivers, educated car users, in the presence of enforcement activities and traveling in city-center areas. With an appreciable level of education, the person can appreciate and understand the High Way Code and rules, more likely to learn the importance of using seatbelts, more likely to understand seatbelt usage communication messages and more likely to always be conscious of legal implications of not using safety seat belts. However, passengers sitting next or around the driver should note that they also need to use their seatbelt as they may be caught unaware during high impacts.

Common reasons that respondents from the study strongly agreed with for non-compliance with the use of seat belt include feeling of discomfort with seat belt, difficulty fastening/ unlocking the seat belt and sense of insecurity with seat belt use, with similar results in other studies[11,14].

In this environment, many motorists would not use seat belt because they are pregnant, not seating in the front and probably because the use of seat belt might restrict them in case of emergency that may require leaving the vehicle without delay. There is no doubt that these reasons were not enough to warrant non use of safety belt which may increase the risk of involvement and fatalities in possible road traffic accidents. This also calls for a more rigorous health education and campaign sessions for all motorists both private and commercial, and taking the messages to them wherever they are for safety reasons.

CONCLUSION

Respondents in this study showed good attitude, perception and compliance to the use of seat belts. A coordinated and persistent effort of law enforcement agencies would make the difference in ensuring that drivers use seat belts on a regular basis. Legislative laws which are already in place should be enforced to improve compliance with the use of seat belt in addition to improved awareness about the importance and use of seat belt.

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