

한국의 도로교통사고 감소를 위한 종교윤리적 실천방안 - 기독교 윤리를 중심으로 -

Religious Ethical Practice for the Reduction of Road Traffic Accidents (RTA) in Korea - Focusing on Christian Ethics -

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Abstract

The purpose of this study is to analyze the causes and actual conditions of RTA and to present Christian ethical practice to reduce RTA in terms of education and enforcement. Above 90% of the causes of these traffic accidents are related to human factors, and a social climate that does not obey the traffic regulations has become a serious social problem in Korea. The main problems of RTA are lack of awareness of traffic laws, weakened traffic law compliance, weakened traffic law enforcement and punishment of violations, unsafe and reckless driving behavior, traffic congestion and induced social costs, thoughtless and selfish driving behavior, and lack of social traffic order. In order to solve these traffic problems, Koreans and Korean Christians should prepare various solutions based on Christian ethics.

The Christian ethical practices in educational aspects include movement for establishment of traffic culture of driver organizations, traffic order activity of transport sector Christian workers, proliferation of Christian public transportation movement, and safe driving education and public relations system. The Christian ethical practices in terms of enforcement consist of Christian's traffic law compliance behavior, raising observant awareness of traffic laws among Christians, strengthening prosecution of traffic violators, and transformation of citizens' illegal driving consciousness. This study will contribute to the culture of life and social responsibility of Christians in order to reduce severe traffic accidents in Korea, a practicing Christian life, observance of the mission of stewardship, and the social contribution of the Christian community.

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I . Introduction

In the past, vehicles were regarded as personal luxuries and were a means of showing status in Korean society. Today vehicles are an essential means of transportation and necessities for citizens' daily life and socioeconomic activities. Along with economic growth, increases in both personal income and socioeconomic activities and expanded leisure activities have led to an increase in the number of vehicles and a significant increase in vehicle utilization. In contrast, drivers' awareness of traffic regulations, traffic order, and life-respecting driving behaviors have weakened, resulting in a significant increase in road traffic accidents, and the damage caused by traffic accidents is enormous.

For road traffic accidents in 2016, the road sector accounted for 99.0% of the total incidents and 96.8% of the deaths. Of the top ten causes of death in Korea, road traffic accidents and suicide were the only non-disease causes. In particular, road traffic accidents were the second leading cause of deaths among those in their 20s or younger and third among those in their 30s. In 2016, the number of road traffic accidents per 100,000 population stood at 458.4 cases, which is about 2.1 times the OECD average of 222.3 cases.

The cost of road traffic accidents in 2016 amounted to 23.7 trillion won, which was 6.1% of the national budget of 386.7 trillion won. Above 90% of the causes of these traffic accidents are related to human factors, and a social climate of disobeying traffic regulations has become a serious social problem in Korea. Traffic offenses committed by drivers and careless driving are significant causes of traffic accidents (KRTA, 2017). If a driver fails to obey a safe driving obligation, it causes a traffic accident,

which is directly related to the driver's level of consciousness.

The purpose of this study is to analyze the causes and conditions of traffic accidents and to present Christian ethical practice to reducing RTA in Korea. This study consists of introduction, concepts of RTA and Christian ethics, analysis of conditions and problems of RTA, and Christian ethical practice for the reduction of RTA. This paper was mainly conducted by a literature review of existing research and an analysis of statistical data.

II. Concepts of RTA and Christian Ethics

1. Definition and Causes of RTA

Traffic refers to all the vehicles that are moving along the roads in a particular area. A traffic accident occurs when a vehicle collides with another vehicle, pedestrian, animal, road debris, or any other stationary obstruction. Traffic accidents may result in injury, death, vehicle damage, and property damage. RTA leads to death and disability as well as financial costs to both society and the individuals involved.

Causes of RTA include driver behavior, equipment failure, roadway design and maintenance (Jeong, 2015). Over 90% of RTA involve some degree of driver behavior. Although the law requires each driver to practice reasonable care while on the road, many fail to do so and their negligence often leads to a tragic car accident. Drivers often try to blame road conditions, equipment failure, or other drivers for those accidents. In fact, the behavior of the implicated driver is usually the primary cause.

2. Driver Behavior, RTA and Ethics

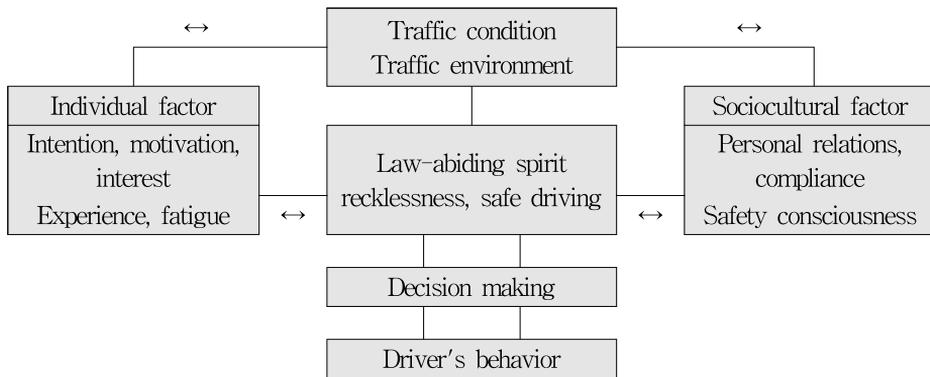
A driver's traffic behavior is affected by sociocultural factors such as intention, motivation, and experience, as well as the individual factors such as personal relations, norms, and safety consciousness. These factors directly affect the driver's sense, including a law-abiding spirit, risk awareness, situational adaptability, and safe driving. If the driver is usually less conscious of a law-abiding spirit (recklessness and safe driving) than others, it is easy to drive a car while violating the safety regulations in busy traffic situations. The driving culture is settled when a driver grasps his driving behavior and habit while driving. That is, if a driver adapts well to the traffic conditions of the road and drives safely, traffic order is established and a safe driving culture is formed.

RTA occur as the result of traffic behavior decisions in the physical traffic situation. A driver directly recognizes and judges the information about the road environment during vehicle operation. Since the driver drives according to his judgment and decision-making, the direct cause of a traffic accident is mostly the consequence of the driver's behavior. RTA are often caused by the poor driving culture and lack in ethics of a driver. Driving culture and ethical consciousness are essential fundamental factors to consider in reducing RTA based on the holistic approach to driver behavior related to traffic accidents. Driving culture has the direct effect of reducing RTA. Therefore, the driver's law-abiding spirit and ethics for safe driving have a high impact on the reduction of RTA.

3. The Relationship between Christian Ethics and RTA

Ethics is the discipline dealing with what is good and bad and with moral duty and obligation. It is concerned with what is good for individuals and society and is also described as moral philosophy. The nature of ethics is to impose obligations and responsibilities independently of our arbitrary desires. Moral often describes

one's particular values concerning what is right and what is wrong. Christian ethics is a branch of Christian theology that defines virtuous behavior and wrong behavior from a Christian perspective (King, 2015). Christian ethics is simply an expansion of moral order that is generally revealed to everyone. The norms of Christian ethics are the moral and positive law imposed on human beings and the world that God grasps through human reason as general revelation (Lee, 2000). The task of Christian ethics is to determine what conforms to God's character and what does not.



Data: Jeong (2015)

Figure 1. Behaviour and Psychological Process of Driver

The road traffic system is one of the places where human beings meet on a daily basis (Thielen et al, 2005). Every traffic supposes the displacement of people and vehicles and every displacement happens through behaviors. Traffic safety is the responsible movements of human beings taking into consideration the needs and life conditions of other living phenomena (Zeitler, 2008). The ultimate goal of traffic safety is to reduce the number of dead and injured. Our scientific concern for traffic safety is ultimately based on an ethical objective: to prevent morally reprehensible transport behavior.

The church is a Christian community that exists within the community and has

a deep connection with society. The church is an essential axis of society that should lead to social development and carry out the mission of social integration and transformation. Therefore, Christianity should reduce RTA through community service and alleviate the social suffering of traffic accident victims.

The high traffic accident death rate in Korea is mostly caused by the lack of law-abiding traffic spirit and loss of morality. It is essential to practice Christian ethics today. Christian ethics are a crucial mission issue for improving social problems, such as RTA. In the spite of the gravity of the problem of traffic fatalities, it is seldom discussed as an ethical problem or as giving rise to ethical questions.

4. Literature Review of RTA and Road Safety

RTA are a serious urban transport problem as well as a major cause of injury, disabilities and deaths in Korea. The measures to reduce RTA in Korea have been mainly focused on traffic safety strategies in terms of environment, institution and technology. Most of the traffic accidents research has concentrated either on technical aspects of the problem or on the visibility of safety policy for reducing RTA.

Previous research provided valuable knowledge about the reduction of RTA and the safety promotion strategies. The safety of vehicle passengers has been the main focus of traffic safety activities. Traffic safety questions are usually not restricted to car technology. In the spite of the gravity of the problem of traffic fatalities, it is seldom discussed as an ethical problem or as giving rise to ethical questions. A continuous ethical discussion concerning road traffic is needed.

Table 1 Literature Review of RTA

Author	Research Title	Characteristics
Jeong(2006)	A study on the problems of traffic safety education in the amendment of Road Traffic Law and The Current Law	Institution Policy
Choi et al.(2009)	A study on the analysis of the effect DFS installation on urban arterial road	Technique Environment
Park et al.(2010)	A study on reducing the aged traffic accidents	Institution Environment
Kim et al.(2011)	Factors and solutions of insensitivity to road traffic safety	Institution Management
Lee et al.(2015)	The effect of road weather factors on traffic accident -Focused on Busan area-	Environment Analytical
Kim et al.(2017)	Analysis of traffic safety facilities in pedestrian protection Area	Environment Facility
Oh et al.(2018)	A study on the spatioal correlation between roadkill and traffic accidents on roads in Chungcheongnam-do	Enviroment Physical measure Analytical
Bae et al.(2018)	A Study on the street enviromental characteristics influencing jaywalking traffic accidents	Enviroment Analytical

Source: Reference to the above mentioned theses

III. Analysis of Conditions and Problems of RTA

1. Trends of Road Traffic Conditions and RTA

From 2000 to 2016, the number of vehicle registrations increased by 3.77%, while the road facilities for vehicular traffic grew at a rate of 1.28% per annum. Regarding road density, the number of vehicles per km rose from 136 in 2000 to 200 in 2016, raising the frequency of traffic congestion and traffic accidents. It means that road capacity is relatively inadequate. Although the expansion of the use of vehicles brought about benefits of personal life and economic activities, traffic problems such as environmental destruction, and traffic accidents have also been produced (KRTA, 2014).

The number of traffic accidents decreased by 1.70% per annum, even though the number of vehicles increased rapidly during the period 2000–2016. In the same period, the number of casualties decreased by 5.29%. The decrease in a traffic accidents is somewhat attributable to slow traveling speed, the strengthening of traffic enforcement, the development of car safety technology, and enhanced driver's order-consciousness. A total of 220,917 traffic accidents occurred in 2016, resulting in 4,292 deaths and 331,720 casualties. There were 605 traffic accidents per day, and 12 people were killed, and 909 people were injured.

Table 2 Trends of Road Traffic Conditions and RTA

Items	Unit	2000	2008	2016	AAGR(%)
Vehicle Registration	Thousand	12,059	16,794	21,802	3.77
Road Length	Km	88,775	104,236	108,779	1.28
Vehicle per road km	Vehicle	136	161	200	2.44
Accidents	Case	290,481	215,822	220,917	-1.70
Deaths	Person	10,236	5,870	4,292	-5.29
Injuries	Person	426,984	338,962	331,720	-1.57
Accidents per 1,000 cars	Case	24.01	12.9	10.1	-5.27
Accidents per 1,000 persons	Case	6.18	4.44	4.18	-2.41

Note: AAGR means Average Annual Growth Rate.

Source: Road Traffic Authority, Statistics of Traffic Accidents, 2001–2017.

2. Characteristics of RTA

(1) RTA by Collision Type

Types of traffic accidents are classified as follows : car vs. person, car vs. car, car alone, and car vs. train. The proportion of deaths resulting from car alone type accidents decreased from 2000 to 2016. In the same period, the proportion of traffic accidents caused by a collision between cars increased from 71.2% in 2000 to 73.3% in 2016. Also, the ratio of the number of fatalities in the case of a car vs. car

accident occupied more than 40% on average, sharing the characteristics of fatal traffic accidents in underdeveloped countries. The number of deaths of separate car accidents increased substantially during the same period, reflecting the seriousness of traffic accidents.

Table 3 Trends of Traffic Accidents by Type

Year	Total / Type		Car vs Pedestrian %		Car vs Car %		Car alone %		Car vs Train %	
	Cases (1,000)	Deaths (1,000)	Case	Death	Case	Death	Case	Death	Case	Death
2000	290.5	10,236	25.1	38.0	71.2	41.1	3.6	20.8	0.1	0.1
2008	215.8	5,870	21.9	35.1	73.7	42.9	4.4	21.9	0.1	0.1
2016	220.9	4,292	21.9	38.7	73.3	41.1	4.7	20.1	0.0	0.0

Source: Road Traffic Authority, Statistics of Traffic Accidents, 2001–2017.

(2) RTA by Violation

The total number of traffic accidents due to unsafe driving accounted for about 55.0% of the total traffic accidents from 2000 to 2016, followed by traffic signal violation which accounted for 8.19%. The proportion of traffic accidents due to traffic signal violation, unsafe following distance, and neglecting pedestrians has increased during the same period. The proportions of violation of centerline and unsafe driving have declined, but the proportions of speeding and traffic offence at crossing have shown similar trends.

The fatality rate of traffic accident by violation in 2016 showed unsafe driving to be highest, followed by traffic signal violation, centerline invasion, passing offence, speeding, and neglecting pedestrians. In fact, more than 90% of driver violations were related to the driver's awareness of safe driving. It is thus crucial for a driver to obey the traffic rules and to secure moral and ethical consciousness while driving.

Table 4 RTA by Violation (%)

Violation types / Year	2000	2008	2016
Speeding	0.33	0.19	0.30
Passing offence	0.32	0.19	0.19
Violation of centerline	6.51	6.33	4.85
Traffic signal violation	8.19	12.25	11.04
Unsafe following distance	6.29	10.19	9.35
Unjust turning	1.00	0.84	0.62
Unsafe driving	63.62	55.0	56.31
Traffic offence at crossing	6.83	7.23	6.61
Neglecting pedestrian	2.02	2.61	3.53
Obstructing left-turn and going straight	0.45	1.76	2.99
Others	4.41	3.37	4.21
Subtotal (%)	100.0	100.0	100.0
Total accident cases	290,481	215,822	220,917

Source: Road Traffic Authority, Statistics of Traffic Accidents, 2001-2017.

3. Relationship between RTA and Christianity

(1) Crime Records of ASCSTA by Religion

The types of traffic accident crimes by religion can be identified through case studies, including Act on Special Cases concerning the Settlement of Traffic Accidents (ASCSTA). ASCSTA is a law enacted for exceptional cases such as criminal punishment for drivers who cause traffic accidents due to negligence (Law No. 3490 of December 31, 1981). If a driver causes a traffic accident due to traffic signal violation, violation of center-line, speeding, passing violation, traffic offense at a crossing, violation of pedestrian protection, unlicensed and drunken driving, protection of passenger falling, it is also possible to prosecute a case.

Religion has the most substantial influence in providing morality to humans. It can control the ability to control and integrate society by providing morality in society. Thus, morality is a central part of religious obligation. When religions

contribute to the cultivation of morality in society, people strengthened the spirit of compliance, and the consciousness of order is improved. Religious ethics are used to comply with traffic laws as much as possible and to maintain traffic order. Genuinely religious people are more socially responsible than unbelievers and have a higher sense of social order and traffic culture. Mature religious people are less likely to cause traffic accidents than unbelievers.

The number of traffic accidents on the ASCSTA decreased by 1.89% per annum from the period of 2000 to 2016. In the same period, the number of believer's traffic accidents decreased at the average annual rate of 7.09%, and that of unbelievers decreased by 7.07% per annum. It means that believer's behavior did not significantly affect the reduction of traffic accidents. However, looking at central religions in Korea, traffic accident crimes decreased by an average of 9.21% per annum for Buddhists, 6.39% per annum for Christians, and 5.94% per annum for Catholics in the same period. Safe driving and traffic law observance of believers contributed to the reduction of traffic accidents. Mature spiritual life of believers will contribute to the reduction of traffic accidents, enhancement of traffic safety, and improvement of traffic law compliance.

Table 5 Traffic Crime Records on the ASCSTA by Religion

Person / Share	2000	2007	2016	AAGR(%)
Buddhism	34,414(51.0)	9,621(28.5)	7,330(36.2)	-9.21%
Christian	21,769(32.3)	8,638(25.5)	7,570(36.4)	-6.39%
Catholic	5,520(8.18)	1,273(3.8)	2,073(10.0)	-5.94%
Won Buddhism	227(0.3)	389(1.2)	47(0.2)	-9.37%
Other Religion	5,491(8.1)	13,860(41.0)	3,763(18.1)	-2.33%
Sub-total	67,421(100.0%)	33,781(100.0%)	20,783(100.0%)	-7.09%
No religion	191,115	83,593	59,118	-7.07%
Religion unknown	6,119	66,298	115,804	20.18%
Total	265,655	183,672	195,705	-1.89%

Source: Supreme Prosecutor's Office (SPA), Crime Analysis, Each year

(2) Crime Records of Unlicensed and Drunken Driving by Religion

Unlicensed driving is a crime in which the driving begins on one day and continues in a series of processes at the same opportunity until the next day. On each day of driving, one crime is violated due to unlicensed driving and violation of the Road Traffic Act (RTA). The number of unlicensed driving crimes decreased by an average of 0.95% per annum for religious people, and increased by 2.67% per annum for non-religious people from 2000 to 2016. Regarding mainstream religion, unlicensed driving crimes committed by Buddhists decreased by an average of 2.79% per annum, by Christians 0.93% per annum, and by Catholics 0.26% per annum in the same period. The religious status of believers has a positive effect on the reduction of unlicensed driving.

Drunken driving is likely to cause traffic accidents. A driver's license is suspended for 100 days when caught driving with a BAC of more than 0.1 percent. A driver is arrested when caught driving with a BAC of more than 0.36 percent. Each violation of RTA owing to unlicensed driving and drunken driving becomes a concurrent competing crime. Drunken driving increases the risk of traffic accidents and results in significant damage. In the reality of a Korean society that is tolerant of drunken driving, religious people are unable to resist the temptation of drunk driving. Drunk driving during 2000-2016 had the lowest average annual rate of decrease at 1.16%, compared to other traffic accidents. In the same period, non-religious people's drunken driving increased at an average annual rate of 0.04%, while religious people's drunken driving showed an average reduction of 3.43% per annum. Religious beliefs have a somewhat positive impacts on personal drinking.

Table 6 Trends of Traffic Accident Criminal by Religion

Items (person/share)	2000	2007	2016	AAGR(%)	
Unlicensed driving	Buddhism	10,947(55.9)	7,174(29.5)	6,966(41.4)	-2.79%
	Christian	6,320(32.3)	5,277(21.7)	5,440(32.4)	-0.93%
	Catholic	1,729(8.8)	797(3.3)	1,658(9.9)	-0.26%
	Won Buddhism	54(0.3)	254(1.0)	28(0.2)	-4.02%
	Other Religion	523(2.7)	10,794(44.4)	2,722(16.2)	10.86%
	Sub-total	19,573(100%)	24,296(100%)	16,814(100%)	-0.95%
	No religion	28,991	83,593	44,225	2.67%
	Religious unknown	1,203	66,298	7,178	11.81%
	Total	49,767	86,233	68,217	1.99%
	Drunken driving	Buddhism	54,236(57.1)	32,446(32.3)	23,365(42.9)
Christian		27,272(28.7)	19,821(19.8)	17,000(31.2)	-2.91%
Catholic		10,705(11.2)	4,150(4.1)	6,671(12.3)	-2.91%
Won Buddhism		283(0.3)	1,115(1.1)	164(0.3)	-3.35%
Other Religion		2,563(2.7)	42,700(42.6)	7,212(13.3)	6.68%
Sub-total		95,058(100%)	100,232(100%)	54,412(100%)	-3.43%
No religion		146,247	228,770	147,070	0.04%
Religion unknown		4,156	4,244	2,131	-4.09%
Total	245,461	333,246	203,613	-1.16%	

Source: Supreme Prosecutor's Office (SPA), Crime Analysis, Each year

In the case of Christians, the social responsibility of Christians and the mission of practice are relatively weaker than those of Buddhists and Catholics. They are related to the lack in safety awareness of Christians in Korean churches, the church's growth ideology and materialism biased church budget, and the split of churches (Kim, 2014). Korean churches should secure the social responsibility of Christians and the publicity of churches.

4. Analysis of Problems of RTA

(1) Lack of Awareness of Traffic Laws

During the period of 2012-2016, the number of traffic violations totaled 6,754,665, an

average of 13,589,333 cases. The number of traffic violations in 2016 was 14,942,248, an increase of 31%. During the same period habitual violators, drivers who violate traffic regulations five times a year, also increased by an annual average of 17%. In 2017, one in four citizens violated traffic laws, showing a low level of citizens' sense of traffic culture (Newsis, May 26, 2017). The level of consciousness about compliance with traffic regulations was low. Overall illegal driving, such as speeding, signal violation, and interrupted driving were rampant and the most common causes of RTA. Driver's compliance with traffic laws reduces the risk of traffic accidents.

(2) Weakened Traffic Law Compliance

The traffic law compliance rate of signal lights increased from 94.33% in 2011 to 96.0% in 2015. The compliance rate of the driver's stop line and fastening seat belts also showed an increasing trend during the same period. The keen awareness of traffic regulations has risen.

Table 7 Observant Awareness of Traffic Laws (%)

Traffic Regulations	2011	2013	2015
Driver's stop-line	69.33	69.19	76.13
Signal light	94.33	95.03	96.00
Fastening seat belt	73.40	69.96	78.86
Turn signal	61.83	65.88	65.98

Source: Road Traffic Authority (RTA), Statistics of Traffic Accidents, 2017.

(3) Weakened Traffic Law Enforcement and Punishment of Violations

The number of traffic violation crackdowns is very high compared to the other crimes. The number of traffic violations amounted to 10,163,300, accounting for 16.3 times the number of major illegal acts. Speeding accounted for 77.9% of all violations, and traffic signal violations 18.5%. Despite the high number of violations of traffic laws, the punishment rate was relatively low. The punishment rate shows

that increased social awareness and rigid enforcement of traffic violations are needed.

(4) Unsafe and Reckless Driving Behavior

Reckless driving is the leading cause of road traffic congestion. Reckless driving is attributed to the driver's selfish psychological condition of wanting to move faster than other drivers. Reckless driving can be regarded as a benefit to the individual, but it leads to traffic congestion and a lot of social costs and waste. Various driving behaviors such as driving immaturity or driver status cause traffic congestion. Reckless driving reduces the travel time required by about 5.3–16.4% compared to normal operation but increases fuel consumption and CO₂ emissions by about 3.6–15.6% (Kim, 2012).

(5) Traffic Congestion and Induced Social Costs

The increase in traffic volume exceeding the capacity of transport facility increases the travel time and decreases the travel speed. Traffic congestion costs in Korea increased 37.9% from 15.4 trillion won in 2006 to 21.2929 trillion won in 2015. In 2016, Korea's traffic congestion cost was 2.16% of GDP, which was higher than the US's 0.83% (Newsis, 2017.10.17.). Drivers' reckless driving and traffic congestion cost 23 won more per km than normal driving. For example, the total cost of reckless driving per km is 3524 won more than normal driving.

(6) Thoughtless and Selfish Driving Behavior

Illegal driving in the city, tailgating and interrupted entry and exit are selfish driving behaviors that further adversely affect road traffic congestion. Illegal driving also encourages a lot of social waste. Behaviors of driver's citizenship and yield are fundamental to reduce traffic congestion.

Illegally parked cars interfere with the movement of other vehicles and cause RTA. The number of illegal parking violations in Seoul increased from 6,043 in 2013 to

14,050 in 2016. In 2016, 34,000 traffic accidents were caused by illegal driving. The biggest proportion of injuries caused by illegal driving was found to be pedestrians (53%) followed by emergency vehicles (29%) (Kyonggi Development Institute, 2016).

(7) Lack of Social Traffic Order

If citizens do not obey a legal system, the vicious cycle of chaos and disorder continues in our society. Law and order now touch on almost every aspect of life, but they are closely related to people's everyday vehicle use. Traffic order is a real problem that citizens face in their daily lives, and the violation of traffic order implies the risk of serious traffic accidents.

The number of traffic violations reported in Gyeonggi province increased yearly from 40,260 in 2012, to 53,644 in 2013, and to 92,878 in 2014. The number of violations of traffic regulations in 2014 were 26,844 (27%) for traffic signal violations, 5,894 (6.3%) for tailgating violations, 3,433 (3.7%) for expressway shoulder violations, and 3,144 (3.3%) for designated expressway violations (Kyunghyang Newspaper, 2015.9.16). In the era of globalization, the traffic order of Korea remains backward. Traffic safety level is gradually improving, but it is still at the lowest level among OECD countries.

IV. Christian Ethical Practice for the Reduction of RTA

1. Vision of Road Traffic Safety

Road traffic safety policy is required to be based on vision zero. Vision zero is a vision of a traffic system that does not lead to fatalities or severe injuries (Elvebak, 2005). Christian drivers are responsible for adapting to the road, whatever its condition. They have to carry the entire responsibility for any road accidents. With vision zero, the road system is seen as an ongoing social action, not merely enabling, but actively shaping the interaction of road users. Neither of the approaches to road traffic safety

seems to be derived from one single basic ethical principle, even if vision zero presents life and health as an absolute good. It seems that vision zero should take on more of a virtue ethical perspective. We should look into the possibility for creating a kind of principlism for road safety decisions. Korean churches need to go on an ethics and education venture as part of the nationwide road safety policy. They can incorporate the 2E's of education and enforcement for improving the ethics of drivers on the road.

2. Christian Ethical Practice in Educational Aspects

(1) Movement for Establishment of Traffic Culture of Christian Organizations

Churches should promote citizens' awareness by displaying "Christian" on Christian vehicles and take the initiative to establish traffic order and comply with traffic regulations. It is good to raise a sense of compliance by putting a "sticker of love" to traffic violators or jaywalkers. It is necessary to issue a letter of notification on traffic violations and to promote the traffic culture movement for yielding, and safe and slow driving, rather than first cracking down on traffic violators. Christian mass media and religious communities will jointly develop citizens' traffic order and safe driving campaigns.

(2) Traffic Order Activity of Transport Sector Christian Workers

It is inevitable for Christian workers to set an example for the establishment of traffic order and the observance of traffic regulations. The role of Christian drivers in the traffic scene is essential and useful. Christian taxi and bus drivers need to take the initiative to develop traffic order campaigns to establish traffic order and show the traffic law-abiding spirit. The law-abiding spirit should also be the target for all drivers and pedestrians. It is a shortcut to growing into a first-class citizen in a developed country. People participating in traffic activities should comply with traffic regulations.

(3) Proliferation of Christian Public Transportation Movement

Public transportation has the effect of improving traffic congestion due to the increase in passenger traffic and enhancement of traffic safety by reducing the risk of traffic accidents. RTA due to illegal parking and disorderly driving are caused by lack of ethical awareness of the driver and low traffic culture consciousness. Church worships generate mass traffic at certain times, and traffic congestion in the surrounding area of church, is very severe. Many vehicles parked illegally on nearby roads increase the risk of RTA. The use of public transits leads to various improvements such as a decrease in traffic accidents, reduction of traffic congestion, and energy saving. Christians need to go to church by bus and urban railways as much as possible. Christians need to carpool to church with neighbors.

(4) Preparation of Safe Driving Education and Public Relations System

Because illegal driving causes enormous social costs and damage, it is important to provide specific publicity and educational contents about illegal driving. The publicity and education contents about driving behavior should focus on drunk driving, speeding, reckless driving, signal violation, and tailgating. Comprehensive transport culture campaigns and related reports are better than real driving behaviors.

It is useful to publicize the social costs incurred by illegal driving on urban transportation systems. Promotional materials on illegal driving should be centered on the total cost of individuals and society as a whole. We need to create more realistic promotional material on the driver's side. Christian's illegal parking and traffic violations especially threaten the lives and safety of Korean society.

(5) Development of Safe Driving Manual for Christians

The driving ethics manual would help Christians apply their ethical life to driving behavior. The content of manual roughly contains an overview of Christian safe driving ethics and a step-by-step action model. The topics of ethical practices consist

of the concept of Christian ethical life, the example of Christian ethical life, the ethics of Christian transport culture, the causes and risks of RTA, the establishment of traffic order, and compliance with traffic laws.

(6) Development of a Christian Safe Driving Practice Model

The training methods for safe Christian driving can be conceived such as discipleship training, various field training exercises, and training in connection with home education. Discipleship training through the Bible is the most effective method. Because there is no ethical life of Christians without the Bible, it is necessary to educate and train them in the contents in connection with traffic order and safety by modeling Jesus from a Biblical perspective. It is essential to practice the Christian ethical life as learning about traffic order and safe driving issues. It presents practical directions to improve traffic order and safety consciousness in daily life.

(7) Practice of Social Responsibility of Korean Churches

Korean churches cannot fulfill the essential mission of the church apart from Korean society. Korean churches should also maintain active cooperation with all interested stakeholders and respect their opinions. They need to present a vision of the Church that goes beyond social welfare and fulfills integrated social responsibilities. Korean churches are now in a position to take on the public role of the church with the development and clear influence of society through repentance and love. Therefore, Korean churches should seek the vision and prospect of social responsibility of the church on the traffic order and safety culture and develop practical strategies that can be applied.

3. Christian Ethical Practice in terms of Enforcement

(1) Christians' Traffic Law Compliance Behavior

The cause of traffic accidents is the violation of traffic regulations. Violation of

traffic laws is a criminal act in the situation where casualties are soaring due to speeding, crossing over the center line, and drunken driving. Keeping the stop line and pedestrian-driven vehicles is a costly traffic regulation compliant behavior that adheres to people's lives and forms healthy homes and society. In order to apply the traffic regulations flexibly, mature citizens' consciousness whereby drivers and pedestrians comply with traffic regulations should be formulated first.

Christians should take the lead by keeping the traffic regulations in daily life. It is vital for Christians to abide by the actual traffic laws in order to promote social order and wellbeing. If Christians respect and adhere to the traffic laws, freedom of action and discretion are expanded as much. It is necessary to thoroughly implement the traffic regulations and to crack down on illegal traffic and parking in order to protect individual lives and establish traffic order.

(2) Raising Observant Awareness of Traffic Laws among Christians

RTA in Korea are predominantly caused by human factors and are directly related to the lack of traffic regulations. Drivers' lack of safety consciousness and violations of traffic regulations caused more than 90% of traffic accidents in 2016. The way of life in which Christians first comply with traffic laws is the first action to establish the public order of society as a people. This is an example to the people around us, and practice of Jesus' love that protects the lives and property of our neighbors. Therefore, for Christians to take the initiative by strictly observing traffic laws is a social responsibility for the practice of the most beautiful neighbor's love.

(3) Strengthening Prosecution of Traffic Violators

Establishment of traffic order and a traffic violation and accident fugitive reporting system have the effect of reducing traffic accidents. In fact, imposing a small penalty on traffic offenders is a big burden on traffic enforcement. Whistleblowers are busy in their daily lives, making statements that are references to events,

standing as witnesses, and worrying about the victims' retaliation. It is very hard for a citizen to report actual accidents while suffering real difficulties.

Therefore, institutional devices such as simplification of interrogation and evidence procedures and personal privacy should be established in order to encourage accusations. Jesus gave strong rebuking and warnings to the Pharisees, apostles, and blasphemers (Matthew 21: 12-17). Christians should actively prosecute violators of traffic laws even if they are sacrificed. Accordingly, society will be cleansed, and traffic order established.

(4) Transformation of Citizens' Illegal Driving Consciousness

As road facilities are shared public space for citizens, Christians first should set up a driving culture that respects pedestrians and others. The illegal driving of individuals causes a lot of cost and damage to society. Rigorous traffic enforcement and systematic publicity can awaken citizens' awareness of illegal driving. Road traffic penalties are too low compared to the personal income level in Korea, so traffic enforcement is less effective. It is also possible to consider realizing road traffic penalties that can affect the behavior of illegal drivers.

Table 8 Christian Ethical Practice for the Reduction of RTA in Korea

Division	Improvements of driver's ethics	Implementation
Education	• Movement for establishment of traffic culture of driver organizations	CI, CC, KC
	• Traffic order activity of transport sector Christian workers	KC
	• Proliferation of Christian public transportation movement	CI, CC
	• Safe driving education and public relations system	CC, KC
	• Development of safe driving manual for Christians	CC, KC
	• Development of a Christian safe driving practic model	CC, KC
	• Practice of social responsibility of Korean churches	KC
Enforcement	• Christian's traffic law compliance behavior	CI, CC
	• Raising observant awareness of traffic laws among Christians	CI, CC
	• Strengthening prosecution of traffic violators	KC
	• Transformation of citizens' illegal driving consciousness	CI, CC, KC

Note: CI means Christian individuals; CC, community churches; KC, Korean churches

V. Conclusion

The purpose of this study is to analyze the causes and conditions of RTA and to present Christian ethical practice to reduce RTA in terms of education and enforcement. This study consists of introduction, concepts of traffic accidents and Christian ethics, analysis of conditions and problems of RTA, and Christian ethical practice for the reduction of RTA in Korea. This paper was mainly conducted by a literature review of existing research and an analysis of statistical data.

Today vehicles are an essential means of transportation and necessities for citizens' daily life and socioeconomic activities. Along with economic growth, increases in both personal income and socioeconomic activities, and expanded leisure activities have led to an increase in the number of vehicles and a significant increase in vehicle utilization. In contrast, drivers' awareness of traffic regulations, traffic order, and life-respecting driving behaviors have weakened, resulting in a significant increase in RTA, and enormous damage is caused by RTA.

Above 90% of the causes of these traffic accidents are related to human factors, and a social climate that does not obey the traffic regulations has become a serious social problem in Korea. The driver's traffic offense or careless driving is a significant cause of traffic accidents. If a driver fails to obey a safe driving obligation, it causes a traffic accident, which is directly related to the driver's level of consciousness. The Korean church is now in the position to establish social responsibility and publicity of the church to solve the severe traffic problem in Christian ethics. The main problems of RTA are lack of awareness of traffic laws, weakened traffic law compliance, weakened traffic law enforcement and punishment of violations, unsafe and reckless driving behavior, traffic congestion and induced social costs, thoughtless and selfish driving behavior, and lack of social traffic order. In order to solve these traffic problems, Korean Christians should prepare various solutions based on Christian ethics.

The Christian ethical practices in educational aspects include movement for

establishment of traffic culture of driver organizations, traffic order activity of transport sector Christian workers, proliferation of Christian public transportation movement, and safe driving education and public relations system. The Christian ethical practices in terms of enforcement consist of Christian's traffic law compliance behavior, raising observant awareness of traffic laws among Christians, strengthening prosecution of traffic violators, and transformation of citizens' illegal driving consciousness. This study will contribute to the culture of life and social responsibility of Christians in order to reduce severe traffic accidents in Korea, a practicing Christian life, observance of the mission of stewardship, and the social contribution of the Christian community.

Through this study, it is desired to study the theoretical basis of future Christian traffic safety ethics, the development strategy model of Christian traffic safety practice, and the education enhancement plan. We will develop this study through a review of existing literature and further detailed modeling of case studies.

“This article is neither published nor planned to be published
in any other journal.”

“이 논문은 다른 학술지 또는 간행물에 게재되었거나 게재 신청되지 않았음을 확인함.”

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논문초록

한국의 도로교통사고 감소를 위한 종교윤리적 실천방안 - 기독교 윤리를 중심으로 -

정봉현 (전남대학교)

한국사회에서 개인소득의 증가, 사회경제 및 여가활동의 확대로 차량보유대수와 차량통행량도 크게 증가했다. 이에 비해 운전자의 교통법규 준수 의식, 교통질서 및 생명 존중 운전행태는 약화되어 도로교통 사고로 인한 피해도 막대하다. 도로교통사고 원인의 90% 이상이 인적 요인이며, 이것은 운전자의 교통법규 위반과 안전운전 불이행은 물론 주로 운전자의 윤리의식 및 운전행태와 직결되어 있다. 이제 한국교회는 도로교통사고를 감소하기 위하여 기독교 윤리적인 해결방안을 강구해야 하는 사회적 책임 완수와 교회의 공공성을 확립해야 할 입장에 놓여 있다.

도로 교통사고의 주된 문제점들은 교통법규에 대한 낮은 의식수준과 준수 의식의 약화, 무분별한 난폭운전, 사회적 비용의 유발, 상습적·이기적 운전행태, 교통질서확립의 미비 등으로 확인되었다. 이러한 교통문제를 해결하기 위해서는 기독교인과 한국교회가 기독교 윤리입장에서 다양한 실천방안을 수립하고 강구하는 것이 중요하다. 교육입장에서 기독교 윤리적 실천방안에는 기독교단체의 교통문화정착운동의 시행, 교통종사자의 선도적 교통질서활동, 기독교계 대중교통 이용의 장려, 안전운전 중심의 교육홍보체계의 준비, 기독교인 안전운전윤리 교재와 실천모델의 개발, 한국교회의 사회적 책임선포와 실천 등이 포함되고 있다. 교통단속의 관점에서 기독교 윤리적 실천방안에는 기독교인의 교통법규 준수행동, 기독교인의 교통법규 준수 의식의 함양, 교통위반자에 대한 고발정신의 강화 및 불법운전에 대한 시민의식의 전환 등이 들어가 있다. 논문은 도로교통사고를 줄이기 위한 기독교인의 생활윤리와 도덕적 책임완수, 기독교인의 신앙생활의 실천과 청지기의 사명준수 및 기독교공동체의 사회적 역할강화에 공헌할 것이다.

주제어 : 도로교통사고의 발생원인, 기독교 윤리와 도덕, 도로교통사고와 기독교 윤리

