



The Enforcement and Implementation of the Traffic Laws in Dipolog City

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Abstract— *The study's main objective was to determine the influence of the enforcement of Traffic Laws on the implementation of pedestrian safety rules in Dipolog City during the calendar year 2020. Therefore, a quantitative descriptive-correlational research design was employed in this study. Using frequency counting and percent, weighted mean, standard deviation, Mann-Whitney U test, Kruskal-Wallis test, and Spearman Rank-Order Correlation, data were obtained from 304 drivers and 92 pedestrians in Dipolog City. The study found that drivers were very highly perceived, and pedestrians were highly perceived in enforcing Traffic Laws. Furthermore, it was found that there is no significant difference in the perceived enforcement of traffic laws of the drivers and pedestrians in terms of age, level of education, and monthly income. However, the study revealed a significant difference in the perceived enforcement of the drivers in terms of the level of education and monthly income. On the other hand, the level of drivers' and pedestrians' perception of the implementation of Traffic Laws in Dipolog City is poorly implemented. Furthermore, there is no significant difference in the perceived implementation of the drivers and pedestrians in terms of age, level of education, and monthly income. Likewise, there is a significant difference in the perceived implementation of the drivers regarding the level of education and monthly income. Moreover, there is a substantial relationship between the drivers' and pedestrians' perceptions of the enforcement and implementation of Traffic Laws in Dipolog City.*

Keywords— *Enforcement of Traffic Laws, Implementation of Traffic Laws, Philippines.*

I. INTRODUCTION

Transport is a significant contributor to the well-being of every economy. The influence of the public transport system on the economic growth and other sectors of the economy depends entirely on the stability in the industry. As observed, institutional challenges like political influences and corruption affect the proper implementation of Traffic Laws. Lack of goodwill by management, a poor organizational structure with people who lack patience and the ability to deliver remains a hindrance to a successful implementation of Traffic Laws (Ngui, 2014). Also, mostly in event that the transport sector fails to perform; the shift towards new economies and communities is impaired, contributing, among other things, to poverty (Kamuhanda & Tanburn, 2005). However, the secret to success is an

inclusive understanding of the implementation process (Raps & Kauffman, 2005).

This study on the implementation of Traffic Laws is significant because this would help to evaluate the present conditions of traffic officers in the implementation of Traffic Laws in the workplace. As noted, stakeholders in the transport sector, such as drivers, pedestrians, and passengers, are most likely to have a positive or negative effect on the implementation of traffic regulations through their engagement and awareness (Ngui, 2014). On the other hand, Southgate and Mirrles Black (1991) mentioned that perceived compliance fairness is an important variable in police-community relations and can have a direct effect on police efforts to inform drivers and encourage responsible road user conduct. Additionally, Wooldridge and Floyd (1989) claimed that effective and efficient implementation

of the Traffic Laws calls for a dedicated team, mutual understanding without commitment will result in "counter efforts" and negatively affect efficiency.

Implementation of Traffic Laws related to so many studies with different factors. However, the study of Ogombe and Nyonje (2016) revealed that the relationship was deemed statistically important by the compliance of Traffic Laws and the application of pedestrian safety regulations. They also claimed that an increase in the enforcement of Traffic Laws would lead to a statistically significant improvement in the application of the rules on pedestrian safety. Also, (Ngui, 2014) stated that there is a positive relationship between the implementation and enforcement of Traffic Laws as perceived by drivers and pedestrians. Moreover, Ngui (2014) also claimed that there is a clear relationship between the enforcement and implementation of Traffic Laws and road traffic regulations and that there is the highest positive correlation value.

Traffic law enforcement remains one of the Philippines' biggest problems in this day and age. Traffic rules and regulations are very important to enable the safety and convenience of individuals and to prevent damages and casualties among individuals. Road users usually experienced poor implementation of traffic rules and regulations by traffic enforcers who may lack knowledge about traffic management.

The City of Dipolog is the capital of the Province of Zamboanga del Norte. Big establishments and real estate properties are rising in the City's economic belts propelling traffic congestion to rise in the coming years which would result in negative environmental issues and contribute to a

decreasing trend in economic confidence. One of the key factors involved to address the ever-growing problem of transportation of Dipolog City is an effective implementation body that will implement all traffic engineering services, traffic enforcement operations, traffic, and transport planning, regulations and franchising, transport facilities management, and traffic education program. These challenges provide an initial basis for directing policy options for Dipolog City which is the amendment of Ordinance No. 107, series of 1996, or otherwise known as the Comprehensive Transport and Traffic Laws of Dipolog City. Ordinance No. 107, series of 1996 is an adaptation of the existing Land Transportation and Traffic Laws of the Philippines (RA 4136).

Given the considerable problems faced by this issue, various works around the globe focused on identifying causes, making appropriate conclusions and suggestions have been made. The literature has a gap concerning the hierarchy of enforcement and implementation of Traffic Laws and whether or not they are followed and applied. Sanctions and fines as the enforcement of Traffic Laws are discussed which assist Cities in the selection of programs, projects, and activities that have the greatest potential to reduce road deaths and injuries. In the meantime, no research has been carried out on any of the above variables in the Philippines, in particular in Region IX cities and municipalities, the purpose of this investigation is to gather evidence to improve understanding and to build a new paradigm that will provide a further means of improving the regulation and enforcement of Traffic Laws.

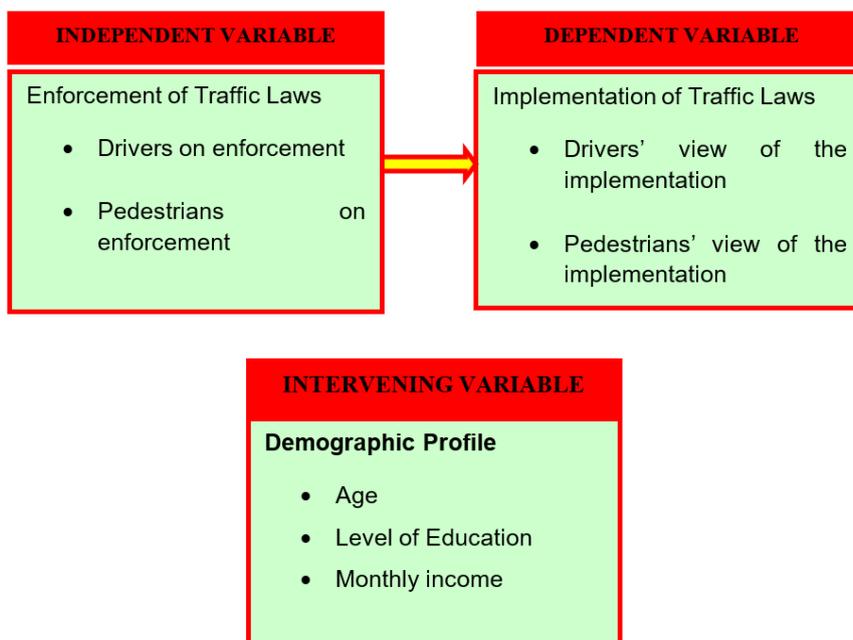


Fig.1. Schematic Diagram of the Study

Theoretical Framework of the Study

This study is anchored on the Street-level Bureaucrat's Theory by Lipsky (1980). This stated how much discretion and power the theory of street bureaucrats has over policy success (or failure). The street-level supervisors are responsible for many of the most central operations of public agencies, from evaluating program eligibility to the distribution of benefits, to assessing enforcement, enforcing restrictions, and exempting individuals and companies from penalties (Lipsky, 1980). Also, since these operations include direct contact with residents, street bureaucrats often exercise considerable discretion (Meyers, Durlak, & A., 2012).

Statement of the Problem

The study's main objective was to determine the influence of the enforcement of Traffic Laws on the implementation of pedestrian safety rules in Dipolog City during the calendar year 2020.

Specifically, the study sought answers to the following questions:

1. What is the profile of the driver - and pedestrian-respondents in terms of:
 - 1.1 age;
 - 1.2 level of education; and
 - 1.3 monthly income?
2. How do the drivers and pedestrians perceive the enforcement of Traffic Laws in Dipolog City?
3. Is there a significant difference in the drivers' and pedestrians' perception of the enforcement of Traffic Laws in Dipolog City when analyzed as to profile?
4. How do the drivers and pedestrians perceive the implementation of Traffic Laws in Dipolog City?
5. Is there a significant difference in the drivers' and pedestrians' perception of the implementation of Traffic Laws in Dipolog City when grouped according to profile?
6. Is there a significant relationship between the drivers' and pedestrians' perception of the enforcement and implementation of Traffic Laws in Dipolog City?

II. LITERATURE

RA 4136 Land Transportation and Traffic Rules

This act stated that a person must drive his/her motor vehicle on a highway with cautious and prudent speed, not greater or less than is fair and proper, having due regard to traffic, the width of the highway, and any other condition then and there existing; and no person shall drive a motor vehicle on a highway at such speed as to endanger the life, limb, and property of any person. Further, no provincial, city or municipal authority shall enact or enforce an ordinance or resolution specifying anything other than those provided in this Act.

City Traffic Ordinance

The Traffic Management Office (TMO) serves as the sole transport and

traffic management authority vested with powers to formulate, coordinate and monitor policies, standards, and programs relating to transport and traffic management, under the supervision and control of the City Mayor. The office was created through City Ordinance No. 107, Series of 1996, or the Comprehensive Transport and Traffic Code of Dipolog City, which was enacted by the Sangguniang Panlungsod last July 31, 2012. Traffic Management Office was established to address the ever-growing problem of transportation of Dipolog City and to manage the traffic situation therefore by rationalizing the existing transport operations and by implementing all traffic engineering services, traffic enforcement operations, traffic, and transport planning, regulations and franchising, transport facilities management, and traffic education program.

Enforcement of Traffic Laws

Several studies have shown how law enforcement coupled with public engagement and improvements to the built environment can improve safety-related behaviors, which may lead to crash reductions and pedestrian safety (Blank, Sandt, & O'Brien, 2020). On the other hand, enforcement of Traffic Laws is a critical requirement for road safety. Even with this in place, if the laws are not effectively enforced; fatal accidents increase daily on our urban roads (Ogombe & Nyonje, 2016). However, Mashhadi, Saha, and Ksaibati (2018) indicated that more enforcement of Traffic Laws and implementation led to fewer motor vehicle traffic accidents. It was also observed that issuing tickets to the violators reduced the number of nonfatal injuries. Issuing traffic citations to the violators had a greater deterrent effect at night, and women appeared to be deterred more by traffic citations than men.

Pedestrian on enforcement

The study of Ogombe and Nyonje (2016) revealed that pedestrian "rules of the road" specified by some developed countries that pedestrians were expected to follow certain rules on the road such as using sidewalks

whenever they were safely available. Globally, Traffic Laws state that it is a must for pedestrians to follow traffic signs, control signals, and pavement markings when crossing a road (Lee, 2011). Also, pedestrian and driver liability found that many pedestrians, at their peril, believe they have an absolute right of way when they seek to cross or in some other way, engage upon a roadway (Devito, 2006). However, in the study of Ogombe and Nyonje (2016) pedestrians are generally considered law-abiding if the less involved motor vehicle accident and the increased enforcement of traffic rules would improve the safety of drivers and pedestrians.

Drivers on enforcement

A study by the World Health Organization (WHO) that primary enforcement, where drivers can be stopped and punished for violating Traffic Laws or other laws independently of committing another crime, can make law enforcement more effective (WHO, 2018). On the other hand, traffic safety authorities manifest themselves when corrupt traffic officials encourage motorists who drive or drive unworthy vehicles on the road to continue their journey, making the effects potentially hazardous for other road users (Ogombe & Nyonje, 2016). They further stated that drivers' opinions regarding statements on-road usage indicate that the majority of drivers strongly agreed that drivers who broke traffic rules angered traffic officers. However, drivers and pedestrians scored low on enforcement and implementation of Traffic Laws giving the opinion that they do not perceive the strict fines for violations of Traffic Laws or the enforcement and implementation of Traffic Laws (Ogombe, Otieno, Mwangi, & Opiyo, 2014).

Implementation of Traffic Laws

In a study by Ogombe, Otieno, and Mwangi (2014), it was found that road infrastructure interventions for pedestrians include educational, engineering, enforcement, and pedestrian demographic factors that exist globally but prove to be ineffective when used inconsistently. On the other hand, institutions and people working towards implementation of pedestrian and drivers safety rules tend to favor either engineering measures or behavior-change measures depending on their training and experience, but the significant and sustainable improvement to pedestrian and drivers safety rules require a balanced approach that includes both perspectives essential to a balanced safe system approach (Loreno, Clinton, & Sleet, 2006).

Pedestrian View of implementation

Implementation of pedestrian and driver's safety laws refers to the perceived level of safety and level of safety compliance of pedestrians and drivers. The laws and the volume of pedestrian and driver activity result as a

variable (Ogombe & Nyonje, 2016). They further mentioned that the majority of drivers and pedestrians strongly agreed that they complied with Traffic Laws when walking along the route. They also claim that the level of road safety awareness increases the enforcement and implementation of the rules on pedestrian safety. Also, pedestrian's view of the implementation of Traffic Laws was high with the majority of pedestrians holding a positive view about the implementation of pedestrian safety rules (Ogombe & Nyonje, 2016).

Drivers View of implementation

The view of an unequal system appeared to apply to problems such as the preferential treatment of some drivers and the vast amount of individual discretion available to traffic police in the administration of sanctions (Fleiter, 2009). On the other hand, traffic violations include overloading passengers, overtaking where it is prohibited, failing to signal turns, parking dangerously, failing to display reflectors, failing to stop at a stop sign, failing to give precedence at a given way sign, driving through a red traffic light, driving an un-roadworthy vehicle and turning in front of oncoming traffic (Chruy, 2016). Also, drivers are a primary strategy used by the government to enforce road Traffic Laws and regulations, and drivers have a positive effect on the implementation of road Traffic Laws and regulations (Ngui, 2014).

III. METHODOLOGY

Research Design

This study used the documentary and descriptive-correlation method of research. The documentary method was used for the perception of pedestrians and drivers and descriptive-correlation was used to determine the relationship between the enforcement and implementation of Traffic Laws in Dipolog City.

The data gathered include the profile of respondents (age, level of education, and monthly income), and the respondents' perception of the enforcement and implementation of the provisions of ordinance number 107 series of 1996, particularly on the Traffic Laws of Dipolog City.

Research Instruments

The instrument used to gather data in this study consists of three (3) parts. The first part included the personal profile of the respondents in terms of age, level of education, and monthly income. The second part is the self-assessment questionnaire where the drivers and pedestrians rate their perception of the enforcement of Traffic Laws in Dipolog City. The third part is the self-assessment questionnaire where the drivers and pedestrians rate their perception of

the implementation of Traffic Laws in Dipolog City. The survey questionnaire used is a checklist type of questionnaire, where respondents marked check [√] to indicate their responses. This is composed of nineteen (19) questions aside from the required personal information of the respondents (See Survey Questionnaire). The principal instrument used in gathering data is a modified questionnaire derived from Ogombe, J. A., & Nyonje, R. O. (2015). *Enforcing Traffic Laws to Implement Pedestrian Safety Rules in the City of Kisumu, Kenya*.

Statistical Treatment of the Data

Frequency Counting and Percent. The tools were used to determine the respondents’ profile in terms of age, level of education, and monthly income. Percent was calculated by getting the frequency of each category divided by the total number of respondents.

Weighted Mean. It was used to quantify the ratings of the respondents’ perceived enforcement and implementation of Traffic Laws in Dipolog City. Weighted mean for the respondents’ perception of the implementation of Traffic Laws was given qualitative description within the established limit as follows:

Scale	Range	Description	Interpretation
5	4.21 – 5.00	Very Often	Very highly Implemented
4	3.41 – 4.20	Often	Highly Implemented
3	2.61 – 3.40	Sometimes	Moderately Implemented
2	1.81 – 2.60	Rarely	Poorly Implemented
1	1.00 – 1.80	Never	Not Implemented

A rating scale was used to assess the drivers’ and pedestrians’ perceived enforcement of Traffic Laws. The rating scales were presented on the next page:

Scale	Range	Description	Interpretation
5	4.21 – 5.00	Strongly Agree	Very highly perceived
4	3.41 – 4.20	Agree	Highly perceived
3	2.61 – 3.40	Neutral	moderately perceived
2	1.81 – 2.60	Disagree	poorly perceived

1	1.00 – 1.80	Strongly Disagree	Not perceived
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Scoring was done by multiplying “Strongly Agree” answers by 5, “Agree” by 4, “Neutral” by 3, “Disagree” by 2, and “Strongly Disagree” by 1.

Standard Deviation. It was used to determine the homogeneity and heterogeneity of the ratings where SD < 3 is homogenous, and SD ≥ 3 is heterogeneous (Aiken & Susane, 2001; Refugio, Galleto, & Torres, 2019).

Kruskal-Wallis Test. It was used to test the difference in respondents’ perceived enforcement and implementation of Traffic Laws in Dipolog City when analyzed as to age, level of education, and monthly income. Post hoc analysis was performed when significant differences existed between the variables tested to determine where the difference was situated with a Bonferroni-adjusted significant level using Dunn’s Test.

Spearman Rank-Order Correlation. It was used to determine the relationship between the respondents’ perceived enforcement and implementation of Traffic Laws in Dipolog City.

The following guide in interpreting the value of ρ, suggested by Cohen, West, and Aiken (2014), was used.

Value	Size	Interpretation
± 0.50 to ± 1.00	Large	High positive/negative correlation
± 0.30 to ± 0.49	Medium	Moderate positive/negative correlation
± 0.10 to ± 0.29	Small	Low positive/negative correlation
± 0.01 to ± 0.09	Negligible	Slight positive/negative correlation
0.00		No correlation

The data collected in the study were encoded and analyzed using Statistical Package for the Social Sciences (SPSS version 20.0) and Microsoft Excel Data Analysis ToolPak. Hence, posting the statistical formulas was not necessary. The statistical test was performed at a 0.05 level of significance.

IV. RESULTS AND DISCUSSIONS

Problem 1. What are the profile of the driver - and pedestrian-respondents in terms of age, level of education, and monthly income?

Table 2. Profile of the Drivers and Pedestrians in terms of Age

Drivers	Frequency	Percent
20 – 29 years old	25	8.2
30 – 39 years old	115	37.8
40 – 49 years old	110	36.2
50 years old & above	54	17.8
Total	304	100.0
Pedestrians	Frequency	Percent
20 – 29 years old	25	27.2
30 – 39 years old	26	28.3
40 – 49 years old	30	32.6
50 years old & above	11	12.0
Total	92	100.0

Table 2 presents the frequency and percentage distribution of the driver- and pedestrian-respondents according to age. It shows that twenty-five (25) or 8.2% of the driver-respondents are at 20–29 age bracket, one hundred fifteen (115) or 37.8% are at 30–39 age bracket, one hundred ten (110) or 36.2% are in 40–49 age bracket, and fifty-four (54) or 17.8% are in the age bracket of 50 years and above. Moreover, the table shows twenty-five (25) or 27.2% pedestrian-respondents are at 20-29 age bracket, twenty-six (26) or 28.3% are at 30-39 age bracket,

thirty (30) or 32.6% are in 40-49 age bracket, and eleven (11) or 12.00% are in the age bracket of 50 years and above. This finding implies that driver-respondents are mostly in the 30-39 age bracket while pedestrian-respondents are in the 40-49 age bracket. Furthermore, this data is supported by the findings of Ogombe, Otieno, and Mwangi (2014) which stated that drivers were between 30 and 40 years of age. They also claimed that the pedestrians who participated in the study were between 30 and 40 years of age.

Table 3. Profile of the Drivers and Pedestrians in terms of Level of Education

Drivers	Frequency	Percent
Elementary Level/Graduate	27	8.9
High School Level/Graduate	157	51.6
College Level/Graduate	120	39.5
Total	304	100.0
Pedestrians	Frequency	Percent
Elementary Level/Graduate	1	1.1
High School Level/Graduate	5	5.4
College Level/Graduate	86	93.5
Total	92	100.0

Table 3 presents the frequency and percentage distribution of the driver- and pedestrian-respondents according to the level of education. As gleaned from the table, twenty-seven (27) or 8.9% of the driver-respondents are in the elementary level/graduate, one hundred fifty-seven (157) or 51.6% are in the high school level/graduate, one hundred twenty (120) or 39.5% are in the college level/graduate. Moreover, the table shows only one (1) or 1.1% pedestrian-respondents are in the elementary

level/graduate, five (5) or 5.4% are in the high school level/graduate, and eighty-six (86) or 93.5% are in the college level/graduate. The findings show that the majority of the driver-respondents are in high school/graduate level, while the majority of the pedestrian-respondents are in college/graduate level. Further, the finding of this study contradicts the study of Ogombe, Otieno, and Mwangi (2014) which stated that the majority of the drivers who participated in the study were elementary-level and

pedestrians were high school/graduate-level.

Table 4. Profile of the Drivers and Pedestrians in terms of Monthly Income

Drivers	Frequency	Percent
Below P10,000.00	201	66.1
P10,000.00 – P15,000.00	103	33.9
Total	304	100.0

Pedestrians	Frequency	Percent
Below P10,000.00	15	16.3
P10,000.00 – P15,000.00	25	27.2
P15,001.00 – P20,000.00	26	28.3
Above P20,001.00	26	28.3
Total	92	100.0

Table 4 shows the frequency and percentage distribution of the driver- and pedestrian-respondents according to monthly income. As shown in the table, two hundred one (201) or 66.1% of the driver-respondents were below the P10,000.00 income bracket and one hundred three (103) or 33.9% are within the P10,000.00- P15,000.00 income bracket. Moreover, the table shows fifteen (15) or 16.3% of the pedestrian-respondents were below the P10,000.00 income bracket, twenty-five (25) or 27.2% are within the P10,000.00-P15,000.00 income bracket, twenty-

six (26) or 28.3% are within the P15,001.00-P20,000.00 income bracket, and twenty-six (26) or 28.3% are above the P20,000.00 income bracket. The data shows that majority of the driver-respondents are earning below P10,000.00 while pedestrian-respondents are earning more than P15,000.00. The findings are supported by the study of Ogombe, Otieno, Mwangi, and Opiyo (2014) which pointed out that drivers with low monthly income comply with the law on the enforcement of traffic.

Table 5. Drivers' and Pedestrians' Perceived Enforcement of Traffic Laws in Dipolog City

Statements	Drivers			Pedestrians		
	AWV	SD	Description	AWV	SD	Description
1. I am law-abiding.	4.56	0.626	Strongly Agree	4.37	0.808	Strongly Agree
2. Drivers should be fined for displaying risky behavior on the road.	4.48	0.731	Strongly Agree	4.45	1.083	Strongly Agree
3. Drivers should be fined for texting while driving.	4.46	0.774	Strongly Agree	4.51	1.064	Strongly Agree
4. Drivers should be fined for talking with passengers while driving.	3.56	1.377	Agree	3.62	1.156	Agree
5. Drivers who break traffic rules make me angry.	4.24	0.832	Strongly Agree	4.13	1.081	Agree
6. I am worried when a family member is driving.	4.08	0.950	Agree	3.77	1.090	Neutral
7. There is a need for more enforcement of traffic laws.	4.48	0.753	Strongly Agree	4.36	1.023	Strongly Agree
8. Pedestrians violate traffic rules more than drivers.	4.11	1.078	Agree	3.63	0.991	Agree
Mean	4.25	0.890	Strongly Agree	4.11	1.037	Agree

AWV-Average Weighted Value, SD-Standard Deviation

As shown in the table, the statements of drivers' perceptions were organized with their corresponding average weighted value, standard deviation, and descriptive interpretation from the highest to the lowest average scores. The driver-respondents rated "*I am law-abiding*" obtained an average weighted value of 4.56 and with a registered standard deviation of 0.626 which is described as strongly agree and interpreted as enforcement is highly perceived among drivers; "*There is a need for more enforcement of traffic laws*" obtained an average weighted value of 4.48 and with a registered standard deviation of 0.753 which is described as strongly agree and interpreted as enforcement is highly perceived among drivers; "*Drivers should be fined for displaying risky behavior on the road*" obtained an average weighted value of 4.48 and with a registered standard deviation of 0.731 which is described as strongly agree and interpreted as enforcement is highly perceived among drivers; "*Drivers should be fined for texting while driving*" obtained an average weighted value of 4.46 with a registered standard deviation of 0.774 which is described as strongly agree and interpreted as enforcement is highly perceived among drivers; "*Drivers who break traffic rules make me angry*" obtained an average weighted value of 4.24 with a registered standard deviation of 0.832 which is described as strongly agree and interpreted as enforcement is highly perceived among drivers; "*Pedestrians violate traffic rules more than drivers*" obtained an average weighted value of 4.11 with a registered standard deviation of 1.078 which is described as agree and interpreted as enforcement is perceived among drivers; "*I am worried when a family member is driving*" obtained an average weighted value of 4.08 with a registered standard deviation of 0.950 which is described as agree and interpreted as enforcement is perceived among drivers; and "*Drivers should be fined for talking with passengers while driving*" obtained an average weighted value of 3.56 with a registered standard deviation of 1.377 which is described as agree and interpreted as enforcement is perceived among drivers.

Also, as indicated in table 5, drivers' perceived enforcement of Traffic Laws obtained an overall mean of 4.25 with a registered standard deviation of 0.890 which is described as strongly agree and interpreted as enforcement is highly perceived among drivers. The results indicate that drivers highly perceived the enforcement of Traffic Laws. This implies that drivers strongly agree that an increase in the enforcement of Traffic Laws would lead to an improvement in the application of the rules on the safety of drivers and pedestrians. The finding is supported by the study of Ogombe and Nyonje (2016) which stated that an increase in the enforcement of Traffic Laws would lead to a

statistically significant improvement in the application of the rules on drivers and pedestrian safety.

Moreover, the statements of pedestrians perceptions were organized from the highest to the lowest average score and pedestrian-respondents rated "*Drivers should be fined for texting while driving*" obtained an average weighted value of 4.51 with a registered standard deviation of 1.064 which is described as strongly agree and interpreted as enforcement is highly perceived among pedestrians; "*Drivers should be fined for displaying risky behavior on the road*" obtained an average weighted value of 4.45 with a registered standard deviation of 1.083 which is described as strongly agree and interpreted as enforcement is highly perceived among pedestrians; "*I am law-abiding*" obtained an average weighted value of 4.37 with a registered standard deviation of 0.808 which is described as strongly agree and interpreted as enforcement is highly perceived among pedestrians; "*There is a need for more enforcement of traffic laws*" obtained an average weighted value of 4.36 with a registered standard deviation of 1.023 which is described as strongly agree and interpreted as enforcement is highly perceived among pedestrians; "*Drivers who break traffic rules make me angry*" obtained an average weighted value of 4.13 with a registered standard deviation of 1.081 which is described as agree and interpreted as enforcement is perceived among pedestrians; "*I am worried when a family member is driving*" obtained an average weighted value of 3.77 with a registered standard deviation of 1.090 which is described as agree and interpreted as enforcement is perceived among pedestrians; "*Pedestrians violate traffic rules more than drivers*" obtained an average weighted value of 3.63 with a registered standard deviation of 0.991 which is described as agree and interpreted as enforcement is perceived among pedestrians; and "*Drivers should be fined for talking with passengers while driving*" obtained an average weighted value of 3.62 with a registered standard deviation of 1.156 which is described as agree and interpreted as enforcement is perceived among pedestrians.

Moreover, pedestrians' perceived enforcement of Traffic Laws obtained an overall mean of 4.11 with a registered standard deviation of 1.037 which is described as agree and interpreted as enforcement is perceived among pedestrians. The results show that pedestrians' perceptions are high in the enforcement of Traffic Laws. This implies that pedestrians feel that a high level of enforcement would improve the safety of drivers and pedestrians. The finding of this study contradicts the study of Ogombe, Otieno, Mwangi, and Opiyo (2014) which stated that drivers and pedestrians were very negative regarding enforcement and implementation of Traffic Laws indicating that they disagreed.

Table 6. Test of Difference of the Drivers' and Pedestrians' Perceived Enforcement of Traffic Laws in Dipolog City as to Profile

Drivers' Profile	Perceived Enforcement of Traffic Laws		
	H-Value	p-value @ 0.05	Interpretation
Age	4.867	0.182	Not Significant
Level of Education	42.974	0.000	Significant
Monthly Income	30.189	0.000	Significant
Pedestrians' Profile	Perceived Enforcement of Traffic Laws		
	H-Value	p-value @ 0.05	Interpretation
Age	2.450	0.065	Not Significant
Level of Education	2.982	0.225	Not Significant
Monthly Income	2.666	0.446	Not Significant

The test illustrates that when the data on driver's perception was analyzed in terms of age, the H value is 4.867 with a p-value of 0.182 which is greater than the alpha at 0.05 level of significance. This means that there is no significant difference in the perceived enforcement of the drivers when they are grouped in terms of age. Thus, the null hypothesis is accepted. This further implies that how driver-respondents of different age brackets, perceived the enforcement of Traffic Laws does not significantly differ. The finding of this study contradicts the study of Ogombe, Otieno, Mwangi, & Opiyo (2014) which stated that enforcement of Traffic Laws and the demographic profile in terms of age of the drivers is significantly related and have a substantial impact.

Further, the test illustrates that when the data on drivers' perception was analyzed in terms of the level of education, the H value is 42.974 with a p-value of 0.000 which is lesser than the alpha at 0.05 level of significance. This means that there is a significant difference in the perceived enforcement of the drivers when they are grouped in terms of the level of education. Thus, the null hypothesis is rejected. This further implies that how driver-respondents of different levels of education, perceived the enforcement of Traffic Laws significantly differ. The findings are supported by the study of Ogombe, Otieno, Mwangi, & Opiyo (2014) that enforcement of Traffic Laws and the demographic profile in terms of the level of education of the drivers are significantly related and have a substantial impact.

Furthermore, when the data on drivers' perception was analyzed in terms of monthly income, the H value is 30.189 with a p-value of 0.000 which is lesser than the alpha at 0.05 level of significance. This means that there is a significant difference in the perceived enforcement of the drivers when they are grouped in terms of the monthly

income. Thus, the null hypothesis is rejected. This further implies that how driver-respondents of different monthly income, perceived the enforcement of Traffic Laws significantly differ. The findings are supported by the study of Ogombe, Otieno, Mwangi, & Opiyo (2014) which stated that enforcement of Traffic Laws and the demographic profile in terms of the monthly income of the drivers are significantly related and have a substantial impact.

On the other hand, the test illustrates that when the data on pedestrians' perception in terms of age, the H value is 2.450 with a p-value of 0.065 which is greater than the alpha at 0.05 level of significance. This means that there is no significant difference in the perceived enforcement of the pedestrians when they are grouped in terms of age. Thus, the null hypothesis is accepted. This further implies that how pedestrian-respondents of different age brackets, perceived the enforcement of Traffic Laws does not significantly differ. The finding of this study contradicts the study of Ogombe, Otieno, Mwangi, & Opiyo (2014) which stated that enforcement of Traffic Laws and the demographic profile in terms of age of the pedestrians are significantly related and have a substantial impact.

Further, the test illustrates that when the data on pedestrians' perception was analyzed in terms of the level of education, the H value is 2.982 with a p-value of 0.225 which is greater than the alpha at 0.05 level of significance. This means that there is no significant difference in the perceived enforcement of the pedestrians when they are grouped in terms of the level of education. Thus, the null hypothesis is accepted. This further implies that how pedestrian-respondents of different levels of education, perceived the enforcement of Traffic Laws does not significantly differ. The finding of this study contradicts the study of Ogombe, Otieno, Mwangi, & Opiyo (2014) which stated that enforcement of Traffic Laws and the

demographic profile in terms of the level of education of the pedestrians are significantly related and have a substantial impact.

Furthermore, when the data on pedestrians' perception was analyzed in terms of monthly income, the H value is 2.666 with a p-value of 0.446 which is greater than the alpha at 0.05 level of significance. This means that there is no significant difference in the perceived enforcement of the pedestrians when they are grouped in terms of monthly

income. Thus, the null hypothesis is accepted. This further implies that how pedestrian-respondents of different monthly income, perceived the enforcement of Traffic Laws does not significantly differ. The finding of this study contradicts the study of Ogombe, Otieno, Mwangi, & Opiyo (2014) which stated that enforcement of Traffic Laws and the demographic profile in terms of the monthly income of the pedestrians are significantly related and have a substantial impact.

Table 7. Drivers' and Pedestrians' Perceived Implementation of Traffic Laws in Dipolog City

Statements	Drivers			Pedestrians		
	AWV	SD	Description	AWV	SD	Description
1. I obey traffic rules when walking along the road.	4.50	0.704	Very Often	4.22	0.836	Very Often
2. The level of road safety awareness improves the implementation of pedestrian safety rules.	4.47	0.726	Very Often	4.39	0.726	Very Often
3. The impartial issuing citation tickets to the violators improve the implementation of traffic laws.	4.41	0.835	Very Often	4.03	1.114	Often
4. Driving when too tired	1.57	0.817	Never	1.74	1.036	Never
5. Driving when drunk	1.49	0.680	Never	1.49	0.932	Never
6. Driving too close to a car	1.54	0.770	Never	1.73	0.962	Never
7. Breaking the speed limit	1.61	0.813	Never	1.68	1.037	Never
8. Driving after taking behavior influencing drug	1.09	0.371	Never	1.17	0.705	Never
9. Talking on the phone while driving	1.62	0.863	Never	1.62	0.982	Never
10. Driving defective vehicle	1.66	0.796	Never	1.47	0.845	Never
11. Traffic mix with high pedestrian activity	1.92	0.835	Never	2.17	1.065	Rarely
Mean	2.35	0.746	Rarely	2.34	0.931	Rarely

AWV-Average Weighted Value, SD-Standard Deviation

As shown in Table 7, the statements of drivers' perception were organized with their corresponding average weighted value, standard deviation, and descriptive interpretation from the highest to the lowest average scores. The driver-respondents rated "I obey traffic rules when walking along the road" obtained an average weighted value of 4.50 with a registered standard deviation of 0.704 which is described as very often and interpreted as implementation is highly perceived among drivers; "The level of road safety awareness improves the implementation of pedestrian safety rules" obtained an average weighted value of 4.47 with a registered standard deviation of 0.726 which is described as very often and interpreted as implementation is highly perceived among drivers; "The impartial issuing citation tickets to the violators improve the implementation of traffic laws" obtained an average weighted value of 4.41 with a registered standard deviation of 0.835 which is described as very often and interpreted as implementation is highly perceived among drivers; "Traffic

mix with high pedestrian activity" obtained an average weighted value of 1.92 with a registered standard deviation of 0.835 which is described as never and interpreted as implementation is not perceived among drivers; "Driving defective vehicle" obtained an average weighted value of 1.66 with a registered standard deviation of 0.796 which is described as never and interpreted as implementation is not perceived among drivers; "Talking on the phone while driving" obtained an average weighted value of 1.62 with a registered standard deviation of 0.863 which is described as never and interpreted as implementation is not perceived among drivers; "Breaking the speed limit" obtained an average weighted value of 1.61 with a registered standard deviation of 0.813 which is described as never and interpreted as implementation is not perceived among drivers; "Driving when too tired" obtained an average weighted value of 1.57 with a registered standard deviation of 0.817 which is described as never and interpreted as implementation is not perceived among drivers; "Driving

too close to a car” obtained an average weighted value of 1.54 with a registered standard deviation of 0.770 which is described as never and interpreted as implementation is not perceived among drivers; *“Driving when drunk”* obtained an average weighted value of 1.49 with a registered standard deviation of 0.680 which is described as never and interpreted as implementation is not perceived among drivers; and *“Driving after taking behavior-influencing drug”* obtained an average weighted value of 1.09 with a registered standard deviation of 0.371 which is described as never and interpreted as implementation is not perceived among drivers.

Also, as indicated in table 7 drivers’ perceived implementation of Traffic Laws obtained an overall mean of 2.35 with a registered standard deviation of 0.746, which is described as rarely and interpreted as implementation is poorly perceived among drivers. The results show that drivers poorly perceived the implementation of Traffic Laws. The data are supported by the findings of Ogombe, Otieno, Mwangi, and Opiyo (2014) which stated that drivers scored low on implementation of Traffic Laws giving the opinion that they do not perceive the strict fines for violations of Traffic Laws.

Further, the statements under the pedestrians’ perception were structured with their corresponding average weighted value, standard deviation, and descriptive interpretation from the highest to the lowest average scores. The pedestrian-respondents rated *“The level of road safety awareness improves the implementation of pedestrian safety rules”* obtained an average weighted value of 4.39 with a registered standard deviation of 0.726 which is described as very often and interpreted as implementation is highly perceived among pedestrians; *“I obey traffic rules when walking along the road”* obtained an average weighted value of 4.22 with a registered standard deviation of 0.836 which is described as very often and interpreted as implementation is highly perceived among pedestrians; *“The impartial issuing citation tickets to the violators improve the implementation of traffic laws”* obtained an average weighted value of 4.03 with a registered standard deviation of 1.114 which is described as often and interpreted as implementation is perceived among pedestrians; *“Traffic mix with high pedestrian activity”*

obtained an average weighted value of 2.17 with a registered standard deviation of 1.065 which is described as rarely and interpreted as implementation is poorly perceived among pedestrians; *“Driving when too tired”* obtained an average weighted value of 1.74 with a registered standard deviation of 1.036 which is described as never and interpreted as implementation is not perceived among pedestrians; *“Driving too close to a car”* obtained an average weighted value of 1.73 with a registered standard deviation of 0.962 which is described as never and interpreted as implementation is not perceived among pedestrians; *“Breaking the speed limit”* obtained an average weighted value of 1.68 with a registered standard deviation of 1.037 which is described as never and interpreted as implementation is not perceived among pedestrians; *“Talking on the phone while driving”* obtained an average weighted value of 1.62 with a registered standard deviation of 0.982 which is described as never and interpreted as implementation is not perceived among pedestrians; *“Driving when drunk”* obtained an average weighted value of 1.49 with a registered standard deviation of 0.932 which is described as never and interpreted as implementation is not perceived among pedestrians; *“Driving defective vehicle”* obtained an average weighted value of 1.47 with a registered standard deviation of 0.845 which is described as never and interpreted as implementation is not perceived among pedestrians; and *“Driving after taking behavior-influencing drug”* obtained an average weighted value of 1.17 with a registered standard deviation of 0.705 which is described as never and interpreted as implementation is not perceived among pedestrians.

Furthermore, as indicated in table 7 pedestrians’ perceived implementation of Traffic Laws obtained an overall mean of 2.34 with a registered standard deviation of 0.931 which is described as rarely and interpreted as an implementation of Traffic Laws is poorly perceived among pedestrians. The results show that pedestrians poorly saw the implementation of Traffic Laws. The data are supported by the findings of Ogombe, Otieno, Mwangi, and Opiyo (2014) which stated that pedestrians scored low on implementation of Traffic Laws giving the opinion that they do not perceive the strict fines for violations of Traffic Laws.

Table 8. Test of Difference of the Drivers’ and Pedestrians’ Perceived Implementation of Traffic Laws in Dipolog City as to Profile

Drivers’ Profile	Perceived Implementation of Traffic Laws		
	H-Value	p-value @ 0.05	Interpretation
Age	4.836	0.184	Not Significant
Level of Education	13.678	0.001	Significant
Monthly Income	31.696	0.000	Significant

Pedestrians' Profile	Perceived Implementation of Traffic Laws		
	H-Value	p-value @ 0.05	Interpretation
Age	0.902	0.825	Not Significant
Level of Education	1.470	0.479	Not Significant
Monthly Income	0.874	0.832	Not Significant

Table 8 presents the test of difference of the drivers' and pedestrians' perception of the implementation of Traffic Laws in Dipolog City when analyzed as to age, level of education, and monthly income using the Kruskal-Wallis test or H test.

The test illustrates that when the data on driver's perception is analyzed in terms of age, the H value is 4.836 with a p-value of 0.184 which is greater than the alpha at 0.05 level of significance. This means that there is no significant difference in the perceived implementation of the drivers when they are grouped in terms of age. Thus, the null hypothesis is accepted. This further implies that how driver-respondents of different age brackets, perceived the implementation of Traffic Laws does not significantly differ. The finding of this study contradicts the study of Ogombe, Otieno, Mwangi, & Opiyo (2014) which stated that implementation of Traffic Laws and the demographic profile in terms of age of drivers are significantly related and have a substantial impact.

Further, the study revealed that when the data on drivers' perception is analyzed in terms of the level of education, the H value is 13.678 with a p-value of 0.001 which is lesser than the alpha at 0.05 level of significance. This means that there is a significant difference in the perceived implementation of the drivers when they are grouped in terms of the level of education. Thus, the null hypothesis is rejected. This further implies that how driver-respondents of different levels of education, perceived the implementation of Traffic Laws significantly differ. The findings are supported by the study of Ogombe, Otieno, Mwangi, & Opiyo (2014) which stated that implementation of Traffic Laws and the demographic profile in terms of the level of education of drivers are significantly related and have a substantial impact.

Furthermore, the study revealed when the data on drivers' perception when analyzed in terms of monthly income, the H value is 31.696 with a p-value of 0.000 which is lesser than the alpha at 0.05 level of significance. This means that there is a significant difference in the perceived implementation of the drivers when they are grouped in terms of monthly income. Thus, the null hypothesis is rejected. This further implies that how

driver-respondents of different monthly income, perceived the implementation of Traffic Laws significantly differ. The findings are supported by the study of Ogombe, Otieno, Mwangi, & Opiyo (2014) which stated that implementation of Traffic Laws and the demographic profile in terms of the monthly income of drivers are significantly related and have a substantial impact.

On the other hand, when the data on pedestrians' perception is analyzed in terms of age, the H value is 0.902 with a p-value of 0.825 which is greater than the alpha at 0.05 level of significance. This means that there is no significant difference in the perceived implementation of the pedestrians when they are grouped in terms of age. Thus, the null hypothesis is accepted. This further implies that how pedestrian-respondents of different age brackets, perceived the implementation of Traffic Laws does not significantly differ. The finding of this study contradicts the study of Ogombe, Otieno, Mwangi, & Opiyo (2014) which stated that implementation of Traffic Laws and the demographic profile in terms of age of the pedestrians are significantly related and have a substantial impact.

Further, the study revealed that when the data on pedestrians' perception is analyzed in terms of the level of education, the H value is 1.470 with a p-value of 0.479 which is greater than the alpha at 0.05 level of significance. This means that there is no significant difference in the perceived implementation of the pedestrians when they are grouped in terms of the level of education. Thus, the null hypothesis is accepted. This further implies that how pedestrian-respondents of different levels of education, perceived the implementation of Traffic Laws does not significantly differ. The finding of this study contradicts the study of Ogombe, Otieno, Mwangi, & Opiyo (2014) which stated that implementation of Traffic Laws and the demographic profile in terms of the level of education of the pedestrians are significantly related and have a substantial impact.

Furthermore, the study revealed that when the data on pedestrians' perception is analyzed in terms of monthly income, the H value is 0.874 with a p-value of 0.832 which is greater than the alpha at 0.05 level of significance. This means that there is no significant difference in the

perceived implementation of the pedestrians when they were grouped in terms of the monthly income. Thus, the null hypothesis is accepted. This further implies that how pedestrian-respondents of different monthly income, perceived the implementation of Traffic Laws does not significantly differ. The finding of this study contradicts the study of Ogombe, Otieno, Mwangi, & Opiyo (2014) which stated that implementation of Traffic Laws and the

demographic profile in terms of the monthly income of the pedestrians are significantly related and have a substantial impact.

Problem 6. Is there a significant relationship between the drivers’ and pedestrians’ perception of the enforcement and implementation of Traffic Laws in Dipolog City?

Table 9. Relationship between the Drivers’ and Pedestrians’ Perception on the Enforcement and Implementation of Traffic Laws in Dipolog City

Drivers				
Variables	Means	ρ-value	p-value @0.05	Interpretation
Enforcement of Traffic Laws and Implementation of Traffic Laws	4.25 2.35	- 0.187	0.001	Negative/Small/Low Correlation
Pedestrians				
Variables	Means	ρ-value	p-value @0.05	Interpretation
Enforcement of Traffic Laws and Implementation of Traffic Laws	4.11 2.34	- 0.091	0.387	Negligible/Slight Negative Correlation/Not Significant
Overall				
Variables	Means	ρ-value	p-value @0.05	Interpretation
Enforcement of Traffic Laws and Implementation of Traffic Laws	4.216 2.349	- 0.156	0.002	Small/Low Negative Correlation/Significant

Table 9 presents the test of the relationship between the drivers’ and pedestrians’ perception of the enforcement and implementation of Traffic Laws using Spearman Rank-Order Coefficient of Correlation or Spearman rho. When the data of the driver-respondents was analyzed, the Spearman rho value is -0.187 with the registered p-value of 0.001 which is less than the alpha at 0.05 level of significance. This finding means that there is a significant negative small/low correlation of the drivers’ perception of the enforcement and implementation of Traffic Laws in Dipolog City. Thus, the null hypothesis is rejected. This further implies that the implementation has a

significant impact on the enforcement of Traffic Laws in Dipolog City. The data are supported by the findings of Ngui, (2014) which stated that there is a positive relationship between the implementation of Traffic Laws and enforcement.

Further, when the data of the pedestrian-respondents was analyzed, the Spearman rho value is -0.091 with the registered p-value of 0.387 which is greater than the alpha at 0.05 level of significance. This finding means that there is no significant negligible/slight correlation of the pedestrians’ perception of the enforcement and

implementation of Traffic Laws in Dipolog City. Thus, the null hypothesis is accepted. This further implies that the implementation has no significant impact on the enforcement of Traffic Laws in Dipolog City. The findings contradict the study of Ngui, (2014) which stated that there is a positive relationship between the implementation of Traffic Laws and enforcement.

The overall Spearman rho value is -0.156 which means a negative small/low correlation. The registered p-value is 0.002 which is less than the alpha at 0.05 level of significance. This finding means that there is a significant negative small/low correlation between the enforcement and implementation of Traffic Laws in Dipolog City. Thus, the null hypothesis is rejected. The finding further implies that traffic enforcement has a significant impact on the implementation of Traffic Laws in Dipolog City. It further implies that the reduction of traffic violators and accidents has a substantial effect on traffic enforcement and implementation. It is concluded that traffic violators and traffic accidents will be minimized when the Traffic Laws are highly enforced and implemented. The findings are supported by the study of Bagolong, Julian, Sabio, and Sabio, (2015). They also revealed that Traffic Law enforcement and implementation can effectively reduce traffic violators and the incidence of fatal motor vehicle accidents to curb thousands of deaths worldwide every year. Also, the data are supported by the findings of Ngui, (2014) which stated that there is a clear relationship between enforcement and implementation of Traffic Laws and road traffic regulations and that there is the highest positive correlation value. Further, the findings are supported by the study of Redelmeier as cited by Bagolong, Julian, Sabio, and Sabio (2015) revealed that there is an important relationship between the level of traffic enforcement and the level of implementation of Traffic Laws in Davao City.

V. CONCLUSION

Based on the findings, the following conclusions were drawn:

1. Majority of the driver-respondents age bracket is 30-39 years of age;
2. Majority of the pedestrian-respondents age bracket is 40-49 years of age;
3. Majority of the driver-respondents are high school level/graduate;
4. Majority of the pedestrian-respondents are college-level/graduate;
5. Majority of the driver-respondents are earning below P10,000.00;
6. Majority of the pedestrian-respondents are earning more than P15,000.00;
7. The study found out that enforcement of Traffic Laws is highly perceived among drivers;
8. The study found out that enforcement of Traffic laws is perceived among pedestrians;
9. There is no significant difference in the drivers' perception of the enforcement of Traffic Laws when they are analyzed in terms of age;
10. There is a significant difference in the drivers' perception of the enforcement of Traffic Laws when they are analyzed in terms of the level of education;
11. There is a significant difference in the drivers' perception of the enforcement of Traffic Laws when they are analyzed in terms of the monthly income;
12. There is no significant difference in the pedestrians' perception of the enforcement of Traffic Laws when they are analyzed in terms of age;
13. There is no significant difference in the pedestrians' perception of the enforcement of Traffic Laws when they are analyzed in terms of the level of education;
14. There is no significant difference in the pedestrians' perception of the enforcement of Traffic Laws when they are analyzed in terms of the monthly income;
15. The study found out that implementation of Traffic Laws is poorly perceived among drivers;
16. The study found out that implementation of Traffic Laws is poorly perceived among pedestrians;
17. There is no significant difference in the drivers' perceived implementation of Traffic Laws are analyzed in terms of age;
18. There is a significant difference in the drivers' perceived implementation of Traffic Laws when they are analyzed in terms of the level of education;
19. There is a significant difference in the drivers' perceived implementation of Traffic Laws when they are analyzed in terms of monthly income;
20. There is no significant difference in the pedestrians' perceived implementation of Traffic Laws when they are analyzed in terms of age;
21. There is no significant difference in the pedestrians' perceived implementation of Traffic Laws when they are analyzed in terms of the level of education;
22. There is no significant difference in the pedestrians' perceived implementation of Traffic Laws when they are analyzed in terms of the monthly income;
23. There is a significant negative small/low correlation

between the drivers' and pedestrians' perception of the enforcement and implementation of Traffic Laws.

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