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AN IMPACT EVALUATION OF THE "POLICE GOES TO SCHOOL" PROGRAM IN NORTH SUMATRA: ADOLESCENTS' ATTITUDES, KNOWLEDGE, AND TRAFFIC BEHAVIORS

Evaluasi Dampak Program "Police Goes to School" di Sumatera Utara: Sikap, Pengetahuan, dan Perilaku Lalu Lintas Remaja

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ABSTRACT

The present paper evaluates the implementation of the Police Goes to School program in North Sumatra and suggest how public officials (e.g., government and police) could use religiosity and traffic rules exposure to promote safe road behaviors among Indonesian adolescents. The results suggest three main findings. First, the results showed the effectiveness of the Police Goes to School program. Students from the actively implemented schools possessed more positive attitudes toward traffic rules, more knowledge of traffic rules, and engaged in safer traffic behaviors than students from the passively implemented schools. Second, structured interviews revealed that although the police officers and teachers involved in the program expressed their satisfaction concerning the implementation of the program, they also provided suggestions to improve the program. Third, the results also suggest the potential benefit of integrating the socialization of traffic rules into the Indonesian religious education curriculum to promote safe traffic behaviors among adolescents in Indonesia.

Keywords: Police Goes to School, adolescents, traffic behaviors, religiosity

ABSTRAK

Dalam artikel ini, kami mengevaluasi implementasi program "Police Goes to School" di Sumatera Utara dan memaparkan bagaimana pihak-pihak terkait (misal, pemerintah, kepolisian) dapat memanfaatkan religiusitas dan pemaparan aturan-aturan lalu lintas untuk mempromosikan perilaku lalu lintas yang aman di kalangan remaja Indonesia. Ada tiga hasil utama penelitian ini. Pertama, hasil menunjukkan efektivitas program Police Goes to School. Siswa-siswi dari sekolah-sekolah yang diimplementasi program secara aktif memiliki sikap lebih positif terhadap aturan-aturan lalu lintas, berpengatuhan lalu lintas yang lebih baik, dan berperilaku lalu lintas yang lebih baik daripada siswa-siswi dari sekolah-sekolah yang diimplementasi program secara pasif. Kedua, wawancara terstruktur menunjukkan bahwa para polisi dan guru yang terlibat di dalam program mengekspresikan kepuasan mereka terhadap implementasi program. Ketiga, hasil menunjukkan potensi manfaat sosialisasi perilaku lalu lintas yang terintegrasi dengan kurikulum pendidikan agama.

Kata kunci: Police Goes to School, remaja, lalu lintas, religiusitas

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INTRODUCTION

The level of traffic accidents in Indonesia has been worrying and increasing in the last five years. According to Maulana and Kurniawan (2019), there were 88,897 cases of traffic accidents in Indonesia in 2014. The rate of traffic accidents increased to 96,073 cases in 2015 and 105,591 cases in 2016. Although the accident rate dropped to 104,327 cases in 2017, the number of cases increased again in 2018 to 107,968 cases. This is a cause for concern considering that traffic accidents often resulting in fatalities. The World Health Organization estimated about 27,277 to 36,176 people died from traffic accidents in Indonesia (World Health Organization, 2018). This means that around three people died from traffic accidents every hour in Indonesia (KOMINFO, 2019). This places Indonesia among countries with the highest mortality rates caused by traffic accidents in the world (Rudi & Ferdian, 2017). Thus, serious effort to reduce traffic accidents is crucial in Indonesia.

To remedy this circumstance, the Traffic Corps of the Police of the Republic of Indonesia (Korlantas POLRI) implemented the Police Goes to School program to socialize and increase safe traffic behaviors among adolescents in Indonesia. Up to date, there is no systematic evaluation concerning the effectiveness of this program. Moreover, data concerning adolescents' current attitudes, knowledge, and traffic behaviors are scarce and scattered throughout university libraries in the form of unpublished manuscripts. To answer this challenge, Korlantas POLRI called out scholars for a joint research and evaluation. Eight universities, which includes: Jember University, Soegilpranata Christian University, University of Indonesia, University of Sumatera Utara, Lampung University, Lambung Mangkurat University, Police Academy of Science, and Mataram University answered to this calling. Korlantas POLRI assigned these universities to (1) study the current adolescents' attitudes, knowledge, and traffic behaviors in their respective provincial regions and (2) to assess the implementation of the Police Goes to School program.

In the present report, we specifically describe the research and evaluation conducted in the North Sumatra Province. In addition to the goals aforementioned in the previous paragraph, we also investigated how religiosity and exposure to traffic rules might increase adolescents' intention to comply with traffic rules. We structure the present report into three parts. In the first part of the report, we assess the effectiveness of the Police Goes to School program by comparing the attitudes, knowledge, and traffic behaviors of students who received the program actively to students who received the program passively. In the second part of the report, we describe police officers' and teachers' evaluations concerning the implementation of the program. In the final part of the report, we describe the impact of religiosity and exposure to traffic rules on students' intention to comply with traffic rules.

PART 1: ADOLESCENTS' ATTITUDES, KNOWLEDGE, AND TRAFFIC BEHAVIORS

In the present Part 1, we assess the effectiveness of the Police Goes to School program in shaping adolescents' positive attitudes toward traffic rules, their knowledge about traffic rules, and their traffic behaviors. We conducted the evaluation using a questionnaire developed by Prof. Dr. Guritnaningsih from the University of Indonesia. Korlantas POLRI obliged all regional research teams, including the team in the North Sumatra Province, to collect data measure using this questionnaire. The general assumption in this evaluation is

that beneficiaries of the program should supposedly possess more positive attitudes toward traffic rules, have better knowledge about traffic rules, and engage in traffic behaviors than non-beneficiaries. However, prior to data collection, the police officers in districts where we planned to collect the data could not determine any school that they have not visited for the program. They could, however, showed schools in which they actively (i.e., frequently visited by the police) or passively (i.e., visited less frequently) implemented the program. Hence, we used an alternative way to assess the program by comparing students from actively implemented schools to students from passively implemented schools.

Method

Participants

Participants were 244 students from Madrasah Aaliyah Negeri 1 Medan (91 students), Madrasah Aaliyah Swasta Proyek Universitas Alwashliyah Medan (63 students), SMP Negeri 1 Pagar Merbau (28 students), and SMP Negeri 1 Lubuk Pakam (62 students). The participants comprised 97 boys, 145 girls, and 3 students did not answer the gender question. The mean age of the participants was 15.45 (*SD* = 1.91, 95%CI: 15.21, 15.69). The police implemented the Police Goes to School program actively at Madrasah Aaliyah Negeri 1 Medan and SMP Negeri 1 Lubuk Pakam, but they implemented the program passively at Madrasah Aaliyah Swasta Proyek Universitas Alwashliyah and SMP Negeri 1 Pagar Merbau.

Procedure

Teachers introduced the research team to the participants in their classrooms. The teachers informed the participants that the research team was present to assess the Police Goes to School Program and to study the students' opinion regarding traffic behaviors. The research team subsequently distributed the questionnaire of the study to the participants.

Measures

We assessed students' *attitudes toward traffic rules* using 5 items (e.g., "People requires a driving license to drive on public road", "Obeying traffic rules will reduce the numbers of traffic accidents"; 1 = *not at all agree* – 4 = *agree very much*; α = .50). We calculated the attitudes score by averaging items. We assessed students' *safe traffic behaviors* using15 items (e.g., "Crossing the road at a zebra-cross", "Run into traffic light when the light turns yellow [R]"; 1 = *never* – 4 = *very often*; α = .58). we calculated the safe traffic behaviors score by averaging items. We assessed students' *knowledge of traffic rules* using 18 items. The first 12 questions of this measurement were made in a multiple choices format with one correct answer (e.g., "What is the normal speed to ride a motorcycle in a two-way road is?", "What is the minimum age to attain a driving license?"). For the remaining 6 items, we presented students with 6 common road signs and instructed them to label each of the road signs. The reliability of the knowledge of traffic rules measure was α = .57. We calculated the score of the knowledge of traffic rules by summing correct responses.

Results

We used regression analysis to examine the effectiveness of the Police Goes to School program. We will start by summarizing the characteristics of the students before advancing to the main evaluation regarding students' attitudes, knowledge, and traffic behaviors. We

conducted all analysis using “R” with the “rio”, “dplyr”, and “psych” packages (Chan et al., 2018; R Core Team, 2018; Revelle, 2018; Wickham et al., 2019). Readers can request the full reproducible code via email.

Students’ Characteristics

As shown in Figure 1, most students reported they can ride a motorcycle. Most of them used public transportation or taken to school by their parents (Figure 5). Most students were underage to qualify for a driving license (Figure 2). However, an ample of students have already ridden their own motorcycle to school (Figure 5). They reported riding a motorcycle on their own every day or at least 2 to 3 times a week (Figure 6). Only a small portion of students claimed to have ever been ticketed by police (see Figure 3). When asked if they have ever been involved in a traffic accident, about a third of the students said "yes" (Figure 4).

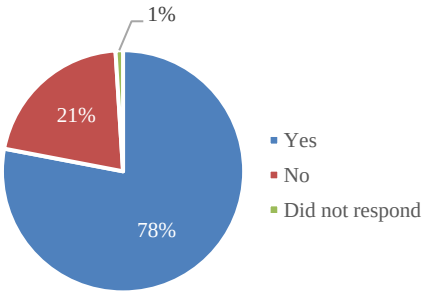

Figure 1. Motorcycle riding capability

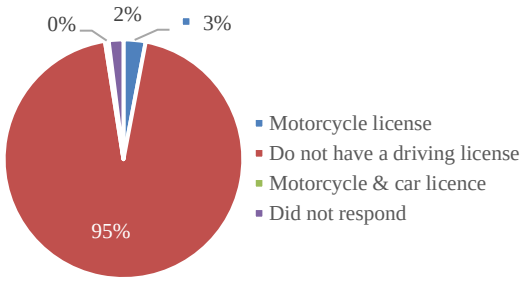

Figure 2. Driving license

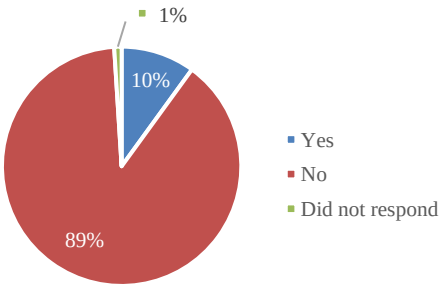

Figure 3. Caught or ticketed by police

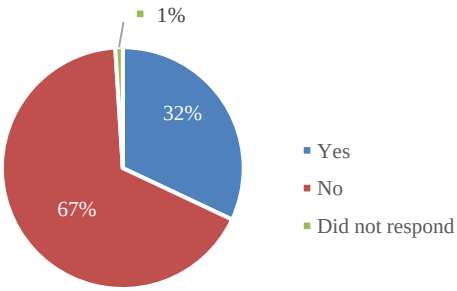

Figure 4. Traffic accident involvement

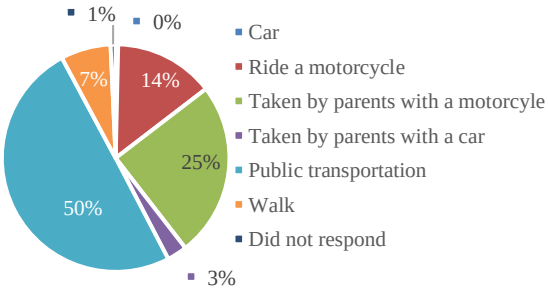

Figure 5. Mode of transportation to go to school

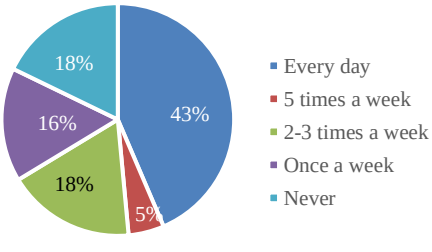

Figure 6. Frequency of raiding motorcycle

Attitudes toward traffic rules

We conducted a regression analysis with program implementation (coded: 0 = passive implementation, 1 = active implementation) as a predictor of attitude toward traffic rules. The effect of program implementation on students' attitude toward traffic rules was significant, $B = 0.12$, $SE = 0.05$, $t = 2.27$, $p = .024$, 95%CI: 0.16, 0.23. Students from the actively implemented schools had a significantly more positive attitudes toward traffic rules ($M = 3.39$, $SD = 0.39$, 95%CI: 3.32, 3.47) than students from the passively implemented schools ($M = 3.27$, $SD = 0.43$, 95%CI: 3.19, 3.35). Thus, active implementation of the Police Goes to School program improved students' attitudes toward traffic rules. However, the model had a small effect size of $R^2 = .02$. This means that the active implementation of the program contributed only about 2% on the variance of the students' attitudes toward traffic rules, leaving about 98% of the participants' pattern of attitudes to other factors undocumented in the present research.

Traffic behaviors

We repeated the previous analysis, substituting the dependent variable to traffic behaviors. The effect of implementation on the students' traffic behaviors was significant, $B = 0.14$, $SE = 0.05$, $t = 2.93$, $p = .004$, 95%CI: 0.05, 0.23. Students from the actively implemented school ($M = 1.92$, $SD = 0.35$, 95%CI: 1.86, 1.99) reported more safe traffic behaviors than students from the passively implemented school ($M = 1.79$, $SD = 0.36$, 95%CI: 1.72, 1.85). Hence, active implementation of the Police Goes to School Program improved students' safe traffic behaviors than passive implementation. It should be noted, however, an $R^2 = .04$ indicates that only about 4% of the variance of the students' traffic behavior was predicted by active implementation of the program.

Knowledge of traffic rules

We again repeated the previous analysis, substituting the dependent variable to the knowledge of traffic rules. The effect of program implementation was significant, $B = .07$, $SE = .019$, $t = 3.52$, $p = .001$, 95%CI: 0.03, 0.10. Students from the actively implemented schools ($M = 9.13$, $SD = 2.29$, 95%CI: 8.71, 9.54) had higher knowledge of traffic rules than students from the passively implemented schools ($M = 8.10$, $SD = 2.14$, 95%CI: 7.73, 8.48). Active implementation of the Police Goes to School program improved students' knowledge of traffic rules by one point higher than passive implementation. Again, it should be noted that the impact of the program was quite small ($R^2 = .05$). This means only about 5% of students' pattern of knowledge regarding traffic rules was predicted by active implementation of the program.

Discussion

In the present Part 1, we assessed the effectiveness of the Police Goes to School program in terms of adolescents' attitudes toward traffic rules, knowledge of traffic rules, traffic behaviors. The results suggest the effectiveness of the program. Students from the actively implemented schools had more positive attitudes toward traffic rules, knowledge of traffic rules, engage in safer traffic behaviors than students from the passively implemented schools. This suggest the effectiveness of the active implementation of the Police Goes to School program. However, it should be noted that although active implementation of the program had a meaningful impact toward students' attitudes, knowledge, and traffic

behaviors, the impact was in general quite small. Which means that there are still a lot of rooms for the program's improvement.

We should note that the present assessment has its limitations. Specifically, the measurements used in the assessment had low reliabilities (see the method section of Part 1). This means that what appears a successful program implementation might in fact an artifact of the use of unreliable measurements. Future assessment of the program needs to develop better measurements to assess the program implementation more accurately.

PART 2: OFFICERS AND TEACHERS PERCEPTION REGARDING THE PROGRAM IMPLEMENTATION

The aim of the present Part 2 was to uncover how teachers from the actively and passively implemented schools assessed the Police Goes to School program. We examined their current view, their future expectation, and their suggestion to refine the program. We also assessed the implementation of the program from the point of view of the officers who implemented the program. We explored their view regarding the implementation of the program and their opinion on how to improve the program.

Method

Informants

Informants were two teachers from the passively implemented schools (2 teachers from Madrasah Aaliyah Swasta Proyek Universitas Alwashliyah Medan and 2 teachers from Sekolah Menengah Pertama Negeri 1 Pagar Merbau), 2 teachers from the actively implemented schools (2 teachers from Madrasah Aaliyah Negeri 1 Medan and 2 teachers from Sekolah Menengah Pertama Negeri 1 Lubuk Pakam) and 4 police officers involved in the program implementation (3 from the Police of the City of Medan and 1 from the Police of Deli Serdang District).

Procedure

We interviewed all informants individually. We interviewed all teachers at their respective offices during their office hours (07:00-14:00 West Indonesian Time). We interviewed all police officers at a restaurant just after lunch time (13:00-15:00 West Indonesian Time). We conducted the interview using a structured guideline prepared by Prof. Dr. Guritnaningsih from the University of Indonesia. Korlantas POLRI obliged all regional research team, including the team in North Sumatra, to use this guideline. We recorded all interview using high-quality audio recording devices.

Results

To make the analysis readable, we classified participants' responses into themes. Readers can request the full transcription of the interviews by email. We referred to participants using codes. For the police officers, A refers to the first officer, B the second officer, C the third officer, and D the fourth officer. For teachers from the passively implemented schools, E refers to teacher 1, F to teacher 2, G to teacher 3, and H to teacher 4. For teachers from the actively implemented schools, W refers to teacher 1, X to teacher 2, Y to teacher 3, Z to teacher 4. We designate references in the description of each theme also by using codes. For

example, code A.3 means that police officer 1 made a particular explanation, in the third line of the transcription of the first police officer.

The Beginning of the Program

The police officers could not recall the start date of the program at their respective districts (A.3, B.20, D.15). They reported that their commanding officers instructed them to intensify school visitations in the past two years. The teachers from the actively implemented schools also could not recall the start of the program. They acknowledged that police officers have been long visiting their schools from time to time, but the past two years have been more active than ever (X.2, X.4, Y.2, W.2, Z.14). The teachers from the passively implemented schools could only recall some occasions of police visitations to their schools (E.9, G.6).

The Goal of the Program

The police officers described that the aim of the program was to introduce public safety at an early age, including traffic safety. The goal includes promoting positive attitudes toward traffic rules, sufficient knowledge of traffic rules, and safe traffic behaviors among adolescents (A.7, D.25). The program also prepares young citizens to apply for a driving license when they reach the age of 17 years old (B.64). The officers also expressed their expectation so that students who benefit from the program would pass on their knowledge to their friends and family (B.83).

The teachers from the active implemented school acknowledged the program as a preventive program to promote public and traffic safety. The teachers viewed the program as important and that they support for the continuity and improvement of the program (W.56, W.56, Z.113, Z115, Y.74, X.74). Similarly, the teachers from the passively implemented schools also think highly of the program to provide students with knowledge about traffic rules. They expressed their interest to become active beneficiary of the program (H.6).

Activities and Materials Presented in the Program

The officers described the Police Goes to School program was about police officers visiting schools to socialize issues about public safety (C.16). They often implemented the program through the weekly Monday Flag Ceremony, in which a particular officer (e.g., Chief of the Police District) act as Trustees of the ceremony. They also implemented the program through class presentation about public safety to students (A.41, B.54, D.40). These were typical approaches for the visitation at a junior and senior high school level. For students of younger age (e.g., kindergarten or primary school), they socialized traffic rules by using the learn and play approach (A.27, C.34).

The officers and the teachers from the actively and passively implemented schools said the most common topic presented to the students was traffic rules and road safety. But the police officers also socialized other topics such as crime through social media, anarchy behaviors, theft, motorcycle gang, and drug abuse (B.61, W.12, X.12-22, E.24, F.87).

The police officers think students enjoyed the program most when they presented socialization materials through movies and interactive pictures (D.119). They also mentioned that students who have already reached 17 years of age were especially fond of programs related to the procedure to attain a motorcycle license (B.78). Teachers from the actively implemented schools said students had strong interest on the Millennial Road Safety Festival (X.46). Another teacher said that students had high enthusiasm toward the chance

to get admitted to the Police Academy (Y.30). Teachers from the passively implemented schools said their students appeared enthusiastic about whatever method and topics presented by the police (G.107, G.101).

When asked about who decided about the topic for the material to be presented to the students, both the teachers from the actively and passively implemented schools said the police officers always decided the topic. The schools have never requested certain topics or materials to the police officers (X.22, W.14, E.38).

Procedure to Become an Active Beneficiary of the Program

According to the officers, there were two methods to become a beneficiary of the program (B.41). First, the police started the program by contacting the schools. They subsequently conducted visitation once the schools have scheduled and issued the permit for visitation (D.46). Alternatively, the schools could request for the police to visit them. However, teachers from both the actively and passively implemented schools said they have never started a request for visitation. They only said that they gladly received any police visitation (Y.4, E.9, E.40).

Evaluation of the Program

The officers said there has been no formal or systematic evaluation of the program so far. They have only assessed the program informally without the use of evaluation instruments. For example, through oral communication with teachers or by observing the numbers of traffic rules violation conducted by adolescents (A.44, A.51, D.87). Consistently, the teachers from both the actively and passively implemented school also said they have never systematically assessed the program implementation (G.72, H.109). However, the teachers viewed the program has been effective in increasing students' awareness about traffic safety and the danger of drug abuse (X.66, Y.60, W.50, Z.111, E.52, F.56, G. 130, H.50).

Although the police officers reported being quite satisfied with the program implementation, they also think they could have done it more optimally (C.62, C78, D.113). They pointed out that some schools comprise a lot of traffic rules violators, while other schools comprise more compliant students. The lack of manpower has been hampering the police to visit the more susceptible schools regularly.

Human Resources

The officers said there was no special requirement for an officer to take part in the program. Any police officer, regardless of their rank or hierarchical position, could engage in the Police Goes to School program (A.59). Although the "Dikmas" (Community Education), "Kamsel" (Community Safety), and "Dikyasa" (Educational Engineering) were the core sections for implementing the program, other sections of the Police Department could also take part in implementing the program (A.59, C.47, D.105). The program also involved cooperation with other civil institutions such as the Transport Department, Health Department, or the National Road Implementation Agency.

Teachers from both the active and passive implemented schools said they have no special human resources assigned for the program implementation. One school reported any available PPKn (Pancasila and Civic Education) teachers were usually assigned to accommodate police visitation (Z.101). A teacher from another school said that their public relations department usually handles and accommodate the police visitations (X.56).

Suggestions to Improve the Program

An officer pointed out the lack of manpower as a hampering factor for the effectivity of the program (A.78). To overcome this problem, the officer pointed out the need for better coordination between the police and other elements of society. With this approach, the burden to socialize public safety becomes not only the responsibility of the police but also other elements of society. Teachers from the passively implemented schools recommended that the program to be conducted regularly and to vary the socialization materials (E.84, G.150). Teachers from the actively implemented schools felt the program implementation as sporadic and recommended for the program to be more regular and predictable. They also suggest the continuity of the program and to increase the frequency of visitations (Z.133, W.62, Y.78, X.84). Two teachers from the active schools hope for the police to established cooperation with the ministry of education so that materials being socialized by the police (e.g., traffic rules, drug abuse) could be integrated as part of the national educational curriculum (W.4, Z.85).

Discussion

In the present Part 2, we interviewed police officers and teachers from the actively and passively implemented schools. The police officers and the teachers agreed that the program started about two years ago. They acknowledge the goal and importance of the program in increasing not only students' traffic behaviors but also other domains of public safety. The most common ways to implement the program were through the weekly Monday Flag Ceremony and class presentation. The officers and teachers also agreed that traffic rules were the most common topic socialized by the police. But the police officers also presented other public safety-related themes, such as crime through social media and drug abuse as part of the program implementation. All in all, although they acknowledged they could implement the program more optimally, both the officers and the teachers expressed their satisfaction with the program implementation.

PART 3: THE IMPACT OF RELIGIOSITY AND EXPOSURE TO TRAFFIC RULES ON INTENTION TO COMPLY WITH TRAFFIC RULES

In this final part of the report, we describe how religiosity and exposure to traffic rules might increase adolescents' intention to comply with traffic rules. The examination of how religiosity can positively impact adolescents' traffic behaviors is important for several reasons. First, religion has been at the heart of most Indonesians. Long before its independence, the founding father of the nation placed the belief in God as fundamental in the nation's constitution (i.e., "Pancasila", "UUD 1945"). Gallup poll also showed over 90 percent of Indonesians consider religion as an important aspect of their daily life, making the nation the fourth most religious country in the world (Crabtree, 2010). Second, research has shown that religious beliefs can strongly influence various aspects of people's lives (Donahue & Nielsen, 2005), including traffic behaviors (e.g., Tabrizi et al., 2017). Considering the centrality of religion among its citizens, Indonesian authorities can use their citizens' religiosity to socialize and promote safer traffic behaviors. This may help reduce the rate of traffic accidents in Indonesia.

Religiosity and Traffic Behaviors

Researchers have defined religiosity in different ways. A theologian would view religiosity in terms of faith, a psychologist in terms of devotion and piousness, whereas a sociologist in terms of church (or mosque) attendance, or doctrines (Holdcroft, 2006). However, in their empirical test of religiosity, Cornwall et al. (1986) suggests three overarching components with six sub-dimensions of religiosity. The belief component includes traditional orthodoxy (e.g., the existence of God, life after death, Satan) and particularistic orthodoxy (i.e., acceptance of beliefs peculiar to a particular religious organization). The commitment component includes spiritual commitment (i.e., the personal faith and loyalty toward the transcendental) and institutional commitment (i.e., individuals' attachment, identification, and loyalty toward their religious institutions). The behavioral component includes religious behavior (e.g., personal prayer, scripture study, pro-social behaviors) and religious participation (e.g., attending religious ceremonial events).

Although religiosity, as conceptualized by Cornwall et al. (1986), contains comprehensive details, researchers usually used the Duke Religion Index questionnaire (DUREL) to examine the relationship between religiosity and traffic behaviors (Koenig & Büssing, 2010). In contrast to Cornwall's et al. questionnaire (which comprised 34 items), DUREL comprised only five items, making it a more ideal option for large-scale surveys. Conceptually, DUREL comprised three dimensions: (1) Organizational religious activities (ORA), (2) non-organizational religious activities (NORA), and (3) intrinsic religious activities (IR). The dimensions of DUREL concords to the dimensions proposed by Cornwall et al. For instance, the ORA dimension concords to the religious behavior dimension, the NORA dimension concords to religious participation dimension, and the IR dimension concord to the dimensions of spiritual commitment and the traditional orthodoxy. As will be discussed, research about the relationship between religiosity and road behaviors using DUREL has produced informative results.

By using DUREL to measure religiosity, Tabrizi et al. (2017) found that adolescents with high IR are less likely than those who are low in IR to engage in dangerous road behaviors (e.g., dangerous play on the road, crossing the road unsafely). In another research, Nabipour et al. (2015) also showed that adolescents who engaged in high NORA are less likely than those low in NORA to engage in dangerous playing on the road. They also showed that individuals high in IR are less likely to cross the road unsafely.

Such an effect of religiosity on safer traffic behaviors may be attributed to the fact that religious people are more willing to obey rules set by legitimate authorities (Grasmick, Kinsey, & Cochran, 1991). Religiosity, in other words, orients individuals to obey traffic rules and to refrain from risky road behaviors (Zümrüt, 2007). We thus predicted that adolescents high in religiosity would have a higher intention to engage in safe traffic behaviors by complying with traffic rules than those who are less religious (Hypothesis 1).

Religious Prime and Intention to Comply with Traffic Rules

Considering the importance of religion among Indonesians (Crabtree, 2010), the present research offers an approach that uses religious values to increase people's willingness to comply with traffic rules. Specifically, we use the religious prime approach. Priming is an implicit way to activate a person's beliefs (e.g., religious beliefs) so that those beliefs would influence the person's attitudes and behaviors (Bargh, Chen, & Burrows, 1996). Studies shows that religious prime, such as by asking participants to read biblical verses increases

people's pro-social behaviors (e.g., make donations, or help others: Shariff, et al., 2016). Religious prime also increased cooperation among small entrepreneurs in Burkina Faso (Hadnes & Schumacher, 2012). The most important and relevant in the present study is the fact that religious prime can render people more willing to obey rules imposed by their authorities (Borena & Bélanger, 2013; Cappellen, Corneille, Cols, & Saroglou, 2011). Since traffic laws are rules made by legitimate authorities (e.g., government, police), we expected that religious prime such as by presenting scriptural texts about the obligation to comply and obey authorities would increase adolescents' intention to obey traffic rules (Hypothesis 2).

Traffic Rules Knowledge and Intention to Comply with Traffic Rules

To comply with certain rules requires people to know about the rules. Research involving workers from the petroleum industries in Norway showed that workers often unintentionally violate safety rules for a simple reason that they do not now about the safety rules (Dahl, 2013). Likewise, people might violate traffic rules not because they intended to do so, but because they do not know the rules. For instance, a survey in Surakarta, Indonesia, revealed that almost 60 percent of the respondents did not know what a "yellow box junction" road sign is and what it is for (Erwanda, 2018). As such, they tended to violate the "yellow box junction" traffic rules. Thus, besides examining the impact of religious prime, we also examined the effect of exposing adolescents with traffic rules on their intention to comply with traffic rules. Specifically, we predicted that exposing adolescents with traffic rules would increase their intention to comply with the traffic rules (Hypothesis 3).

The Interplay of Religiosity, Religious Prime and Traffic Rules

So far, we have outlined how religiosity, religious prime, and exposure to traffic rules might increase adolescents' intention to comply with traffic rules. Whereas these variables may work orthogonally in predicting adolescents' intention to comply with traffic rules, it is also important to test the extent that these variables interact with each other. Thus, besides the previously described hypotheses, we also predicted that adolescents exposed to a combination of religious prime and traffic rules would show higher intention to comply with traffic rules than those not exposed to either religious prime or traffic rules (Hypothesis 4). Moreover, considering that religiosity can strongly impact how people think and behave (Donahue & Nielsen, 2005), we also predicted that the effect of religious prime (Hypothesis 2a), exposure to traffic rules (Hypothesis 3a), and the combine religious prime and traffic rules (Hypothesis 4a) on adolescents' intention to comply with traffic rules would depend on their levels of religiosity.

Method

Participants

Participants were 232 junior and senior high school students from the City of Medan and the Deli Serdang districts of North Sumatra, Indonesia (96 boys, 128 girls, and 8 did not respond to the gender question, M = 15.63, SD = 1.86, 95%CI: 15.39, 15.87). All participants were Moslems. We assigned them to four groups between subject-designs (control, religious prime, traffic rules, and the combine conditions).

Procedure and Measures

We collected the data as part of the impact evaluation of the Police Goes to School program. After responding to the first questionnaire (see Part 1 of the present paper), the research team distributed the materials of the present experimental study to the participants. In the religious prime condition, students read several religious verses about how people should obey legitimate leaders. We took the verses from Al-Quran and hadith and presented them to the participants in Arabic and Bahasa Indonesia. In the traffic rules condition, participants read several traffic rules (e.g., penalty given for driving without having a driving license). In the combine condition, participants first read the religious verses, subsequently the traffic rules. Participants in the control condition completed the questionnaire reading nothing beforehand.

We checked participants' attention to the religious verses with 3 questions in a format of multiple choices response with one correct answer (e.g., "What Quran verse described Moslem's obligation to obey their leader, even when one feels not to?", "What verse described about the warning for those who disobey their leader?"). We checked participants' attention to the traffic rules with 3 questions made in a format of multiple choices response with one correct answer (e.g., "What is the penalty for not wearing helmet while driving a motorcycle?", "Which traffic rule described about safety belt?"). We assessed participants' religiosity using the Duke Religiosity Index questionnaire developed by Koenig and Büssing (2010: e.g., "How often do you go to the mosque or attend other religious meetings?"; 1 = *never*, 2 = *once a month*, 3 = *once a week*, 4 = *once a day*, 5 = *a view times a day*; "My religious beliefs are what really lie behind my whole approach to life"; 1 = *definitely not true* – 5 = *definitely true of me*; 6 items; $\alpha = 0.68$). We assessed participants intention to comply with traffic rules using 10 items (e.g., "I intend to use seatbelt when riding a car", "I intend to wear a helmet when riding a motorcycle"; 1 = *not at all* – 10 = *very much*; $\alpha = 0.87$).

Results

We analyzed the data using regression analysis using "R" with the "rio", "dplyr", and "psych" packages (Chan et al., 2018; R Core Team, 2018; Revelle, 2018; Wickham et al., 2019). The full reproducible code is available on request via email.

Checks

In the religious prime condition, 5 students failed or answered wrong at least one comprehension check item. In the traffic rules condition, 3 students failed or answered wrong at least one comprehension check item. In the combine condition, 4 students failed or answered wrong at least 1 comprehension check item for the religious verses and 4 students failed or answered wrong at least 1 comprehension check item for the traffic rules. We omitted these participants in the further analysis, assuming that they have paid insufficient attention to the manipulation. The final sample included in further analysis were 221 participants.

Intention to Comply with Traffic Rules

We hypothesized that high religiosity would predict greater intention to comply with traffic rules (Hypothesis 1). Relative to students in the control condition, students in the religious prime condition (Hypothesis 2), traffic rules condition (Hypothesis 3), and combine condition (Hypothesis 4) would show greater behavioral intention toward traffic rules

(Hypothesis 4). We also hypothesized that the effect of religious prime (Hypothesis 2a), traffic rules (Hypothesis 3a), and combine condition (Hypothesis 4a) would depend on levels of religiosity. To test these hypotheses, we conducted a regression analysis in which we entered religiosity (centered), religious prime, traffic rules, the combine conditions, and all interaction terms (religious prime x religiosity, traffic rules x religiosity, and combine condition x religiosity) as predictors of intention to comply to traffic rules. We dummied all experimental conditions by treating the control condition as the point of reference.

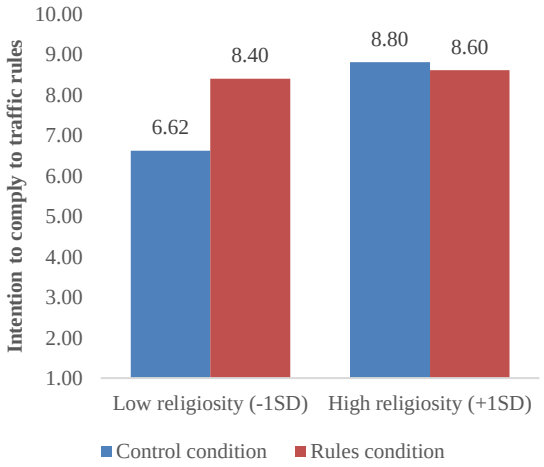

Figure 7. The interaction of religiosity and traffic rules condition on intention to comply with traffic rules

Supporting Hypothesis 1, the effect of religiosity on intention to comply to traffic rules was significant, B = 0.61, SE = 0.13, t = 4.64, p < .001, 95%CI: 0.35, 0.88. Students with high religiosity had higher intention to comply with traffic rules. Moreover, supporting Hypothesis 3a, there was a significant interaction of religiosity and the traffic rules condition, B = -0.56, SE = 0.19, t = -2.90, p = 0.004, 95%CI: -0.93, -0.18. Simple slope analysis showed that the effect of religiosity on intention to comply with traffic rules was significant among students in the control condition, B = 0.44, SE = 0.10, t = 4.49, p < .001, 95%CI: 0.25, 0.63, but not among students in the traffic rules condition, B = -0.11, SE = 0.17, t = -0.68, p = 0.494, 95%CI: -0.44, 0.22. As shown in Figure 7, in the control condition, students with low religiosity had lower intention to comply with traffic rules than their more religious counterparts. Moreover, simple slope analysis also suggests that the effect of the traffic rules condition was meaningful among students with high religiosity, B = -0.62, SE = 0.30, t = -2.06, p = 0.04, 95%CI: -1.22, -0.03, but not among students' with low religiosity, B = 0.49, SE = 0.28, t = 1.73, p = 0.085, 95%CI: -0.07, 1.04. Unexpectedly, however, relative to the control condition, exposure to traffic rules appear to slightly reduced high religiosity students' intention to comply with traffic rules (see Figure 7).

In contrast to Hypothesis 2, the main effect of religious prime condition B = -0.23, SE = 0.22, t = -1.08, p = 0.281, 95%CI: -0.66, 0.19, traffic rules condition B = -0.07, SE = 0.22, t = -0.30, p = 0.762, 95%CI: -0.50, 0.38, and combine condition, B = 0.11, SE = 0.23, t = 0.49, p = 0.622, 95%CI: -0.34, 0.56, were non-significant. Hence, there was no support for Hypothesis 2, 3, and 4. The interaction of the religious prime condition and religiosity, B = -0.38, SE = 0.25, t = -1.54, p = 0.124, 95%CI: -0.87, 0.11, and the interaction of the combine

condition with religiosity was not meaningful, B = -0.34, SE = 0.24, t = -1.43, p = 0.154, 95%CI: -0.81, 0.13. Thus, there was also no support for Hypothesis 2a nor 4a.

Discussion

In Part 3, we examined how religiosity, religious prime, exposure to traffic rules, and the combination of religious prime and exposure to traffic rules impacts adolescent intentions to comply with traffic rules. The results showed that religiosity had a positive impact on students' intentions to comply with traffic rules. Religious students have a greater intention than those who are less religious to obey traffic rules. This result suggests that Indonesian authorities can incorporate religiosity in promoting safe traffic behaviors among Indonesian adolescents. The results also showed that exposing traffic rules seemed to be a good approach to increase the less religious students' intention to comply with traffic rules.

We should note that in the traffic rules condition, highly religious students were more likely to be reluctant to comply with traffic rules than less religious adolescents. Although there was only a slight difference in intention to comply with traffic rules between the religious and less religious adolescents (see Figure 7), the difference was not because of chance. Thus, we cannot take the difference lightly. One reason for this tendency might relate to psychological reactance, which occurs when individuals feels their behavior is imposed by external forces (Brehm, 1966; Miron & Brehm, 2006). Exposure to traffic rules among the religious students might have made them feel their choice to obey traffic rules as an external coercion, rendering them become a little reluctant to obey the traffic rules.

GENERAL DISCUSSION

The present paper assessed the effectiveness of the Police Goes to School program implemented by the Traffic Corps of the Police of the Republic of Indonesia in North Sumatra. The paper also suggested religiosity as a factor that authorities can use to promote safe traffic behaviors. Specifically, Part 1 showed how the program has successfully improved adolescents' attitudes toward traffic rules, increased the students' knowledge of traffic rules, and promoted safe traffic behaviors among adolescents from the actively implemented schools. Part 2 showed that although the involved police officers and teachers think they could have implemented the program more optimally, they expressed their satisfaction concerning the implementation of the program. Part 3 showed the potential utility of religiosity that authorities can use to promote safe traffic behaviors among adolescents in Indonesia.

Limitations and Suggestions for Future Research and Evaluation

Like any other research and evaluation, the present paper has its limitations. First, the measurements used in Part 1 were low in reliabilities. Future impact research and evaluation should pay attention to this issue by using validated and reliable measurements. Second, the present project only includes samples from two districts of North Sumatra. This may limit the generalizability of the research. This limitation might be easily avoided if the research and evaluation was scheduled at an earlier time of the year so that the research team have a sufficient timeline to conduct the research in other districts of North Sumatra.

Practical Implication

Based on the present research and evaluation, we can offer some practical suggestions to improve the implementation of the Police Goes to School program. First, the Police of the Republic of Indonesia should continue and expand the program to include more schools to be their active beneficiaries. Second, the program may become even more effective with well-structured schedule management. Third, that students' religiosity significantly predicts their intention to comply with traffic rules show the potential utility of religiosity to promote positive traffic and road behaviors. For example, in socializing traffic rules, police officers could work in tandem with local religious figures. While the police officers focus in socializing traffic rules, the religious figures focuses on providing a context for the students to relate compliance to the traffic rules with their religious beliefs. Fourth, considering that religious education is mandatory in the Indonesia, it may also be fruitful to integrate the socialization of traffic rules into the national religious education curriculum.

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