

A Study on the Use of Child Restraint System (CRS) in Indonesia and Vietnam

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ORIGINAL ARTICLE

Open Access

Article History:

Received
12 Feb 2020

Received in
revised form
15 May 2020

Accepted
17 May 2020

Available online
1 Sep 2020

Abstract – As technology develops in passenger vehicles, occupant safety is an issue that cannot be ignored, especially with regard to child occupants. Therefore, the child occupant safety should be given emphasis in the car assessment program to increase car safety levels and to primarily ensure children's safety during travels. To this end, ASEAN NCAP through its child occupant protocol recommends the use of a Child Restraint System (CRS). This study evaluates the level of vehicle users' awareness of the use of CRS (ownership and usage) in Indonesia and Vietnam. In this study, 336 Indonesian and 119 Vietnamese parents with children aged six years or below were asked to fill out the questionnaire both online and in written form. In Indonesia, the data showed that 70% of the participants owned CRS, while the rest either unrestrained or used the vehicle seat belts for their children. In Vietnam, 77% of the participants owned CRS. Moreover, there were approximately 26% respondents in Indonesia, and 9% in Vietnam who did not use the CRS. Parents did not use CRS for their children due to several reasons, namely children refusal and parents' preference to place children on their lap. In Indonesia, only 58% of children used proper CRS according to their age group, and 35% of the parents installed CRS properly per the user manuals. In addition, more than 50% of the 28 surveyed vehicles in Indonesia were fitted with ISOFIX standard CRS attachment. Furthermore, it appears that there was high enthusiasm among parents to use CRS based on their willingness to pay for it. However, initiatives such as social awareness campaigns or even regulation should be considered to increase CRS usage both in Indonesia and Vietnam.

Keywords: Passenger safety, child occupant, Child Restraint System (CRS)

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Journal homepage: www.jsaem.saemalaysia.org.my

1.0 INTRODUCTION

As the automobile industry grows, the death toll from road accidents also increases. According to WHO data in 2016, road traffic accidents were the eighth leading cause of death ahead of HIV/AIDS (WHO, 2018). It was also the second death cause after serious diseases. In one crash event, the victims can include the driver, passengers, other road users, and even pedestrians. Figure 1 shows the number of traffic fatalities from 2001 to 2018 in Indonesia, Vietnam, Europe, and the USA (Badan Pusat Statistik, 2020; European Commission, 2019; Jusuf et al., 2017; National Center for Statistics and Analysis, 2019; Santosa et al., 2017; Statista, 2019). One method to reduce mortality and injury due to road traffic accidents is the use of seat belts for adults and Child Restraint System (CRS) for a child passenger as mandated in various countries. It can be observed that such a traffic policy in the USA and Europe was able to curb the number of motor vehicle casualties. Even European countries have been able to reduce the number of fatalities. In contrast, road traffic deaths in Indonesia, which is yet to implement a CRS policy for a child passenger, continues to increase.

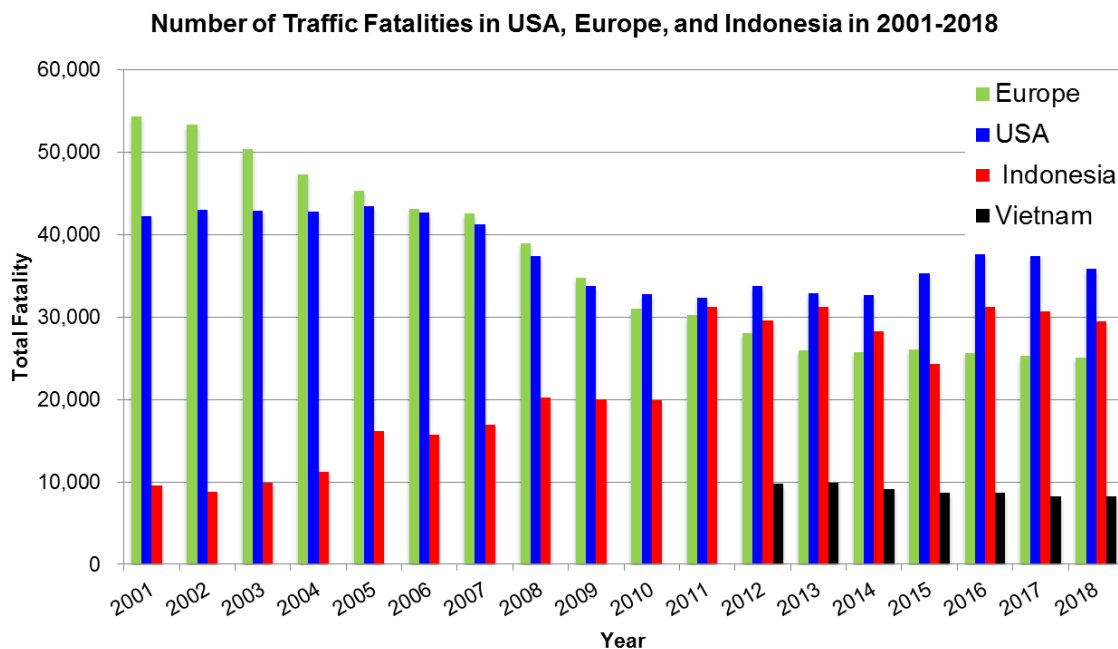


Figure 1: Traffic fatalities data in Indonesia, Vietnam, Europe, and USA (Badan Pusat Statistik, 2020; European Commission, 2019; Jusuf et al., 2017; National Center for Statistics and Analysis, 2019; Santosa et al., 2017; Statista, 2019)

Traffic accidents are the second leading cause of death for those aged 5 to 14 years and the leading cause of death for those aged 14 to 19 years (WHO, 2018). In Indonesia, itself, based on the data from Statistics Indonesia (Badan Pusat Statistik Indonesia) recorded 107,968 incidents with a total of 29,472 fatalities throughout 2018 (Badan Pusat Statistik, 2020). If classified by vehicle type, a total of 14% of the events involved the passenger car. What is shocking is that 5% of the victims were children under 9 years old. For the record, there is no regulation on the use of CRS for children in Indonesia.

Efforts to reduce the number of child victims by using CRS has become the focal point of several regions, for example, Europe. Listed in Euro NCAP in 2009, the safety of child passengers has become part of the assessment program for new cars sold in the continent (Euro

NCAP, 2018). Other countries or regions that have developed their CRS protocol include USA (NHTSA, 2017), United Kingdom (Global NCAP, 2017), Japan (NASVA, 2020), and Australia (ANCAP, 2018). In the assessment, a crash test is carried out using a dummy and the results are revealed to consumers. Through it, consumers can choose a car that supports the use of CRS to ensure children's safety while driving. Indonesia can also refer to such an assessment which is being carried out by ASEAN NCAP for the Southeast Asia region (ASEAN NCAP, 2018; Abu Kassim et al., 2019). In addition to the technical assessment, there are types and brands of child seats recommended for use according to a child's age and weight range. The list is summarized in the "Reference List" (ASEAN NCAP, 2018; Husain et al., 2020). However, consumer awareness in using CRS is also a factor that influences its effectiveness in ensuring children's safety while travelling in a car (Paiman et al., 2018).

To date, several studies have been conducted to investigate the effectiveness of CRS. Zaza et al. (2001) stated that CRS were significantly effective to protect children in traffic accidents. According to Starnes and Eigen (2002), proper use of CRS can reduce the likelihood of death by 71%. In studies conducted by Arbogast et al. (2004) and Elliot et al. (2006), the use of CRS was found to reduce the risk of injury by 71% to 82%. Zaloshnja et al. (2007) conducted a study comparing the use of CRS with seat belts in children aged 2 to 3 years. From the study, the use of CRS was found to reduce the risk of death by 28%.

Furthermore, proper installation of CRS can dramatically influence the effectiveness of child occupant protection. Several studies have investigated car drivers' level of knowledge of the use of CRS. The National Highway Traffic Safety Administration (NHTSA) in 2015 studied the use of CRS and booster seats for passengers aged 8 years and below. The study involved as many as 4167 vehicles. The results of the study stated that 94% of children used CRS or booster seats, 4% used seat belts, whereas 2% were unrestrained (NHTSA, 2017).

Moreover, there was incorrect installation in 46% of the cases, which could reduce the performance of CRS (Greenwell, 2015). In Northern Cyprus, similar studies were also carried out. The study involved 377 participants (Dalkan et al., 2018). A total of 30% of the participants with children less than 2 years old did not use CRS since birth, and 17.4% knew that children 0 to 2 years old should use rear-facing seats. A total of 80% of the participants with 2 to 6 year-old children knew the use of forward-facing seats, and 38.3% of the participants with children aged 6 to 12 years knew that their children should use booster-seats (Dalkan et al., 2018). In Southeast Asia, Paiman et al. (2018) conducted a study of the misuse of CRS in Malaysia. There were 11.6% of children using rear-facing seats, 4.5% of children using booster seats, 7.9% of children using seat belt, while 56.9% of children were unrestrained. The main reason for the parent to unrestrained their children was because the child had "grown-up" or the child refused to sit in CRS. Also, 77.4% of rear-facing seats and 84.3% of forward-facing seats were properly used for children according to their range. Based on those studies, it is therefore crucial to understand parents' awareness of using CRS.

Looking at the previous research, there is a lack of studies of CRS usage in ASEAN countries. Such a study is critical to determine the correlation between CRS usage and child passenger safety. In this study, three survey activities were conducted involving three different target participants. First, the data of CRS usage in Indonesia were collected from a survey of parents with children aged 6 years or below. Second, a survey to obtain data of CRS installation in the vehicle. Third, a market survey among baby houses or outlets selling baby products to find out the prices of CRS in Indonesia. Specifically, the objectives of this study are (i) to find out parents' awareness of CRS usage in Indonesia and Vietnam, (ii) to investigate CRS

installation in the vehicle in Indonesia, and (iii) to compare the market price of CRS with parents' willingness to pay for their children's safety. Moreover, the results of this study could provide feedback and recommendations for ASEAN NCAP to improve the awareness of CRS usage in the Southeast Asia region.

2.0 METHODOLOGY

2.1 Participants

In this study, data of participants were collected by filling a form either online or offline (fill out the form directly). Participants of this study included parents with children aged six years or below. The participants from Indonesia were chosen randomly involving parents in several major cities in Indonesia, namely Jakarta, Bandung, Surabaya, and Yogyakarta. To widen the distribution of questionnaire, the research team collaborated with a non-profit organization Safe Kids community. The data included 352 parents with 463 children. Meanwhile, six car dealers and two baby store owners were interviewed to obtain data of CRS installation in the vehicle model and the market price for CRS in Indonesia. Meanwhile, in Vietnam, the study was able to collect data of 50 participants through interviews and another 91 participants using the online form.

2.2 Procedures

In this study, data of the participants were collected through filling an online or offline form (using pen and paper). The online form utilised a free survey platform, namely Google Forms. The questionnaire was made widely known on social media and during school visits. This method was quite effective to reach out to parents in different cities. The method was also considered appropriate as most parents were active on social media. However, such a method could only gather data in big cities whereas in smaller towns, the elders were less familiar with mobile devices. In the interview session, parents were asked to fill out the form, and after that, they were informed about the safety aspects of CRS use.

Meanwhile, in respect to CRS attachment and CRS market price, data from six car dealers and two baby house owners in Bandung were gathered. Most car dealers in Bandung were cooperative to provide the interior view of the cars for sale. The customer service even informed us of the disadvantages and advantages of their vehicle in regard to child occupant safety.

2.3 Survey Materials

Before the survey team collected the data of participants, the team members were briefed on form materials including CRS types, target parents, CRS attachment type and rear/front facing position, and CRS installation. The research team produced the questionnaire based on previous studies.

Also, some important questions regarding the typical demographics in Indonesia were added. The survey materials on CRS utilization included:

- Demographics (age, place of residence, gender, level of education, monthly income, vehicle ownership) of parents and children
- Type of the vehicle, brand, production year, and airbag availability

- Number of children, CRS type for each child
- Child position and installation of CRS based on user manual

Furthermore, for the survey regarding CRS attachment to be distributed to the car dealer, the materials included car model, production year, attachment type, as well as the availability of warning labels for front child passenger and airbag switch. For the survey form regarding CRS market price, the materials only included CRS type, CRS model and price.

3.0 RESULTS AND DISCUSSION

3.1 Child Restraint System Attachment

CRS attachment was surveyed for 28 car models from six car dealers in Indonesia. Appendix I shows the result of the observation of the vehicle interior. 21 cars had a warning label of airbag launch in the front seat for a child passenger. Some of them displayed it in the form of a symbol, while others had a written instruction to avoid front placement of a child passenger. At least 15 cars among the 28 cars surveyed had an ISOFIX or top tether anchor. It was found that half of the vehicles in the market did not have an attachment for CRS. This would complicate the parents to use CRS. However, this survey was not conducted in Vietnam. The study assumed that the trend in Vietnam could be similar to Indonesia due to the similar regulation that CRS was not a requirement during travelling.

3.2 Demographics and Child Restraint System Usage

The survey was done in Indonesia with 352 participating parents to find out the habits of 463 children in using child seats during their trips. The demographics data of the participants shall be discussed. Parents with a toddler under six years were interviewed. 94.3% of them were in the age group from 25 to 40 years, 2.6% were aged 18-24 years, and 3.1% were above 40 years. From the 352 participants, 81.8% had their own vehicle. Most of the parents, approximately 68.5%, had a bachelor’s degree, the rest (6% and 26%) had high school certificate and graduate degree, respectively. Table 1 shows the demographics of participants. The higher level of education among participants could be caused by the questionnaire being publicised using social media by the research team member.

Table 1: Demographics data of 352 participants in Indonesia

Parameter	Group	Number (%)
Participant’s age (years old)	18 – 25	9 (2.6)
	25 – 40	332 (94.3)
	> 40	11 (3.1)
Gender	Male	56 (15.9)
	Female	296 (84.1)
Education level	Junior high school	0 (0.0)
	Senior high school	20 (5.7)
	Diploma/ undergraduate	241 (68.5)
	Graduate	91 (25.9)
Monthly income (Rp.)	< 5 million	116 (33.0)
	5 to 10 million	109 (31.0)
	>10 million	127 (36.1)
Number of child (under 6 years old)	1	252 (71.6)
	2	89 (25.3)

	3 or more	11 (3.1)
Vehicle ownership	Yes	288 (81.8)
	No	64 (18.2)

Furthermore, the parents also stated their monthly household income and education level (Figure 2). This study divided the household income levels into three groups, namely Group 1 earning below 5 million Indonesian Rupiah (Rp.), Group 2 earning between Rp. 5 to 10 million and Group 3 earning above Rp. 10 million. The survey result shows that Group 1, 2 and 3 respectively comprised 33%, 31%, and 36.1% of respondents.

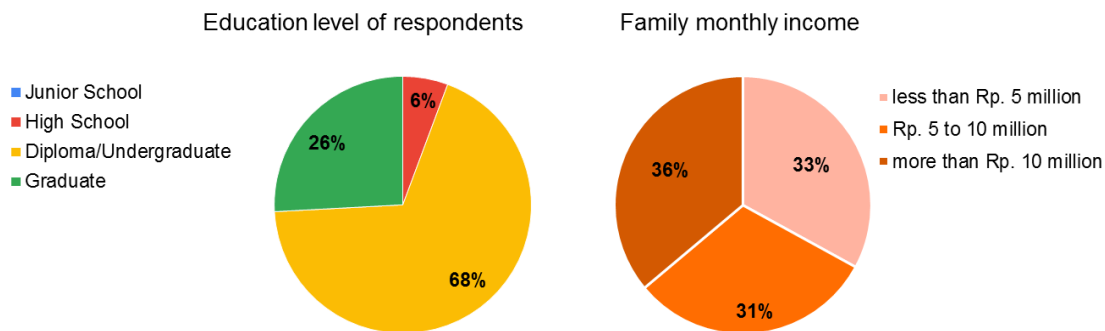


Figure 2: Education level and monthly income profile of Indonesian participants

Meanwhile, in Vietnam, 141 parents were surveyed to find out the trend of CRS usage. Table 2 shows the demographics of 141 Vietnamese participants. It can be observed that approximately 73% of the participants were diploma/degree holders. Meanwhile, the percentage of junior school leavers, high school leavers, and graduate-level was 0.7%, 13.3%, and 13.3%, respectively.

Table 2: Demographics data of 141 participants in Vietnam

Parameter	Group	Number (%)
Participant's age (years old)	18 – 25	12 (8.5)
	25 – 40	106 (75.2)
	> 40	23 (16.3)
Gender	Male	73 (51.8)
	Female	68 (48.2)
Education level	Junior high school	1 (0.7)
	Senior high school	18 (13.3)
	Diploma/ undergraduate	98 (72.6)
	Graduate	18 (13.3)
Monthly income (đồng)	< 5 million	4 (2.8)
	5 to 10 million	13 (9.2)
	>10 million	124 (87.9)
Number of child (under 6 years old)	1	129 (91.5)
	2	89 (8.5)
	3 or more	0 (0.0)
	Vehicle ownership	Yes
	No	22 (15.6)

Another factor assumed to affect the trend of CRS usage was family monthly income. Among the 141 Vietnamese participants, approximately 88% had an income of over 10 million

đồng, 9% earned 5 to 10 million đồng, and the rest earned less than 5 million đồng. Moreover, Figure 3 shows the comparison of education level and monthly income of the participants.

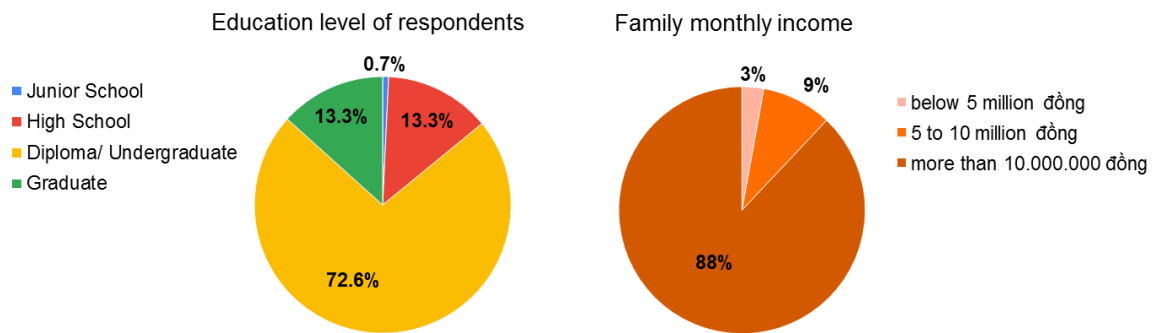


Figure 3: Education level and monthly income profile of Vietnamese participant

Table 3 shows the child seat use of 463 children surveyed. Based on the safety protocol, children under six years must use CRS during their trips. In total, 70.1% of the children used CRS. This number was quite significant considering that in Indonesia, the use of CRS was not yet a safety regulation. On the other hand, there were still children who only used the seat belt and were not restrained at all, with 4.1% and 25.8%, respectively. Moreover, about 58% used proper CRS based on their age group. Of course for the rest, this would increase the risk of injury and death to a child passenger if an accident occurs. This number was also similar to the findings in the USA, as 44% child passengers misused the CRS type based on their age group (Greenwell, 2015).

Table 3: CRS use and unrestraint number of 463 children in Indonesia

Child's Age	CRS Type					Unrestraint
	Rear Facing	Forward Facing	High-back Booster	Booster Cushion	Seat Belt	
0.0 – 1.5	42	55	1	6	1	27
1.5 – 2.0	4	19	1	0	1	10
2.0 – 3.0	3	42	3	1	2	15
3.0 – 4.0	5	37	12	1	4	17
4.0 – 5.0	3	12	3	6	6	23
5.0 – 6.0	1	6	7	2	2	8

However, this significant number of CRS use must be reviewed to investigate the suitability of the CRS type based on age classification. There were about 31.5% of children aged under 1.5 years who used the rear-facing CRS, while the majority used the forward-facing CRS. In the protocol, children of this age range should use a rear-facing CRS. This finding was likely due to parents not knowing to choose the right CRS according to the child's age.

In addition, other factors also affected the safety level of child passengers when travelling in a car, namely the suitability of the CRS installation and its positioning in the vehicle. As many as 19.2% of the participants installed CRS in the front passenger seat. This could have fatal consequences for child passengers. This would be caused by the airbag deploying that produced an opposite thrust to the forward motion of the child passenger during the accident. The impact could cause serious injury, hence, children under six years old should

be positioned in the second row or in the first row without an active airbag (Greenwell, 2015). Moreover, the CRS required careful installing and must follow the manuals. The installation of loose webbing would not hold a child passenger effectively. In fact, 6.1% of the participants did not pay attention to the installation according to the manuals, and 23% of the participants were not aware of the manuals. The lack of awareness could be addressed by increasing intensive instruction and guidance by CRS manufacturers with technical demonstration of proper CRS installation.

Table 4 shows the data of unrestrained child passengers. Among the participants who owned a car, 25.6% of the children did not have CRS, while 3.9% used the seat belt for children while driving. There were several reasons put forward by participants following the choices provided in the questionnaire. However, some participants who owned a vehicle and CRS still did not use the CRS while driving. About 33.1% stated that their children refused to use CRS, and 21.7% of the participants chose to put children on the parent’s lap. Children should be trained to use CRS since early childhood, hence, raising parents’ awareness of this matter was very important.

Table 4: The number of CRS front row use and manual book following

	Yes	No	Do not know
CRS in the front seat	50 (19.2%)	211 (80.8%)	-
Read CRS manual book	185 (70.9%)	16 (6.1%)	60 (23%)

In Vietnam, it was found that 3.8% did not use CRS, and 8.5% only used a seat belt to restrain their child. On the other hand, approximately 78.5% used a CRS. This was also a significant number due to the similarity with Indonesia, where Vietnam did not obligate the use of CRS for a child passenger. It could be due to the participants’ level of education and family income that CRS use was quite high. Table 5 shows the detailed data of CRS type and the number of unrestrained children.

Table 5: CRS use and unrestraint number of 130 children in Vietnam

Child’s Age	CRS Type					Unrestraint
	Rear Facing	Forward Facing	High-back Booster	Booster Cushion	Seat Belt	
0.0 – 1.5	2	1	3	0	1	0
1.5 – 2.0	2	1	1	0	0	0
2.0 – 3.0	2	2	3	0	0	0
3.0 – 4.0	2	7	5	5	0	4
4.0 – 5.0	4	13	16	5	1	4
5.0 – 6.0	8	14	16	2	3	3

Furthermore, Figure 4 reveals several reasons why the parents unrestrained their child while travelling. In Indonesia, the reasons were varied. The most popular reason was that the child felt uncomfortable and refused to sit in CRS. It was followed by placing the child on the passenger’s lap, or parents believed that buying a CRS was a waste of money. Meanwhile, in Vietnam, the main reason was they were not informed of the importance of using a CRS for their child. Also, similar to the finding in Indonesia, Vietnamese parents chose to put the child on their lap.

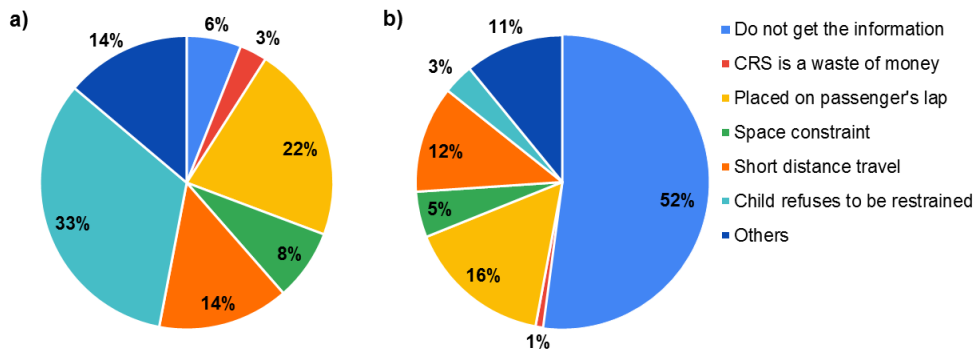


Figure 4: Participants' reason for unrestrained children during their trip: a) in Indonesia and b) in Vietnam

3.3 Awareness of Child Restraint System Usage

In this section, the awareness of using CRS for child passengers were evaluated. Financial security certainly affected a person to ensure family safety while travelling in a car. As shown in Figure 2, the distribution of participants' family income tended to be evenly distributed. In the following graph, Figure 5, the level of willingness to pay for CRS is classified into 4 price ranges.

For Groups 1 and 2, the result showed that they were willing to pay between Rp. 0.5 to 1 million to get a CRS, while Group 3 mostly did not mind to buy CRS from Rp. 1 to 2 million. A total of 48% of Group 1 would not mind to buy at a price of Rp. 0.5 to 1 million, and 40% were willing to pay about Rp. 1 to 2 million. In Group 2, 47% were willing to pay about Rp. 0.5 to 1 million and 31% for price range of Rp. 1 to 2 million. In contrast to Groups 1 and 2, a total of 48% of Group 3 showed willingness to pay for CRS at the price of Rp. 1 to 2 million. Moreover, 14% of them, which was the most percentage among the groups, would not mind spending over Rp. 3 million to keep their children safe while driving. Figure 5 shows more than half the participants from each group could afford to buy a CRS for their child at the price of Rp.1 million.

In Vietnam, the result also shows a similar trend where more than half of the participants were willing to pay more than 1 million đồng to buy a CRS for their child. Figure 6 shows the data of the willingness to pay among Vietnamese participants. Similar categories were introduced here. The group categories were based on the family monthly income, as shown in Figure 3. Group 1 did not answer this question, perhaps because they did not even think about buying a CRS that (in their opinion) would waste money. An assumption was made that Group 1 of Indonesian participants had the similar purchasing power as Group 2 of Vietnamese participants, while Group 2 of Indonesian participants was similar with Group 3 of Vietnamese participants. This was due to the difference in currency value. When the study was conducted, Rp. 1 million was equal to 1.52 million đồng.

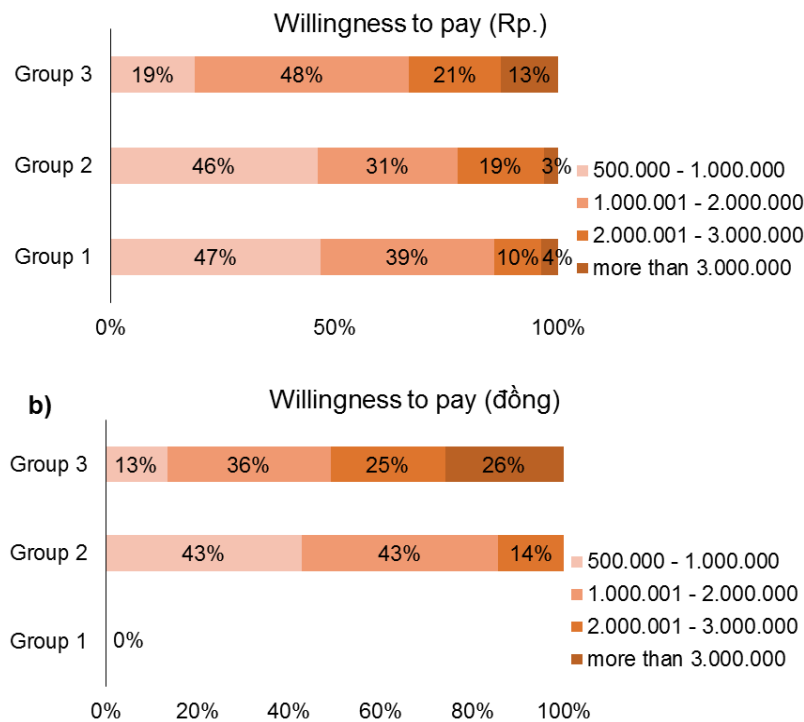


Figure 5: CRS willingness to pay: a) Indonesian and b) Vietnamese participants

In addition, Table 6 presents the market price of the CRS Reference List according to ASEAN NCAP for 2021. About 6 out of 9 CRS type recommended by ASEAN NCAP are available in Indonesia. The price range is quite affordable, ranging from Rp. 1.6 to 3.5 million or about USD 110 to 125. However, a buyer can also use other brands that can be either cheaper or costlier. Table 7 presents the market price of CRS in Indonesia based on real market survey. Table 8 presents the brand market price of CRS in Indonesia as sold online (Tokopedia, 2020).

Table 6: CRS Reference List of ASEAN NCAP 2021 (ASEAN NCAP, 2018)

Category	CRS	Direction	Interface	Availability in Indonesia	Price Range
Group 0+	Peg-Perego Primo Viaggio SL	Rwd	B_ _ _	√	Rp. 1,660,000 - Rp. 2,050,000
Group 0+/I/II	Joie Every Stage	Fwd	B_ _ _	√	Rp. 2,700,000 - Rp. 3,140,000
Group 0+/I/II	Joie Every Stage	Rwd	B_ _ _	√	Rp. 2,225,000 - Rp. 2,795,000
Group II/III	Combi Buon Junior Air	Fwd	B_ _ _	√	Rp. 2,100,000 - Rp. 3,300,000
Group 0+	Maxi Cosi Cabriofix + Family Fix	Rwd	_ I L _	√	Rp. 1,700,000 - Rp. 2,250,000
Group 0+/I	Joie Every Stage	Fwd	_ I _ S	-	-
Group 0+/I	Joie Every Stage	Rwd	_ I _ S	√	Rp. 3,000,000 - Rp. 3,400,000
Group I	Maxi Cosi Titan Pro	Fwd	_ I _ S	-	-
Group II/III	MeinKind Sonata	Fwd	BI _ _	-	-

*Rwd – Rearward, Fwd – Forward, HB – High Booster, B – Belt, I – ISOFIX, L – Support Leg, S – Strap/ Top tether

Table 7: CRS price market (shop survey) in Indonesia

No	Brand	Model	Price	Attachment			
				Tether	ISOFIX Anchor	Support Leg	Belted
1	Chicco Eletta	Fwd	Rp. 3,942,000	-	-	-	√
2	Chicco Eletta	Rwd	Rp. 3,942,000	√	√	-	-
3	Chicco AutoFix Fast	Rwd	Rp. 2,887,500	-	√	√	-
4	Carseat Joei Tilt	Fwd, HB	Rp. 1,479,500	-	√	√	-
5	Kiddy Cruiser Fix Pro	Fwd	Rp. 4,903,000	-	√	-	-
6	Carseat Joei Tilt	Fwd, Rwd	Rp. 1,529,500	-	-	-	√
7	Combi Wego Long Series	Fwd, Rwd	Rp. 3,850,000	-	-	-	√
8	L'abelle TJ806	Fwd, Rwd	Rp. 1,469,000	-	-	-	√
9	Evenflo	Fwd, Rwd	Rp. 1,588,500	-	-	-	√
10	Babydoes	Rwd	Rp. 1,062,500	-	-	-	√
11	Babydoes	Fwd, Rwd	Rp. 943,500	-	-	-	√
12	Babydoes	Fwd, Rwd	Rp. 887,000	-	-	-	√
13	Emoji by Coco Latte	Fwd	Rp. 1,941,000	√	√	-	√
14	Emoji by Coco Latte	Rwd	Rp. 1,941,000	-	-	-	√

Table 8: CRS price market (online) in Indonesia (Tokopedia, 2020)

No	CRS Brand in Indonesia	Price Range
1	Graco	Rp. 1.700.000 - 4.950.000
2	Elle	Rp. 450.000 - 1.588.900
3	Joie	Rp. 600.000 - 4.300.000
4	Cocolatte	Rp. 675.000 - 1.880.000
5	Pliko	Rp. 200.000 - 1.220.000
6	Babydoes	Rp. 429.000 - 1.487.500
7	Chicco	Rp. 1.250.000 - 5.300.000
8	Aprica	Rp. 1.575.000 - 8.000.000

Based on the result, it is shown that the enthusiasm of Indonesian and Vietnamese consumers to improve both driving and child passenger safety was quite high. In order to encourage this trend, the government and the manufacturer must provide the support needed. The government and vehicle manufacturers could introduce a regulation to facilitate the use of CRS for child passengers. However, this may be quite difficult judging by the demographic distribution throughout Indonesia and Vietnam. So, it would be more feasible and essential if the initial step involves creating awareness of CRS usage. In this campaign program, the government and manufacturers can also provide training in order to install CRS properly.

Some other strategies to increase parental awareness include introducing new vehicle purchase programs with CRS bonuses, so that the CRS bought is suitable with the vehicle attachment. The quality of the CRS must also meet the standards set by ASEAN NCAP. In addition, with the cooperation between the government and manufacturers, it may be possible

to regulate the market price of CRS, so that every parent that can afford to buy a vehicle, can also afford to use a CRS.

4.0 CONCLUSION

This study of the vehicle CRS features and parents' awareness in Indonesia and Vietnam in using CRS for their children has been conducted using both online survey and face-to-face interviews. 15 out of the total 28 vehicles surveyed were equipped with ISOFIX CRS features. The study also collected 463 data of child passengers from 352 parents in Indonesia, and 130 child passengers' data from 119 parents in Vietnam. Participants' demographics were ascertained to fulfil the related rationale of the study. Here are some key points of the survey conducted:

- Out of the surveyed participants, CRS ownership level was 70% and 79% in Indonesia and Vietnam, respectively.
- The participants in this study were mostly degree holders (or higher) who could be more educated to keep their child safe. Moreover, the study also presented the data from more than 60% of those in Group 2 and Group 3 in terms of household income for both countries, which earned more than Rp. 5 million or 5 million đồng. This income could be considered as a factor for the participants to buy a CRS.
- There were similarities between Indonesian and Vietnamese participants in the aspect of willingness to pay, whereby for the same income groups, more than 50% of the respondents were willing to pay a CRS at the price range of more than 70 USD.
- Parents in Indonesia also could find a CRS recommended by ASEAN NCAP at an affordable price.
- The high number of awareness of using CRS in Indonesia and Vietnam could be increased with the support of the authorities through regulations and campaigns. The campaigns should contain the material to select a proper CRS based on the age range, proper installation, and other important information. The campaign can be targeted primarily at parents who own a vehicle and have a child under six years old. However, the campaign can also be intended for those who do not own a vehicle or a young couple as future car buyers and for parenting education.

ACKNOWLEDGEMENTS

This research was fully supported by ASEAN NCAP through the ANCHOR II Program entitled "Child Restraint Analysis for Occupant Protection in the ASEAN Market". Thanks are also due to our lab assistants at Lightweight Structures Laboratory, Faculty of Mechanical and Aerospace Engineering ITB for assisting in the interviews and online surveys.

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Appendix I. Surveyed Vehicles' Profile

No.	Category	Brand	Model	Production Year	Attachment Type			
					Tether Anchor	ISOFIX Anchor	Warning Label	Airbag Switch
1	SUV	Isuzu	M-UX	2019	√	-	√	-
2	SUV	Isuzu	Panther Grand Touring	2019	-	-	-	-
3	MPV	Daihatsu	Xenia	2019	-	-	√	-
4	Small Hatchback	Daihatsu	Ayla (type D)	2019	-	-	-	-
5	MPV	Daihatsu	Sigra (type D)	2019	-	-	-	-
6	SUV	Daihatsu	Terios (type X)	2019	-	-	√	-
7	MPV	Daihatsu	Gran Max D (1300 cc)	2019	-	-	-	-
8	MPV	Daihatsu	Luxio	2019	-	-	-	-
9	Small Hatchback	Daihatsu	Sirion (CBU - Malaysia)	2019	√	√	√	√
10	Mid-size	Toyota	Fortuner	2019	√	√	√	√
11	SUV	Toyota	Rush	2019	√	√	√	-
12	MPV	Toyota	Avanza	2019	√	√	√	-
13	MPV	Nissan	Livina	2019	√	-	√	-
14	SUV	Nissan	Juke	2019	-	-	√	-
15	MPV	Nissan	Serena	2019	√	-	√	-
16	SUV	Nissan	Terra	2019	-	√	√	-
17	Sub-compact	Nissan	Go Panca	2019	-	-	-	-
18	Hatchback	Nissan	All new GO	2019	-	-	-	-
19	SUV	Honda	HR-V	2019	√	√	√	-
20	Hatchback	Honda	Jazz	2019	√	√	√	-
21	Sub-compact	Honda	Brio	2019	-	-	√	-
22	MPV	Honda	BR-V	2019	-	√	√	-
23	SUV	Honda	CR-V	2019	√	√	√	-
24	MPV	Honda	Mobilio	2019	√	√	√	-
25	SUV	Mazda	CX-3	2019	√	√	√	-
26	SUV	Mazda	CX-5	2019	√	√	√	-
27	SUV	Mazda	CX-5	2019	√	√	√	-
28	Mid-size	Mazda	MX-5	2019	√	√	√	-
Total					15	14	21	2