Executive Summary February 2024:

Assessing Compliance with the Child Safety in Motor Vehicles Act in the Republic of the Philippines

Bloomberg Philanthropies Initiative for Global Road Safety

REPUBLIC OF THE PHILIPPINES

JOHNS HOPKINS
BLOOMBERG SCHOOL
of PUBLIC HEALTH

International
Injury Research Unit

Key Takeaways

Key Findings

1. The Child Safety in Motor Vehicles (CSMV) Act has not been fully implemented yet; subsequently, there is no enforcement of the law and a lack of incentive for the public to comply.
2. Mistrust in the government's intentions, passage of a law without public support, unaffordability of child restraints, limited knowledge of child restraints, and cultural norms have hindered the use of child restraint systems (CRS) among the public.
3. Child restraint use was almost non-existent; 62% of children observed were not in any form of restraint (child seat or seat-belt), 30% were sitting on a passenger's lap, 6% were in a seat-belt, and only 2% were in a car seat.
4. Traveling in a passenger's lap was almost five times more common among children aged under five (62%) compared to children aged between 5-12 years old (13%).
5. Seat-belt use was ten times higher among children seated in the front seat (30%) compared to children seated in the rear seat (3%).
6. The number of CRS observed at physical stores was lower (N=91) compared to CRS being sold online (N=4,334) at the most popular e-commerce sites in Philippines.
7. The mean prices of CRS sold on the online market were remarkably higher (105 USD – 482 USD) than the price in physical stores (7 USD – 260 USD).
8. All the CRS observed in physical stores had product standard indicated by means of a license, certificate, or sticker, whereas only 10% of CRS sold online had product standards indicated
9. The majority (71%) of CRS sold online did not specify dates of manufacture and expiry, while the majority of the CRS observed in physical stores had dates of manufacture (80%) and dates of expiry (31%) indicated.
10. Nearly all the CRS observed in physical stores had minimum and maximum age and weight limits indicated, however maximum height limits were less commonly specified among the CRS observed across both types of stores (physical: minimum and maximum height limit = 20%; online: minimum height limit = 1%, maximum height limit = 3%).

Key Recommendations

Government and Law Enforcement

1. Increase awareness of the Child Safety in Motor Vehicles Act among law enforcement agencies and the public, by:
    a. Training law enforcement on the CSMV Act and how to implement it,
    b. Liaising with the Land Transportation Office (LTO) to promote awareness about child restraints among vehicle-owners,
    c. Coordinating mass media campaigns for the public which advocate for child restraint use, promote the benefits of child restraint use, and highlight the dangers of seating children in the front seat, in a passenger's lap, or without a child restraint.
2. Enact full implementation of the Child Safety in Motor Vehicles Act after:
    a. Garnering public support and awareness through media campaigns,
    b. Providing sufficient notice to the public to prepare for implementation,
    c. Improving affordability of child restraints through financial incentives such as discounts, voucher schemes, or tax exemptions.
3. Upon full implementation of the CSMV Act, coordinate awareness efforts with enhanced enforcement of:
    a. Child restraint use among children aged 12 years or younger,
    b. Seat-belt use among children who meet the legal height requirements,
    c. Banning children aged 12 years or younger from sitting in the front seat if they do not meet the legal height requirements.

Department of Trade and Industry

1. Ensure availability of CRS products across physical and online stores all over Philippines by increasing local production and importing from abroad.
2. Set equitable prices for CRS sold across physical and online stores, and official and unofficial vendors.
3. The Bureau of Philippine Standards must implement adequate quality control regulations for CRS sold in the online market, especially those sold by unofficial vendors in the online market.

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The Johns Hopkins International Injury Research Unit (JH-IIRU), Johns Hopkins University Bloomberg School of Public Health, is responsible for monitoring and evaluating the second phase of the Bloomberg Initiative for Global Road Safety (BIGRS) project implemented in 27 cities across 15 low- and middle-income countries (LMIC). BIGRS is a 5-year (2020–2025) project implemented by a consortium of partners with an overall goal to reduce the burden of road traffic injuries and fatalities in selected LMICs. BIGRS collects observational data related to four risk factors that account for the majority of road traffic morbidity and mortality, one which is a lack of child restraints use. One of the mandates of the current phase of BIGRS is to advocate for national road safety legislation, in addition to enhancing data collection and surveillance, changing road user behavior, improving road infrastructure and upgrading vehicle safety.

In 2019, the Government of the Philippines passed Republic Act No. 11229, the Child Safety in Motor Vehicles (CSMV) Act, which prohibits children under 12 from sitting in the front seat of motor vehicles and mandates use of age, weight, and height appropriate child restraint systems (CRS) for all children under 150 cm or 59 inches in height (Republic Act 11229, 2018). The President of the Republic of Philippines signed the mandate in February 2019 however due to the COVID-19 pandemic, implementation of the act was deferred indefinitely in February 2021 (Cervantes, 2021).

JH-IIRU partnered with the Institute of Health Policy and Development Studies (IHPDS), University of the Philippines Manila to assess compliance with the CSMV Act and study CRS use pre-implementation of the CSMV Act in the Philippines. This study focused on understanding 1) the prevalence of CRS use among children traveling in covered motor vehicles, 2) the accessibility, affordability and quality of child restraints sold in the Philippines, 3) consumer perspectives about the CSMV Act and CRS use, and 4) the design and implementation of the CSMV Act. This study will help BIGRS partners understand more about one country's experience in working to protect children from road traffic injuries. This technical report summarizes the results from this multi-pronged research study, including recommendations on how to improve CRS use among caregivers in the Philippines.

Child observations: this sub-study was conducted to assess compliance with sections 4 and 5 of the CSMV Act, which 1) mandate the use of CRS in all covered, moving motor vehicles, and 2) prohibits children aged 12 years or below from sitting in the front seat of a moving vehicle. Between August to October 2022, 18,273 child observations were conducted across 63 sites in Manila, Pasay, and Quezon City. Sites observed includes parks, restaurants, places of worship, shopping malls, schools, and hospitals, where children are most likely to frequent.

Child restraint use was poor across all cities; 62% were not in a child seat or seat-belt, 30% were sitting on a passenger's lap, 6% were in a seat-belt, and 2% were in a child seat. The use of seat-belts was higher among children seated in the front seat compared to the rear seat; 30% versus 3%, respectively. Across age groups, it was more common for children aged under five (62%) to be seated on a passenger's lap compared to children aged 5-12 years old (13%).

Market observations: this sub-study was conducted to evaluate the affordability, accessibility and quality of

child restraints sold in the Philippines. CRS were observed in (a) physical stores in Manila, Pasay, and Quezon City and (b) the most popular e-commerce sites in the Philippines. The number of CRS observed in physical stores was limited (N=91) however a large number of CRS were being sold online (N=4,334). The mean prices of CRS sold in physical stores ranged from 7 USD to 260 USD, while those sold online were remarkably higher (105 USD to 482 USD). The majority (90%) of the CRS were being sold online by unofficial vendors, at prices lower than those offered by official vendors (mean price (official): 1,359 USD; mean price (unofficial): 122 USD).

The demand for new CRS was higher compared to secondhand ones, when comparing number of units sold (31,953 vs. 21), although prices of new CRS in online stores were higher (mean price: 285 USD) compared to secondhand ones (mean price: 86 USD). All the CRS observed in physical stores had product standards[1] indicated, while only 10% of CRS observed online had product standards. While 80% of all the CRS observed in physical stores had dates of manufacture, and 31% mentioned dates of expiry, majority (71%) of the CRS observed online did not specify dates of manufacture and expiry. While nearly all of the CRS observed in physical stores had minimum and maximum age and weight limits, 61% of the CRS sold in online stores specified minimum age limit, 66% mentioned maximum age limits, 38% mentioned minimum weight limits and 46% mentioned maximum weight limits. Minimum and maximum height limits were less commonly specified among the CRS observed across both types of stores (physical, minimum and maximum height limit: 20%; online, minimum height limit: 1%, maximum height limit: 3%).

Focus group discussions: this sub-study was conducted to understand perceptions surrounding CRS, including accessibility, affordability, and quality and awareness about the CSMV Act, among caregivers and drivers of children 12 years old or younger who use cars as a means of transport in Pasay, Manila, and Quezon City. Between July and August 2022, six focus group discussions were conducted with 54 caregivers. Despite awareness of the law, caregivers were unmotivated and unable to use child restraint systems due to lack of implementation of the law and unaffordability of CRS. Child restraint systems were identified as a token of a family belonging to a higher socio-economic status, and caregivers suggested that the government improve affordability of CRS and increase awareness of the CSMV Act and CRS use by highlighting the importance of CRS use and promoting CRS use among caregivers.

Policy implementation and case studies: this sub-study was conducted to understand how the CSMV Act was designed and its implementation. Between April and July 2021, 27 key informant interviews (KIIs) were conducted with multi-sectoral stakeholders involved in the policy design and policy implementation of the CSMV Act. The policy design and implementation case studies demonstrated that the law was passed without public support during a financially-sensitive time (during the COVID-19 pandemic when restrictions prevented children from leaving the house and families were experiencing heightened financial difficulties). Despite CRS and road safety advocate's efforts to frame the CRS mandate as a public health issue which was enacted to protect parents from the high costs of child road safety injuries; the cultural belief that a mother's arms is safer than a CRS, and the mistrust of the public in the government's motive in enacting this law for the good of its citizens, public support for the law was poor.

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I. Introduction

Globally, 1.35 million deaths each year are caused by road traffic crashes. Road traffic injuries (RTIs) are the eighth leading cause of global deaths and years of life lost, and this burden is projected to increase. This burden falls especially hard on low and middle-income countries, which have road traffic death rates that are three times as high as the developed world. More than 90% of the world's road traffic deaths occur in low and middle-income countries, despite having only about half of the world's registered vehicles (WHO, 2018).

The Republic of the Philippines is a lower-middle income country (LMIC) located within the Western Pacific Region. In 2016, 12,690 deaths were attributable to road traffic crashes in the Philippines (WHO, 2018). The Global Burden of Disease study in 2019 recorded about 1,070 road traffic deaths among children 0–14 years of age in the Philippines. About 89,529 children of the same age group suffered from road traffic injury related morbidity in 2019, with a Disability-Adjusted Life Years rate of 252 per 100,000 (GBD, 2019).

According to the World Health Organization's Global Status Report from 2018, the use of a child restraint system (CRS) can reduce deaths by 60% (WHO, 2018). Similarly, the National Highway Traffic Safety Administration estimates that CRS are 71% effective in reducing the likelihood of death of children in motor vehicle crashes when installed correctly (Schieber 2000; Ma 2012). For older children (8–12 years of age), booster seat use has been shown to reduce injury by 19% compared to seat-belts alone (WHO, 2018).

To tackle the huge burden of deaths and morbidities from road traffic injuries, the Philippines developed a Road Safety Action Plan 2017–2022 to achieve zero road traffic deaths, and a reduction of at least 20% by 2022 (Land Transportation Office, 2019). One of the pillars of the Road Safety Action Plan focused on reducing the burden of road-traffic injuries among children in the Philippines. In February 2019, the Government of the Philippines passed Republic Act No. 11229, the Child Safety in Motor Vehicles (CSMV) Act to address this goal (Rivera 2018; Murphy 2022). The CSMV Act prohibits children under 12 from sitting in the front seat of motor vehicles and mandates use of age, weight, and height appropriate CRS for all children under 150 cm or 59 inches in height (Republic Act 11229, 2018).

The President of the Republic of Philippines signed the mandate in February 2019 however, the implementation of the act was later deferred indefinitely in February 2021, since the President acknowledged that this act would put additional pressure on people's expenses amid the COVID-19 pandemic (Cervantes, 2021).

The Johns Hopkins International Injury Research Unit (JH-IIRU), Johns Hopkins University Bloomberg School of Public Health partnered with local collaborators from the Institute of Health Policy and Development Studies (IHPDS), University of the Philippines Manila, to conduct a multi-pronged research study aimed at assessing compliance with CRS use and served as a baseline study describing the pre-implementation status of CRS use in the Philippines. This study focused on understanding 1) the prevalence of CRS use among children traveling in

covered motor vehicles, 2) the accessibility, affordability and quality of CRS sold in the Philippines, 3) consumer perspectives about the CSMV Act and CRS use, and 4) the design and implementation of the CSMV Act.

Objectives

The goal of this research study was to assess compliance with the CSMV Act in the National Capital Region (NCR) in the Philippines through four sub-studies, as outlined below.

1. Observational study

The objective of this sub-study was to assess compliance with sections 4 and 5 of the CSMV Act, which: 1) mandate the use of CRS in all covered, moving motor vehicles, and 2) prohibits children aged 12 years or below from sitting in the front seat of a moving vehicle.

2. Market observations

The objective of this sub-study was to evaluate the affordability, accessibility and quality of child restraints sold in the Philippines. This included surveys of CRS observed in (a) physical stores that sell CRS in the Philippines, and (b) the most popular e-commerce sites selling CRS in the Philippines.

3. Focus group discussions

The objective of this sub-study was to understand perceptions surrounding CRS, including accessibility, affordability, and quality and awareness about the CSMV Act, among caregivers and drivers of children 12 years old or younger who use cars as a means of transport.

4. Policy design and implementation case studies

The objective of this sub-study was to understand how the CSMV Act came to be (policy design), and its implementation (how provisions of the legislation are being mobilized and implemented).

Ethics

The observational and market observational studies, and the policy design and implementation case studies were deemed as non-human subjects research by the Johns Hopkins Bloomberg School of Public Health Institutional Review Board (IRB). Local ethics approval was granted by the National Ethics Committee (NEC), Philippine National Health Research System, to conduct the focus group discussions with caregivers, and key informant interviews with stakeholders and officials involved in the policy passage and implementation of the CSMV Act.

II. Methods

Sampling Approach

The following three local government units (LGUs) in the NCR of the Philippines were selected as the study area for all sub-studies: Manila, Pasay, and Quezon City. Manila and Quezon City were purposively selected as these are major cities which were prioritized by BIGRS partners; and Pasay was randomly selected.

Observational Study

JH-IIRU consulted with the local collaborators to identify sites where children were most likely to frequent. The final site list included hospitals, schools, shopping malls, places of worship, restaurants, and parks. Comprehensive lists of all observation sites were compiled using Google Maps, and random sampling was used to select the final sample of sites to be observed in each city.Market observations

Market Observations

a. Observations of physical stores

The study aimed to capture CRS sold by the following types of vendors: automobile and car accessories shops, child focused shops, departmental stores selling child restraints, general stores selling child restraints and others (including street vendors). A master list of shops selling child restraints in Manila, Pasay and Quezon City was created using 'web scraper' and available data from Google Maps.

Twenty-three stores were identified in Manila, of which 20 were randomly selected. Three of these stores were closed and 1 store had no CRS available. Three stores from the master list were included into the study as replacement for the ones that were closed. Thus, a total of 18 stores were included from Manila. A total of 9 stores were identified in Pasay. Because of the small number of vendors identified in this city, all 9 stores were included. However, 3 out of the 9 stores were closed. Finally, 6 stores were included from Pasay.

A total of 9 stores were identified in Pasay. Because of the small number of vendors identified in this city, all 9 stores were included. However, 3 out of the 9 stores were closed. Finally, 6 stores were included from Pasay. Sixty-five stores were identified in Quezon City, of which 20 were randomly selected. Four of these stores were closed and 1 had no CRS available. Following this, 5 stores from the master list were included as replacements. The total number of stores included from Quezon City was 20.

b. Online market survey

A census approach was taken to capture postings of CRS products on the most popular e-commerce sites in Philippines. Products were included when they met the inclusion criteria of being a CRS: booster cushion; booster seat; forward-facing CRS; rear-facing CRS; and either forward- or rear-facing CRS. The e-commerce sites included were Amazon, BeautyMnl, Carousell, eBay, Lazada, Shopee, and Zalora. Search filters such as "Babies and Kids" were used to ensure the products retrieved from the search were CRS. For example, for Lazada, the following filters were used: "Babies & Toys", "Baby Gear", "Infant Carseats" and "Toddler Carseats".

Focus group discussions

Six focus group discussions were planned, two in each LGU, with 6-10 participants in each FGD. To account for potential drop-outs among participants in the online focus group discussions, about 6-12 participants were invited to each FGD.

Participants included individuals who were caregivers or parents/drivers of children aged 12 years old and younger, who use cars as a means of transportation. Purposive sampling was used to recruit participants. Due to COVID-19 restrictions, the screening and recruitment process was completed online through remote communication platforms such as online messaging applications (Facebook, Messenger, and Viber), phone calls, and short message service (SMS)/texts. The screening and recruitment process was conducted from July 2, 2022 to August 18, 2022. Potential participants were approached remotely/virtually, and asked if they were interested in participating in FGDs about child restraints, were provided a brief description of the purpose of the study, and were asked a few screening questions to ensure they met the study's inclusion criteria.

Inclusion and exclusion criteria for participants were outlined as follows:

Inclusion criteria:

- Is a caregiver or parent/driver of a child 12 and younger
- Lives in selected LGU
- Uses cars as a means of transportation
- Is an adult (over 18 years of age)
- Willing to give informed consent

Exclusion criteria:

- Is neither a caregiver nor parent/driver of a child 12 and younger
- Does not live in the selected LGU
- Does not use cars as a means of transportation
- Is not an adult
- Is not willing to give informed consent

If potential participants were interested, they were provided with the local data collectors' contact information and went through a formal screening process. During the recruitment process, the study team asked the participants the screening questions, explained the study to the participants, and sought their agreement to participate. Subsequently, participants were given the opportunity to ask the study team any questions or concerns they had about the study. Upon agreeing to participate in the study, the study team and participants exchanged contact details to coordinate the focus group discussions. The focus group discussions were then scheduled at a time that was convenient for the study participants.

All focus group discussion activities were conducted completely remotely using Zoom, due to COVID-19 restrictions. Focus group discussions were conducted between July 10, 2022 to August 20, 2022. Informed consent was obtained from all study participants at the start of the focus group discussion. During the informed consent process, a study team member read the consent form in Filipino to the study participants and gave them time to ask questions about their participation and the study. Subsequently, the study participants gave their written consent to participate in the focus group discussion. All data were de-identified during data collection. After data collection was complete, all study participants received a token of compensation.

Policy design and implementation

A comprehensive list of stakeholders involved in the policy design and policy implementation of the CSMV Act was created (subsequently referred to as "policy process informants". Stakeholders were categorized as participating more heavily in the policy process; which included those who participated in the drafting, lobbying for, enacting, or generally supporting the passage of the child restraint legislation, or policy implementation focused; which included those who enforced and, or educated the public on CRS use, as well as those who work with child restraint vendors to ensure products are meeting the act requirements. The list of road safety actors was entered into a database, with variables for name, organization, category of organization, location in Philippines, role, and type of information the person provided. Participants were selected purposively from this list for key informant interviews, based on their knowledge of the areas of interest for this study, upon the advice of BIGRS stakeholders, and through snowball sampling.

The inclusion and exclusion criteria for selecting key informants were as follows:

Inclusion criteria:

- For policy process informants: Individuals from various government departments, ministries, non-government organizations, media agencies, politicians, and champions involved in road safety in the Philippines.
- For policy implementation informants: Individuals from various government departments, non-government organizations, media agencies, corporations and private sector, international organizations, members of the police, and champions involved in road safety in the Philippines.
- For policy process informants: Will not be participating in a policy implementation key informant interview.
- For policy implementation informants: Will not be participating in a policy process key informant interview.
- Adult (over 18 years of age).
- Willing to give informed consent.

Exclusion criteria:

- Is not knowledgeable of, or does not work in, road safety in the Philippines (key informant interviews)
- For policy process informants: Will be participating in a policy implementation key informant interview.
- For policy implementation informants: Will be participating in a policy process key informant interview.
- Is not an adult (below the age of 18).
- Will not provide informed consent.

A total of 27 KIIs were conducted from April 2021 to July 2021. Due to COVID-19 restrictions, all interviews were held remotely via Zoom. Informed consent was obtained from all study participants at the start of the interviews. Study team members read from a paper consent form to the key informants, who were then given time both before and after the interview to ask questions about the study. In accordance with the Philippines' National Ethics Committee's regulations, spot translation was available for participants in case they wished to share terms, expressions, or phrases in Filipino. Interviews lasted between 43 and 82 minutes, with an average of 61 minutes per interview. All data were de-identified after data collection.

Training

Faculty from JH-IIRU partnered with local collaborators from IHPDS to train data collectors to follow data collection protocols to conduct child observations and physical market observations.

Training was held between July 19, 2022 and July 21, 2022 for 18 data collectors in Manila; 12 data collectors were assigned to the observational study and 6 data collectors were assigned to the market observational studies. The first day of training introduced the data collectors to the CSMV Act, provided an overview of the research study and objectives, and trained them on the data collection protocol and observational tools. The following two days were spent following the data collection protocol and conducting practice observations in the field using the observation tools. Data collectors used smartphones/tablets equipped with Kobo Toolbox to support data collection for the child observations and market observations. Following each day of training, data collectors met with the JH-IIRU and IHPDS teams to debrief on the field practice, and address any questions or issues which arose during field practice. Subsequently, the JH-IIRU and IHPDS teams made appropriate revisions to the observation tools and data collection protocols, in preparation for final data collection.

For the online market observations, JH-IIRU and IHPDS prepared a survey tool, and decided on the variables, sampling strategy and search filters for the e-commerce sites collaboratively. Data collectors from IHPDS collected the online market survey data.

For the focus group discussions, JH-IIRU and IHPDS prepared the FGD research plan, recruitment script, consent script, and interview guide collaboratively. IHPDS staff conducted the focus group discussions in Filipino.

A trained qualitative researcher from JH-IIRU conducted all of the key informant interviews for the policy design and implementation case studies, and was accompanied by spot translators from the IHPDS team during the KIIs.

Analysis

Observational Study

The observational data was cleaned by IHPDS and JH-IIRU. Following this, descriptive statistical analysis was done by the JH-IIRU team. Prevalence of CRS use was calculated and reported for each variable. All analyses were done using Stata/MP 16.1 (StataCorp, 2019).

Market observations

The observations data from physical stores and online market surveys was cleaned by IHPDS and JH-IIRU. Following this, descriptive statistical analysis was done by the JH-IIRU team. Frequencies and percentages of the number and type of CRS and vendors were reported. Additionally, cross tabulations were done to show relationships between variables e.g., type of CRS and mean prices at which they were sold. All analyses were done using Stata/MP 16.1 (StataCorp, 2019).

Focus group discussions

Focus group discussions were conducted in the local language, transcribed, and translated into English by the IHPDS team. Following this, analysis was done by the JH–IIRU team. The focus group discussion transcripts were coded using deductive coding based on the discussion guide. Six overarching deductive codes were employed; CSMVA, CRS: attitudes, CRS: knowledge, CRS: barriers, CRS: facilitators, and recommendations; and within each code were respective inductive sub–codes. All analyses were done using NVivo 1.7.1.

Policy design and implementation case studies

All interviews were recorded, transcribed, thematically coded, and analyzed using NVivo qualitative software. Peer debriefing was conducted immediately post–interview by the interviewer and the assisting interviewer(s), as well as periodically with the larger study team. Transcriptions were reviewed for accuracy by the local team. A codebook was developed using a combination of inductive and deductive methods. Ten overarching codes were employed: policy setting, Act's features, merits and shortcomings, policy design, legislative process, implementation, public support, conflict, framing devices, and other, each with their respective inductive sub–codes.

III. Results

Observational Study

Observational data was collected using a schedule which accounted for when children were most likely to be observed (Appendix, Table 1). Data were collected across 63 observation sites between August 2022 and October 2022 (Table 1), and a total of 18,273 child observations were included in the final analysis (Table 2).

Table 1. Summary of sites observed

	Pasay		Manila		Quezon City		Total	
Site	**n**	**%**	**n**	**%**	**n**	**%**	**n**	**%**
Hospital	3	14	3	14	3	14	9	14
School	6	29	6	29	6	29	18	29
Shopping mall	3	14	3	14	3	14	9	14
Places of worship	3	14	3	14	3	14	9	14
Restaurant	3	14	3	14	3	14	9	14
Park	3	14	3	14	3	14	9	14
Total	**21**	**100**	**21**	**100**	**21**	**100**	**63**	**100**

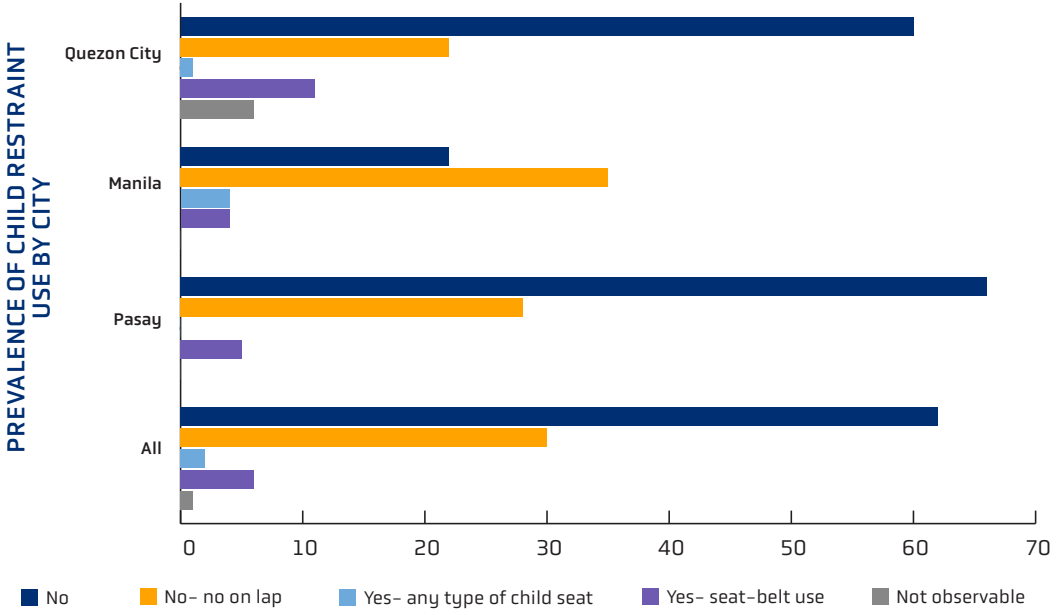
Table 2. Summary of child observations

	Pasay		Manila		Quezon City		Total	
Site	**n**	**%**	**n**	**%**	**n**	**%**	**n**	**%**
Hospital	1252	15	712	11	772	23	2736	15
School	2893	34	1922	30	838	25	5653	31
Shopping mall	1006	12	826	13	891	26	2723	15
Places of worship	610	7	948	15	297	9	1855	10
Restaurant	1001	12	1108	17	228	7	2337	13
Park	1729	20	891	14	349	10	2969	16
Total	**8941**	**100**	**6407**	**100**	**3375**	**100**	**18273**	**100**

Table 3. Number of child observations by city

City	n	%
Manila	6407	35
Pasay	8491	47
Quezon City	3375	18
Total	**18273**	**100**

Figure 1. Prevalence of child restraint use by city



Child restraint use was poor across all cities, and seating children on a passenger's lap was common across all cities (Figure 1). Almost two-thirds (62%) of all children observed were not in a child restraint or seat-belt, one-third (30%) were sitting in a passenger's lap, 6% were sitting in a seat-belt, and 2% were in a child seat. Child seat use was highest in Manila (4%), and seat-belt use was highest in Quezon City (11%).

Table 4. Number of child observations by site

Site	n	%
Hospital	2736	15
School	5653	31
Shopping mall	2723	15
Places of worship	1855	10
Restaurant	2337	13
Park	2969	16
Total	**18273**	**100**

Figure 2. Prevalence of child restraint use by site (Overall)

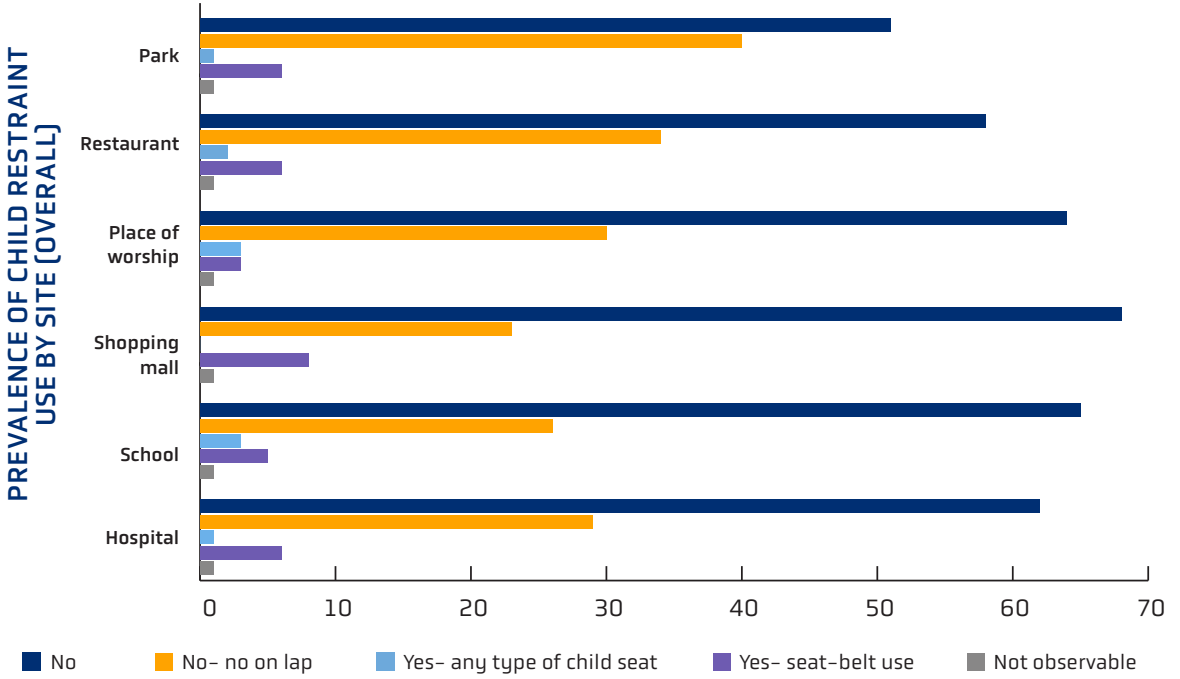
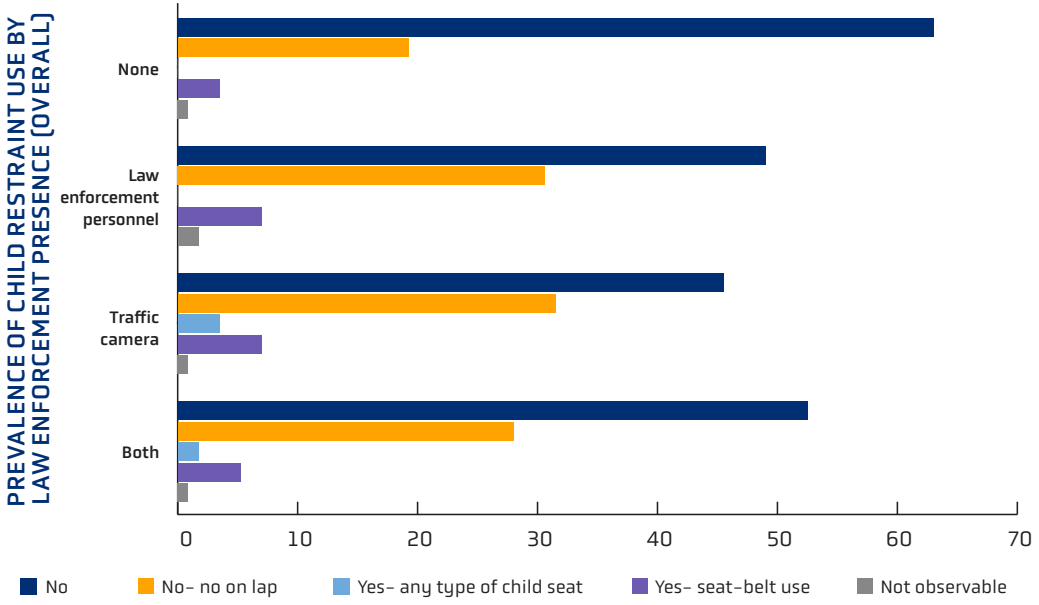


Table 5. Number of child observations by law enforcement presence

Law enforcement present	n	%
None	6107	33
Law enforcement personnel	2067	11
Traffic camera	3324	18
Both	6775	37
Total	**18273**	**100**

Figure 3. Prevalence of child restraint use by law enforcement presence (Overall)

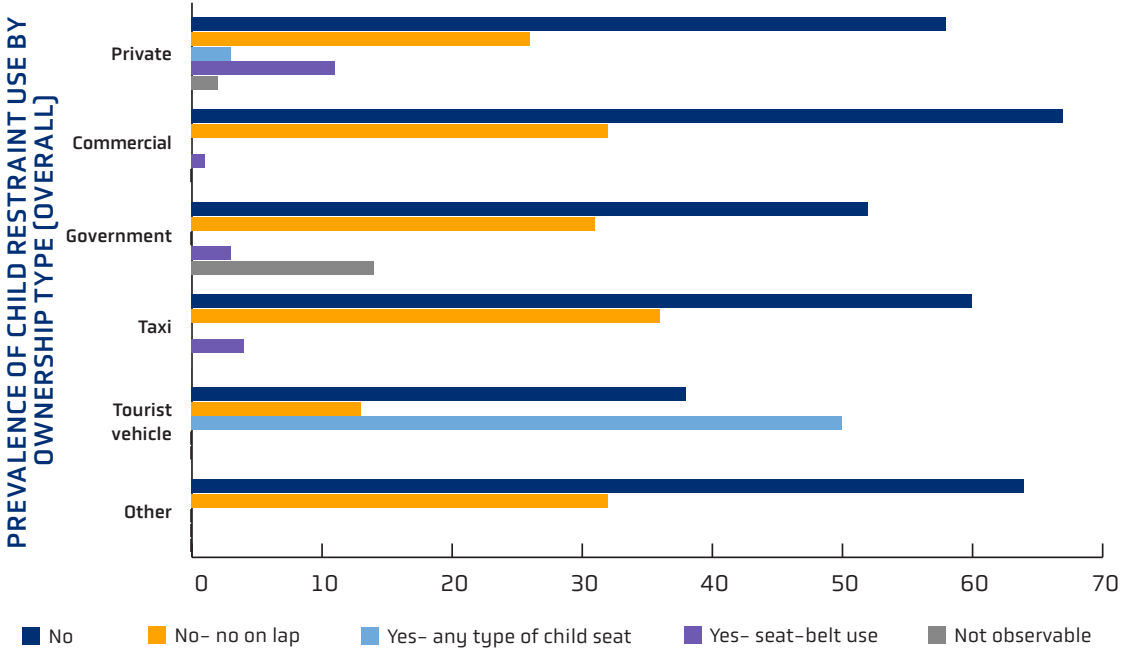


Child restraint use was low (2%), regardless of the presence of law enforcement (Figure 3). At sites where both law enforcement personnel and traffic cameras were present, 60% of children were not in a child seat or seat–belt, one–third (32%) of children were sitting in a passenger's lap, 6% were in a seat–belt, and 2% were in a child seat. At sites where either law enforcement personnel or traffic cameras were present, CRS and seat–belt use was similar.

Table 6. Number of child observations by vehicle ownership type

Vehicle ownership type	n	%
Private	8802	48
Commercial	7517	41
Government	29	0
Taxi	1895	10
Tourist vehicle	8	0
Other	22	0
Total	**18273**	**100**

Figure 4. Prevalence of child restraint use by vehicle ownership type (Overall)

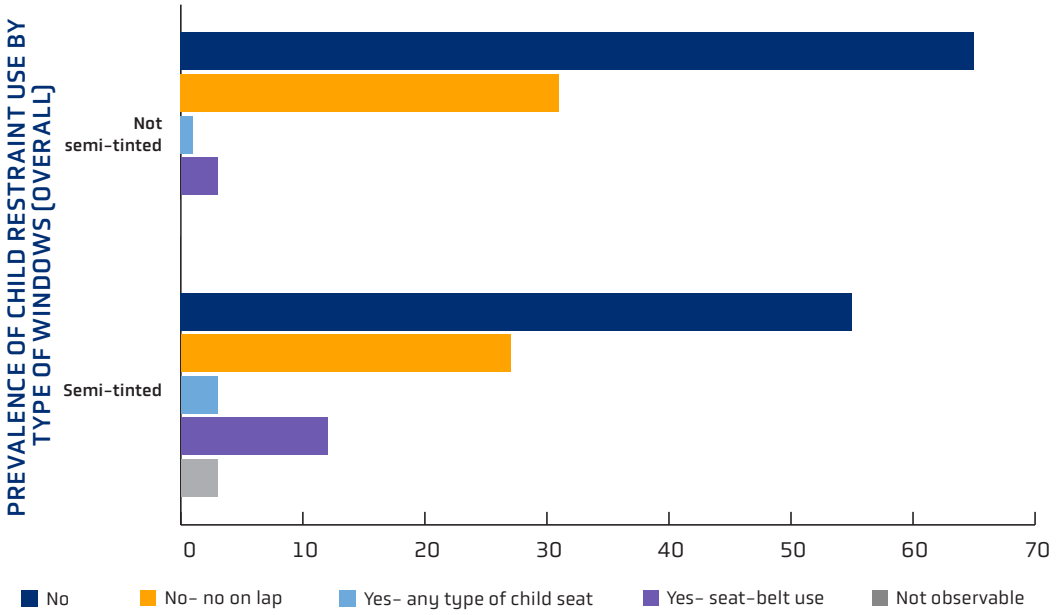


Child restraint use was low across all vehicle types apart from tourist vehicles, where half (50%) of all children observed were in a child seat (Figure 4). Across all other vehicles types, more than 80% of all children observed were either not in a child restraint or seat-belt, or were sitting in a passenger's lap.

Table 7. Number of child observations by type of windows

Type of windows	n	%
Not semi-tinted	12496	68
Semi-tinted	5777	32
Total	**18273**	**100**

Figure 5. Prevalence of child restraint use by type of windows (Overall)

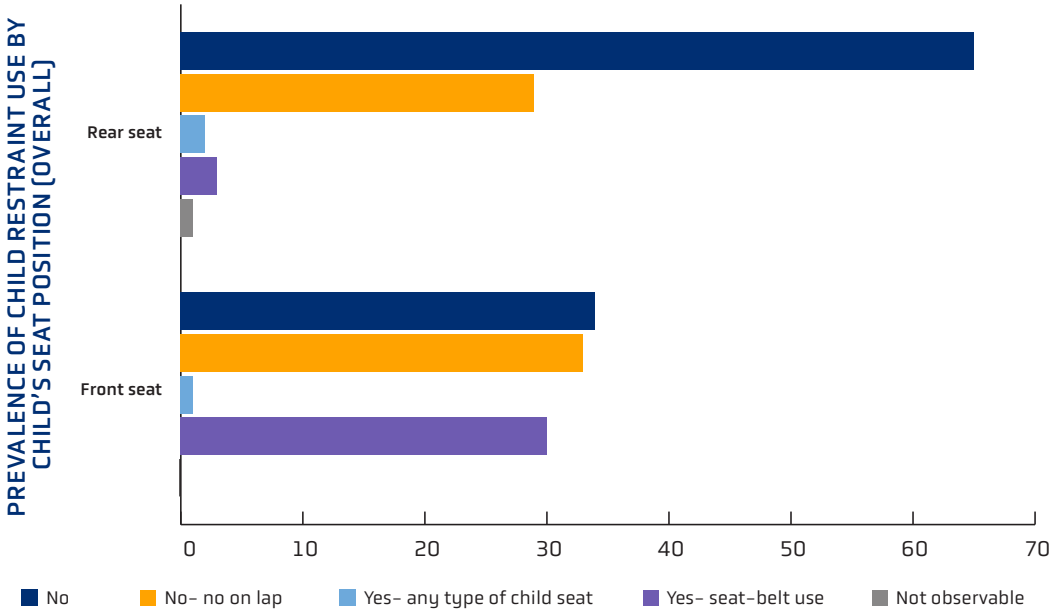


Child restraint use was low, regardless of whether the vehicle's windows were semi-tinted; however child restraint use was higher in vehicles with semi-tinted windows (Figure 5). In vehicles with semi-tinted windows, 3% and 12% of children observed were sitting in a child seat or seat-belt, respectively. In vehicles without semi-tinted windows, 1% and 3% of children observed were sitting in a child seat or seat-belt, respectively.

Table 8. Number of child observations by child's seat position

Position of child	n	%
Font seat	1809	10
Rear seat	16464	90
Total	**18273**	**100**

Figure 6. Prevalence of child restraint use by child's seat position (Overall)

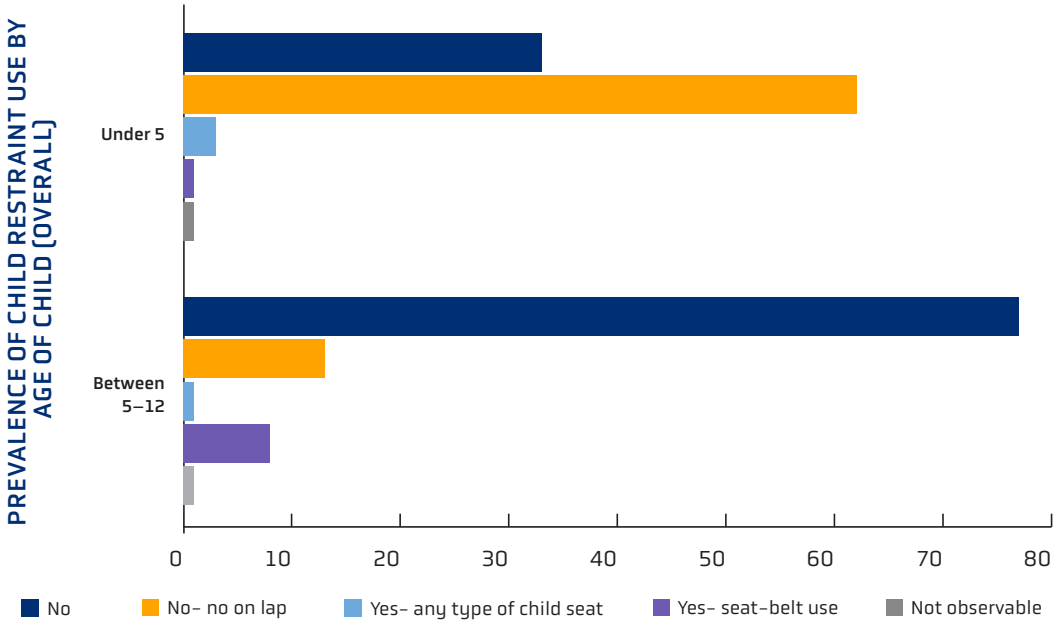


Child restraint use was almost non-existent, irrespective of the child's seat position (Figure 6). The use of seat-belts was much higher among children sitting in the front seat compared to children sitting in the rear seat; almost one-third (30%) of all children sitting in the front seat were wearing a seat-belt, compared to 3% of children sitting in the rear seat.

Table 9. Number of child observations by age of child

Age of child	n	%
Under 5	6239	34
Between 5–12	12034	66
Total	**18273**	**100**

Figure 7. Prevalence of child restraint use by age of child (Overall)

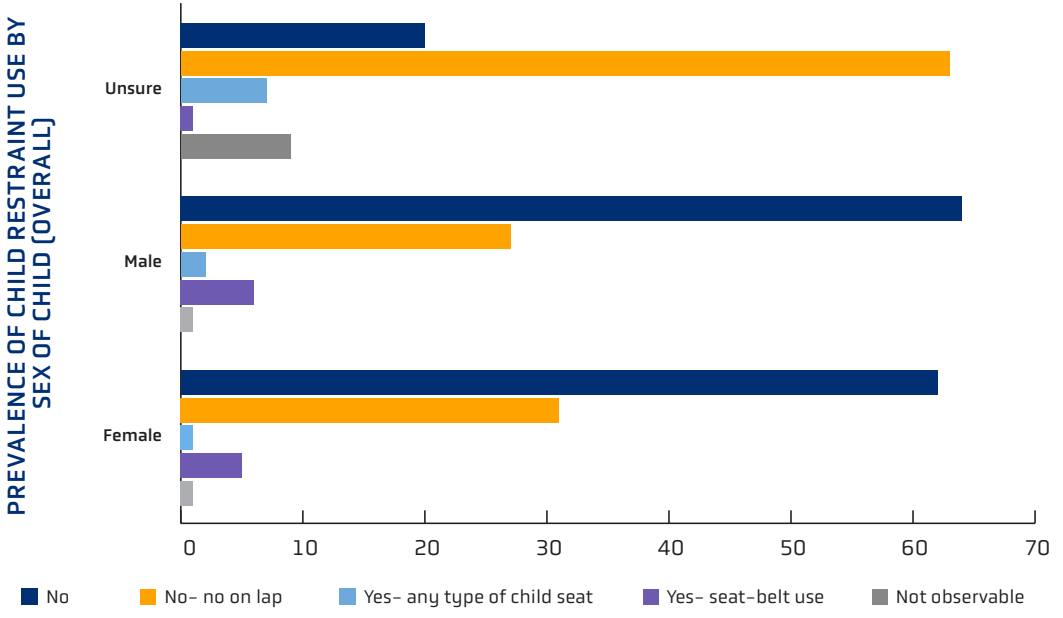


Child restraint use low however seat-belt use was higher among children aged 5-12 years (8%) compared to children aged under 5 (1%) (Figure 7). The prevalence of children sitting in a passenger's lap also varied by the age of the child; almost two-thirds (62%) of all children aged under 5 years were sitting in a passenger's lap, compared to 13% of children aged between 5-12 years.

Table 10. Number of child observations by sex of child

Sex of child	n	%
Male	10075	55
Female	7649	42
Unsure	549	3
Total	**18273**	**100**

Figure 8. Prevalence of child restraint use by sex of child (Overall)



Child restraint use was low, irrespective of the sex of the child (Figure 8). Among male children, 2% and 6% were in a child seat or seat-belt respectively; and among female children, 1% and 5% were in a child seat or seat-belt respectively.

Market observations

Physical stores

CRS and vendor types

Data collectors visited 44 randomly selected vendors in total across Manila, Pasay, and Quezon City cities between July – August 2022 (Table 11). Figure 10 shows the distribution of stores selling CRS included in this study.

Figure 9. Distribution of child restraint selling stores randomly selected

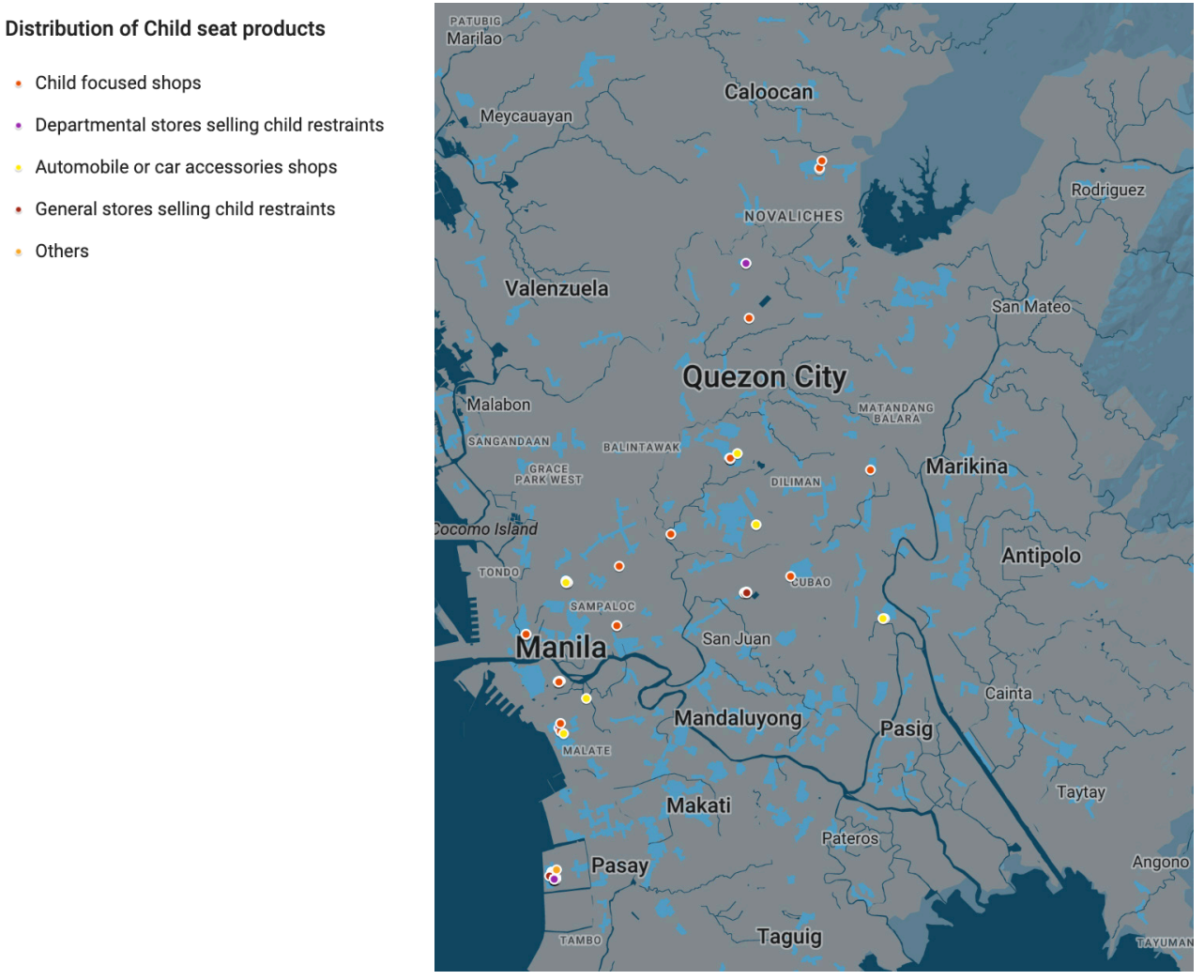


Table 11. Distribution of different types of vendors observed per city

Type of vendor	City name						Total	
	Manila		Quezon City		Pasay			
	n	%	n	%	n	%	n	%
Automobile and car accessories shops	4	22	4	20	0	0	**8**	**18**
Child focused shops	7	39	14	70	3	50	**24**	**55**
Departmental stores selling child restraints	4	22	1	5	1	17	**6**	**14**
General stores selling child restraints	3	17	1	5	1	17	**5**	**11**
Others (street vendors, etc.)	0	0	0	0	1	17	**1**	**2**
Total	**18**	**100**	**20**	**100**	**6**	**100**	**44**	**100**

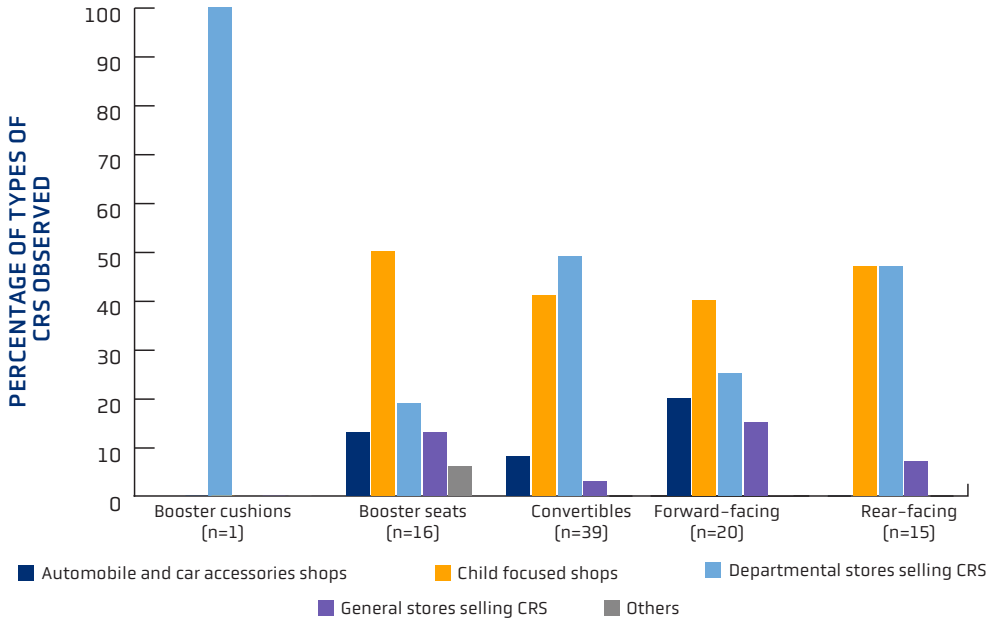
A total of 91 child restraint systems were observed across the three cities. About 43% (n=39) of the CRS observed (N=91) were child restraints that can be used as both forward and rear-racing or, convertibles, while 22% (n=20) were forward-racing, 18% (n=16) were booster seats, 17% (n=15) were rear-racing and only 1% (n=1) was booster cushions (Table 12).

Table 12. Distribution of types of child restraints observed

Type of CRS	n	%
Booster cushions	1	1
Booster seats	16	18
Convertibles	39	43
Forward-racing	20	22
Rear-racing	15	17
Total	**91**	**100**

Only one booster cushion was observed at a departmental store selling child restraints. Half (n=8) of all the booster seats observed (n=16) were found in child focused shops. About 49% (n=19) of the convertible CRS were observed in departmental stores, while 41% (n=16) were found in child focused shops. About 40% (n=8) forward-racing CRS were seen in child focused shops. 7 (47%) rear-racing CRS were seen in child focused shops and 7 (47%) were observed in departmental stores (Figure 10). Overall, CRS observed in this study were predominantly from child focused shops and departmental stores, with 43% (n=39) of all the CRS included in this study being observed in child focused shops and 38% (n=35) in departmental stores selling CRS.

Figure 10. Percentages of different types of CRS observed by type of vendor



Prices of CRS observed

Among the different types of CRS observed, the mean price was the highest for convertibles (260 USD) and lowest for booster cushions (7 USD) (Table 13).

Table 13. Mean prices and confidence intervals by type of CRS

Type of CRS	Mean Price in USD[1]	95% CI Min	95% CI Max
Booster cushions	7	n/a[2]	n/a2
Booster seats	132	76	189
Convertibles	260	215	304
Forward-racing	192	137	247
Rear-racing	136	80	192

[1] Philippines peso was converted to United States Dollar (USD) using the exchange rate as of January 28, 2023 [1 Philippine peso = 0.018 USD]

[2] 95% CI were not applicable for prices of booster cushions since only one booster cushion was observed.

Quality of CRS observed

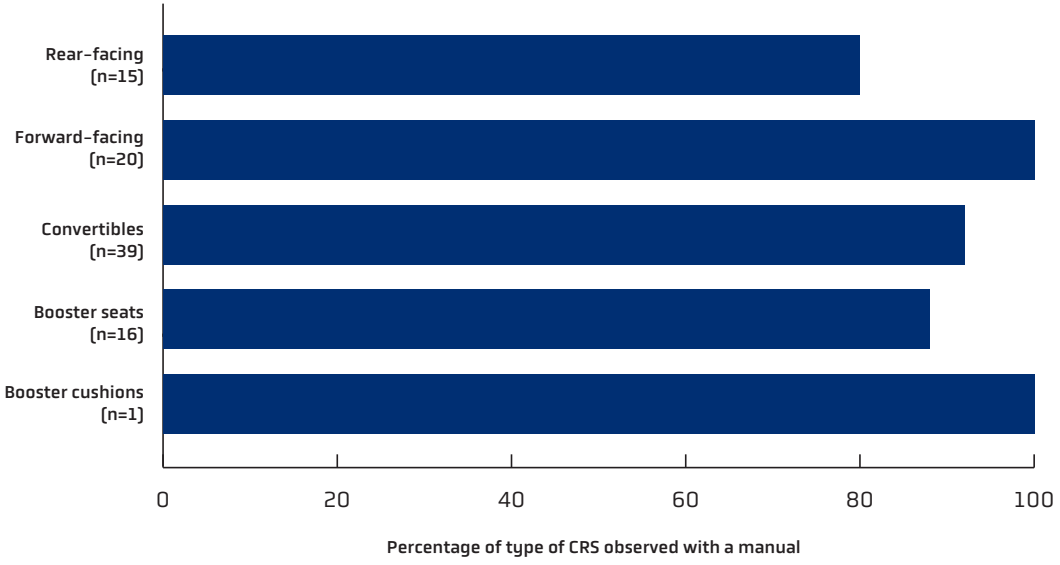
The CSMVA requires all CRS products being sold and distributed in the Philippines to be accompanied with a Philippines standard mark license or Import Clearance Certificate (ICC). In this study, in addition to Philippines standard mark license and ICC, we considered European Union (EU), Canada and United States (US) standards and any other international product standards to be valid indicators of product quality.

All the CRS observed in this study had product standard indicated by means of a license, certificate or sticker. The product standards indicated in the CRS observed were Philippines standard mark license (n=5), ICC (n=15), EU (n=4), Canada (n=1), US (n= 4), and any other international standard (n= 8). 53 of the CRS products had multiple product standards indicated including various combinations of the aforementioned product standards.

Presence of manual and its language

About 91% (n=83) of the CRS observed, were being sold with a manual. Of the booster seats observed, 88% (n=14) came with a manual. About 92% (n=36) of the convertibles and 80% (n=12) of the rear-racing CRS had manuals. All (n=20) of the forward-facing CRS were accompanied with a manual (Figure 11).

Figure 11. Presence of manual among CRS observed



Of the car seats that had manuals, 60% (n=50) had instructions in Filipino (Table 14).

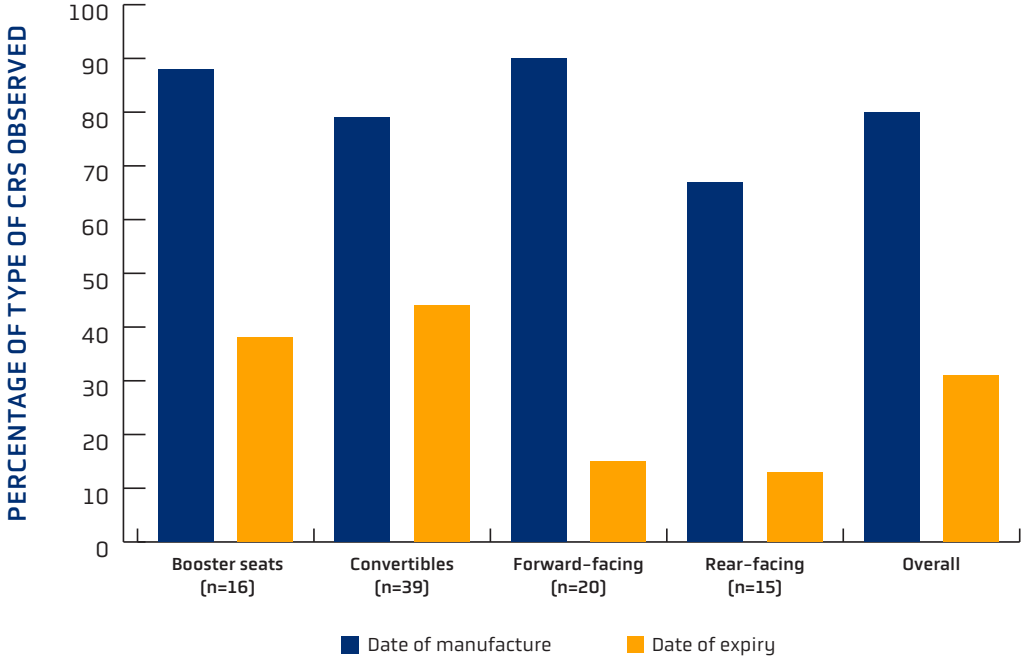
Table 14. Language of manual

Language of manual	n	%
Filipino	50	60
English and Filipino	2	2
Filipino and other	31	37

Presence of date of manufacture and expiry among CRS observed

About 80% (n=73) of all the CRS observed had dates of manufacture indicated. Only 31% (n=28) of all CRS observed had dates of expiry indicated. The booster cushion observed had neither a date of manufacture nor a date of expiry indicated. Among all other types of CRS, presence of date of manufacture was more common compared to presence of date of expiry (Figure 12).

Figure 12. Presence of date of manufacture and expiry among CRS observed



Presence of manufacturer's name, initial and trademark

The booster cushion observed was marked with manufacturer's name, while manufacturer's initial and trademark were absent. Majority of the booster seats (n=15, 94%) had manufacturer's name and initial and all of the booster seats observed had a trademark indicated. 97% (n=38) of the convertibles observed had a manufacturer's name, while 85% (n= 33) and 95% (n= 37) had an initial and trademark, respectively. All of the forward-facing CRS had manufacturer's name and trademark indicated. Among the rear-racing CRS observed, 80% (n=12) and 93% (n=14) had manufacturer's initial and trademark respectively, while all of them had manufacturer's name displayed. All of the CRS observed had at least one of the three manufacturer's indicators present (Table 15).

Table 15. Presence of manufacturer's name, initial and trademark by type of CRS

Type of CRS	Presence of manufacturer's name		Presence of manufacturer's inital		Presence of manufacturer's trademark	
	n	%	n	%	n	%
Booster cushions (n=1)	1	100	0	0	0	0
Booster seats (n=16)	15	94	15	94	16	100
Convertibles (n=39)	38	97	33	85	37	95
Forward-racing (n=20)	20	100	19	95	20	100
Rear-racing (n=15)	15	100	12	80	14	93
Total (n=91)	**89**	**98**	**79**	**87**	**87**	**96**

Presence of age, weight and height limits

All of the CRS types observed had indications for minimum and maximum age limits, except one booster seat that did not specify the maximum age limit. Similarly, all CRS observed included minimum and maximum weight limits, except one booster seat for which the maximum weight limit was not indicated.

Very few of the CRS observed included minimum and maximum height limits. Among the 91 CRS observed, only 18 indicated the minimum and maximum height limits. The booster cushion observed did not specify minimum or maximum height limits. Of the 16 booster seats observed, only 13% (n=2) displayed minimum height limit and 19% (n=3) displayed maximum height limit. 13 convertibles were accompanied with a minimum height limit and 12 with a maximum height limit. Only 1 forward-racing CRS and 2 rear-racing ones were observed to have minimum and maximum height limits indicated (Table 16).

Table 16. Presence of height limits by type of CRS

Type of CRS	Presence of minimum height limits		Presence of maxiumum height limits	
	n	%	n	%
Booster cushions (n=1)	0	0	0	0
Booster seats (n=16)	2	13	3	19
Convertibles (n=39)	13	33	12	31
Forward-racing (n=20)	1	5	1	5
Rear-racing (n=15)	2	13	2	13
Total (n=91)	**18**	**20**	**18**	**20**

Online stores

CRS, e-commerce site, and vendor information

A total of 4,334 CRS were observed across the 7 e-commerce sites (Amazon, BeautyMnl, Carousell, eBay, Lazada, Shopee, and Zalora). The highest percentage of CRS were being sold by Shopee (46%, n= 1,999) (Table 17).

Table 17. Number of CRS observed per e-commerce site

Name of e-commerce sites	Number of CRS observed	% of CRS observed
Amazon	202	5
BeautyMnl	9	0
Carousell	970	22
eBay	39	1
Lazada	1,085	25
Shopee	1,999	46
Zalora	30	1
Total	**4,334**	**100**

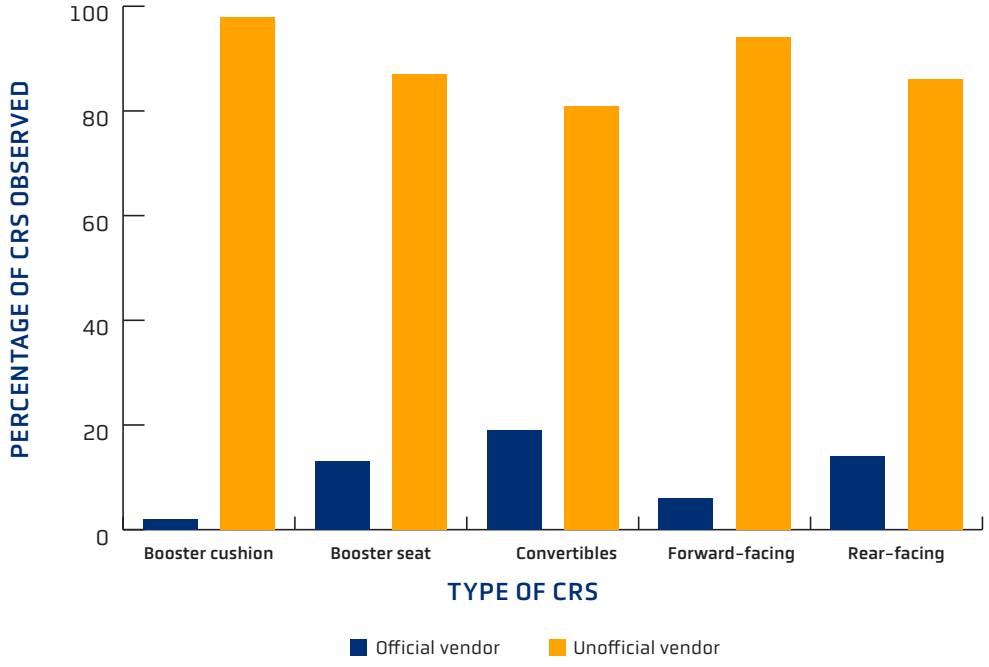
All of the e-commerce sites included were official, except Carousell. However, Carousell was found to be a legitimate web-based marketplace and was thus considered to be an official e-commerce site for the purposes of this study. There were official[1] and unofficial vendors within each e-commerce site (Table 18).

Table 18. Number of CRS observed by type of vendor

Type of vendor	Number of car seats observed (overall)	% of car seats observed
Official	440	10
Unofficial	3,894	90
Total	**4,334**	**100**

90% (n= 3,894) of all the CRS observed were being sold by unofficial vendors. Of the booster cushions observed, 98% were being sold by unofficial vendors (Figure 13).

Figure 13. Number and percentage of CRS observed by type of vendor



[1] Official vendors were flagship stores of retail companies or vendors that passed all the requirements of the e-commerce sites such as relationship with the brand and proof of authenticity.

Table 19. Number of car seats observed by type of CRS

Type of CRS	Number of car seats observed	% of car seats observed
Booster cushion	1,559	36
Booster seat	374	9
Covertibles	1,436	33
Forward-facing	656	15
Rear-facing	309	7
Total	**4,334**	**100**

61% (n=2,628) of the CRS observed were being sold by vendors from Philippines, while 18% of the CRS observations did not specify the countries of vendors. Small percentages of CRS from other countries were also available in the e-commerce sites, e.g., China (12%, n=504), Indonesia (3%, n=136), and Vietnam (4%, n=155).

The number of CRS observed within Philippines was disaggregated by the local government unit (LGU) types in Philippines from which they were being sold. A total of 2,628 observations mentioned LGU types in the e-commerce sites, while 21 observations did not. Among the CRS with information on LGU types, 84% (n= 2,200) were from the NCR, 10% (n=264) from component cities, 2% (n=57) from highly urbanized cities (HUCs), 3% (n=72) from Municipality 1[2] , 1% (n=36) from Municipality 2, and 0% (n=1) from special areas.

Prices of CRS observed and shipping fee

Among all the CRS observed, the mean prices were highest for rear-facing CRS (482 USD) and lowest for booster cushions (105 USD) (Table 20).

Table 20. Mean prices by type of CRS

Type of CRS	Mean price in USD[1]	95% CI Min	95% CI Max
Booster cushions	105	93	36
Booster seats	240	153	9
Covertibles	385	314	33
Forward-facing	176	107	15
Rear-facing	482	293	7

[1]Philippines peso was converted to United States Dollar (USD) using the exchange rate as of March 1, 2023 [1 Philippine peso = 0.018 USD]

[2]Municipalities in the Philippines are categorized according to income classification.

When disaggregated by e-commerce site and CRS type, mean prices were generally the lowest for booster cushions across most e-commerce sites (Amazon, Carousell, eBay, Lazada, and Shopee), ranging from 59 USD on Carousell to 1,717 USD on Amazon. No booster cushions were observed on BeautyMnl and Zalora. The CRS type with highest mean prices varied by e-commerce site: rear-facing CRS (Shopee= 266 USD; Amazon= 3,870 USD), forward-facing CRS (Lazada=102 USD; eBay= 1,690 USD) and convertibles (Carousell= 100 USD; Zalora= 185 USD).

The highest mean prices were seen on Amazon (2,714 USD) followed by eBay (1032 USD), while Zalora (176 USD), Shopee (151 USD), Carousell (92 USD) and Lazada (79 USD) and comparatively lower mean prices, irrespective of CRS type. Across all e-commerce site, mean prices of CRS were higher when sold by official vendors (1,359 USD) compared to those sold by unofficial vendors (122 USD). In line with the trends seen when mean prices were disaggregated by e-commerce site, booster cushions had the lowest prices across both official and unofficial vendors. In addition, shipping fee was also higher for CRS sold by official vendors, compared to that of CRS sold by unofficial vendors, irrespective of CRS type. Comparison of mean prices according to product condition shows that for all types of CRS, mean prices were higher for new CRS compared to secondhand ones (Table 21).

Table 21. Mean prices by product condition and CRS type

Type of CRS	Product condition					
	New			Secondhand		
	Mean original price	95% CI min	95% CI max	Mean original price	95% CI min	95% CI max
Booster cushions	107	94	119	60	34	85
Booster seats	290	178	402	69	55	83
Convertibles	532	426	639	96	81	110
Forward-racing	199	114	285	82	65	99
Rear-racing	847	495	1200	79	81	110

Number of units sold per vendor type

Data on the numbers of units sold per vendor were missing for 2,383 products (i.e., 55% of all CRS observed). At the time of data collection, 29,390 CRS had already been sold by unofficial vendors and 2,584 by official vendors. Sales were higher among unofficial vendors across all CRS types (Table 22).

Table 22. Number of units sold by vendor and CRS type

Type of CRS	Number of units sold			
	Official vendors		Unofficial vendors	
	n	%	n	%
Booster cushions (n=27,335)	107	94	60	34
Booster seats (n=1,668)	290	178	69	55
Convertibles (n=1,364)	532	426	96	81
Forward-racing (n=1,512)	199	114	82	65
Rear-racing (n=95)	847	495	79	81
TOTAL (n=31,974)	**2,584**	**8**	**29,390**	**92**

The number of units sold per e-commerce site was the highest for Shopee (n=31,957), followed by Carousell (n=11), eBay (n=5) and Lazada (n=1). Other e-commerce sites did not mention the number of units sold. The number of new CRS sold was higher than that of secondhand CRS, irrespective of CRS type (Table 23).

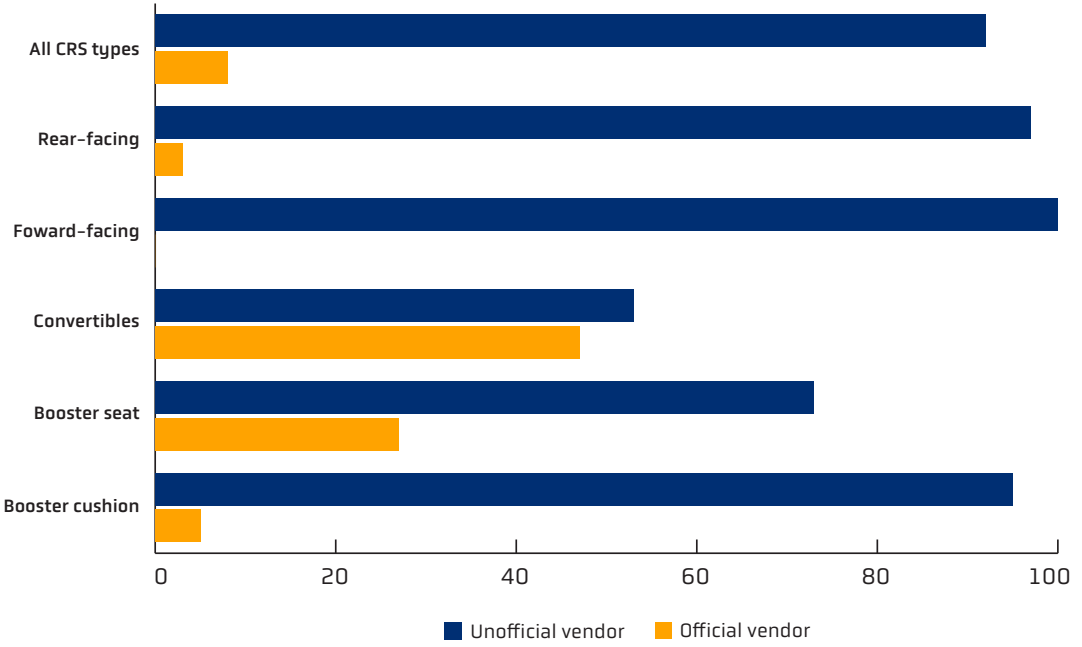
Table 23. The number of units sold by product condition and CRS type

Type of CRS	Product condition			
	New		Secondhand	
	Number of units sold	% of units sold	Number of units sold	% of units sold
Booster cushions (n=27,335)	27,331	100	4	0
Booster seats (n=1,668)	1,663	100	5	0
Convertibles (n=1,364)	1,360	100	4	0
Forward-racing (n=1,512)	1,510	100	2	0
Rear-racing (n=95)	189	94	6	6
TOTAL	**31,953**	**100**	**21**	**0**

Number of stocks available per vendor type

At the time of data collection, the total number of stocks available was higher for unofficial vendors (n=29,390) compared to that of official vendors (n= 2,584). Data on the number of stocks available was missing for 1,906 CRS products: 205 (46%) from official vendors; 1,701 (44%) from unofficial vendors. The number of stocks available was higher for unofficial vendors across all CRS types (Figure 14).

Figure 14. Number of stocks available by type of vendor and CRS



Quality of CRS observed

The CSMVA requires all CRS products being sold and distributed in the Philippines include a Philippines standard mark license or Import Clearance Certificate (ICC). In this study, in addition to Philippines standard mark license and ICC, we considered (EU), Canada, Australia and US standards and any other international product standards to be valid indicators of product quality.

Product standard was missing for 3921 observations and was present for 413 observations. 116 CRS products had more than one product standard indicated.

Product rating

Overall, the mean product rating was highest on Amazon (3.5), followed by Lazada (3.3), Carousell (3.1), Shopee (2.2), and eBay (1.7), irrespective of CRS types. BeautyMnl and Zalora did not specify product ratings.

Presence of manual and language

Majority of the CRS observed did not have a manual (89%, n=3,875). A total of 459 CRS products (11%) included a manual. Only 3% (n=51) of all the booster cushions observed had manuals (Table 24).

Table 24. Number and percentages of CRS with and without manuals

Type of CRS	Manul			
	Present		Absent	
	n	%	n	%
Booster cushion (n=1,559)	51	3	1,508	97
Booster seat (n=374)	18	5	356	95
Convertibles (n=1,436)	152	11	1,284	89
Forward-facing (n=656)	130	20	526	80
Rear-facing (n=309)	108	35	201	65
TOTAL (n=4,334)	**459**	**11**	**3,875**	**89**

Among the CRS that came with manuals, 73 (16%) were being sold by official vendors and 386 (84%) by unofficial vendors. For a large number of CRS observations (n=380), the photos available on e-commerce sites were blurred and thus the language of manuals could not be determined. Of the CRS with clearly visible manuals, 1 was in Filipino and English and 78 were only in English.

Presence of date of manufacture and expiry

Majority of the CRS observed (71%, n=3,068) did not have dates of manufacture and expiry specified. A total of 1,266 CRS (29%) came with a date of manufacture and expiry (Table 25). More than 70% (n=971) of the CRS with dates of manufacture and expiry were being sold by unofficial vendors, while 23% (n=295) were being sold by official vendors.

Table 25. Presence of dates manufacture and expiry by CRS type

Type of CRS	Manufacture and expiry dates			
	Present		Absent	
	n	%	n	%
Booster cushion (n=1,559)	16	1	1,543	99
Booster seat (n=374)	71	19	303	81
Convertibles (n=1,436)	789	55	647	45
Forward-facing (n=656)	228	35	428	65
Rear-facing (n=309)	162	52	147	48
TOTAL (n=4,334)	**1,226**	**29**	**3,068**	**71**

Presence of manufacturer's name, initial and trademark

A total of 4,274 CRS were observed for manufacturer's name, and this information was missing for 60 observations. Of the 4,274 observations made for manufacturer's name, only 28% (n=1,181) had manufacturer's name. A total of 809 (19%) CRS observed had manufacturer's initial and 18% (n=766) had manufacturer's trademark. Among the different CRS types, only 1% of the booster cushions had manufacturer's name, initial and trademark. Half of the rear-facing CRS observed had manufacturer's name and initial, while 51% had manufacturer's trademark (Table 26).

Table 26. Presence of manufacturer's name, initial and trademark by CRS type

Type of CRS	Presence of manufacturer's name		Presence of manufacturer's inital		Presence of manufacturer's trademark	
	n	%	n	%	n	%
Booster cushions	15	1	11	1	8	1
Booster seats	10	19	47	13	44	12
Convertibles	781	54	388	27	341	24
Forward-racing	220	34	210	32	214	33
Rear-racing	155	50	153	50	159	51
Total	**1,181**	**28**	**809**	**19**	**766**	**18**

Overall, 67% (n=293) of CRS sold by official vendors (n=440) had manufacture's name, 42% (n=184) had manufacturer's initial and 39% (n=170) had a trademark. Among the types of CRS sold by official vendors, rear-facing CRS most commonly specified manufacturer's name (86%, n=36), manufacturer's initial (86%, n=36) and trademark (88%, n=37). Booster cushions sold by official vendors were less commonly observed to have manufacturer's name (13%, n=4), manufacturer's initial (9%, n=3) and manufacturer's trademark (9%, n=3).

Overall, only 24% (n=948) of the CRS sold by unofficial vendors (n=3,894) had manufacture's name, 16% (n=625) had manufacturer's initial and 15% (n=596) had a trademark. Booster cushions sold by unofficial vendors rarely had manufacturer's name (1%, n=11), initial (1%, n=8) and trademark (0%, n=5). Presence of these indicators were slightly more common for convertibles: manufacturer's name (50%, n=583), initial (24%, n=283) and trademark (22%, n=251).

Presence of age, weight and height limits

Overall, 61% (n= 2,628) of the CRS observed had minimum age limits specified, while 66% (n=2,844) specified maximum age limits. Among all the booster cushions observed (n=1,559), minimum and maximum age limits were specified for 72% (n=1,222) and 73% (n=1,141) of the observations. All rear-facing CRS specified maximum age limits, but only 32% (n=100) specified minimum age limits (Table 27).]

Table 27. Presence of minimum and maximum age limits by CRS type

Type of CRS	Presence of minimum age limits		Presence of maximum age limits	
	n	%	n	%
Booster cushions (n=1,559)	1,122	72	1,141	34
Booster seats (n=374)	250	67	242	55
Convertibles (n=1,436)	709	49	710	81
Forward-racing (n=656)	447	68	442	65
Rear-racing (n=309)	100	32	309	100
TOTAL (n=4,334)	**2,628**	**61**	**2,844**	**66**

Overall, 38% (n=1,666) of all the CRS observed mentioned minimum weight limits while 46% (n=1,974) mentioned maximum weight limits. The percentages of indication of minimum and maximum weight limits were the lowest for booster cushions at 32% (n=492) and 41% (n=637), respectively (Table 28).

Table 28. Presence of minimum and maximum weight limit by CRS type

Type of CRS	Presence of minimum weight limit		Presence of maximum weight limit	
	n	%	n	%
Booster cushions (n=1,559)	492	32	637	41
Booster seats (n=374)	162	43	200	53
Convertibles (n=1,436)	641	45	706	49
Forward-racing (n=656)	274	42	317	48
Rear-racing (n=309)	97	31	114	37
TOTAL (n=4,334)	**1,666**	**38**	**1,974**	**46**

Overall, only 1% (n=55) of the CRS observed specified minimum height limits and 3% (n=113) specified maximum height limits. Only 2 of all the booster cushions observed (n=1,559) had specified height limits (Table 29).

Table 29. Presence of minimum and maximum height limit by CRS type

Type of CRS	Presence of minimum height		Presence of maximum height	
	n	%	n	%
Booster cushions (n=1,559)	2	0	2	0
Booster seats (n=374)	16	4	26	7
Convertibles (n=1,436)	20	1	53	4
Forward-racing (n=656)	8	1	9	1
Rear-racing (n=309)	9	3	23	7
TOTAL (n=4,334)	**55**	**1**	**113**	**3**

Focus group discussions

Six focus group discussions were conducted between July 10, 2022–August 20, 2022. Focus group discussions were conducted remotely using Zoom. Focus group discussions were conducted with 54 participants aged 23–51 years old; 27 female caregivers and 27 male caregivers (Table 30). FGD 6 had twelve participants, as all participants who were invited, were able to participate with no technical difficulties.

Table 30. Summary of focus group discussions with caregivers

FGD	City	Sex	# of Participants	Age range	Average age
1	Quezon City	Female	8	26 – 40	35
2	Quezon City	Male	8	24 – 34	31
3	Manila	Female	10	23 – 51	31
4	Pasay	Female	9	27 – 35	31
5	Manila	Male	7	23 – 48	34
6	Pasay	Male	12	23 – 44	34

The focus group discussions with caregivers were centered around three main discussion points; perspectives surrounding the CSMV Act, knowledge, attitudes, and perspectives (KAP) surrounding CRS use, and recommendations to improve mandatory CRS use.

Perspectives surrounding the Child Safety in Motor Vehicles Act

Awareness surrounding the CSMV Act

Awareness surrounding the CSMV Act was generally high across all participants, regardless of sex or city, however participants lacked complete information about the law. The main point of confusion was that surrounding taller children; participants mentioned that many children, especially those aged 12 years old, who are taller than the height outlined in the law (150 centimeters) shouldn't be expected to sit in a car seat. Participants expressed that the law should use a child's height to guide child seat regulations, rather than age, as older children are generally bigger in size; indicating a misunderstanding of the law.

"... but what if my 12 year old is a 7 footer, how do you use that car seat? They don't have enough information about that."

Participants identified news outlets, social media, YouTube, and driving schools as sources of information about the law. Participants were aware that the law was enacted to prioritize the wellbeing and safety of children however there was confusion about the full implementation of the law; they recognized that the law had been passed but were unclear on the exact timeline of implementation.

Opinions on the CSMV Act

Opinions around the law were mixed. Child safety was identified as a priority of the law, and participants supported implementing the law to keep children safe. Participants recognized that restraining children meant they were less likely to move around inside the car and be protected in case of a car accident of crash. They also felt that restraining children in a car seat or seat-belt was safer for the driver, as the driver is less likely to be distracted or interrupted. Additionally, participants felt that car seats are especially useful for single mothers who are unable to carry their child alone. A few participants mentioned seeing child restraints for the first time in other countries, and recognizing the value in using these. They felt that it was easier to prioritize the safety and well-being of children in private vehicles, however this is a challenge on public utility vehicles (public transportation), where women often commute with their children.

Participants felt that the government lacked in disseminating information on the law and how to use a car seat. In addition, they felt that feasibility of abiding by the law could be improved if law enforcement either provided more guidance on which car seats meet the standards outlined in the law, or provided subsidies to make car seat purchases more affordable.

Speaking on feasibility and law enforcement, participants were generally aware that law enforcement was poor. Participants stated that law enforcement may know the law however they are unaware how to implement it or how to punish those who don't use child restraints, thus there is a lack of incentive to use these systems. Participants also felt that increasing awareness about the law is not the only point of consideration, and questioned Filipino society's ability to adapt to this law.

"Sad to say most of the people here aside from the parents, even the law enforcers are not aware of the law."

Knowledge, attitudes, and practices surrounding child restraint systems

Knowledge

Children's safety, protection, and comfort were identified as the primary benefits of child restraint use across all participants. Distraction-free driving was identified as an additional benefit to the caregivers, protecting both children and adults in the car. Keeping children safe from accidents and reducing the risk of injury among children during car accidents was identified as a benefit; participants recognized that car seats reduce the impact of an accident on a child. Among participants who knew about the different types of car seats, they were aware that the type they use depends on the age of the child. Lack of awareness about the different car seats was also more common among caregivers who did not own a car seat.

"The purpose and function of the car seat and benefit is to protect and reduce the injury of children."

When asked about sources of information through which they learnt about child restraint systems from, participants identified internet reviews, online blogs and forums, social media (YouTube, Facebook), news outlets, TV shows, American/Hollywood movies, social circles (family, friends, neighbors), and parenting books. When asked what platforms should be used to share information about car seats to caregivers, participants mentioned social media (Facebook, Twitter, Instagram, TikTok), YouTube vloggers, posters and billboards, radio, TV (ads, news), education outlets (school curriculums, driving schools, seminars at the LTOs and MMDAs). Social media was the most recommended promotion outlet; YouTube vloggers and TikTok are especially popular in the Philippines, and participants suggested these could be used to share personal experiences or endorse car seats. Brochures which accompany the purchase of a car and dissemination campaigns at health facilities (hospitals, birthing facilities, pediatrics offices) were also identified as key information outlets for parents.

When asked about the place of purchase, for caregivers who owned a car seat, the majority mentioned department stores, malls, and baby fairs. Online purchases were not common, and when informed that they could purchase car seats online, participants mentioned that there was no difference in online and store prices, and they preferred buying car seats in-store because they can assess the quality and purchase immediately.

Attitudes

To assess attitudes towards child restraints, participants were asked: 1) what their reaction would be to other caregivers who don't use a car seat, and 2) what the reaction of law enforcers would be to caregivers who don't use a car seat.

Almost all participants mentioned having no problem seeing other parents not use a car seat, and felt that it is a personal choice which the parents can make. The cultural norm is to not use a car seat, thus the majority mentioned that they would have no reaction to seeing other parents not using a car seat as they themselves don't use one. Participants felt that it would be wrong to judge other parents for not using a car seat as there may be other underlying reasons, such as their economic conditions, which prevent them from purchasing a car seat. Additionally, some participants felt that it was unusual seeing parents using a car seat, and admitted that if they were to see a parent using a car seat, they would automatically assume that they are "rich" or belong to a higher socioeconomic class.

"I feel like I can understand why they don't have one because here in the Philippines we are so lenient. It's just like a decoration to us."

Although the law was passed in February 2019, it was not being implemented fully, thus participants had become complacent to the lack of law enforcement. Through their own experiences with not using car seats, seating children in their laps, or seating children in the front seat, the majority of participants recognized that law enforcement was not implementing the law. Participants felt that law enforcement either were not aware of the law, how to implement the law, or what the punishment for not complying with the law was, so they have no reaction to seeing no car seats.

"They just ignore it because they see a lot of people who don't have a car seat."

Participants were asked their beliefs on what characteristics influences car seat use, such as socioeconomic status, geographical location, and parent/child age. The majority of participants felt that there was no significant difference in car seat use across rural and urban settings, however car seat use may be higher in cities compared to rural/provincial settings as there are more police there. On the contrary, most participants recognized that families with a higher socioeconomic status are more likely to purchase a car seat than families belonging to a lower socioeconomic status. Participants felt that younger parents, particularly millennials, are more likely to use car seats than older parents as they are more aware and are more "paranoid". There were mixed responses on whether the age of the child impacts car seat use. Some participants felt that it was easier to restraint toddles aged 0–2 years in a car seat compared to children aged 2+, who are more moody; whereas other participants felt that restraining 1–2 years in a car seat was challenging because they need to be breastfed.

"Because here, we really don't see many people with car seats. If there is, that's what they call rich kids."

CRS Practices: Barriers

Lack of incentive in purchasing a car seat was largely attributed to the lack of implementation of the law. The majority of participants recognized that the law was very lenient, the law is not being implemented fully, and that there is low awareness of the law among law enforcers and the public. For these reasons, caregivers did not feel compelled to purchase or use a car seat; however some mentioned that if the law was implemented strictly, then they would feel obligated to buy a car seat.

Lack of affordability was identified as the primary barrier to child restraint use or purchase. Most participants expressed that car seats are too expensive for the general Filipino population to afford. Worsened economic conditions during the pandemic, pandemic travel restrictions (at the time of the study), and a lack of law implementation, coupled with lack of affordability, have hindered purchase or use of child restraint use.

"... Then you have to get a new one as the child grows, then another one when he grows. so, it seems really expensive and not affordable, and the government does not provide any alternative, especially for lower income families."

Space and family size were identified as a major barrier to car seat purchase or use. Participants described car seats as being bulky and taking up too much space within the vehicle, which makes the car crowded and reduces comfortability for other passengers. This was a huge barrier, especially for families with multiple children or older children. Large family outings/gatherings are common in the Philippines, and when these take place, it is common for children to sit on adults' laps during travel.

"Because it occupies a large space, in fact, when your child is sitting on your lap, you two are occupying only one seat instead of two seats."

Children's preference or response to car seats was also a huge barrier to child restraint use among participants, especially among younger children who don't understand child safety or are being trained to be seated in a car seat. Children either don't like sitting in car seats or they feel uncomfortable in car seats. Some children throw tantrums, become restless or irritable, or misbehave when they have to sit in a car seat or if they aren't sitting with their parents. For these reasons, participants mentioned seating children in their laps instead, or removing them from the car seat as it is distracting to drive with an emotional or irritable child.

One participant mentioned mistrust in the government, stating that child restraint use may have been implemented for governments and manufacturers to make profit, not for the protection of the children. A few participants mentioned lack of interest in purchasing a car seat because children will outgrow it quickly, and others mentioned children's movement and behavior (tantrums) as reasons for not using a car seat. Caregiver misconceptions surrounding child safety included believing their children are safer in their laps, and that child locks offer sufficient safety for children in vehicles.

“Then there’s also the trending logic that says "when I was a child, I was just held and I didn't get in accident".”

CRS Practices: Facilitators

A few participants mentioned practicality of car seats as facilitating car seat use, specifically, presence of ISOFIX attachments in cars and an easy installation process. A few participants mentioned using a car seat primarily for convenience. This included parents having a hard time carrying their child, travelling alone with a child, and travelling with a child who is asleep. Participants generally did not express any difficulties in accessing stores which sold child restraints; most recognized that these could be purchased online and in-store; and even mentioned second-hand purchases on Facebook Marketplace.

Recommendations from caregivers

Government

Recommendations for government were centered around incentivization, amendments to the law and/or level of law enforcement, utilizing the Land Transportation Office (LTO), and local contextualization of child restraint systems.

Incentivization was recognized as a win-win situation, for caregivers, children, and the government. Instead of focusing efforts on punishing non-compliant caregivers (fines, arrests) and having caregivers comply out of fear, efforts should be made to entice caregivers through rewards and incentives. Incentivization was focused on improving affordability, and recommendations included lowering the price of car seats, providing free or discounted car seats, implementing voucher programs, implementing price ceilings for car seats, or providing Value Added Tax (VAT) exemptions. Participants suggested providing parents who have just had a child, at a birthing facility of health facility, with a voucher for a discounted car seat. Such vouchers can be equipped with a QR code which caregivers can scan to learn more information about the importance of car seats for their newborn child. Participants recognized that the government plays a big role in providing citizens with the resources needed to comply with the law, and they should improve affordability of car seats if they want caregivers to use car seats. Just like the government has mandated identity documents (IDs) and seat-belts, it is also the government’s responsibility to provide car seats, is an example they provided. Participants also expressed the need to improve child safety on public utility vehicles, as these are commonly used by the public.

"Because if there are perks then definitely they will comply. Because aside from their baby is safe, they will even receive more benefits at the end... So, maybe it would be better if the government can persuade in a much rewarding way."

Participants mentioned that imported car seats are expensive and suggested designing and manufacturing seats locally so that they are more affordable, support the local economy, and can be customized to meet local needs. For example, they can be designed to meet local weather needs and the size of local Filipino children, who tend to be smaller.

Participants also felt that it is the government's responsibility to consult with the people who are going to be affected by the law, and understand their perspectives prior to implementing the law. Specifically, the opinions of caregivers should be heard prior to full implementation so that their doubts can be addressed, especially on a new topic like this, where the public may be resistant to change.

The Land Transportation Office (LTO), which is the government agency within the Department of Transportation which oversee land transportation in the Philippines, was identified as an agency which can actively promote child restraint use. LTOs are responsible for registering motor vehicles, issuing licenses, and processing license renewals. As one of the first points of contact for drivers and vehicle owners, participants felt that LTOs should inquire vehicle owners whether they will have any child passengers, so that they can recommend car seats or ensure appropriate child restraint use. Additionally, participants felt that licensing exams or license renewals should include an orientation on the use of car seats for parents.

"So, the implementation should start with the LTOs when we register our vehicles and maybe they should also verify if a child will also get in the car. So that the LTO can recommend them to get a car seat and the LTO should also monitor them if they have a car seat..."

Speaking about the law, participants felt that the law should be revised after a more detailed analysis of age and height among children in the Philippines has been conducted. Participants felt that the age bracket outlined in the law (newborn to 12 year olds) is too broad, as older children in this age bracket are usually too big to sit in a car seat, thus this law is impractical; which can be identified as a misunderstanding of the law.

Recommendations to improve enforcement of the law were also identified. Ways to improve enforcement included holding checkpoints, checking individual vehicles, and ensuring full and strict implementation of the law. Participants recognized that the law has been enacted however it has not been fully implemented, thus it is not considered important or taken seriously. In addition, participants highlighted the need to ensure fair implementation of the law; the law also applies to public utility vehicles however implementation seems to be selective and is likely to be stricter among private vehicles.

Community

Participants recommended increasing awareness about car seats among the public and providing information about car seats to potential car buyers. News platforms, street signs and boards, dissemination campaigns, advertisements, and public awareness forums about child restraints, were identified as potential information outlets. Citizens who don't own or drive cars may not be aware of the law, thus measures to increase awareness among these individuals should be considered.

A few participants also suggested that when customers are purchasing a car, they should talk to car companies and ask for information about car seats and ISOFIX in their vehicles. Some participants also suggested having car manufacturers include a car seat or providing a promotion on car seats with the purchase of vehicles.

Policy design and implementation case studies

A total of 46 key informants were interviewed with majority being involved with domestic NGOs. Table 31 shows the complete breakdown of the types of key informants interviewed.

Table 31. Key Informants invited and interviewed

Sector	Interviewed	No answer	Declined	Total contacted
Domestic NGOs	15	0	5	20
Legislative	3	4	0	7
Government	4	3	4	11
International NGOs/Organizations	4	0	0	4
Academic	1	1	0	2
Private sector	0	2	0	**2**
TOTAL	**27**	**10**	**9**	**46**

Politicians who were identified largely based on their past support for road safety legislation were found to be instrumental in the passage of what became the CSMV Act, though awareness of CRS and its importance was low among policy stakeholders. Table 32 enlists the key actors who were involved in the passage of the CSMV Act.

Table 32. Key Actors Involved with the CSMV Act in the Philippines

Sector	Interviewed
Domestic NGOs	▪ ImagineLaw Inc. ▪ Initiatives for Dialogue and Empowerment through Alternative Legal Services (IDEALS, Inc) ▪ VERA Files ▪ Buckle Up Kids ▪ Safe Kids Philippines ▪ New Vois Association of the Philippines ▪ Peace and Conflict Journalism Network (Pecojon) ▪ Automobile Association Philippines ▪ Legal Engagement Advocating Development and Reform (LEADER) ▪ Center for Policy Studies and Advocacy on Sustainable Development
Legislative	▪ Committee on Public Services (Subcommittee on Special Protection of Child Passengers) ▪ Committee on Women, Children, Family Relations and Gender Equality
Government	▪ Department of Transportation (DOTr) ▪ Land Transport Office (LTO) ▪ Philippine National Police (PNP) ▪ Department of Trade and Industry (DTI) ▪ Department of Health (DOH)
International NGOs/ Organizations	▪ Global Health Advocacy Incubator (GHAI) ▪ Philippines Red Cross (PCR) ▪ World Health Organization Philippines ▪ UNICEF ▪ Vital Strategies ▪ Global Road Safety Partnership (GRSP) ▪ Bloomberg Philanthropies (BP)
Academic	▪ Ateneo de Manila University School of Government

Actors involved with the CSMV Act made sense of the policy process by sharply distinguishing between its passage into law (which was successful) and its implementation (which to-date has not been successful). The act's implementation was stymied by three overarching frames: that the Act is 'anti-poor,' 'unnecessary,' and a 'strategic political distraction.'

The Act was thought of as 'anti-poor' across the 'country', 'population,' 'family,' and 'individual' levels. Key informants reported that at the country level, it was thought that CRS laws were not appropriate for an LMIC like Philippines. The CSMV Act was considered inappropriate at the population level since it was only applicable for those who owned private motor vehicles (PMVs) while the majority of the population in the Philippines cannot afford PMVs. Since families tend to be large in the Philippines, not as many passengers can fit in a car when children are using CRS. Thus, this piece of legislation that is de facto obligating households to purchase a larger car to transport their family was considered an unreasonable expense. At the individual level, purchasing a CRS was seen as an unnecessary expense.

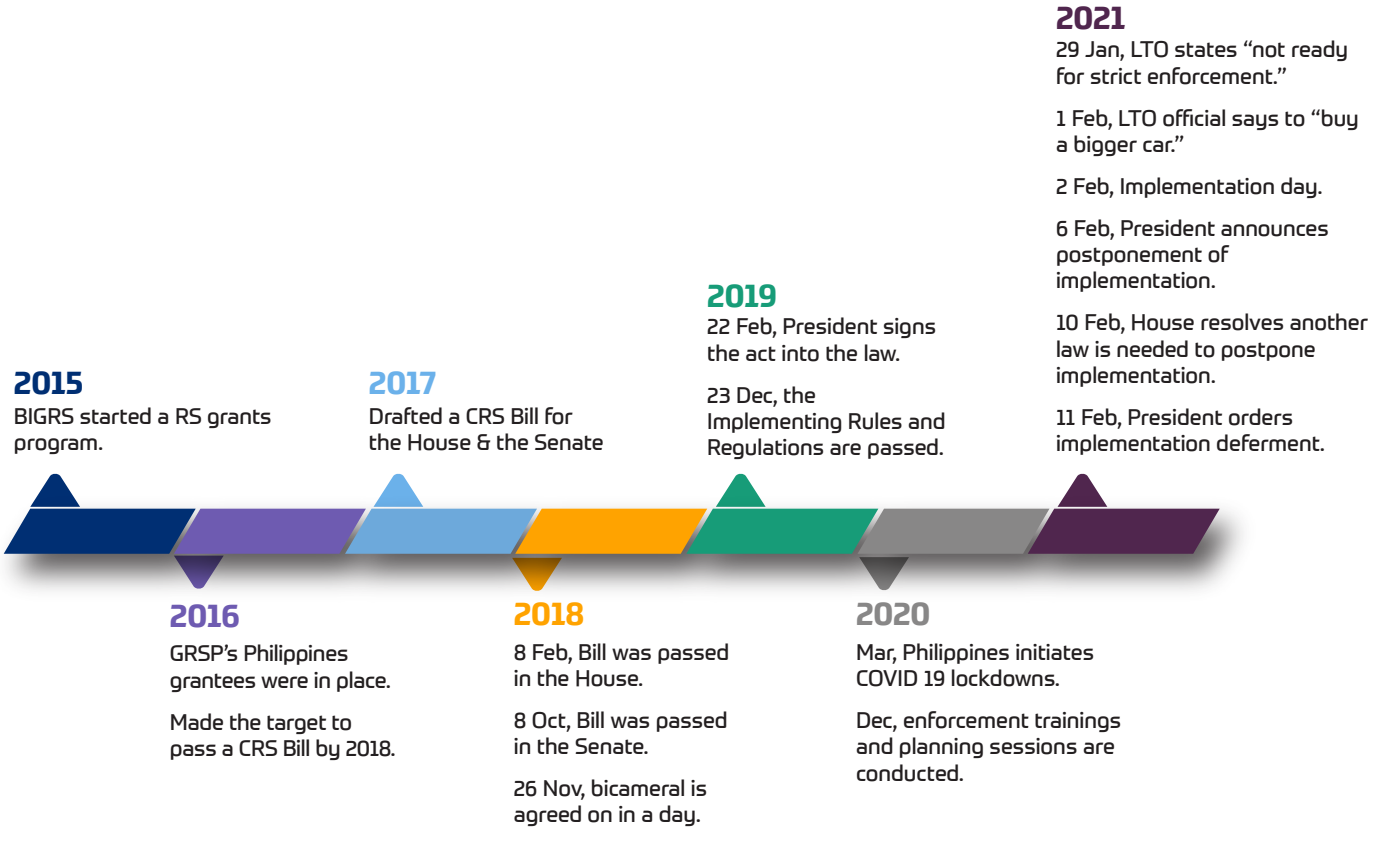
The Act was deemed 'unnecessary' at the time of implementation, since the COVID-19 pandemic was ongoing and children were not permitted to leave the house, and hence did not require CRS. Finally, the CSMV Act was thought of as unnecessary because of the false belief that 'nothing is safer than a mother's arms.'

The CSMV Act was reportedly considered as an attempt to divert attention from poor governance, such as that surrounding the pandemic, or the drug war. By introducing road safety legislation, the government was perceived as attempting to demonstrate to the public how they are acting with the protection of their citizens in mind. Stakeholders believed that this 'good press' (pre-media backlash) was an attempt to mask errors or injustices that have occurred under President Duterte's administration. Along the same lines, the CSMV Act was also understood to be yet another mechanism through which traffic officers can solicit bribes.

CRS and road safety champions advocated for the law to be 'pro-poor' in that it sought to protect against the high costs of child road safety injuries. Advocates also worked hard in an attempt to frame CRS mandates as a 'public health issue', as opposed to a road safety one.

The CSMV Act faced minimal opposition in the legislative process. Between the drafting and the passage of the Bills other road safety activities, namely the GRSP's Asia Pacific Regional Conference held in the Philippines and the Global Road Safety Leadership Course, another output of the BIGRS, invited several key actors involved in the passage of the Act. These parallel road safety efforts reportedly served to motivate key actors and keep up the momentum surrounding the CRS Bill. Figure 16 shows the timeline for different stages of passage of the CSMV Act.

Figure 17. Timeline of the CSMV Act



At the time the CSMV Act was passed, public awareness of the law was very low. Coalition members from the media, PECOJON and Vera Files, organized media trainings on road safety and the importance of CRS. Public awareness occurred at the scheduled time of implementation when an official made an inaccurate comment on national radio. A media backlash followed and cemented the framing of the act as 'anti-poor' among the public. In response, President Duterte deferred the enforcement of the act, without the legal backing to do so, with no clear timeline for how long the deferment would last.

IV. Recommendations

1. Enhance enforcement the CSMV Act with focus on the following:
    a. Section 4 of the CSMV Act, which mandates use of CRS among children aged 12 years or younger
    b. Section 5 of the CSMV Act, which prohibits children aged 12 years or younger from sitting in the front seat, and
    c. Providing training to law enforcement to improve their knowledge about the Act and its implementation.
2.. Coordinate mass media campaigns which:
    a. Promote awareness of the CSMV Act and its implementation, including clear timelines
    b. Help create a positive narrative around the Act and garner public support by emphasizing on the benefits, in terms of health and out-of-pocket expenditures
    c. Educate caregivers on the use of CRS, its types, and benefits, and
    d. Discourage the practice of seating children on passenger's laps.
3. Ensure adequate numbers of CRS are available in physical stores all over Philippines by increasing production within the Philippines and importing from abroad.
4. Implement adequate quality control regulations for CRS sold in the online market, especially those sold by unofficial vendors in the online market.
5. Improve affordability of CRS through discounts (specifically those sold by official vendors in the online market), voucher schemes, or tax exemptions.

V. Limitations

Our research study only included three cities in the Philippines, which were restricted to the NCR, thus our findings are not nationally representative and may not be generalized to all of the Philippines. In addition, due to the indefinite deferment of the CMSV Act, a post-implementation assessment of CRS use, accessibility, affordability and quality, and consumer and political perspectives surrounding the CSMV Act's implementation will not be completed.

Observation study

Child observations were capturing during a certain timeframe; although the observation schedule was designed to account for when children are most likely to be observed in vehicles at the observation sites, the cross-sectional data only provides CRS prevalence at a specific point in time and cannot be used to make any causal inferences.

Market observations

Not all randomly selected physical vendors selling child restraints in Manila could be included since some shops were closed at the time of data collection. For several CRS observed on the e-commerce sites, data on variables such as product standard, number of units sold by vendor type, age, weight and height limit, were not available. It is difficult to infer whether these pieces of information are only missing from the e-commerce sites or are not shared with customers at all during the process of online sales.

Focus group discussions

FGD facilitators actively ensured all participants were able to express their opinions equally however some participants may have felt that they were unable to express their opinion freely, or they may have felt uncomfortable providing their honest opinion in a public setting. In addition, as one of the inclusion criteria was ownership of a car, the participant sample cannot be generalized to all caregivers across the Philippines, and may represent a group who belong to a higher socioeconomic status group.

Policy design study

Relatively few government officials (n=4) agreed to participate in the key informant interviews (out of n=11 invited to participate). In addition, due to time constraints, the impact of the CSMV Act was not explored.

VI. Conclusions

Compliance with the Child Safety in Motor Vehicles Act 2019 was found to be poor across cities in the National Capital Region in the Republic of the Philippines. This multi-method study indicates the need to implement the law to incentivize CRS use, enhance awareness about the CSMV Act among the public, and improve availability and quality of CRS sold in the Philippines. Furthermore, in the Philippines, it is a cultural norm and culturally acceptable to seat children in their parents' laps, thus adopting use of CRS will also require a shift in society's mindset.

To promote uptake of child restraint systems, governments must prioritize full implementation of the law and improve affordability of child restraint systems through financial incentives, particularly in the online market. Conducting standardized training for law enforcement agencies across the NCR will support capacity development and enhance understanding of the CSMV Act among law enforcement, and ensure uniform implementation across cities.

There was a lack of availability of CRS in physical stores, and while many CRS were available online, the quality of these products was not compliant with the CSMV Act. Additionally, there was a huge discrepancy in the price of CRS sold in physical stores and online, as well as those sold by official and unofficial vendors. Implementation should also include a quality control component, wherein, strict enforcement of lack of product standards, dates of manufacture and expiry, manufacturer's details, and age, weight, and height limits, is ensured.

Developing social marketing and mass media advocacy campaigns to increase awareness about child restraint systems, and framing the CSMV Act as a child health issue, with an emphasis on the safety benefits for children, must be conducted in tandem with improved implementation of the law, and must target caregivers of children aged 0–12 years old. Advocacy campaigns must focus on garnering public support and should be implemented through information channels which caregivers commonly utilize, including social media, news channels, advertising; and places where caregivers commonly frequent, including LTOs, birthing/health facilities, and schools/day care centers.

Through these cross-sectoral efforts, local policy-makers can drive improvements in the use of child restraint systems in the NCR, and act as a model for other administrative regions across the Philippines to improve compliance with the CSMV Act.

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Appendix

Table 1. Observation schedule for child observational study

TYPE OF SITE	NUMBER OF OBSERVATION SESSIONS PER SITE	OBSERVATION SCHEDULE
Hospitals	5 (90 min) sessions per day (2 weekdays and 1 weekend day)	Early morning (7:30 – 9:00) Late morning (10:00 – 11:30) Afternoon (12:30 – 14:00) Late afternoon (15:00 – 16:30) Evening (17:30 – 19:00)
Places of worship (all)	6 (90 min) sessions per day with the last session beginning right after the second last session (2 weekend days and 1 weekday)	Early morning (6:30 – 8:00) Late morning (8:30 – 10:00) Afternoon 1 (10:30 – 12:00) Afternoon 2 (12:30 – 14:00) Late afternoon (14:30 – 16:00) Evening (16:00 – 17:30)
Schools and childcare facilities	4 (90 min) sessions and 1 (60 min) session per day for 3 days (all weekdays); the last session runs 60 mins	Early morning (7:00 –8:30) Late morning (9:00 – 10:30) Afternoon 1 (11:00 – 12:30) Afternoon 2 (13:00 – 14:30) Late afternoon (15:00 – 16:30) Evening (16:30 – 17:30)
Shopping malls	5 (90 min) sessions per day for 3 days (1 weekday and 2 weekend days)	Late morning (10:00 – 11:30) Afternoon 1 (12:00 – 13:30) Afternoon 2 (14:00 – 15:30) Late afternoon (16:00 – 17:30) Evening (18:00 – 19:30)
Restaurants	3 (90 min) sessions and 1 (120 min) session per day for 3 days (1 weekday and 2 weekend days)	Late morning (11:00 – 12:30) Afternoon (13:00 – 14:30) Late afternoon (15:00 – 16:30) Evening (17:00 – 19:00)
Parks	5 (90 min) sessions per day (1 weekday and 2 weekend days)	Early morning (7:30 – 9:00) Late morning (10:00 – 11:30) Afternoon (12:30 – 14:00) Late afternoon (15:00 – 16:30) Evening (17:30 – 19:00)

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