

**KNOWLEDGE OF
MOTHERS ABOUT THE
USE OF CHILD SAFETY
SEATS ON DISCHARGE
FROM MATERNITY**

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Abstract: Deaths, hospitalizations and sequelae from traffic accidents involving children are worrying in the global and Brazilian health scenario. Traffic education practices are strategies for the prevention and health promotion of the population. The objective was to verify the knowledge of mothers about the safe transport of newborns after discharge from the maternity hospital. This was an exploratory, quantitative research carried out through a questionnaire applied to the parent or guardian of the child at discharge from the maternity hospital, totaling 30 Interviewed. The results showed the lack of Health Education and Traffic Education that must be carried out by the health teams, as only two (6.7%) Interviewed reported having received some information during the newborn's discharge from the maternity hospital, the rest, 28 (93.3%) Interviewed did not receive any information on how to correctly transport the baby when leaving the maternity ward. This way, it is intuited that mothers must receive guidance on care in relation to the transport of the child from prenatal care to the consultations held after birth, it is observed that the main source of information that the interviewee received about the use of of Child Safety Seats was through conversations with friends, with ten (27.1%) responses, and from other sources, with 13 (35.1%) responses, none of the interviewees received information from the nurse and only three (8, 1%) received from the pediatrician. It is recommended that educational practices are present in the daily lives of professionals, they can be carried out in the hospital environment, in waiting rooms of basic health units, private clinics, educational centers, and can be individual or collective.

INTRODUCTION

Annually, more than 1.35 million people are affected by Traffic Accidents (TA), about 13 million deaths occur and about 500 million are injured by the next decade (WHO, 2021).

Children are even more vulnerable to violence (Schwebel et al., 2016) than adults because they have difficulty crossing streets, making decisions and assessing risks in terms of distance, speed, and also because they have peculiar conditions for growth and growth. development. Thus, in traffic they are more exposed to accidents.

Automotive means of transport have been increasingly used in the world, due to the agility with which they move from one place to another. Due to the high frequency of driver misconduct, traffic accidents have become an important cause of trauma, multiple trauma and deaths (ASCARI et al., 2013). The lack of use of a car seat in the vehicle may have contributed to such worrying numbers of deaths recorded in traffic accidents involving children.

In this sense, guidelines must be carried out for the prevention of accidents, and the nurse, in his/her role as an educator, must carry out educational activities from the prenatal period and prior to the child's discharge from the maternity, in order to inform the mothers of the care that must have, and the correct use of Child Safety Seats, to protect the newborn during its growth.

Health professionals, involved in child care, play a fundamental role in educating parents for safe transit, enabling safe transport to take place after the newborn leaves the maternity hospital in order to reduce injuries in traffic accidents.

The present study aimed to verify whether mothers of newborns discharged from the maternity hospital have knowledge about the safe way in which children must be transported to their home after discharge.

METHODOLOGY

The present study is characterized by exploratory, quantitative, descriptive research. It was developed at the Obstetric Clinic with Rooming-in of a public hospital located in the western region of Paraná.

The mothers of newborns hospitalized during the last week of the first month of data collection took part in the research, in the last week of the second month of collection, carried out in June and in the first week of the last month of collection, which was in July. This choice of dates occurred for convenience.

Data collection was carried out in the morning with the mothers of newborns who were discharged on the day of data collection. Mothers whose newborns were referred or transferred to neonatal intensive care unit (ICU) and (ICU) specialty centers and patients admitted to the ward for reasons such as pre or post gynecological surgery were excluded from the data collection.

Data collection took place through a questionnaire. The study followed the ethical precepts of the Permanent Research Ethics Committee of the Universidade Estadual do Oeste do Paraná, being approved under opinion 277,213.

The presentation of the quantitative results took place in the form of Tables, Graphs and Charts. For data analysis, responses were entered into a database, grouped and counted by frequency and simple percentages.

RESULTS AND DISCUSSIONS

Data collection took place with a sample of 30 individuals. In the hospital (field of study) there are approximately three discharges per day, making an average during the three weeks of collection, without discounting weekends (Saturdays and Sundays), the number of discharges that occurred in this period was approximately 63 discharges.

The first part of the interview was related to the interviewee's socioeconomic data, education, family income and age group were evaluated.

According to the level of education, it is observed that there was a greater number of individuals with incomplete primary education nine (30%), followed by complete primary education six (20%) and incomplete secondary education six (20%), five (16.67%) subjects had completed high school, two (6.67%) subjects had completed higher education and two (6.67%) were not literate. None of the subjects had professional education or incomplete higher education.

These data seem to show the low level of education in the interviewed subjects and below the national index (BRASIL, 2007), they point out that the national population, over 15 years old, in 2006, 11.18% had less than one year of schooling, 11.8% had 1 to 3 years, 26.74% had 4 to 7 years, while 50.99% had eight years or more of schooling.

In relation to family income, none of the interviewees had a family income below one minimum wage, the prevalence occurred in the income that is between 1 to 5 minimum wages, where this value represented 29 (96.7%), from 5 to 10 minimum wages, only one (3.3%) interviewee was observed, and none of the families had an income greater than 10 minimum wages.

Oliveira et al. (2009) in their study measured the degree of knowledge of mothers about the norms of use of ASI (systematic approach to instruction), with the best performance indices in knowledge tests obtained by participants with higher socio-occupational conditions in terms of education and income.

It is worth remembering that the values of ASI (systematic approach to instruction) are high, being unfavorable for people with low income in Brazil. Research shows that access

to ASI (systematic approach to instruction) can be facilitated with the government distribution of equipment to the needy population. Although apparently expensive, for every US\$ 1.00 invested in the acquisition of ASI (systematic approach to instruction), there is a savings of US\$ 33.00, saved with the treatment of accident victims (TALTY et al., 2000).

Regarding the age group of the Interviewed, only two (6.6%) participants are younger than 18 years old, the prevalence is between 18 and 25 years old, with a total of 11 (36.7%) responses, between 25 and 35 years old. years, 14 (46.7%) fit in, three (10%) were aged between 35 and 45 years and no participant aged over 45 years.

The second part of questions was related to the newborn's departure from the hospital, that is, which means of transport would the mothers use at the time of hospital discharge, the distance that would be covered with the newborn within the transport, which route is taken.

| Category | Interviewed (<i>n</i>) | Percentage (%) |
|--------------------|--------------------------|----------------|
| Own car | 14 | 46,7% |
| Family/friend car | 7 | 23,3% |
| Taxi | 2 | 6,7% |
| Others | 7 | 23,3% |
| Total | 30 | 100% |
| Smaller than 30 km | 19 | 63,3% |
| Over 30 km | 11 | 36,7% |
| Total | 30 | 100% |

Table 1. Means of transport used and distance traveled by mothers and children when leaving the hospital with the newborn. Paraná, 2022.

Source: Research data, 2022.

Regarding the means of transport used when leaving the hospital, 14 (46.7%) left in their own car, seven (23.3%) left with a family/friend's car, two (6.7%) used the taxi as a means of transport. means of transport and seven (23.3%) Interviewed used other means, these means were the health car or ambulance of the municipality to which it belonged, and even buses, as shown in Table1.

Mothers stop using this safety device, as it is not mandatory in the vehicle they would use (bus, taxi or other public transport). Leaving the newborn vulnerable in the face of an accident. This way, the more unprotected the baby is, the greater the sequelae and traumas in the face of an accident.

Comparing the data with the study carried out with 203 Interviewed, 131 (64.5%) left the maternity hospital in their own car, 29 (14.3%) did so with a family/friend's car, 41 (20.2%) used a taxi, only one interviewee (0.5%) used a bus, and only one person (0.5%) used another means of transport after discharge (ENSEÑAT; SOJO; IÖLSTER, 2002).

This study evaluated the knowledge and use of ASI (systematic instructional approach), identified that 99% of the interviewed left the maternity hospital by car, including their own car, family/friend or taxi (ENSEÑAT; SOJO; IÖLSTER, 2002). Corroborating the data from this research.

Regarding the distance to be covered during the journey from the hospital to the residence, 19 (63.3%) Interviewed covered a distance less than 30 km, and 11 (36.7%), participants covered a distance greater than 30 km return home. It can be inferred that people generally seek hospitals closer to their place of residence. Those who probably do not have referral hospitals close to their place of residence travel more than 30 km (ENSEÑAT; SOJO; IÖLSTER, 2002).

It must be noted that regardless of whether the distance to be covered is small or long, care must be the same. For accidents can occur even when the vehicle is a few meters from reaching your residence. The risk of accidents can even increase when the distance traveled is small, because if the driver already knows the place, he will no longer pay attention to points on the road that he is already used to.

The third part consisted of information regarding the use of ASI, commonly called child seats. The questionnaire presented questions about the source of information from which the mothers received guidance on the use of ASI, if they had knowledge, in which place to use the car seat, and its positioning and, until what age must the car seat be used. will transport the newborn from the maternity hospital to your home. It was also questioned the degree of knowledge of the Interviewed about up to what age the child must be transported from the back seat of cars and, if they received any information on discharge from the maternity hospital and who passed on this information.

| Category | Interviewed (n) | Percentage (%) |
|--|-----------------|----------------|
| Friends | 10 | 27,1 |
| Magazines for parentes | 4 | 10,8% |
| Pediatrician | 3 | 8,1% |
| Obstetrician | 0 | 0% |
| Nurse | 0 | 0% |
| Others | 13 | 35,1% |
| The person did not receive information | 7 | 18,9% |
| Total | 37 | 100% |

Table 2. Main source of information that the interviewee received about the use of ASI.

Paraná, 2022.

Source: Research data, 2022.

Table 2 shows the main source of information that the interviewee received about the use of ASI, it can be observed that the highest rates are represented by information obtained through conversations with friends with 10 (27.1%) responses, and from other sources, with 13 (35.1%) responses, when referring to other sources, the interviewee reports that he received information when making or renewing the National Driver's License (CNH (DRIVER'S LICENSE)) and by means of communication such as radio and television.

It is worth remembering that mothers must receive information during prenatal consultations, and these educational practices are carried out by health professionals, namely: obstetrician, pediatrician, nurse, nursing technician. Here we highlight that in the data found, no interviewee received information from the nurse and only three (8.1%) received it from the pediatrician. An important finding was that seven (18.9%) Interviewed reported that they never received guidance on the subject.

Educational practices in health must be part of the daily life of the health professional, in particular the nurse, who, when developing health prevention, promotion and recovery activities, must include among the educational practices the theme traffic behavior (CASAROLLI; CAMBOIN, 2011).

The use of the infant seat must start with the transport of the baby from the maternity hospital to home. And this orientation must be reinforced at each consultation, when including in childcare how the child is being transported (WAKSMAN; PIRITO, 2005).

| Category | Interviewed (n) | Percentage (%) |
|-----------------------------------|-----------------|----------------|
| Rear seat on the passenger's side | 10 | 33,3% |
| Driver's side rear seat | 3 | 10% |
| Middle back seat | 17 | 56,7% |
| Front seat | 0 | 0 |
| Total | 30 | 100% |
| Forward (facing the panel) | 6 | 20% |
| Backwards (back to panel)) | 15 | 50% |
| The person does not know | 9 | 30% |
| Total | 30 | 100% |

Table 3. Knowledge of mothers on how to use and position the ASI inside the vehicle. Paraná, 2022.

Source: Research data, 2022.

Although most of the Interviewed answered assertively, the lack of guidelines regarding its use can still be observed in Table 3. When asked about how to use the ASI inside the vehicle (Table 3), ten (33.3%) of the Interviewed allege that the best place to position the ASI is in the rear seat on the passenger's side, and three (10%) responded to be in the rear seat on the driver's side.

It is worth remembering that the safest place for any child with a height of less than 1.45 m is the central position of the rear seat of the car (Santiago, 2019), of the Interviewed 17 (56.7%) answered correctly.

The rear seat in the middle is the most suitable, as the child is safer in the face of impacts that occur on the sides of the car, however, when there is a need to use all the seats with children, the largest ones must be placed on the sides and as much as possible. smaller the size and age of the child, the child must occupy the middle seat. Still, the child,

using the back seat, is the simplest and most effective way to reduce the risk of injury in the event of an accident or fatality (ROMARO; FONSECA, 2004; Howard et al., 2004).

Regarding the knowledge of the mothers of the newborn, about the correct positioning of the seat used in the discharge from the maternity hospital (Table 3), in this case, the comfort baby, six (20%) answered that it must be facing the baby. the panel, 15 (50%) responded that the correct position is the seat facing away from the panel, and nine (30%) Interviewed responded that they do not know the correct positioning. This finding is worrying, because it is not enough just to have the car seat, if at the time of positioning it you do not do it correctly.

According to Waksman; Pirito (2005), the manufacturer's instructions must be strictly followed when installing the seat in the car; only this way is safety guaranteed.

In the case of premature or low birth weight newborns, they need constant observation, even before hospital discharge, the newborn must be placed in the baby seat and evaluated for possible respiratory changes due to the semi-inclined position of the infant seat. If it must remain lying down, a suitable "basket" for vehicular transport can be used (WAKSMAN; PIRITO, 2005, p. S184).

The strength of a child's bone structure and internal organs is significantly less than that of an adult. Therefore, the loads of seat belt straps generated in vehicular collision situations, in most cases compatible with the resistance of a young adult, can be excessive to be supported by the bone structure of a child (ROMARO; FONSECA, 2004).

Hence the importance of special devices for children, which have the function of absorbing even more the energy transmitted in collisions at levels compatible with the structure and organs of the child's body (ROMARO; FONSECA, 2004).

As for the comfort baby, it must be positioned with its back to the panel, as this position prevents the child's head from being subjected to impacts in case of braking and collisions, reducing the risk of trauma to the cervical spine. It is contraindicated to place the baby, in the infant seat, facing the road until it reaches a weight of 9 kg (DENATRAN, 2013).

| Category | Interviewed (n) | Percentage (%) |
|--------------------------|-----------------|----------------|
| 1 year | 10 | 33,3% |
| 2 years | 3 | 10% |
| 3 years | 0 | 0% |
| 4 years | 0 | 0% |
| 5 years | 5 | 16,7% |
| The person does not know | 12 | 40% |
| Total | 30 | 100% |

Table 4. Knowledge of mothers about up to what age the child must use the maternity high chair. Paraná, 2022.

Source: Research data, 2022.

When asked up to what age the newborn must be transported in its specific seat (Table 4), only ten (33.3%) responded that it is up to one year, three (10%) responded that it is up to two years, five (16.7%) answered that they must use the baby comfort until the age of five and the majority, 12 (40%) interviewed answered that they did not know.

Looking for data from the Argentinian article, of the 203 interviews, seven (3.4%) responded that they must use the specific seat up to one year of age, 35 (17.2%) responded that the equipment must be used up to two years of age. age, 49 (24.1%) answered up to three years old, 16 (7.9%) answered up to four years old, 14 (6.9%) answered up to five years old, 77 (37.9%) said no know, and five (2.5%) did not respond (ENSEÑAT; SOJO; IÖLSTER, 2002).

When using the safety seat improperly, the equipment itself can cause injuries to children, hence the need to be used at the correct age for each type of equipment, and in the right way.

| Category | Interviewed (n) | Percentage (%) |
|--------------------------|-----------------|----------------|
| 1 year | 0 | 0% |
| 2 years | 0 | 0% |
| 3 years | 0 | 0% |
| 4 years | 0 | 0% |
| 5 years | 6 | 20% |
| 10 years | 17 | 56,7% |
| The person does not know | 7 | 23,3% |
| Total | 30 | 100% |

Table 5. Knowledge of mothers about the age up to which children must be transported in the back seat. Paraná, 2022.

Source: Research data, 2022.

Regarding knowledge of traffic laws, about transporting children in the back seat of the vehicle (Table 5), most showed knowledge of the subject, 17 (56.7%) interviewed answered that children under ten years old must be transported in the back seat of the vehicle, only six (20%) responded that they must carry children under five years of age in the back seat, and seven (23.3%) interviewed said they did not know.

In short, due to the child's mental and physical immaturity, the correct recommendations for transporting children in a motor vehicle were established through Resolution 277/2009, which was updated by Resolution 819/21 (CONTRAN, 2021).

The legislation guides the transport of children under 10 years old in the back seat, but some cars have only front seats. If the transport of a child under the age of 10 years is to be carried out, safety measures must be taken, such as transporting children in seats suitable for their age, using the correctly

adapted three-point seat belt, moving the seat as far apart as possible. away from the panel as possible (WAKSMAN; PIRITO, 2005).

| Category | Interviewed (n) | Percentage (%) |
|----------------------------|-----------------|----------------|
| Yes | 2 | 6,7% |
| No | 28 | 93,3% |
| Total | 30 | 100% |
| Nurse | 0 | 0% |
| Nursing Technician | 0 | 0% |
| Pediatrician | 1 | 3,3% |
| Obstetrician | 0 | 0% |
| Physiotherapist | 0 | 0% |
| Others | 1 | 3,3% |
| The person did not receive | 28 | 93,4% |
| Total | 30 | 100% |

Table 6. Did the mother receive any information at the time of discharge from the maternity hospital, who provided the information at the time of discharge. Paraná, 2022.

Source: Research data, 2022.

When questioning the mothers during the interview, if they received any information about the use of ASI (Table 6) and who was responsible for this information, the numbers are surprising. Only two (6.7%) Interviewed reported having received any information during the newborn's discharge from the maternity hospital, the remainder, 28 (93.3%) Interviewed, did not receive any information on how to correctly transport the baby when leaving the hospital. maternity.

Of those who received some type of information, only one (3.3%) reported that the pediatrician passed on this information and the second interviewee (3.3%) who reported having received information, could not say what the function of the employee was. inside the unit.

The data differ from a survey carried out by Camboin (2009), which pointed out that

of a total of 60 professionals who answered the question about the time they dedicate to ASI orientations, 30 (50%) reported that they perform at least 15 minutes a day. to advise on the use of ASI, 24 (40%) used 15 minutes to 2 hours and 6 (10%) said they used more than 2 hours. And in the study it was evident that the professionals who, in greater number, said to guide were nurses, 20 (33.3%) answered to guide for at least 15 minutes.

The current study notes that the guidelines for mothers are too short. Mothers must be guided by health professionals about the risks of incorrect transport of the child and even adults inside the vehicle, what are the injuries, the sequelae that a child can suffer in the face of an accident.

It is worth mentioning that, for campaigns to be effective, health teams, the media with advertising campaigns and public health policies must work together, so these strategic measures tend to benefit Brazilian children and adolescents (WAKSMAN; PIRITO, 2005).

In the fourth part of the interview, the way the mothers would transport the newborn after discharge from the maternity hospital was evaluated (Table 7).

| Category | Interviewed (n) | Percentage (%) |
|--------------------------------|-----------------|----------------|
| Mother's arms in the backseat | 15 | 50% |
| Mom's arms on the front seat | 0 | 0% |
| Baby comfort in the back seat | 0 | 0% |
| Baby comfort in the front seat | 0 | 0% |
| Car seatfor babies | 15 | 50% |
| Total | 30 | 100% |

Table 7. How the mothers took the newborn when leaving the maternity hospital. Paraná, 2022.

Source: Research data, 2022.

Of the 30 interviewed, 15 (50%) said they would go out with the newborn in their arms, in the back seat of the vehicle, the other 15 (50%) said they would use the car seat.

Parents must be aware of the risks of not using child safety seats, since prenatal care, so that upon leaving the maternity hospital they have already provided the equipment for the safe transport of the newborn from the maternity hospital discharge to home.

The correct use of child safety seats has a 71% effectiveness in preventing deaths attributed to car accidents, and a 67% effectiveness in preventing hospitalizations for injuries resulting from collisions. It is also estimated that, when used correctly, they reduce the risk of death in newborns by 71% and by 54% in children aged 1 to 4 years (ENSEÑAT; SOJO; IÖLSTER, 2002).

In the fifth part of the interview, only those who already have children and who already use the car seat responded (Table 8), we chose to ask what type of ASI they already use and the way they use it.

| Category | Interviewed (n) | Percentage (%) |
|--------------------------------------|-----------------|----------------|
| Rear-facing (opposite the conductor) | 3 | 10% |
| Forward facing (driver facing) | 9 | 30% |
| The person does not use | 18 | 60% |
| Total | 30 | 100% |
| Adapted to use from birth | 1 | 3,3% |
| For babies up to 9 kg, rear-facing | 2 | 6,7% |
| Another model | 9 | 30% |
| The person does not use | 18 | 60% |
| Total | 30 | 100% |

Table 8. Mothers who already use ASI, how they do it and what model. Paraná, 2022.

Source: Research data, 2022.

When asked if they already use a child safety seat (Table 8), of the respondents, 12 (40%) stated that they already used a child safety seat model, and 18 (60%) respondents never used it. child safety seat.

Regarding the model used, one (3.3%) uses the seat adapted to be used from birth, two (6.7%) use the chair for babies up to 9 kg and use the back facing the panel, and nine (30%) used other models, these models included child seats up to 18 and 25 kg, or child booster seats, 18 (60%) never used any ASI. When mothers already know and have had contact with ASI, it becomes important, as it is a positive point that they are concerned about the safety of their children, and tend to use them again.

And the last part of the questionnaire sought to cover the use of safety systems in adults, more specifically the seat belt (Table 9).

| Category | Interviewed (n) | Percentage (%) |
|----------|-----------------|----------------|
| Yes | 30 | 100% |
| No | 0 | 0% |
| Total | 30 | 100% |

Table 9. Mothers use seat belts in the back seat. Paraná, 2022.

Source: Research data, 2022.

In the case of using seat belts, all respondents said they use it, four (13.3%) responded that they use it only on the BR/PR Highway, one (3.3%) interviewee said that they use it only in the city and 25 (83.4%) responded that they use both in the city and on the BR/PR highway. And all mentioned that the seat belt is used in the back seat of the vehicle.

What is striking is that all adults report using seat belts, which contrasts with the lack of use of child safety seats for their children. Once in the educational process, the example has a much greater force than any type of action. In other words, when mothers do

not wear seat belts, children do not use them either (WAKSMAN; PIRITO, 2005).

As acquisition and installation are time-consuming and costly, mandatory use is essential. The use of ASI for the transport of children had a great increase from the mandatory use of seat belts for adults, especially by the driver of the vehicle (OLIVEIRA; CARVALHO; JOÃO, 2007).

The data identified the low number of educational practices carried out by the health teams both in the hospital environment (during admission, the period of hospitalization itself and at discharge) and in the prenatal period, in which care is provided in the basic health units, being that educational practices would help to prevent harm to children's health.

The data point to the low number of orientations carried out by the health teams, composed of pediatricians, obstetricians, nursing technicians and the nurse, these data are local, but it is something that may also be happening in other places. Since the nurse has greater contact with the population and is always carrying out educational practices for prevention and health promotion, since the patient's admission to the unit, guidelines regarding the safe behavior of drivers in traffic can be included in the your daily planning in order to reduce the number of traffic accidents.

FINAL CONSIDERATIONS

The use of ASI has been considered the most effective method in reducing infant mortality in car crashes. When transporting children inside the vehicle, parents must be aware of the risks to which they are exposed, know the safest equipment, and the equipment that the vehicle has. Avoiding accidents or trying to minimize their consequences is an adult's duty, he is responsible for minors.

For this picture to change, we need more effective policies and interventions, with driver education as the essential means to promote

changes in their behavior. Thinking about the effectiveness of this education, it is necessary that the content of safe transport of children inside the vehicles be taught and charged in the exams to obtain the CNH (DRIVER'S LICENSE), since the data from this research showed that when the research sample was questioned about the transport of children under 10 years old, most were assertive, and this information is part of the guidelines carried out in the preparatory activities for the CNH exams (DRIVER'S LICENSE). On the other hand, when individuals were asked about the ASI models (systematic approach to instruction), the number of erroneous answers predominated and even some individuals were unaware of the subject.

Educational practices aimed at the child's mothers should occur at different times, starting with prenatal care during consultations, in the maternity ward, in visits that the health team makes after the child's birth, in the clinics, in visits to the pediatrician and, during childcare, which both doctors and nurses perform, demonstrating to parents the importance of prevention, when using protective equipment, in the face of collisions, the sequelae and injuries will be smaller. This educational practice can be carried out with printed material, videos in waiting rooms and oral guidance to parents.

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