

INSTALLATION OF CRS WITH VEHICLE SEATBELT

Misuse rate and range of use

GRSP Informal group on CRS – Phase III

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Data source : compilation of 3 surveys (BSRI2011, BSRI2014, DAL2015)

- Original sample of observations: 3893 children
- For the present study, need to removing children using
 - Seatbelt only
 - booster cushions
 - ISOFIX fixed CRS
- Harness and shield systems that should be restrained by the vehicle seatbelt: 1191
 - Not restrained : 34, Unknown: 7
 - Final sample : Restrained with seatbelt:1150

Selection of CRS 1141 children

– Only the ones for which the usage group(s) of mass is known:

- Convertible (G0_0+/1 or G0/1/2/3): **210** (208+2)
- Only transversal installation: (G0): **18**
- Only rearward facing installation (G0_0+ or G1)= **230**
(2+ 228+0)

Only forward facing installation (G1 or G12 or G123): **687**
(537+0+150)

- For others CRS, the group mass is not known

Selection of CRS among 1141 observed children

- Proposal of analysis:
 - Convertible (G0_0+/1): **208**
 - Misuse installation rate
 - Distribution of use FWD/RWD FC
 - Distribution of age (FWD/RWD FC)(under 2 years) 80 children
 - Only rearward facing installation (G0_0+): **230**
 - Misuse installation rate
 - Distribution of age (under 2 years) (217)
 - Only forward facing installation (G1): **537**
 - **Proposal: select only CRS with model known: 247**
 - Misuse installation rate
 - Distribution of age (under 2 years) (124)

Analysis

CRS type	Installation misuse
CONVERTIBLE CRS	57/208 27,4 % % installation misuse similar for FWD and RWD facing installations
REAR INFANT CARRIER	95/230 41,3%
APPROVED ONLY GROUP 1	43/247 17,4%

Data source compilation of observation databases (2011-15)

Questions:

Interesting to know why (reasons) people using convertibles are doing misuse (voluntary, too complex,...)

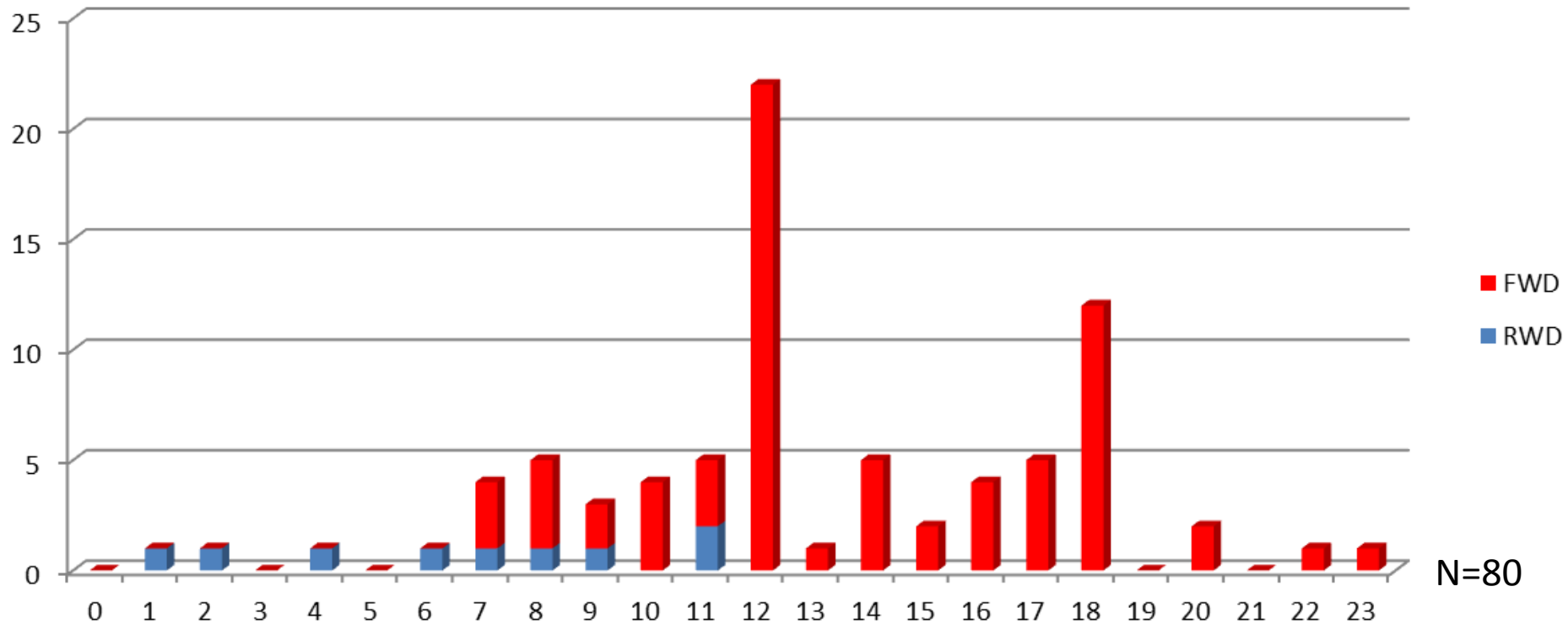
What kind of installation misuse are done?

Analysis

CRS type	RWD FC installation
CONVERTIBLE CRS	10/198 5,1%
REAR INFANT CARRIER	200/230 87,0%
APPROVED ONLY GROUP 1	0/247 0%

Data source compilation of observation databases (2011-15)

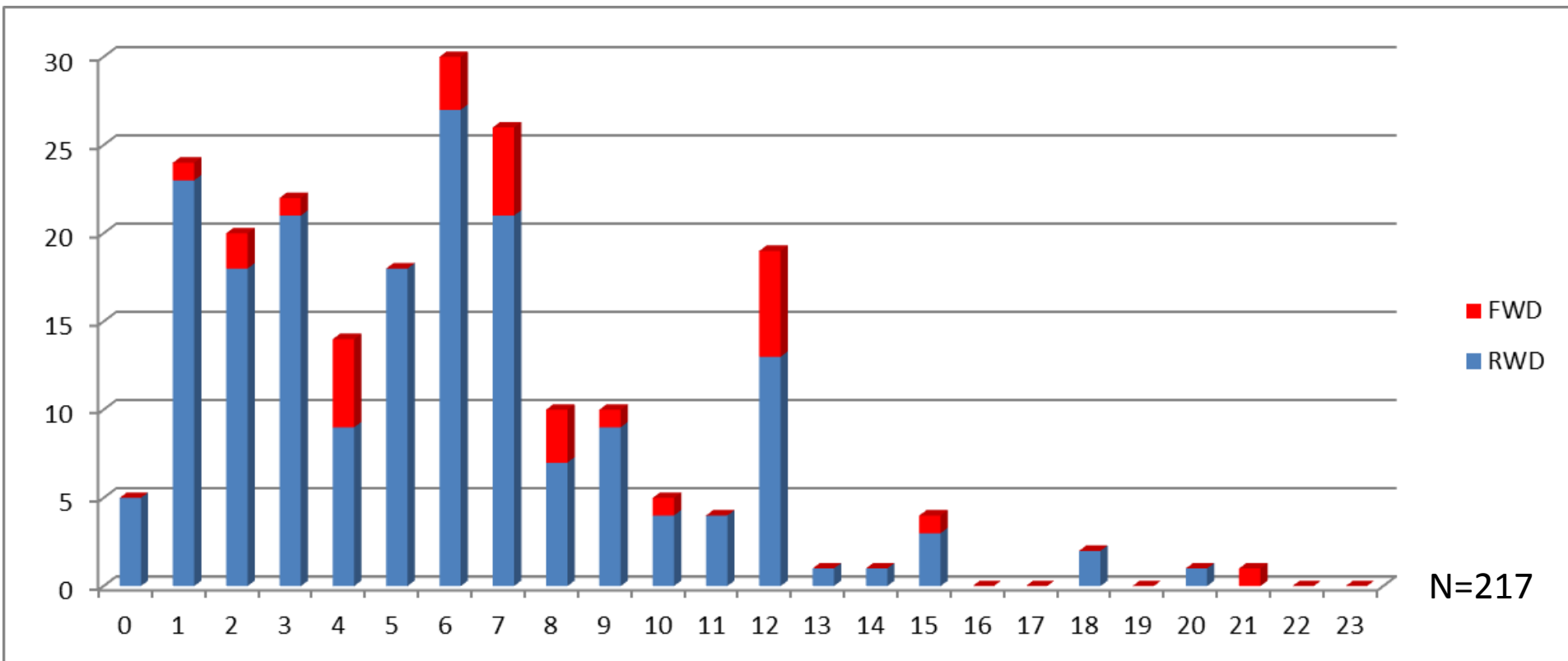
AGE OF CHILDREN(months) IN CONVERTIBLE CRS



Data source compilation of observation databases (2011-15)

Early switch to FWD facing direction

AGE OF CHILDREN(months) IN G0 /0+ CRS

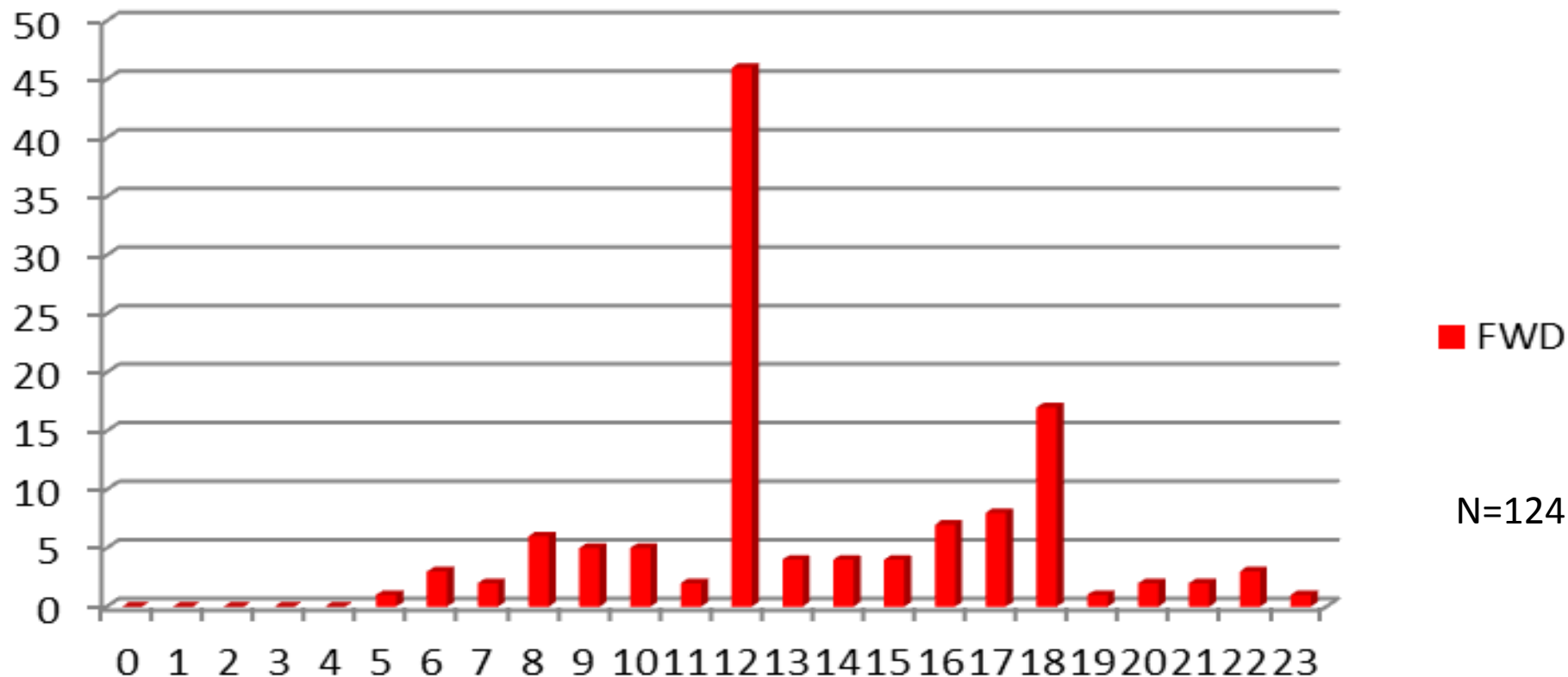


Data source compilation of observation databases (2011-15)

Also used in FWD facing direction very early

AGE OF CHILDREN(months) IN G1 CRS

FWD



Data source compilation of observation databases (2011-15)

First conclusions

- **Rate of installation misuse of rear infant carrier is a big concern**
- **Rate of misuse of installation is higher with convertible restrained with the seatbelt than G1 with only one possible seatbelt route (27% vs 17%)**
- **The rate of use RWD facing is very low for convertible (5%)**
- **Use forward facing is visible far too early both for convertible and group I system: need of information and education of parents**
- **To be done: Is it possible to see when transfert from integral to non integral is made by parents/children?**