

Passenger understanding of hand baggage retrieval during emergency evacuation

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Background



- **Accident reports have highlighted passengers retrieving hand baggage during an emergency evacuation.**
- **Increased amounts of hand baggage going into cabin.**
- **Retrieving or attempting to retrieve hand baggage has the potential to negatively influence the evacuation.**

Background

- **Previous studies have shown a lack of comprehension about other safety related procedures.**
- **Passenger knowledge and understanding about hand baggage retrieval during an evacuation is unknown.**

Aim of research



- **Exploratory study to gain an insight into the general population's knowledge and understanding regarding the retrieval of hand baggage during an emergency evacuation.**

Data collection

- **Qualitative data collected.**
- **Individual structured interviews.**
- **Open questions.**
- **150 members of the general population.**
 - **Flown on a commercial aircraft at least once.**

Selection of areas discussed



- Knowledge of any procedure regarding cabin baggage retrieval during an emergency.
- Means of communication of procedure.
- Disadvantages of retrieving.
- Reason for procedure.

Data analysis

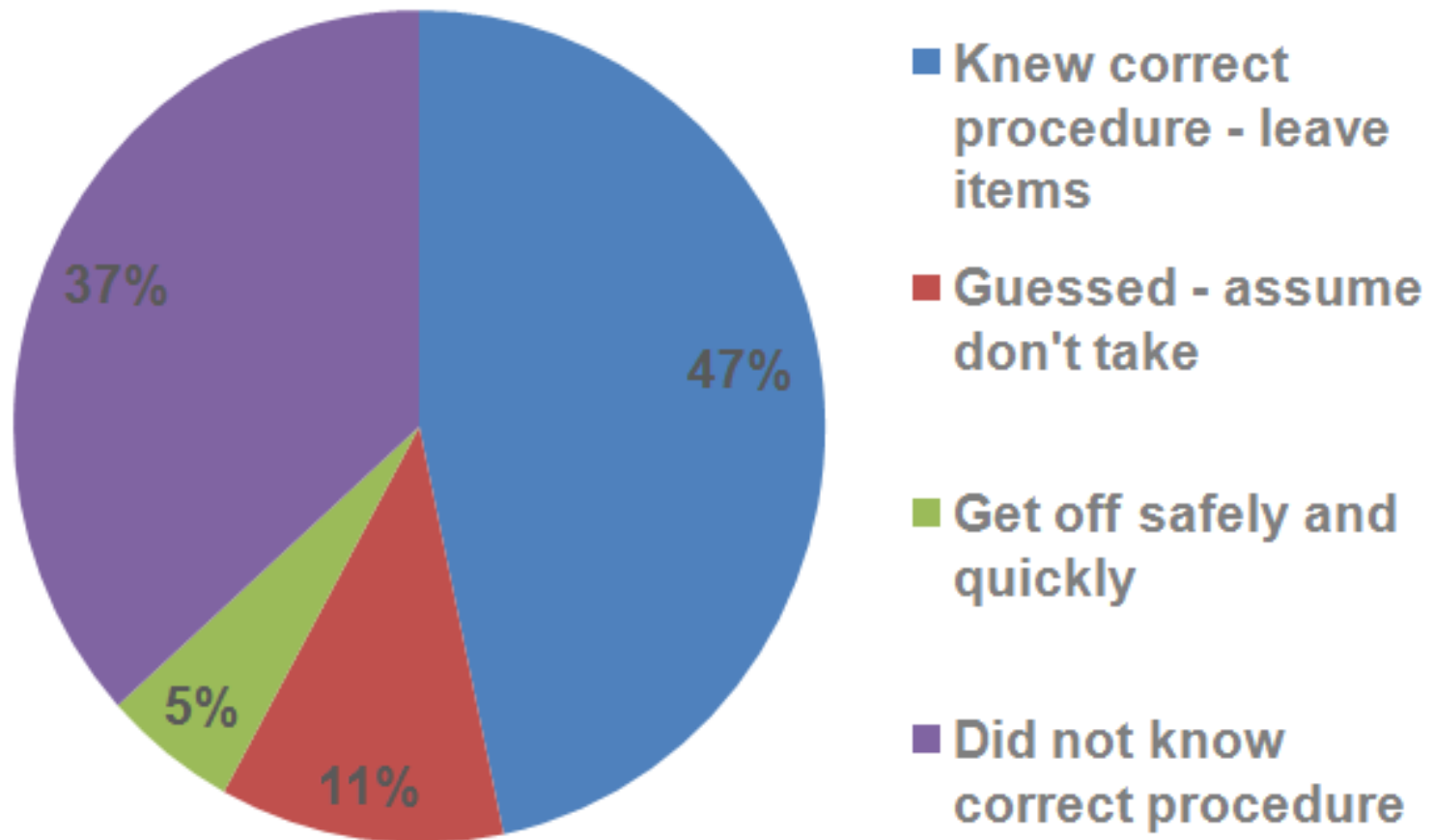


- All interviews were recorded and transcribed.
- The responses to each question were coded into different categories based on the content.
- Inter-coder reliability check undertaken on a percentage of interviews.

Results: sample

- **150 participants - 56% male and 44% female.**
- **Mean age 39.4 years (sd 14.9 years).**
- **Flown in last 12 months**
 - **No - 20%**
 - **1-3 return trips – 52%**
 - **4-7 return trips – 21%**
 - **8+ return trips - 7%.**

Knowledge of the procedure (n=150)



Knowledge of the procedure (n=150)



"no, I don't"

"no"

"I would just want
to get to the
nearest exit"

"no really, but you are probably
supposed to leave it"

"no, but I assume you
would leave everything"

"you should never
take anything or
waste time"

"you should just
leave it and follow
the evacuation"

Knowledge - flight recency

	Total sub- sample	Flown in previous 12mths	Not flown in previous 12mths
Knew correct procedure	70	60 (60%)	10 (40%)
Did not know correct procedure	55	40 (40%)	15 (60%)
TOTAL	125	100	25

- A chi-square test of association between recency of flight and knowledge of the correct procedure:
 - No significant association $\chi^2 = 2.49$, df 1 $p = >.05$.
- Recency of flight did not necessarily result in correct knowledge.

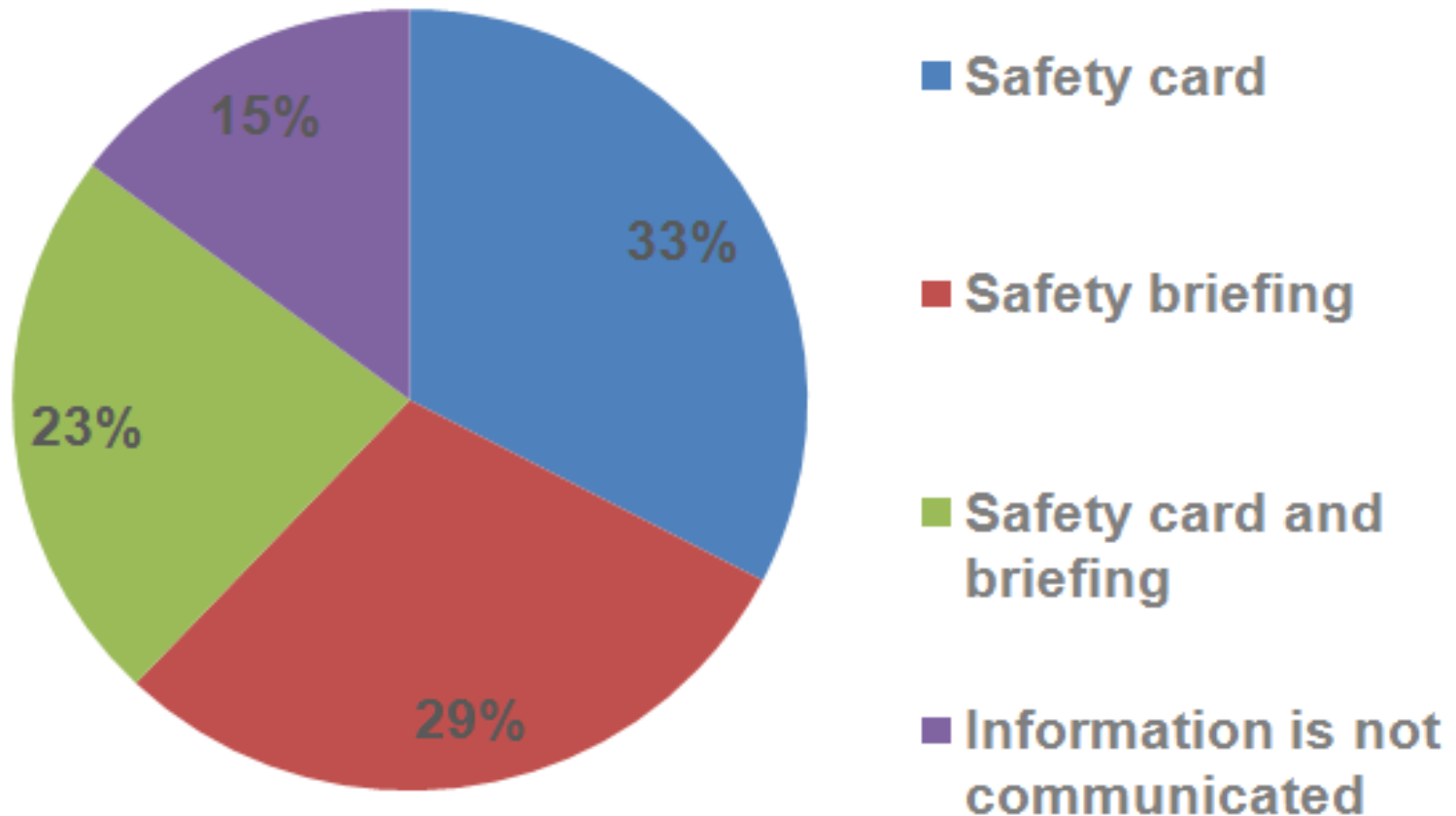
Knowledge - flight recency and frequency

	Total sub-sample Recent flyers	1-3 return flights	4+ return flights
Knew correct procedure	60	33 (50%)	27 (79%)
Did not know correct procedure	40	33 (50%)	7 (21%)
TOTAL	100	66	34

Knowledge - flight recency and frequency

- A chi-square test of association between frequency of flight in previous 12 months and knowledge of the correct procedure:
 - Significant association $\chi^2 = 6.91$, df 1 $p < .05$.
- Greater frequency of flight in the last 12 months significantly associated with correct knowledge.

Means of communication (n= 95)



Means of communication (n= 95)

“they aren’t but you get the general feeling that they [bags] are not important”

“don’t think it is officially communicated”

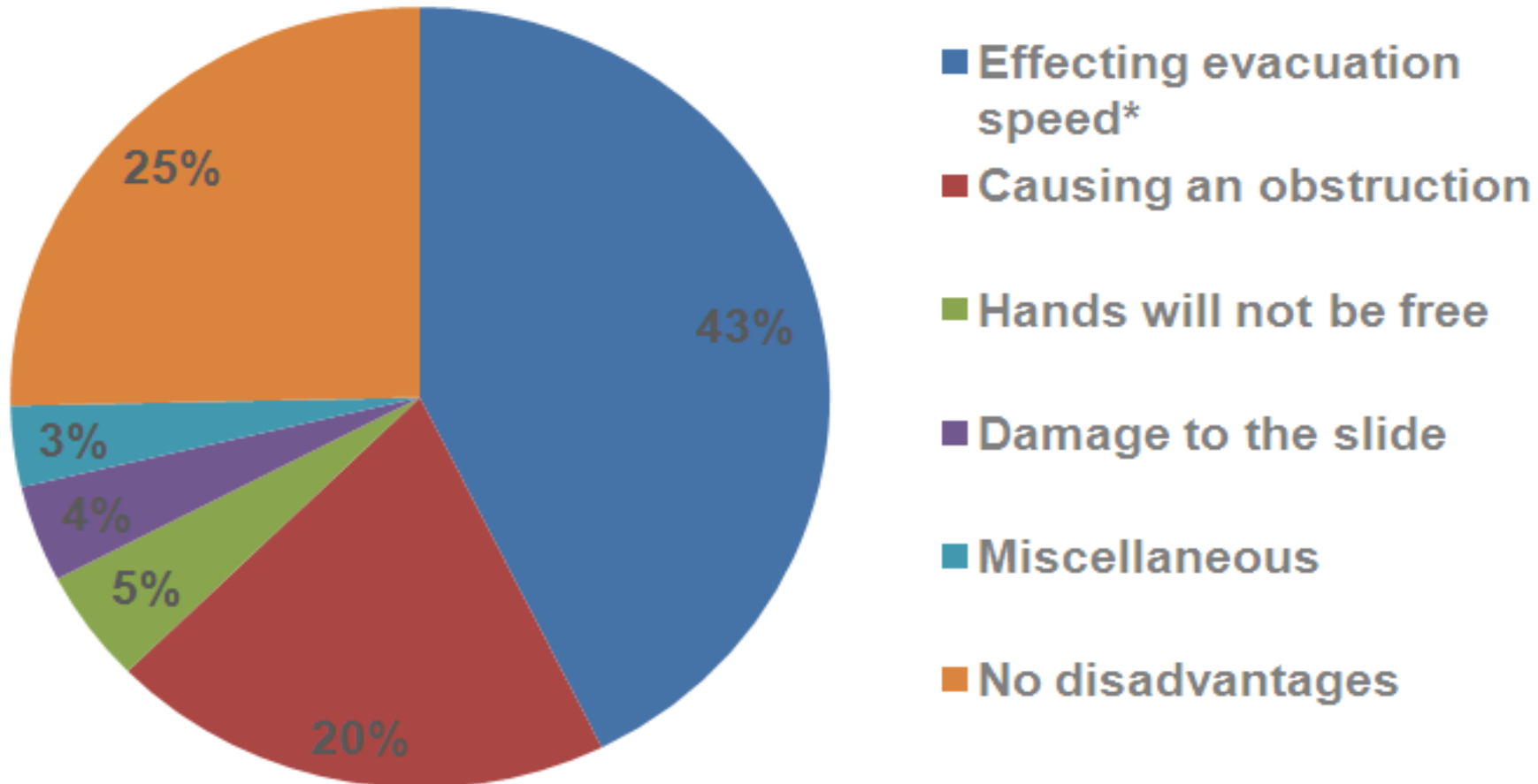
“safety card and demo before flight”



“on the safety cards”

“during the safety presentation by the crew”

Disadvantages of retrieving (n= 150)



*in this category some participants linked items getting in the way with evacuation speed www.cranfield.ac.uk

Disadvantages of retrieving (n= 150)

“no - not that I can think of”

“sharp objects... could even pierce the inflatable evacuation chute”

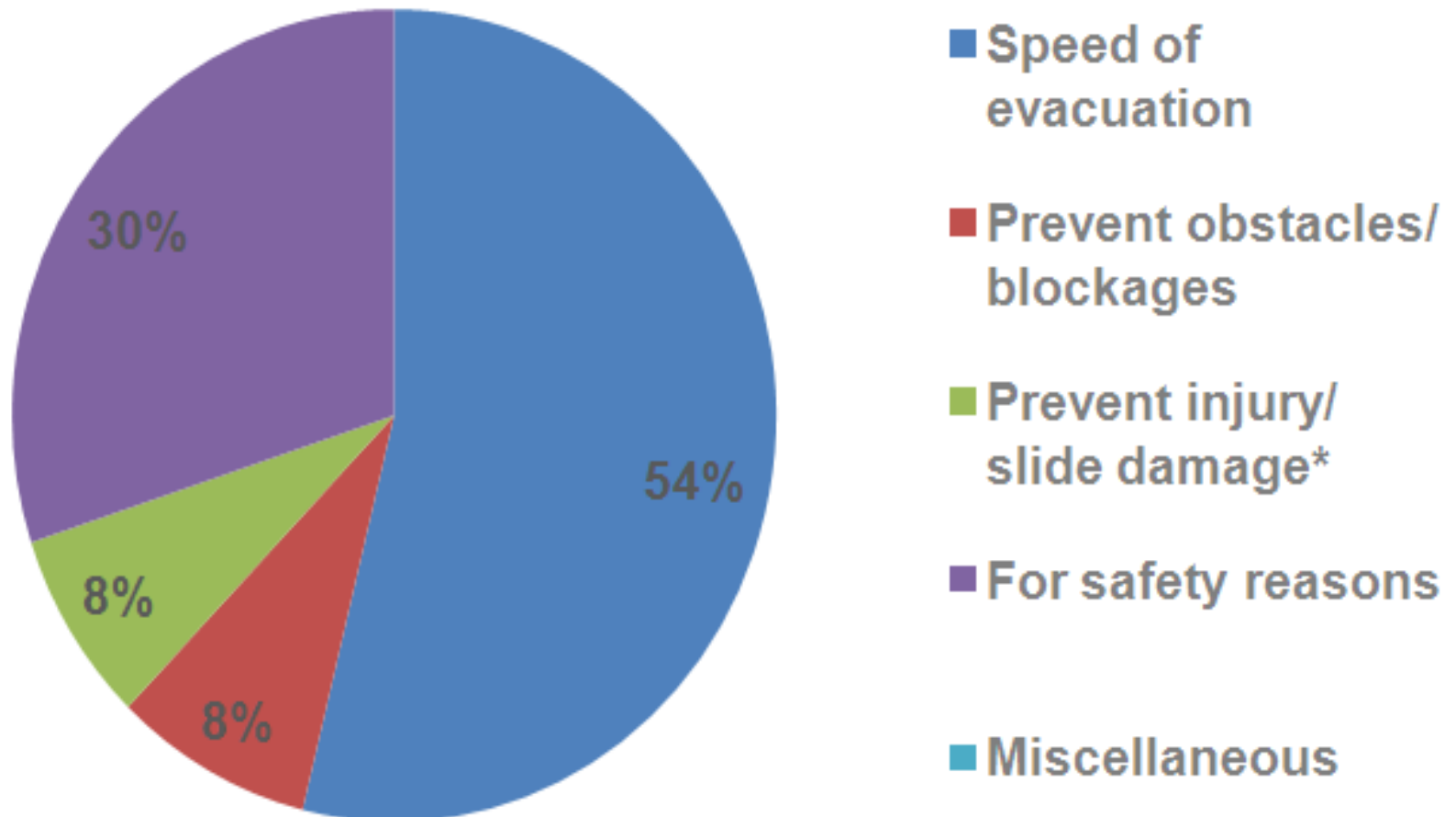


“it takes time to get your bag and if everyone was doing that it would be really slow”

“it slows you down getting off the aircraft”

“it may obstruct people from getting out the emergency exits”

Reason for the procedure (n= 150)



*in this category participants mentioned injury/damage in addition to reasons above.

Reason for the procedure (n= 150)

“for everybody’s safety”

“for safety reasons”

“to ensure the plane is evacuated as quickly as possible”

“to speed up the evacuation”

“...to stop bags going down slides as it could damage them and stop the evacuation”

“to try and not overload escape routes and block aisles”

Conclusions



- **General lack of knowledge and understanding about retrieving hand baggage during an evacuation.**
- **Over a third of the sample were not aware that they should leave all baggage.**
- **Recency of flight alone not significantly associated with correct knowledge, but frequent recent flights were.**

Conclusions

- **A quarter of the sample were not aware of any disadvantages of retrieving items.**
- **Once explained, many participants seemed to understand why the procedure was in place.**
 - **However the depth of knowledge for non-retrieval was limited from some participants.**

Conclusions



- **Further work is needed on educating passengers.**
- **Some participants thought improvements could be made to current communication:**
 - **Improve existing methods of instruction**
 - **Include/emphasise the information in the briefing**
 - **Provide additional information.**

Thank you!

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