

# **UNDERSTANDING THE BARRIERS TO EFFECTIVE FOOD SAFETY MANAGEMENT IN THE FISH PRODUCING AND PROCESSING COMPANIES IN MAURITIUS**

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Presented by  
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- × Study which is part of a PhD research

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- × Project supervisors and co-authors:
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- × Main aim of overall research work:
  - + To analyse the food safety management system in fish producing and fish processing companies in Mauritius

## Objectives of the Presentation

1. To explain the background of the study
2. To describe the methodology used
3. To elaborate on and discuss the main findings
4. To summarise the conclusions and recommendations



Food safety is one of the central issues for governments, the food industry, traders and consumers alike

Fish and fish products are in the forefront of food safety improvement

Among the most internationally traded food commodities

Can spoil very rapidly

Highly associated with food borne disease outbreaks

In Mauritius, the fish industry is a sector which has considerably expanded in the past years

- Creation of a one-stop shop: the 'seafood hub'
- Increase in the number of fish processing establishments
- More emphasis on the development of aquaculture

Implementation of effective food safety management systems in the fish industry is a necessity

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graph TD; A[Implementation of effective food safety management systems in the fish industry is a necessity] --> B[To ensure product safety to safeguard consumer health]; A --> C[To abide by international food safety requirements]; A --> D[To be able to export fish and fish products]; D --> E[European Union (EU) and USA have introduced HACCP-based regulations for fish and fish products];
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To ensure product safety to safeguard consumer health

To abide by international food safety requirements

To be able to export fish and fish products

European Union (EU) and USA have introduced HACCP-based regulations for fish and fish products

Failing to comply with these requirements can be detrimental to exporting countries like Mauritius

Exports are banned

Trade is impeded

Mauritius was banned from exporting fish and fish products to the EU in 2006

EU inspectors had found severe deficiencies in the food safety management systems of some companies

There was a need to understand the barriers faced by fish business owners/managers

## During the initial phases of the research:

- Many respondents (managerial-level) reported facing problems during food safety management
- E.g. food handlers, complexity of HACCP, lack of resources, access to training
- At the origin of the different 'knowledge, attitude and behaviour' problems, lay a wider range of practical and psychological factors

Failure in management practices is one of the many reasons for the increase in food poisoning (Griffith, 2006).



\* Other researchers had already reported these issues:

\* Gilling et al. (2001) - 11 barriers to effective HACCP guideline adherence identified and organised into a model around the knowledge, attitude and behaviour framework

\* Taylor and Taylor (2004) - uncovered a complex range of inter-related factors which lead to implementation problems

\* Taylor (2008) - revealed 21 practical and psychological barriers at knowledge, attitude and behavioural levels which were not considered previously in catering sector in UK



## Objectives of the Study

- 1, To identify the main barriers to food safety management in fish producing and fish processing companies in Mauritius
2. To explain how the barriers to effective food safety management operate at knowledge, attitude and behavioural levels in the companies

# Methodology

- \* Narrative interview technique:

- \* Qualitative research method

- \* Allows stories to unfold in a temporal way, leading to in-depth understanding (Tan and Hunter, 2003)

- \* Offers richly descriptive reports of individuals' perceptions, attitudes, beliefs, behaviour and the interpretations given to events (Hakim, 1987)

- \* A common strategy associated with the qualitative approach is the 'grounded theory'

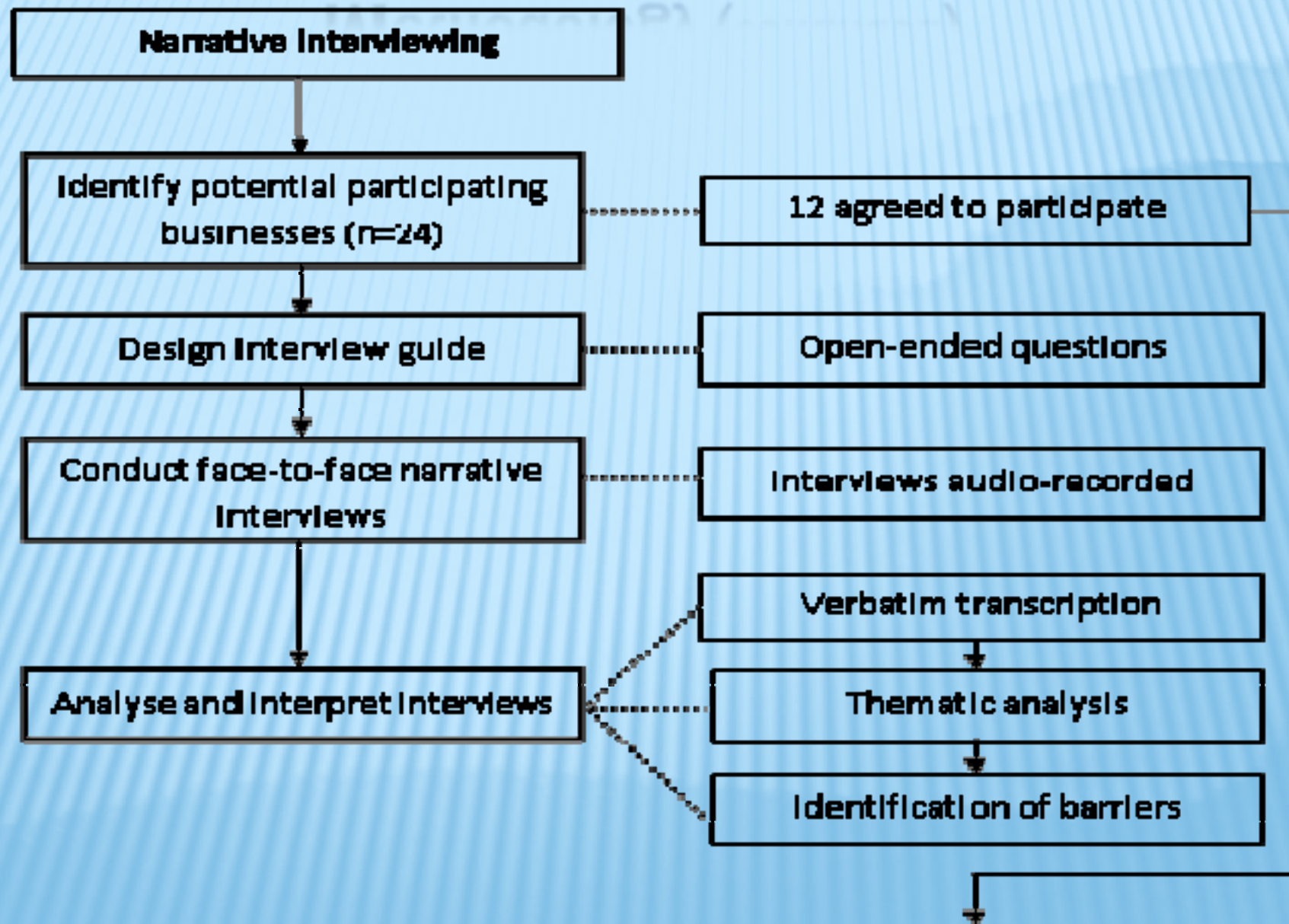
# Methodology

- \* Narrative interview technique:

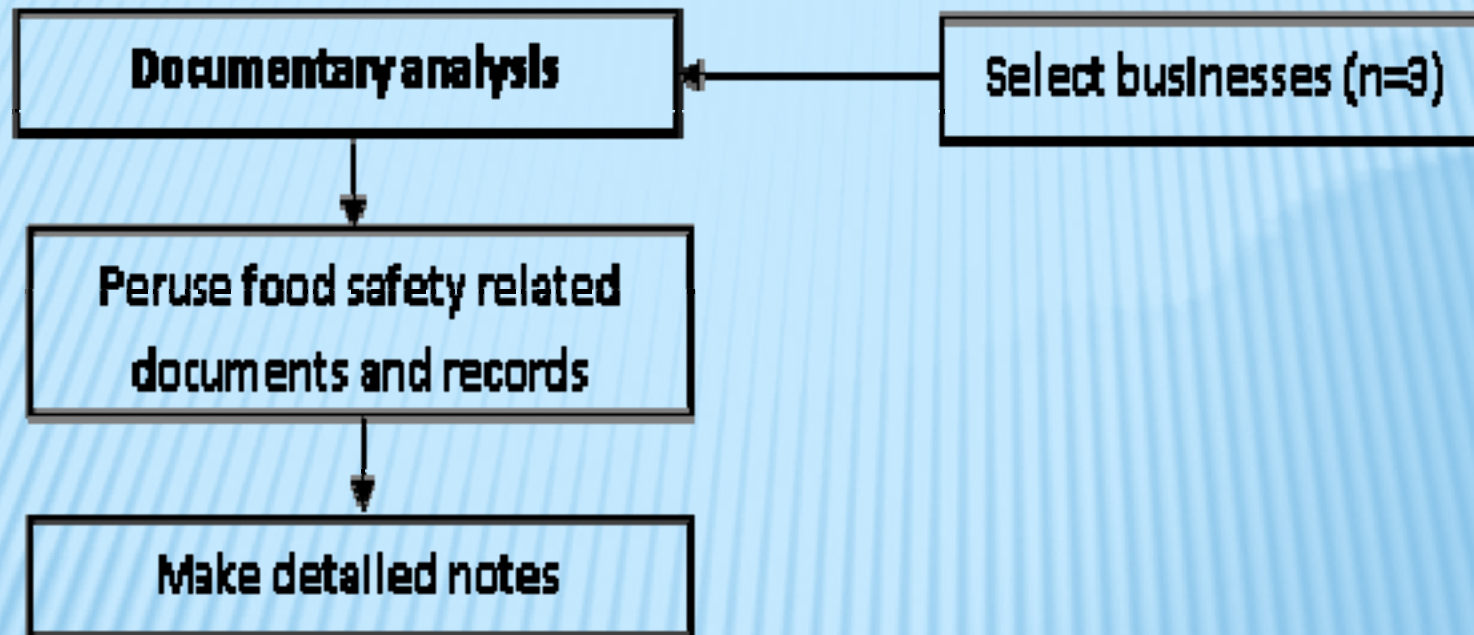
- \* The qualitative researcher collects open-ended, emerging data with the primary intent of developing **theory** from the data (Creswell, 2003)
- \* Theory usually is more than a set of findings; it offers an **explanation** about the subject of the research (Patton, 2001)
- \* Fundamentally **interpretive**, implying that the researcher makes an interpretation of the data by filtering it through a personal lens (Creswell, 2003)



# Methodology (continued)



# Methodology (continued)

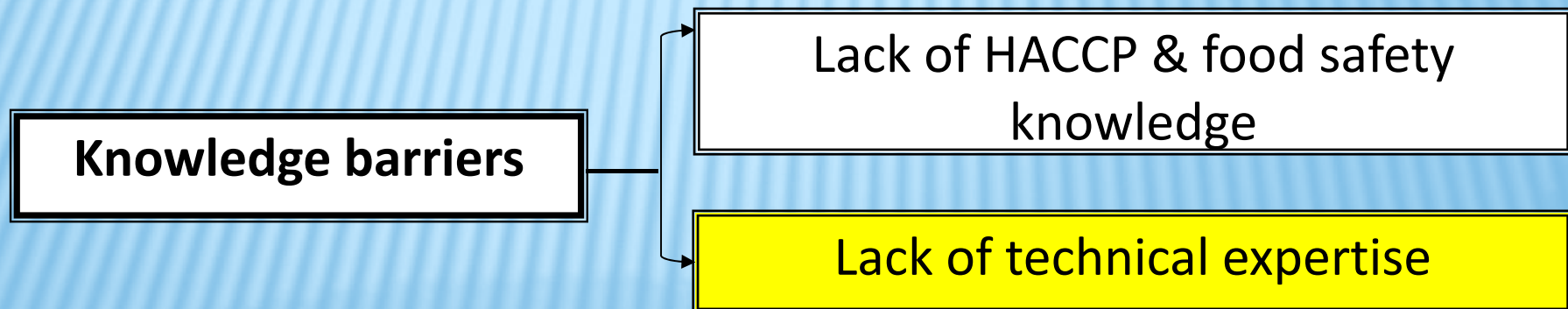


## Triangulation:

- strengthens a study by combining different methods
- increases the validity of the research method by verifying that what is said during interviews is evidenced by documents

# Main Findings and Discussion

- \* **‘Strong’** barriers: mentioned repetitively within individual interviews and across different interviews by more than half of the respondents
- \* **‘New’** barriers: not encountered in previous research but which emerged during the different interviews in this specific study

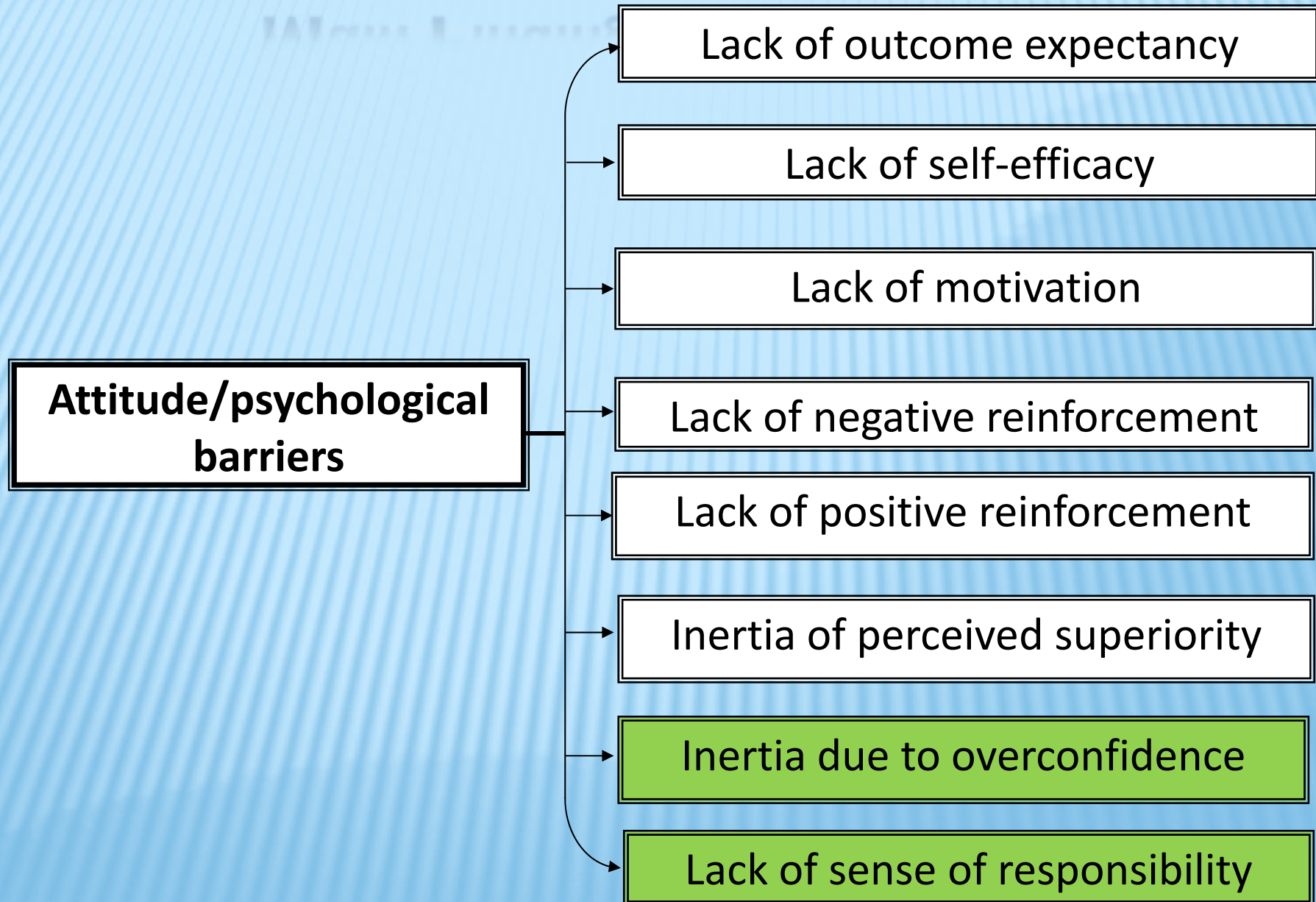




## Lack of technical expertise

- \* There was a lack of technical expertise either specific to fish or with respect to HACCP among most respondents
- \* Some even admitted to facing this problem

# Main Findings and Discussion



## Inertia due to overconfidence

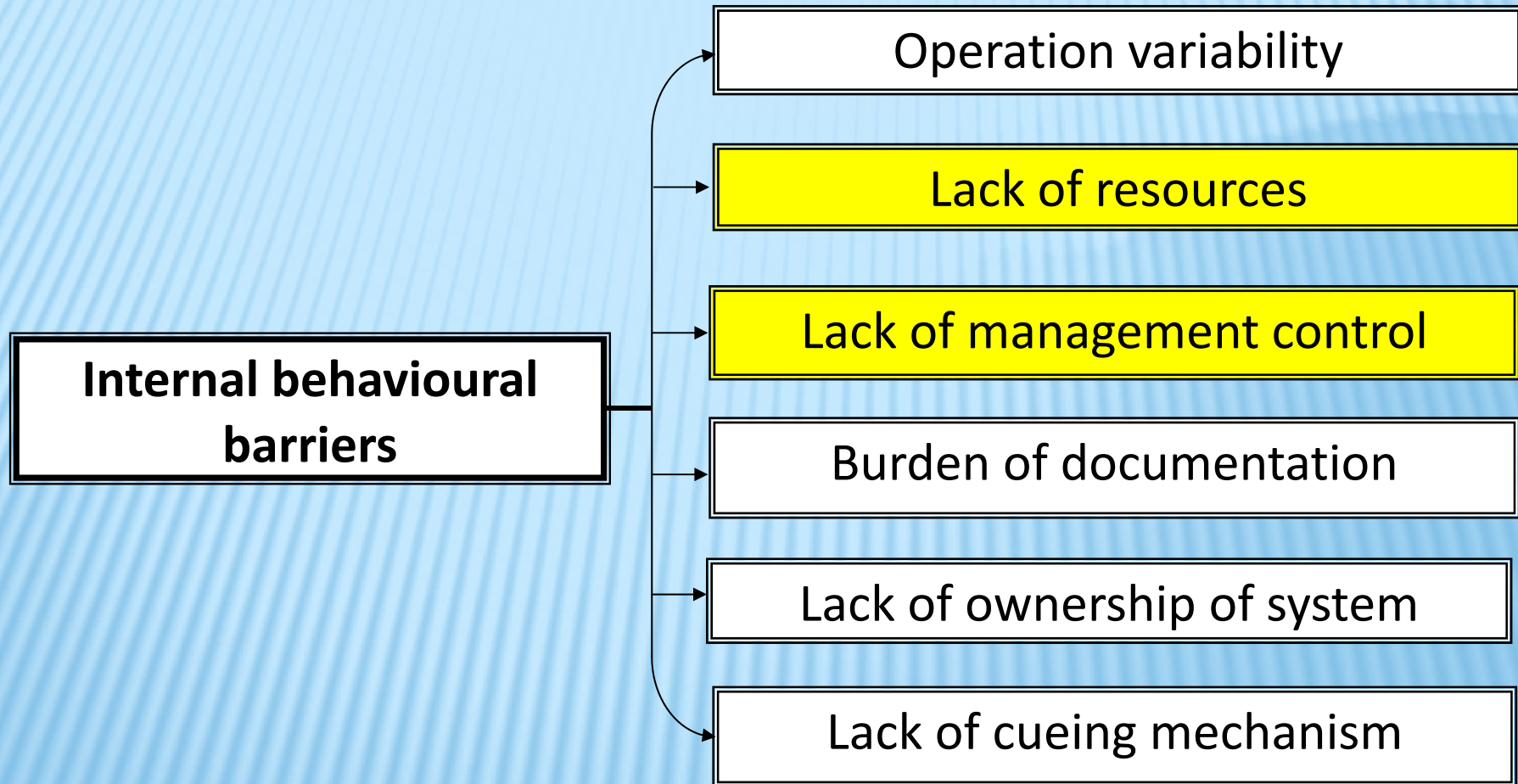
- \*The analysis of interviews demonstrated that certain respondents were confident about the system in place in their enterprises, mentioning it several times throughout the conversation.
- \*This could be a sign of overconfidence which can lead to overlooking essential aspects of the food safety management system

## Lack of sense of responsibility

- \*The findings showed that there was a lack of sense of responsibility towards food safety particularly concerning the overall situation in the fish industry prior to the inspections of the FVO mission team



# Main Findings and Discussion



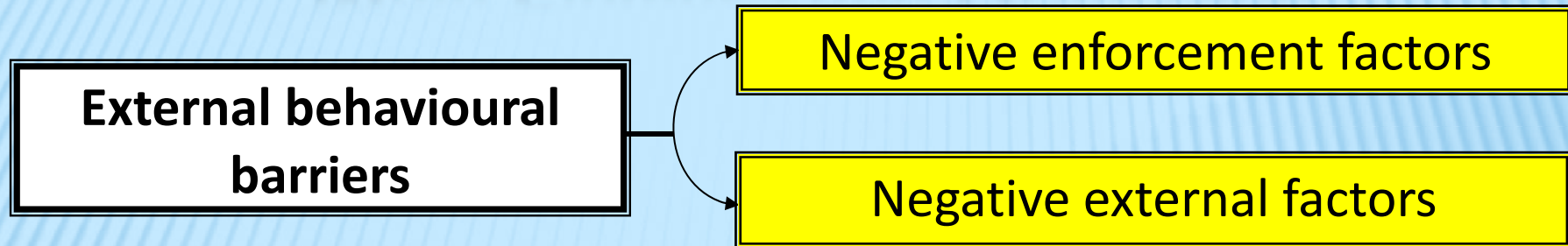
## Lack of resources

- \* Lack of resources like training opportunities, technical experts, staff and money were common problems mentioned by interviewees that hindered effective food safety management within their businesses.
- \* Respondents from large companies recognised that they could afford these resources, but, access to these can be difficult for small companies

## Lack of management control

- \* Lack of management control can result in food safety practices not being effectively implemented. Some interviewees actually agreed that 'problems' did occur due to inadequate control.
- \* Difficulties to manage personnel and make them follow hygiene rules were also mentioned

# Main Findings and Discussion



## Negative enforcement factors

- \* Enforcement activities were frequently viewed as having a negative impact rather than a facilitating one.
- \* These related to duplication of work by the different authorities regulating the fish industry, lack of competence and inadequate enforcement in enterprises supplying only the local market.



## Negative external factors

- \* A major negative external factor was with respect to the government authorities regulating the fish industry in Mauritius. Several problems were mentioned during individual interviews and across the interviews. These were:
  - \* the lack of support and incentives from government authorities
  - \* the bureaucracy in the civil service which slows down administrative procedures
  - \* the lack of a comprehensive piece of legislation to regulate the fish industry in Mauritius
  - \* the high audit fee imposed, even for very small businesses
  - \* the lack of commitment to promote food safety
  - \* strict standards imposed by customers and importing countries
  - \* incompetent consultants

# Conclusions

- \* The findings confirmed various barriers to HACCP and food safety management that had been reported by other studies
- \* New barriers which had not been discussed in previous research were also identified
- \* 'Lack of motivation' surfaced as a strong obstacle among non-exporting businesses
- \* Issues related to government authorities and food safety enforcement which are external to the companies seem to be particularly difficult to surmount
- \* While food safety training is necessary at all levels within the companies, a food safety culture change is also required