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Perceptions, representations and logics of action of urinary incontinence in institutionalised elderly people: a concurrent mixed study protocol

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Perceptions, representations and logics of action of urinary incontinence in institutionalised elderly people: a concurrent mixed study protocol

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5 **List of abbreviations**
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8 NH = Nursing homes
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11 UI = Urinary incontinence
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Abstract

Introduction Urinary incontinence (UI) is a major public health problem. It affects many institutionalised elderly people. In the literature, the phenomenon is well defined. Its frequency, risk factors, individual and social costs, as well as the different therapeutic approaches are described. However, there are few publications on its representations, both from the point of view of the patient and that of the carers. However, the literature shows that a better understanding of the social representations of this phenomenon could be a vector for improving care. We aim at understanding the perception of urinary incontinence, to model its representations, and to understand and characterise the logics of action in terms of protection.

Methods and analysis This will be a mixed-method concurrent study with a quantitative and a qualitative component. Data will be collected through semi-structured interviews, focus groups and surveys from 4 populations: institutionalised elderly people, caregivers, carers and individuals from the general population. An overlay and combination of quantitative and qualitative information for the triangulation analytical approach will be carried out.

Ethics and dissemination The study protocol was approved by the Descartes ethics and research committee on June 1, 2021, with the IRB number 00012021-43. The findings will be published in peer-reviewed journals and presented at national and international conferences.

Trial Registration Number This protocol was registered with the Research Registry on 12 July, 2021 and is numbered researchregistry6965.

Keywords Mixed methods research, Urinary incontinence, Social representations, Elderly people, Nursing homes

Article Summary

Strengths and limitations of this study

- A large-scale study that focuses on the representations of urinary incontinence of 4 categories of individuals.
- A concurrent mixed methods that contributes to a more complete approach of the urinary incontinence phenomenon.
- Several challenges will have to be met : succeeding in recruiting the very large number of participants and avoiding bias.

Introduction

Urinary incontinence (UI) is defined as an involuntary and uncontrollable flow of urine through the urethra [1]. Depending on the mechanism of onset, there are three forms: stress urinary incontinence, bladder overactivity incontinence and mixed urinary incontinence. There are many risk factors. These include age, number of pregnancies, diabetes, obesity, a history of obstetric or bladder surgery, associated with neurological diseases and intense sport activity [2]. Urinary incontinence is a major public health problem, affecting almost 9% of the world's population [3]. However, it is important to note that women are three times more affected than men and that its prevalence increases with age [4]. Indeed, for people aged 65 or more, urinary incontinence affects 50.4% of people living at home, 41.5% of people dependent at home and 8.1% of people in nursing homes. Moreover, its consequences are multiple. The individuals concerned are obviously affected on a social level. Studies show that urinary incontinence can be responsible for isolation, withdrawal, feelings of shame and low self-esteem, which can sometimes lead to real depression [5] [6]. UI is also associated with reduced quality of life, sleep disturbance, and emotional distress. A high level of evidence study [7] (randomised controlled trial) found UI to be a predictor of depression, along with mental and physical health.

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3 In addition to these consequences, several studies conclude that it is one of the primary causes
4 of institutionalisation of elderly people [8] [9]. However, the causes of institutionalization are
5 often multifactorial, and as a result, elderly people are barely involved in decisions to manage
6 their UI. They are dependent on the institutional structure and the carers' representation of UI
7 [10]. The loss of physical control over bodily fluids puts the individual's identity and dignity at
8 risk. The acquisition of knowledge is the basic assumption needed to improve UI management
9 practices.
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20 Social psychology explains that representations play a major role in learning. These can be an
21 obstacle to the appropriation of knowledge. Therefore, the acquisition of knowledge and the
22 modification of specific representations of UI could play a role in improving its management.
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24 A qualitative empirical survey [11] was carried out among carers to understand their
25 representations of UI. This study showed a link between better understanding of representations
26 and improved management of this health problem. UI is very well defined in the literature.
27 Indeed, several authors describe its symptoms, its causes, or its risk factors [12]. However, there
28 are few publications on its social representations, both from the patient's point of view and that
29 of the caregivers or the carers. This same literature shows that a better understanding of the
30 social representations of this phenomenon could be a vector for improving care. [11]. Moreover,
31 several authors have advocated a multi-method approach to the study of social representations
32 [13, 18].
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48 This study aims at investigating the social representations, perceptions and logics of action that
49 are put in place to improve the management of urinary incontinence. To do this, it will explore
50 the beliefs of elderly people in nursing homes, their relatives or caregivers, carers and also
51 individuals from the general population. It will also look at the logics of action implemented in
52 nursing homes in terms of protection, prevention of incontinence and preservation of
53 continence. The main research questions are : what are the social representations of urinary
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3 incontinence among institutionalised elderly people, their caregivers, their carers and also
4 among individuals in the general population? What is the logics of action in terms of choice of
5 means of protection? What is the logics of action in terms of prevention of urinary incontinence
6 and preservation of continence?
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13 Answering these questions will make possible to adjust practices, develop patient
14 empowerment and, depending on the results, propose innovative solutions for the management
15 of urinary incontinent patients.
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20 21 **Methods and analysis**

22 23 24 **Study design**

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27 To meet the objectives, a two-part mixed-methods study will be carried out (see Fig. 1). The
28 qualitative part, with a descriptive and comprehensive aim, will be enforced using a
29 phenomenological approach according to Husserl [14]. The second part will be quantitative and
30 extensive. It will have a declarative cross-sectional aim. These data will be collected in private
31 and public nursing homes, but also in the general population, throughout France and in part of
32 Belgium. These data will be collected by researchers over a period of six months. The results
33 will then be triangulated in order to compare them to determine their convergences, differences
34 and possible combinations [15].
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46 47 **Study setting**

48 49 **Patient and public involvement statement**

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51 In this study, the population should naturally include elderly people in nursing homes, their
52 caregivers, carers (nurses and care assistants) in private and public nursing homes, but also
53 people of all ages from the general population. The multiplicity of the population is justified by
54 the fact that each of these groups of individuals has a different relationship with urinary
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3 incontinence. People in nursing homes may have been affected for several years, or may live
4 with people who are affected. Relatives and caregivers may have dealt with the urinary
5 problems of these elderly people and talk to them about this complex subject. Nursing assistants
6 and nurses take care of urinary incontinent patients. The general population is more alien to the
7 problem, but may know people who are affected or may be affected themselves. It will therefore
8 be necessary to collect the opinions, beliefs and attitudes of several categories of individuals
9 who have different relationships with the subject of representation. This choice is justified in
10 the literature, where it is recommended to question a large panel of individuals in order to
11 achieve saturation of representations [16]. This heterogeneity will allow us to understand the
12 existing representations of urinary incontinence as precisely as possible. Recruitment will be
13 on a voluntary basis. To be eligible, it will be sufficient to be at least 18 years old and to be able
14 to understand and answer questions.

31 **Sample Size**

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33 Semi-structured interviews will be carried out with carers and elderly people in nursing homes.
34 After a call of participation throughout France and part of Belgium, a list of volunteer
35 institutions will be drawn up. 12 private and 5 public institutions will be chosen at random. The
36 sampling of interviewees will be non-random, cumulative and recruitment within these nursing
37 homes may be carried out by the snowball method [17]. In total, at least 50 interviews will be
38 carried out for carers and 50 for elderly people in nursing homes, i.e. 3 interviews per institution
39 and per type of population.

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41 Focus groups will be conducted with caregivers and individuals from the general population.
42 Six of them will be carried out in voluntary private nursing homes and two in public institutions.
43 These nursing homes will be randomly selected from a list of volunteers. The sample of carers
44 and individuals will be non-random and accidental.

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3 For the quantitative part, surveys will be offered to all volunteer nursing homes. Elderly people,
4 their caregivers and their carers will be asked to answer them. In total, 2000 questionnaires will
5 be completed by population category within the nursing homes. For the general population,
6 surveys will be offered in shopping malls. The data collection will be carried out on a non-
7 random accidental sample. Age and gender parity will be respected. A total of 2,000 surveys
8 will be completed by the general population. The aim will be to obtain 10,000 surveys for the
9 quantitative part. In order to determine the necessary and realistic number of respondents per
10 population category, a power calculation was performed.
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22 **Conceptual Model**

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24 This study will be based on Abric's conceptual model and his theory of social representations
25 [18]. More specifically, it will focus on the 4 main functions he describes, his theory of the
26 central core and the silent zone [19]. The model puts forward the socio-cognitive system "with
27 a specific organisation around and by a central core -consisting of a very limited number of
28 elements- which gives its meaning and determines the relations between its constituent
29 elements". The surveys were therefore constructed in relation to the functions. The interviews
30 and focus groups will make possible to identify the central core and constituent elements of the
31 social representations of urinary incontinence. However, this study will remain inductive [20].
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44 **Data Collection**

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46 The data collection tools (semi-structured interviews, focus groups and surveys) were created
47 on the basis of the literature [21] and a virtual brainstorming session with experts and members
48 of our research team.
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54 **Qualitative part**

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56 The study will include semi-structured interviews and focus groups. A minimum of 100
57 interviews will be conducted in private and public nursing homes: half with the institutionalised
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3 elderly people, and the other half with their carers. This method will be used to gather a great
4 deal of information about people's representations of urinary incontinence. Note-taking and
5 voice recording will be used in these interviews.
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10 Eight focus groups will also be carried out with caregivers and individuals from the general
11 population, in order to bring out new ideas and clarify their representations. Three researchers
12 trained beforehand in this data collection method will take part in the organisation of each focus
13 group: a moderator, a secretary and an observer. At the beginning of the interview, the
14 participants will be asked to create a network of associations [22]. Beginning with the
15 administration of this tool will make possible to respect the "projective nature of the technique"
16 [22]. It is a cornerstone of the presented study because this gives the possibility of different
17 profiles (ages, socio-professional categories, ...) having various experiences with UI to share
18 their perceptions and interact between each other .
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32 For the semi-structured interviews as well as for the focus groups, an interview grid was drawn
33 up in order to collect a large amount of information in a structured framework, but allowing the
34 interviewees to freely respond. Depending on the answers given, the interviewer may use verbal
35 reminders to guide or refocus the interview.
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42 **Quantitative part**

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44 For the quantitative part, 10,000 surveys will be collected from 4 categories of population:
45 residents, carers, caregivers and the general population. Elderly people in nursing homes will
46 complete 2,000 surveys with the help of their carers. Another 2,000 will be administered to
47 their caregivers. Nursing homes nurses and nursing assistants will complete 4,000 surveys.
48 They will have the possibility to fill them online. Surveys for the general population will also
49 gather 2,000 responses, and will be administered by students from a junior company in shopping
50 centers or supermarkets. Each of these 4 categories will have its own survey. However, they
51 will all start with the respondent's presentation variables (age, gender, socio-professional
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3 category, lifestyle and region). The questions will expect verbal responses, but non-verbal
4 attitudes will also be noted by the interviewers using a grid of facial micro-expressions [23].
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6 This will inform the research and understanding of the silent zone.
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10 **Analysis**

11 **Qualitative analysis**

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13 The interviews and focus groups will be analysed both manually and with ATLAS.Ti version
14 9 software, which will be used to centralize and organize all qualitative data collected (field
15 notes, interview transcripts). The next step will be to carry out a content analysis, by coding
16 and categorising the units of meaning. This will highlight recurring significant phrases and
17 words [24], then coding them according to the strength of their occurrence. The codes will then
18 be organised by taking into account the frequency within the corpora and the importance of
19 these statements in the discourse of each participant. The units of meaning will be grouped
20 progressively by proximity of meaning, then by classifying them by theme. Finally, the themes
21 will be studied to note the associated concepts. The aim is to make the elements collected more
22 readable and understandable and to identify the different themes, meanings, oppositions or
23 associations of concepts.
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42 **Quantitative analysis**

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44 For the analysis of the surveys, a descriptive statistical analysis of the socio-demographic
45 characteristics of the people participating in the study will be carried out first. Secondly, a
46 logistic regression type association will be carried out between the dependent variables
47 (perceptions, representations) and the independent variables (type of population, age, sex,
48 socio-demographic situations, region, pre-existing relationship with urinary incontinent
49 people). These analyses will be carried out using R software version 3.5.2. In addition, a
50 similarity analysis according to Bouriche will be carried out with 4 different steps [25] : the
51 creation and exploration of the similarity matrix, the visualisation of the maximum tree and
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3 threshold graphs, the visualisation of the maximum clique filter and the comparison of
4 similarity matrices of different sub-populations. Finally, the search for the "silent zone" will be
5 carried out in order to obtain also the non-expressible elements of the interviewees.
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10 The qualitative and quantitative results will then be triangulated to confirm, refute, corroborate
11 or cross-validate [26, 27].
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15 16 **Potential limitation and bias**

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18 There are two main cognitive biases that affect perception. The Hawthorne effect of influence
19 of the interviewer on the respondent, and the halo effect, also called the notoriety or
20 contamination effect. Researchers will try to limit these biases by training interviewers.
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25 26 **Outcomes**

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28 The results of the qualitative analyses will be presented in the form of a dendrogram per cluster
29 and then modelled. The results of the quantitative data will be presented in the form of a
30 summary with profiles, simple sorting and cross-sorting by tables and graphs. Finally, the
31 results of the triangulation will be presented in the form of comparative tables and diagrams.
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39 40 **Ethics and dissemination**

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42 This protocol was approved by the Descartes ethics and research committee on June 1, 2021,
43 with the IRB number 00012021-43. The research will be conducted in accordance with
44 international and French regulations on clinical research. Thus, the rules of confidentiality and
45 anonymity will be respected. All participants will receive an information letter and their
46 informed consent will be collected verbally. During the interviews and focus groups, the
47 participants' agreement will be requested for note-taking and recording. The ethics and research
48 committee has approved this procedure.
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3 The findings will be published in international peer-reviewed journals and will be presented at
4 national and international conferences. The study started in August 2021 and is anticipated to
5 continue until June 2022.
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10 **Discussion**

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14 Improving the care of institutionalised elderly people affected by urinary incontinence is a real
15 challenge. This study will therefore have many perspectives. For elderly people affected by
16 urinary incontinence, this research will lead to an understanding of their feelings, but also to
17 the development of their empowerment. Indeed, by allowing them, where possible, to make
18 decisions about their own protection, this research will help them to become more autonomous
19 and to have greater control over their choices. This process will also improve their self-esteem.
20 For nurses and nursing assistants, this study will initially support their skills and understand
21 their knowledge and attitudes towards this phenomenon. It will also allow them to adapt their
22 professional behaviour according to the results of this research. In this way, their expertise will
23 be enhanced and the management and quality of care will be improved. Finally, the results of
24 this research will enable the development of innovations to prepare for the future on this
25 complex subject.
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43 **Contributorship statement**

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45 LP and MRT drafted this protocol. DA has reviewed and given his opinion. SS assisted in the
46 writing of the following parts: background and problematic. All authors have read and approved
47 the final version.
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52 **Competing interests**

53
54 The study has received funding from a commercial organization, but the authors declare that
55 they have no competing interests.
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Disclaimer

The funding sources had no role in the design and the conduct of the study.

Ethics approval

Descartes ethics and research committee.

Provenance and peer review

Not commissioned; externally peer reviewed.

Data statement

Our manuscript describes a study protocol. As such, we cannot elaborate on additional unpublished data.

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Number of words

2 566 words

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FIGURE LEGEND

Figure 1: Study Design

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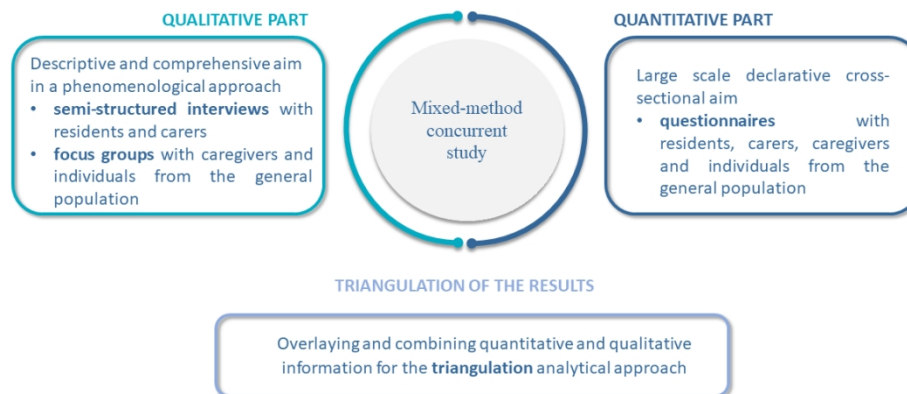


Figure 1 : Study Design

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**Perceptions, representations and logics of action of urinary
incontinence in institutionalised elderly people:
a concurrent mixed study protocol**

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5 **List of abbreviations**
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8 NH = Nursing homes
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11 UI = Urinary incontinence
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For peer review only

Abstract

Introduction Urinary incontinence (UI) is a major public health problem. It affects many institutionalised elderly people. In the literature, the phenomenon is well defined. Its frequency, risk factors, individual and social costs, as well as the different therapeutic approaches are described. However, there are few publications on its representations, both from the point of view of the patient and that of the carers. However, the literature shows that a better understanding of the social representations of this phenomenon could be a vector for improving care. We aim at understanding the perception of urinary incontinence, to model its representations, and to understand and characterise the logics of action in terms of protection.

Methods and analysis This will be a mixed-method concurrent study with a quantitative and a qualitative component. Data will be collected through 100 semi-structured interviews, 8 focus groups and 10 000 surveys from 4 populations: institutionalised elderly people, caregivers, carers and individuals from the general population. The qualitative part will be analysed both manually and with ATLAS.Ti software, which will be used to centralise and organise all qualitative data collected. For the analysis of the quantitative part, a descriptive statistical analysis and a logistic regression type association will be carried out. These analyses will be enforced using R software. Then, an overlay and combination of quantitative and qualitative information for the triangulation analytical approach will be carried out. The study started in August 2021 and will continue until June 2022.

Ethics and dissemination The study protocol was approved by the Descartes ethics and research committee on June 1, 2021, with the IRB number 00012021-43. The findings will be published in peer-reviewed journals and presented at national and international conferences.

Trial Registration Number This protocol was registered with the Research Registry on 12 July, 2021 and is numbered researchregistry6965.

Keywords Mixed methods research, Urinary incontinence, Social representations, Elderly people, Nursing homes

Article Summary

Strengths and limitations of this study

- A large-scale study that focuses on the representations of urinary incontinence of 4 categories of individuals.
- A concurrent mixed methods that contributes to a more complete approach of the urinary incontinence phenomenon.
- Several challenges will have to be met: succeeding in recruiting the very large number of participants and avoiding bias.

Introduction

Urinary incontinence (UI) is defined as an involuntary and uncontrollable flow of urine through the urethra [1]. Depending on the mechanism of onset, there are three forms: stress urinary incontinence, bladder overactivity incontinence and mixed urinary incontinence. There are many risk factors. These include age, number of pregnancies, diabetes, obesity, a history of obstetric or bladder surgery, neurological diseases and intense sport activity [2]. Urinary incontinence is a major public health problem, affecting almost 9% of the world's population [3]. However, it is important to note that women are three times more affected than men and that its prevalence increases with age [4]. In fact, urinary incontinence concerns more than 40% of women over the age of 70 [4] and 60 to 90% of residents in nursing homes [5]. Moreover, its consequences are multiple. The individuals concerned are obviously affected on a social level. Studies show that urinary incontinence can be responsible for isolation, withdrawal, feelings of shame and low self-esteem, which can sometimes lead to depression [6] [7]. UI is

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3 also associated with reduced quality of life, sleep disturbance, and emotional distress. A
4
5 randomised controlled trial [8] found UI to be a predictor of depression, along with mental and
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7 physical health. In addition to these consequences, several studies conclude that it is one of the
8
9 primary causes of institutionalisation of elderly people [9] [10]. Unfortunately, the literature
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11 shows us that once institutionalised, elderly people are hardly involved in the decision
12
13 managing their urinary incontinence. They are dependent on the institutional structure and the
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15 carers' representation of UI [11]. The loss of physical control over bodily fluids puts the
16
17 individual's identity and dignity at risk. The acquisition of knowledge is the basic assumption
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19 needed to improve UI management practices.
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24 Social psychology explains that social representations play a major role in learning. Indeed,
25
26 defined by Abric as "an organised set of information, opinions, attitudes and beliefs about a
27
28 given object", these can be an obstacle to the appropriation of knowledge. Therefore, the
29
30 acquisition of knowledge and the modification of specific representations of UI could play a
31
32 role in improving its management. But there are few publications on social representations of
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34 urinary incontinence, both from the patient's point of view and that of the caregivers or the
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36 carers. However, a qualitative empirical survey [12] was carried out among 3 300 carers to
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38 understand their representations of UI. A questionnaire was sent to doctors, nurses, midwives
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40 and care assistants. This study showed a link between better understanding of representations
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42 and improved management of this health problem. It shows that a better understanding of the
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44 social representations of this phenomenon could be a vector for improving care. Moreover,
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46 several authors have advocated a multi-method approach to the study of social representations
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51 [13, 19].
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54 This study aims at investigating the social representations and logics of action that are put in
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56 place to improve the management of urinary incontinence. To do this, it was chosen to explore
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58 the beliefs and opinions of 4 categories of people on urinary incontinence: elderly people in
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3 nursing homes; their caregivers, who are often close to the elderly person, and who provide
4 them with permanent or temporary help in their daily life [14] ; their carers, nurses and care
5 assistants, but also individuals from the general population. It will also look at the logics of
6 action implemented in nursing homes in terms of protection, prevention of incontinence and
7 preservation of continence. The main research questions are: what are the social representations
8 of urinary incontinence among institutionalised elderly people, their caregivers, their carers and
9 also among individuals in the general population? What is the logics of action in terms of choice
10 of means of protection? What is the logics of action in terms of prevention of urinary
11 incontinence and preservation of continence? Answering these questions will make possible to
12 adjust practices, develop patient empowerment and, depending on the results, propose
13 innovative solutions for the management of urinary incontinent patients.
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30 **Methods and analysis**

31 **Study design**

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33 To meet the objectives, a two-part mixed-methods study will be carried out (see Fig. 1). The
34 qualitative part, with a descriptive and comprehensive aim, will be implemented using a
35 phenomenological approach according to Husserl [15]. The quantitative part will be transversal.
36 It will have a declarative cross-sectional aim. These data will be collected in private and public
37 nursing homes, but also in the general population, throughout France and in part of Belgium.
38 These data will be collected by researchers over a period of six months. The results will then
39 be triangulated in order to compare them to determine their convergences, differences and
40 possible combinations [16].
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55 **Study setting**

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57 In this study, the population should naturally include elderly people in nursing homes, their
58 caregivers, carers (nurses and care assistants) in private and public nursing homes, but also
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3 people of all ages from the general population. The multiplicity of the population is justified by
4
5 the fact that each of these groups of individuals has a different relationship with urinary
6
7 incontinence. People in nursing homes may have been affected for several years, or may live
8
9 with people who are affected. Relatives and caregivers may have dealt with the urinary
10
11 problems of these elderly people and talk to them about this complex subject. Care assistants
12
13 and nurses take care of urinary incontinent patients. The general population is more alien to the
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15 problem, but may know people who are affected or may be affected themselves. It will therefore
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17 be necessary to collect the opinions, beliefs and attitudes of several categories of individuals
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19 who have different relationships with the subject of representation. This choice is justified in
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21 the literature, where it is recommended to question a large panel of individuals in order to
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23 achieve saturation of representations [17]. This heterogeneity will allow us to understand the
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25 existing representations of urinary incontinence as precisely as possible. Recruitment will be
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27 on a voluntary basis. To participate in this study, respondents must be at least 18 years old and
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29 French or French-speaking Belgian. For institutionalised elderly people, they must be able to
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31 understand and answer questions.
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38 **Sample Size**

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41 Semi-structured interviews will be carried out with carers and elderly people in nursing homes.
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43 After a call of participation throughout France and part of Belgium, a list of volunteer nursing
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45 homes will be drawn up. Then, 12 private and 5 public nursing homes will be chosen at random,
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47 in order to represent the population as accurately as possible. The sampling of interviewees will
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49 be non-random, cumulative and recruitment within these nursing homes may be carried out by
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51 the snowball method [18]. In total, at least 50 interviews will be carried out for carers and 50
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53 for elderly people in nursing homes, i.e. 3 interviews per institution and per type of population.
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57 Focus groups will be conducted with caregivers and individuals from the general population.
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59 Six of them will be carried out in voluntary private nursing homes and two in public nursing
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3 homes. These will be randomly selected from a list of volunteers. The sample of carers and
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5 individuals will be non-random and accidental.
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8 For the quantitative part, surveys will be offered to all volunteer nursing homes. Elderly people,
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10 their caregivers and their carers will be asked to answer them. In total, 2 000 questionnaires
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12 will be completed by population category within the nursing homes. For the general population,
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14 surveys will be offered in shopping malls. The data collection will be carried out on a non-
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16 random accidental sample. Age and gender parity must be respected, trying to interview men
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18 and women of all ages. This should ensure a heterogeneous panel of respondents. A total of 2
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20 000 surveys will be completed by the general population. The aim will be to obtain 10 000
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22 surveys for the quantitative part. In order to determine the necessary and realistic number of
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24 respondents per population category, the following power calculation was performed. Five
25
26 categories of respondents are included in this quantitative part of the study: elderly people in
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28 nursing homes, their caregivers, nurses, care assistants, and individuals from the general
29
30 population. The sample required for this study was calculated for each category. The last
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32 nursing homes prevalence study in 2016 estimated the number of institutionalised people in
33
34 France to be approximately 600 000 and 7 500 nursing homes. If we consider that only 5% of
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36 this category could respond to the surveys and interviews, our pool of potential respondents is
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38 estimated at 30 000 institutionalised elderly people. Thus, in this cross-sectional study, we
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40 consider a sample pool estimated at 30 000 people and a 95% confidence level. Thus, we obtain
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42 a 2% margin of error for an expected sample of 2 000 institutionalised elderly people. The same
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44 number of caregivers would be realistic if we considered at least one family member willing to
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46 participate in the study per elderly people interviewed. Thus, with an average of 3 nurses and
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48 10 care assistants working in nursing homes, the sample pools for these two categories are
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50 respectively about 22 500 nurses (7500×3) and 75 000 caregivers (7500×10). Considering a
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52 margin of error of 2% and a confidence interval of 95%, the sample size is 2 000 participants
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3 for each of the two categories. For the general population, a number of 2 000 people would be
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5 realistic with the same margin of error and confidence level.
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8 **Conceptual Model**

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10 This study will be based on Abric's conceptual model and his theory of social representations
11 [19]. More specifically, it will focus on the 4 main functions he describes, his theory of the
12 central core and the silent zone [20]. The model puts forward the socio-cognitive system "with
13 a specific organisation around and by a central core -consisting of a very limited number of
14 elements- which gives its meaning and determines the relations between its constituent
15 elements". The surveys were therefore constructed in relation to the functions. The interviews
16 and focus groups will make possible to identify the central core and constituent elements of the
17 social representations of urinary incontinence. However, this study will remain inductive [21].
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30 **Data Collection**

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32 The data collection tools (semi-structured interviews, focus groups and surveys) were created
33 on the basis of the literature [22] and a virtual brainstorming session with experts and members
34 of our research team.
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40 **Qualitative part**

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42 The study will include semi-structured interviews and focus groups. A minimum of 100
43 interviews will be conducted in private and public nursing homes: half with the institutionalised
44 elderly people, and the other half with their carers. This method will be used to gather a great
45 deal of information about people's representations of urinary incontinence. Note-taking and
46 voice recording will be used in these interviews.
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54 Eight focus groups will also be carried out with caregivers and individuals from the general
55 population, in order to bring out new ideas and clarify their representations. Three researchers
56 trained beforehand in this data collection method will take part in the organisation of each focus
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3 group: a moderator, a secretary and an observer. At the beginning of the interview, the
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5 participants will be asked to create a network of associations [23]. Beginning with the
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7 administration of this tool will make possible to respect the "projective nature of the technique"
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9 [23]. It is a cornerstone of the presented study because this gives the possibility of different
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11 profiles (ages, socio-professional categories, ...) having various experiences with UI to share
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13 their perceptions and interact between each other .
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17 For the semi-structured interviews as well as for the focus groups, an interview grid was drawn
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19 up in order to collect a large amount of information in a structured framework, but allowing the
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21 interviewees to freely respond. Depending on the answers given, the interviewer may use verbal
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23 reminders to guide or refocus the interview.
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26 27 **Quantitative part**

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29 For the quantitative part, 10 000 surveys will be collected from 4 categories of population:
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31 residents, carers, caregivers and the general population. Elderly people in nursing homes will
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33 complete 2 000 surveys with the help of their carers. Another 2 000 will be administered to
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35 their caregivers. Nursing homes nurses and care assistants will complete 4 000 surveys. They
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37 will have the possibility to fill them online. Surveys for the general population will also gather
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39 2 000 responses, and will be administered by students from a junior company in shopping
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41 centers or supermarkets. Each of these 4 categories will have its own survey. However, they
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43 will all start with the respondent's presentation variables (age, gender, socio-professional
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45 category, lifestyle and region). Each questionnaire will consist of open-ended questions,
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47 multiple choice questions, scaled questions and closed questions. The questions will expect
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49 verbal responses, but non-verbal attitudes will also be noted by the interviewers using a grid of
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51 facial micro-expressions [24]. This will inform the research and understanding of the silent
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53 zone.
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3 Before distribution to the nursing homes, the surveys and interview grids will be tested with
4 two individuals from each category of population concerned: residents, carers, caregivers and
5 individuals from the general population. These tests will be carried out in two volunteer pilot
6 nursing homes and will make it possible to judge the feasibility of the data collection tools.
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11 **Analysis**

12 **Qualitative analysis**

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15 The interviews and focus groups will be analysed both manually and with ATLAS.Ti version
16 9 software, which will be used to centralise and organise all qualitative data collected (field
17 notes, interview transcripts). The next step will be to carry out a content analysis, by coding
18 and categorising the units of meaning. This will highlight recurring significant phrases and
19 words [25], then coding them according to the strength of their occurrence. The codes will then
20 be organised by taking into account the frequency within the corpora and the importance of
21 these statements in the discourse of each participant. The units of meaning will be grouped
22 progressively by proximity of meaning, then by classifying them by theme. Finally, the themes
23 will be studied to note the associated concepts. The aim is to make the elements collected more
24 readable and understandable and to identify the different themes, meanings, oppositions or
25 associations of concepts.
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43 **Quantitative analysis**

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45 For the analysis of the surveys, a descriptive statistical analysis of the socio-demographic
46 characteristics of the people participating in the study will be carried out first. Secondly, a
47 logistic regression type association will be carried out between the dependent variables
48 (perceptions, representations) and the independent variables (type of population, age, sex,
49 socio-demographic situations, region, pre-existing relationship with urinary incontinent
50 people). These analyses will be carried out using R software version 3.5.2. In addition, a
51 similarity analysis according to Bouriche will be carried out with 4 different steps [26] : the
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3 creation and exploration of the similarity matrix, the visualisation of the maximum tree and
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5 threshold graphs, the visualisation of the maximum clique filter and the comparison of
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7 similarity matrices of different sub-populations. Finally, the search for the "silent zone" will be
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9 carried out in order to obtain also the non-expressible elements of the interviewees.
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13 The qualitative and quantitative results will then be triangulated to confirm, refute, corroborate
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15 or cross-validate [27, 28].
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18 **Potential limitation and bias**

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20 There are two main cognitive biases that affect perception. The Hawthorne effect of influence
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22 of the interviewer on the respondent, and the halo effect, also called the notoriety or
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24 contamination effect. Researchers will try to limit these biases by training interviewers.
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28 **Outcomes**

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30 The results of the qualitative analyses will be presented in the form of a dendrogram per cluster
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32 and then modelled. The results of the quantitative data will be presented in the form of a
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34 summary with profiles, simple sorting and cross-sorting by tables and graphs. Finally, the
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36 results of the triangulation will be presented in the form of comparative tables and diagrams.
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Patient and public involvement statement

In this study, 4 categories of population will be interviewed: elderly people in nursing homes, their caregivers, their carers and individuals from the general population. In order to design this study, and especially the tools needed to collect the data, a pre-survey was carried out with carers working in nursing homes.

Ethics and dissemination

This protocol was approved by the Descartes ethics and research committee on June 1, 2021, with the IRB number 00012021-43. The research will be conducted in accordance with international and French regulations on clinical research. Thus, the rules of confidentiality and anonymity will be respected. All participants will receive an information letter and their informed consent will be collected verbally. During the interviews and focus groups, the participants' agreement will be requested for note-taking and recording. The ethics and research committee has approved this procedure.

The findings will be published in international peer-reviewed journals and will be presented at national and international conferences. The study started in August 2021 and is anticipated to continue until June 2022.

Discussion

Improving the care of institutionalised elderly people affected by urinary incontinence is a real challenge. This study will therefore have many perspectives. For elderly people affected by urinary incontinence, this research will lead to an understanding of their feelings, but also to the development of their empowerment. Indeed, by understanding their needs in terms of protection mean choices, this research will help them becoming more autonomous and having greater control over their decisions. This process will also improve their self-esteem. For nurses

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3 and care assistants, this study will initially support their skills and understand their knowledge
4 and attitudes towards this phenomenon. It will also allow them to adapt their professional
5 behaviour according to the results of this research. In this way, their expertise will be enhanced
6 and the management and quality of care will be improved. Finally, the results of this research
7 will enable the development of innovations to prepare for the future on this complex subject.
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15 **Contributorship statement**

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17 LP and MRT drafted this protocol. DA has reviewed and given his opinion. SS assisted in the
18 writing of the following parts: background and problematic. All authors have read and approved
19 the final version.
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25 **Competing interests**

26
27 The study has received funding from a commercial organisation, but the authors declare that
28 they have no competing interests.
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33 **Funding**

34
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36 no award/grant number.
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41 **Disclaimer**

42
43 The funding sources had no role in the design and the conduct of the study.
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47 **Ethics approval**

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49 Descartes ethics and research committee.
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52 **Provenance and peer review**

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54 Not commissioned; externally peer reviewed.
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Data statement

Our manuscript describes a study protocol. As such, we cannot elaborate on additional unpublished data.

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Number of words

3 116 words

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58 [COFACE-Handicap/CHARTE-AIDANT-FAMILIAL/](http://coface-eu.org/fr/GT2-COFACE-Handicap/CHARTE-AIDANT-FAMILIAL/)
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20 21 22 **FIGURE LEGEND** 23

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25 Figure 1: Study Design
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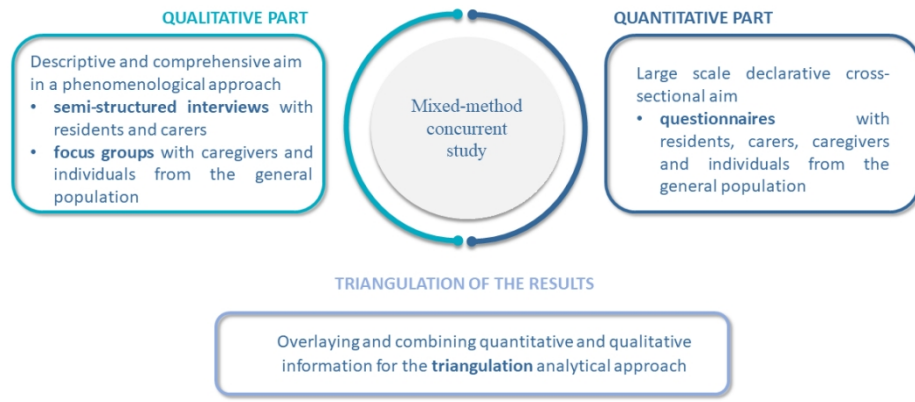


Figure 1 : Study Design

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Perceptions, representations and logics of action of urinary incontinence in institutionalised elderly people: a concurrent mixed study protocol

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**Perceptions, representations and logics of action of urinary
incontinence in institutionalised elderly people:
a concurrent mixed study protocol**

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5 **List of abbreviations**
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8 NH = Nursing homes
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11 UI = Urinary incontinence
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For peer review only

Abstract

Introduction Urinary incontinence (UI) is a major public health problem. It affects many institutionalised elderly people. In the literature, the phenomenon is well defined. Its frequency, risk factors, individual and social costs, as well as the different therapeutic approaches are described. However, there are few publications on its representations, both from the point of view of the patient and that of the carers. However, the literature shows that a better understanding of the social representations of this phenomenon could be a vector for improving care. We aim at understanding the perception of urinary incontinence, to model its representations, and to understand and characterise the logics of action in terms of protection.

Methods and analysis This will be a mixed-method concurrent study with a quantitative and a qualitative component. Data will be collected through 100 semi-structured interviews, 8 focus groups and 10 000 surveys from 4 populations: institutionalised elderly people, caregivers, carers and individuals from the general population. The qualitative part will be analysed both manually and with ATLAS.Ti software, which will be used to centralise and organise all qualitative data collected. For the analysis of the quantitative part, a descriptive statistical analysis and a logistic regression type association will be carried out. These analyses will be enforced using R software. Then, an overlay and combination of quantitative and qualitative information for the triangulation analytical approach will be carried out. The study started in August 2021 and will continue until June 2022.

Ethics and dissemination The study protocol was approved by the Descartes ethics and research committee on June 1, 2021, with the IRB number 00012021-43. The findings will be published in peer-reviewed journals and presented at national and international conferences.

Trial Registration Number This protocol was registered with the Research Registry on 12 July, 2021 and is numbered researchregistry6965.

Keywords Mixed methods research, Urinary incontinence, Social representations, Elderly people, Nursing homes

Article Summary

Strengths and limitations of this study

- A large-scale study that focuses on the representations of urinary incontinence of 4 categories of individuals.
- A concurrent mixed methods that contributes to a more complete approach of the urinary incontinence phenomenon.
- Several challenges will have to be met: succeeding in recruiting the very large number of participants and avoiding bias.

Introduction

Urinary incontinence (UI) is defined as an involuntary and uncontrollable flow of urine through the urethra [1]. Depending on the mechanism of onset, there are three forms: stress urinary incontinence, bladder overactivity incontinence and mixed urinary incontinence. There are many risk factors. These include age, number of pregnancies, diabetes, obesity, a history of obstetric or bladder surgery, neurological diseases and intense sport activity [2]. Urinary incontinence is a major public health problem, affecting almost 9% of the world's population [3]. However, it is important to note that women are three times more affected than men and that its prevalence increases with age [4]. In fact, urinary incontinence concerns more than 40% of women over the age of 70 [4] and 60 to 90% of residents in nursing homes [5]. Moreover, its consequences are multiple. The individuals concerned are obviously affected on a social level. Studies show that urinary incontinence can be responsible for isolation, withdrawal, feelings of shame and low self-esteem, which can sometimes lead to depression [6] [7]. UI is

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3 also associated with reduced quality of life, sleep disturbance, and emotional distress. A
4
5 randomised controlled trial [8] found UI to be a predictor of depression, along with mental and
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7 physical health. In addition to these consequences, several studies conclude that it is one of the
8
9 primary causes of institutionalisation of elderly people [9] [10]. Unfortunately, the literature
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11 shows us that once institutionalised, elderly people are hardly involved in the decision
12
13 managing their urinary incontinence. They are dependent on the institutional structure and the
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15 carers' representation of UI [11]. The loss of physical control over bodily fluids puts the
16
17 individual's identity and dignity at risk. The acquisition of knowledge is the basic assumption
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19 needed to improve UI management practices.
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24 Social psychology explains that social representations play a major role in learning. Indeed,
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26 defined by Abric as "an organised set of information, opinions, attitudes and beliefs about a
27
28 given object", these can be an obstacle to the appropriation of knowledge. Therefore, the
29
30 acquisition of knowledge and the modification of specific representations of UI could play a
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32 role in improving its management. But there are few publications on social representations of
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34 urinary incontinence, both from the patient's point of view and that of the caregivers or the
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36 carers. However, a qualitative empirical survey [12] was carried out among 3 300 carers to
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38 understand their representations of UI. A questionnaire was sent to doctors, nurses, midwives
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40 and care assistants. This study showed a link between better understanding of representations
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42 and improved management of this health problem. It shows that a better understanding of the
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44 social representations of this phenomenon could be a vector for improving care. Moreover,
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46 several authors have advocated a multi-method approach to the study of social representations
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51 [13].
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55 This study aims at investigating the social representations and logics of action that are put in
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57 place to improve the management of urinary incontinence. To do this, it was chosen to explore
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59 the beliefs and opinions of 4 categories of people on urinary incontinence: elderly people in
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3 nursing homes; their caregivers, who are often close to the elderly person, and who provide
4 them with permanent or temporary help in their daily life [14] ; their carers, nurses and care
5 assistants, but also individuals from the general population. It will also look at the logics of
6 action implemented in nursing homes in terms of protection, prevention of incontinence and
7 preservation of continence. The main research questions are: what are the social representations
8 of urinary incontinence among institutionalised elderly people, their caregivers, their carers and
9 also among individuals in the general population? What is the logics of action in terms of choice
10 of means of protection? What is the logics of action in terms of prevention of urinary
11 incontinence and preservation of continence? Answering these questions will make possible to
12 adjust practices, develop patient empowerment and, depending on the results, propose
13 innovative solutions for the management of urinary incontinent patients.
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30 **Methods and analysis**

31 **Study design**

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33 To meet the objectives, a two-part mixed-methods study will be carried out (see Fig. 1). The
34 qualitative part, with a descriptive and comprehensive aim, will be implemented using a
35 phenomenological approach according to Husserl [15]. The quantitative part will be transversal.
36 It will have a declarative cross-sectional aim. These data will be collected in private and public
37 nursing homes, but also in the general population, throughout France and in part of Belgium.
38 These data will be collected by researchers over a period of six months. The results will then
39 be triangulated in order to compare them to determine their convergences, differences and
40 possible combinations [16].
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55 **Study setting**

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57 In this study, the population should naturally include elderly people in nursing homes, their
58 caregivers, carers (nurses and care assistants) in private and public nursing homes, but also
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3 people of all ages from the general population. The multiplicity of the population is justified by
4
5 the fact that each of these groups of individuals has a different relationship with urinary
6
7 incontinence. People in nursing homes may have been affected for several years, or may live
8
9 with people who are affected. Relatives and caregivers may have dealt with the urinary
10
11 problems of these elderly people and talk to them about this complex subject. Care assistants
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13 and nurses take care of urinary incontinent patients. The general population is more alien to the
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15 problem, but may know people who are affected or may be affected themselves. It will therefore
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17 be necessary to collect the opinions, beliefs and attitudes of several categories of individuals
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19 who have different relationships with the subject of representation. This choice is justified in
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21 the literature, where it is recommended to question a large panel of individuals in order to
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23 achieve saturation of representations [17]. This heterogeneity will allow us to understand the
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25 existing representations of urinary incontinence as precisely as possible. Recruitment will be
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27 on a voluntary basis. To participate in this study, respondents must be at least 18 years old and
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29 French or French-speaking Belgian. For institutionalised elderly people, they must be able to
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31 understand and answer questions.
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38 **Sample Size**

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41 Semi-structured interviews will be carried out with carers and elderly people in nursing homes.
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43 After a call of participation throughout France and part of Belgium, a list of volunteer nursing
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45 homes will be drawn up. In order to represent the population as accurately as possible, 12
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47 private and 5 public nursing homes will be chosen at random. This number of institutions has
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49 been chosen to respect the increasing evolution that is currently taking place in France as well
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51 as in Belgium where the number of beds in private nursing homes tends to increase
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53 considerably, while the number of beds in public nursing homes has stagnated for several years.
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55 However, it is not the intention here to compare the responses of private versus public nursing
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57 homes. Within the 17 institutions, the sampling of interviewees will be non-random, cumulative
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3 and recruitment within these nursing homes may be carried out by the snowball method [18].

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5 In total, at least 50 interviews will be carried out for carers and 50 for elderly people in nursing
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7 homes, i.e. 3 interviews per institution and per type of population.
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10 Focus groups will be conducted with caregivers and individuals from the general population.

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12 Six of them will be carried out in voluntary private nursing homes and two in public nursing
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14 homes. These will be randomly selected from a list of volunteers. The sample of carers and
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16 individuals will be non-random and accidental.
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20 For the quantitative part, surveys will be offered to all volunteer nursing homes. Elderly people,
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22 their caregivers and their carers will be asked to answer them. In total, 2 000 questionnaires
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24 will be completed by population category within the nursing homes. For the general population,
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26 surveys will be offered in shopping malls. The data collection will be carried out on a non-
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28 random accidental sample. Age and gender parity must be respected, trying to interview men
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30 and women of all ages. This should ensure a heterogeneous panel of respondents. A total of 2
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32 000 surveys will be completed by the general population. The aim will be to obtain 10 000
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34 surveys for the quantitative part. In order to determine the necessary and realistic number of
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36 respondents per population category, the following power calculation was performed. Five
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38 categories of respondents are included in this quantitative part of the study: elderly people in
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40 nursing homes, their caregivers, nurses, care assistants, and individuals from the general
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42 population. The sample required for this study was calculated for each category. The last
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44 nursing homes prevalence study in 2016 estimated the number of institutionalised people in
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46 France to be approximately 600 000 and 7 500 nursing homes. If we consider that only 5% of
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48 this category could respond to the surveys and interviews, our pool of potential respondents is
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50 estimated at 30 000 institutionalised elderly people. Thus, in this cross-sectional study, we
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52 consider a sample pool estimated at 30 000 people and a 95% confidence level. Thus, we obtain
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54 a 2% margin of error for an expected sample of 2 000 institutionalised elderly people. The same
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3 number of caregivers would be realistic if we considered at least one family member willing to
4 participate in the study per elderly people interviewed. Thus, with an average of 3 nurses and
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6 10 care assistants working in nursing homes, the sample pools for these two categories are
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8 respectively about 22 500 nurses (7500*3) and 75 000 caregivers (7500*10). Considering a
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10 margin of error of 2% and a confidence interval of 95%, the sample size is 2 000 participants
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12 for each of the two categories. For the general population, a number of 2 000 people would be
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14 realistic with the same margin of error and confidence level.
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19 **Conceptual Model**

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21 This study will be based on Abric's conceptual model and his theory of social representations
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23 [19]. More specifically, it will focus on the 4 main functions he describes, his theory of the
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25 central core and the silent zone [20]. The model puts forward the socio-cognitive system "with
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27 a specific organisation around and by a central core -consisting of a very limited number of
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29 elements- which gives its meaning and determines the relations between its constituent
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31 elements". The surveys were therefore constructed in relation to the functions. The interviews
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33 and focus groups will make possible to identify the central core and constituent elements of the
34
35 social representations of urinary incontinence. However, this study will remain inductive [21].
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41 **Data Collection**

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43 The data collection tools (semi-structured interviews, focus groups and surveys) were created
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45 on the basis of the literature [22] and a virtual brainstorming session with experts and members
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47 of our research team.
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50 **Qualitative part**

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52 The study will include semi-structured interviews and focus groups. A minimum of 100
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54 interviews will be conducted in private and public nursing homes: half with the institutionalised
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56 elderly people, and the other half with their carers. This method will be used to gather a great
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3 deal of information about people's representations of urinary incontinence. Note-taking and
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5 voice recording will be used in these interviews.
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9 Eight focus groups will also be carried out with caregivers and individuals from the general
10
11 population, in order to bring out new ideas and clarify their representations. Three researchers
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13 trained beforehand in this data collection method will take part in the organisation of each focus
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15 group: a moderator, a secretary and an observer. At the beginning of the interview, the
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17 participants will be asked to create a network of associations [23]. Beginning with the
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19 administration of this tool will make possible to respect the "projective nature of the technique"
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21 [23]. It is a cornerstone of the presented study because this gives the possibility of different
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23 profiles (ages, socio-professional categories, ...) having various experiences with UI to share
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25 their perceptions and interact between each other .
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29 For the semi-structured interviews as well as for the focus groups, an interview grid was drawn
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31 up in order to collect a large amount of information in a structured framework, but allowing the
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33 interviewees to freely respond. Depending on the answers given, the interviewer may use verbal
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35 reminders to guide or refocus the interview.
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38 39 **Quantitative part**

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41 For the quantitative part, 10 000 surveys will be collected from 4 categories of population:
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43 residents, carers, caregivers and the general population. Each of these 4 categories will have its
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45 own survey. Carers in the nursing homes will distribute 2 000 paper surveys to residents who
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47 are able to answer question. Another 2 000 will be administered to their caregivers via their
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49 email adress. Concerning carers in nursing homes, 2,000 care assistants and 2,000 nurses will
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51 also fill a survey thanks to an Internet link that will be sent to them by e-mail. Finally, surveys
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53 for the general population will also gather 2 000 responses, and will be administered by students
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55 from a junior company in shopping centers or supermarkets. All surveys will start with the
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57 respondent's presentation variables (age, gender, socio-professional category, lifestyle and
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3 region). Each questionnaire will consist of open-ended questions, multiple choice questions,
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5 scaled questions and closed questions. The questions will expect verbal responses, but non-
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7 verbal attitudes will also be noted by the interviewers using a grid of facial micro-expressions
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9 [24]. This will inform the research and understanding of the silent zone. In order to do so,
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11 students from the junior company will have been trained beforehand by the principal
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13 investigator of this study, both on the subject of urinary incontinence, but also on how to ask
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15 the interviewees questions and take into account their non-verbal expressions.
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19 Before distribution to the nursing homes, the surveys and interview grids will be tested with
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21 two individuals from each category of population concerned: residents, carers, caregivers and
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23 individuals from the general population. These tests will be carried out in two volunteer pilot
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25 nursing homes and will make it possible to judge the feasibility of the data collection tools.
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28 29 **Analysis**

30 31 **Qualitative analysis**

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33 The interviews and focus groups will be analysed both manually and with ATLAS.Ti version
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35 9 software, which will be used to centralise and organise all qualitative data collected (field
36
37 notes, interview transcripts). The next step will be to carry out a content analysis, by coding
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39 and categorising the units of meaning. This will highlight recurring significant phrases and
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41 words [25], then coding them according to the strength of their occurrence. The codes will then
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43 be organised by taking into account the frequency within the corpora and the importance of
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45 these statements in the discourse of each participant. The units of meaning will be grouped
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47 progressively by proximity of meaning, then by classifying them by theme. Finally, the themes
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49 will be studied to note the associated concepts. The aim is to make the elements collected more
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51 readable and understandable and to identify the different themes, meanings, oppositions or
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53 associations of concepts.
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Quantitative analysis

For the analysis of the surveys, a descriptive statistical analysis of the socio-demographic characteristics of the people participating in the study will be carried out first. Secondly, a logistic regression type association will be carried out between the dependent variables (perceptions, representations) and the independent variables (type of population, age, sex, socio-demographic situations, region, pre-existing relationship with urinary incontinent people). These analyses will be carried out using R software version 3.5.2. In addition, a similarity analysis according to Bouriche will be carried out with 4 different steps [26] : the creation and exploration of the similarity matrix, the visualisation of the maximum tree and threshold graphs, the visualisation of the maximum clique filter and the comparison of similarity matrices of different sub-populations. Finally, the search for the "silent zone" will be carried out in order to obtain also the non-expressible elements of the interviewees.

The qualitative and quantitative results will then be triangulated to confirm, refute, corroborate or cross-validate [27, 28].

Potential limitation and bias

There are two main cognitive biases that affect perception. The Hawthorne effect of influence of the interviewer on the respondent, and the halo effect, also called the notoriety or contamination effect. Researchers will try to limit these biases by training interviewers.

Outcomes

The results of the qualitative analyses will be presented in the form of a dendrogram per cluster and then modelled. The results of the quantitative data will be presented in the form of a summary with profiles, simple sorting and cross-sorting by tables and graphs. Finally, the results of the triangulation will be presented in the form of comparative tables and diagrams.

Patient and public involvement statement

In this study, 4 categories of population will be interviewed: elderly people in nursing homes, their caregivers, their carers and individuals from the general population. In order to design this study, and especially the tools needed to collect the data, a pre-survey was carried out with carers working in nursing homes.

Ethics and dissemination

This protocol was approved by the Descartes ethics and research committee on June 1, 2021, with the IRB number 00012021-43. The research will be conducted in accordance with international and French regulations on clinical research. Thus, the rules of confidentiality and anonymity will be respected. All participants will receive an information letter and their informed consent will be collected verbally. During the interviews and focus groups, the participants' agreement will be requested for note-taking and recording. The ethics and research committee has approved this procedure.

The findings will be published in international peer-reviewed journals and will be presented at national and international conferences. The study started in August 2021 and is anticipated to continue until June 2022.

Discussion

Improving the care of institutionalised elderly people affected by urinary incontinence is a real challenge. This study will therefore have many perspectives. For elderly people affected by urinary incontinence, this research will lead to an understanding of their feelings, but also to the development of their empowerment. Indeed, by understanding their needs in terms of protection mean choices, this research will help them becoming more autonomous and having greater control over their decisions. This process will also improve their self-esteem. For nurses

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3 and care assistants, this study will initially support their skills and understand their knowledge
4 and attitudes towards this phenomenon. It will also allow them to adapt their professional
5
6 and attitudes towards this phenomenon. It will also allow them to adapt their professional
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8 behaviour according to the results of this research. In this way, their expertise will be enhanced
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10 and the management and quality of care will be improved. Finally, the results of this research
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12 will enable the development of innovations to prepare for the future on this complex subject.
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15 **Contributorship statement**

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17
18 LP and MRT drafted this protocol. DA has reviewed and given his opinion. SS assisted in the
19
20 writing of the following parts: background and problematic. All authors have read and approved
21
22 the final version.
23
24

25 **Competing interests**

26
27
28 The study has received funding from a commercial organisation, but the authors declare that
29
30 they have no competing interests.
31
32

33 **Funding**

34
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36 This work was supported by the Korian Foundation and the Hartmann laboratories. There are
37
38 no award/grant number.
39
40

41 **Disclaimer**

42
43
44 The funding sources had no role in the design and the conduct of the study.
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47 **Ethics approval**

48
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50 Descartes ethics and research committee.
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53 **Provenance and peer review**

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56 Not commissioned; externally peer reviewed.
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Data statement

Our manuscript describes a study protocol. As such, we cannot elaborate on additional unpublished data.

Acknowledgments

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Number of words

3 213 words

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20 21 22 **FIGURE LEGEND**

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25 Figure 1: Study Design
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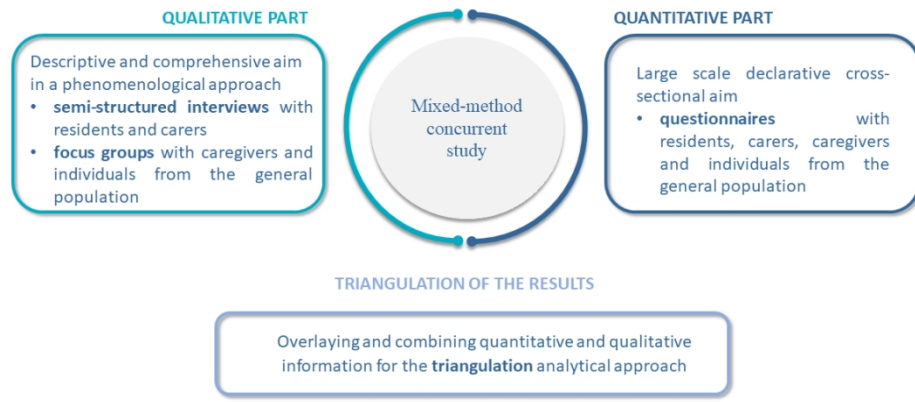


Figure 1 : Study Design

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