

## Article

# Community Health and Public Health Nurses: Case Study in Times of COVID-19

Carmen Cunha <sup>1,2,\*</sup> , Adriana Henriques <sup>2,3</sup>  and Andreia Costa <sup>2,3</sup><sup>1</sup> Nursing School, Lisbon University, 1649-004 Lisbon, Portugal<sup>2</sup> Nursing Research, Innovation and Development Centre of Lisbon (CIDNUR), Nursing School of Lisbon, 1600-190 Lisboa, Portugal; ahenriques@esel.pt (A.H.); andreia.costa@esel.pt (A.C.)<sup>3</sup> Instituto de Saúde Ambiental (ISAMB), Faculdade de Medicina, Universidade de Lisboa, 1649-028 Lisboa, Portugal

\* Correspondence: carmencunha@campus.esel.pt

**Abstract:** The COVID-19 pandemic has given more relevance to identifying the common and specific competencies of specialized nurses in community health and public health, presenting and characterizing their interventions, relations with health indicators in the population, identifying factors that facilitate their performance, and their respective regulations. A qualitative case study was undertaken with 31 nurses from a group of health centers and data collection by interviews, direct observation, and documents analysis. The flow model and an interpretive matrix, with two strategies and two techniques, was used for the analysis and discussion. The majority of participants were female, who were aware of and familiar with the specific and defined competencies, which they put into practice. They recognize their activities as important and feel happy where they are and doing what they do. They have good a knowledge of the regulations that concern them. They consider themselves well prepared and available to intervene in many dimensions, such as epidemiological surveillance, management, and group empowerment, contributing to good health indexes and health sustainability. Expected changes are related to their potential contributions to advance the nursing profession, which this pandemic has highlighted.

**Keywords:** case study; community health; health sustainability; nursing; pandemic; public health; specialist nurses



**Citation:** Cunha, C.; Henriques, A.; Costa, A. Community Health and Public Health Nurses: Case Study in Times of COVID-19. *Sustainability* **2021**, *13*, 11149. <https://doi.org/10.3390/su132011149>

Academic Editor: Lotfi Aleya

Received: 8 September 2021

Accepted: 2 October 2021

Published: 9 October 2021

**Publisher's Note:** MDPI stays neutral with regard to jurisdictional claims in published maps and institutional affiliations.



**Copyright:** © 2021 by the authors. Licensee MDPI, Basel, Switzerland. This article is an open access article distributed under the terms and conditions of the Creative Commons Attribution (CC BY) license (<https://creativecommons.org/licenses/by/4.0/>).

## 1. Introduction

The emergence of COVID-19, provoked by the SARS-CoV-2 virus and its fast dissemination, highlighted the fragility of human health, especially impacting public health and challenging many health systems to respond to it [1]. Because nurses are key elements of health teams, charged with containing and preventing the dissemination of infectious diseases [2], such as this pandemic, but are also, often, its victims [3,4], we feel encouraged to promote the visibility of the production of knowledge in nursing [5], problematizing the competencies and interventions of specialized nurses in community and public health.

While being important actors in the struggle against the pandemic, nurses, to whom the year of 2020 was dedicated [6], continue to guarantee the health of the population and the compliance with the United Nations sustainable goals, especially the third goal: to “ensure healthy lives and promote well-being for all at all ages” [7], sustaining health and life beyond the pandemic.

Recently, the World Health Organization, has highlighted the importance of health professional workers, such as nurses, for health sustainability: “The health community is increasingly an ally in this goal. Healthworkers are the single most trusted profession in the world. Their skill, dedication, bravery and compassion has saved countless lives during the COVID-19 crisis—raising them to even higher levels of respect in their communities. Health professionals from around the world have shown that they are also strong supporters of

action to protect the environment—and thereby the health of the populations that they serve. They are ready to be champions for the green, healthy and prosperous societies of the future, as evidenced in a recent open letter to G20 leaders, in which health professionals from around the world called for a healthy recovery from COVID-19” [8] (p. 27).

### Background

As two recent literature reviews disclosed, one scoping review [9] and one systematic review (SLR) [10], apparently, scientific production about this topic is scarce among us. Considering the apparent nonexistence of specific studies in this field, when carrying out this investigation our focus was on the specialized nurses, from the perspective of a complex adaptive system (CAS) [11].

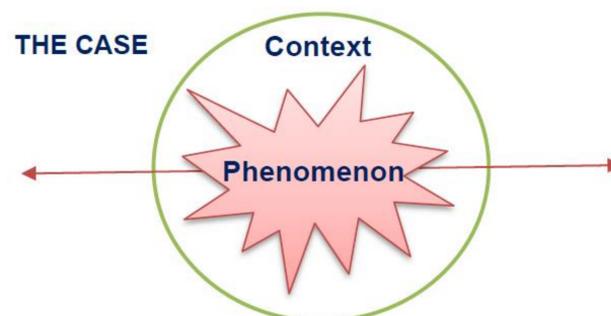
The specific competencies of specialized nurses, in public health and community health, are defined and prescribed by Article 2 of the regulation No. 428/2018 [12] from the Nurses Order: to evaluate the health state of a community; to empower groups and communities; to integrate and coordinate community health programs and the objectives of the National Health Plan (PNS); to carry out epidemiological surveillance [12]. These competencies are a reference point for the development of this study, as they are taken into practice in the interventions carried out by these nurses.

This study aims to identify the common and specific competencies of the specialized nurses in community health and public health, presenting and characterizing their interventions, analyzing their competencies, and relating them to the population health indicators, identifying facilitating factors for their performance, and their respective regulation.

## 2. Materials and Methods

### 2.1. Study Design

Qualitative study was undertaken, seeking to understand the complex phenomenon in depth [13], using the case study modality [14]. From the perspective of a case study, the “case” is, usually, the focus. It is a concrete entity, such as a person, a group, an organization, or a community. A contemporary phenomenon is a concrete manifestation in the real world, which involves studying the present without excluding the near past from its context and becomes the subject in the case study. Context is the data external to the case, which establishes the limits of the case, that is, the analysis unit. Figure 1, elaborated by the authors and inspired by the author in [14], aims to illustrate the “case” of a case study.



**Figure 1.** Representation of the case, phenomenon, and context in the case study.

Specialized nurses in community and public health are our “case”, as they intervene in a Group of Health Centers (ACES) from the region of Lisbon, focused especially on the Public Health Unit (USP), which is the contemporary phenomenon that has the ACES as its context since it limits and forms the respective analysis unit, making this a unique case study. ACES is a collective group of public rights, integrated in the indirect administration of the State. It is a legal entity with administrative, financial, and property autonomy. Its mission is to provide the population in the geographical area of its intervention with access

to quality health care, adapting the available resources to health needs, answering to the PNS, and enforcing it, as prescribed in the Decree-Law No. 28/2008 [15].

## 2.2. Setting

Data collection took place in an ACES in the region of Lisbon, Portugal.

The data was collected in the second semester of 2019.

Population. Specialized nurses in community health and public health from the ACES.

## 2.3. Selection Criteria

Included were all community health and public health nurses from the ACES, including those who, despite not being titled specialists, worked in this field of nursing, and were in a USP. Excluded were nurses who were on long-term medical leave.

## 2.4. Data Collection

The first author of this paper interviewed the participants. She is a PhD student and went through a theoretical–practical discipline to improve interviewing techniques. The scheduling in advance of interviews was performed in person with some participants, but with most via email, and the interviewer did not know any of them. On the day of the interview, the study and its objectives were presented briefly. The participants accepted participating by signing a free and informed consent form. The interviews, one with each participant, were recorded in the presence of interviewee and interviewer alone, lasted for an average of 40 min, and were carried out in the workplace of the interviewees. The interview followed a protocol, made up by 31 open questions. Later, the transcriptions were sent via email to the participants for them to comment or correct. No one gave further feedback.

The direct observations took place from September to December 2019 based on a previously prepared script. The activities of some nurses, in the real world context of the case, were observed [14]. The observations took place in the last quarter of 2019, lasting for a mean of three hours each, in the USP and in a Family Health Unit, and the observer did not intervene in any way. The respective notes were made later. The collection of documents took place throughout the entire research, directly in the ACES and through searches in databases and official and/or government websites.

## 2.5. Data Treatment and Analysis

The interviews were transcribed *ipsis verbis*, except for colloquial and repeated expressions, and no data saturation was observed. They received an alphanumeric code which identified them, and, later, were treated using the software MAXQDA2020, after specific training to do so. Data from the interview forms were grouped in an Excel spreadsheet to characterize participants. A database was created including the product recovered from direct observations and recorded in Excel as well.

We analyzed the data according to the flow model [16] that consists in three stages/continuous activities: (1) data reduction, a continuous process of selection, simplification, and abstraction; (2) data presentation in an organized and compressed fashion; (3) design and verification of conclusions, such as the activity of deciding the meaning of things, noting down regularities, patterns, explanations, possible configurations, causal flows, and propositions. The two first stages aim to present the findings, and the last to discuss it and present its conclusions.

For the third stage of the flow model [16], design and verification of conclusions, and to start our discussion, we followed the propositions [14] to analyze the evidence, in the context of case studies. We organized an interpretive matrix of data, formed by two strategies and two analysis techniques [14]. The first strategy was based on previous theoretical propositions, which was to conduct the case concretely, leading to analytical priorities [9,17], and the second consisted of working with emergent data, inviting researchers to “pour through your data”, and “playing with the data” [14]. Two analysis techniques

were further added: pattern matching and explanation building [14]. In the first analytical technique, the patterns that emerged from the findings were compared to those that were predicted and expected before the respective data collection. To formulate propositions and patterns, we resorted to the previous literature reviews [9,17]. The second technique, creating explanations, aimed to elaborate on explanatory hypotheses [14].

Throughout the analysis process, we brought together and confronted the different data collected, to perform what the author calls data triangulation [14].

### 2.6. Ethical Aspects

The study was conducted according to the guidelines of the Declaration of Helsinki, and approved by the Institutional Review Board, Ethics Commission for Health, from the Regional Health Administration of Lisbon and Vale do Tejo, on 10 May 2019, reference 4547/CES/2019. For the protection of participants, and to guarantee their confidentiality and anonymity, informed consent was obtained from all subjects involved in the study. The information acquired was protected using an alphanumeric code, and personal data was not recorded. The participants accepted that their perspectives could be incorporated in the results and published or presented for academic and scientific purposes.

## 3. Results

The participants were 31 nurses, and none refused to participate in the study. As instruments used for data collection, from the six sources of data most used in case studies [14], we used the interview, direct observation, and document analysis, the latter including public and published records relative to the health indexes from the ACES in the last 10 years.

The 31 community health and public health nurses who participated in this study were taken from the approximate 160 nurses from the ACES. Their average time working there was 25 years, with a range between 13 and 40 years. As for the number of years of specialty, the average was 9 years, although the range was between 2 and 27 years, and the largest number of participants were from community health nursing. There were only 6 public health nurses, 3 of whom were designated as community health and public health nurses. The mean time working in primary health care was 16 years. Most nurses had been in their current role for 10 years, although some had worked in the same service for the last 30 years. Most participants were female, with an average age of 48 years old, and a range between 34 and 63 years. The research involved all functional ACES units.

The data were introduced into the MAXQDA2020 software for qualitative data analyses, already mentioned, to aid the authors in the codification and creation of categories and subcategories, as Table 1 shows.

**Table 1.** Categories, subcategories, and codes.

Categories	Subcategories	Codes
The knowledge of the competencies by the nurses	What the nurses know about the determination of their competencies	- knows whether competencies are determined - knows who determined them
	The competencies the nurses know about	- knows what they are - which ones they know
The actual interventions and the competencies prescribed		- relates activity with indicators - evaluates the health/community - contributes for capacitation/groups - integrates/coordinates programs - implements objectives/PNS - participates in epidemiological surveillance

Table 1. Cont.

Categories	Subcategories	Codes
The practice of the nurses systematized in interventions	The practice of the nurses and relation with training The importance of interventions The contributions of the nurses to the unit	- his/her intervention is important - do what he/she was prepared to do - contributions to/definition of activities - importance/activities unit - what is done in practice - attributed activities
What facilitates or makes the performance of the competencies difficult	The nurses and the relation with work What is difficult and what is easy The nurses and public health	- would continue or change - what contributes/performance - what would change/good performance - what would change/SP - how do you feel/working with others - working alone/team - benefits/advantages of your presence - what makes action difficult - problems, dilemmas/faced
Legal framework and regulations identified by the nurses		- knows the regulation - knows which regulation takes precedence

Following the flow model [16] presented above, and its reduction via codification, we now present the most relevant findings, grouped in the five categories formed.

### 3.1. The First Category

The nurses' knowledge of competencies reflects the findings about whether these competencies are determined and who determined them. All nurses answered that yes, they know that these are determined. "Yes, they are, everything is very well defined" (E24), or, "I think so, I am sure I read it in the specialty, they are" (E8). Regarding who determined them, most identified the "Nurses Order" (E3), or, "the Order has everything determined, from what I read" (E8), and "who determines is legislation, I do not know whether through laws or decree-laws, but I know they are determined in a legislation" (E4), and also, "the laws are various people, various organizations, but the Order contributed, as well as the unions and society as a whole" (E24).

Regarding the competencies the nurses know, whether they know them, and those they know concretely, a general knowledge was asserted. "Yes, and I read them multiple times" (E2), and "no, specifically no, that is, I know, I know they exist, if need be, I will check, but in our day-to-day what I need to know exactly is the care" (E9).

Some nurses even numbered them, "providing health diagnosis for a community, managing the health of this community, (...)carrying out epidemiological investigations (...)" (E1), "the diagnosis of a community and later the whole intervention" (E28).

In addition to the demonstration of knowledge, they recognized the importance of this knowledge and of making use of it: "I have used it many times, even to make note of performance evaluations" (E10).

### 3.2. The Second Category

Are nurses involved in identifying the diversity of actual interventions regarding the prescribed competencies, in addition to the perception of the nurses concerning their activities regarding the indicators contracted for their unit and relating them with the interventions?

Epidemiological surveillance was noted to be a specific activity for some of them, but not all, although it was identified as participating in vaccinations. "Yes, since I entered public health" (E2), "but only in the vaccination part" (E3), or, "as long as it is not reduced to the diseases with mandatory disclosure, all the rest, yes, I do" (E10), such as, "if there is

an outbreak, we follow the instructions from public health" (E13), "surveilling a case of tuberculosis, or measles, we have to (...) send the data" (E26).

Regarding the achievement of PNS objectives: "yes, especially considering our objectives, which are also in accordance with the PNS" (E18), and, "yes, I implement them, in our space, time, and equipment limitations, and team limitations" (E2).

Regarding the integration and coordination of the community programs, at least half of the participants said they did this. "Yes, I am part of the coordination of a project by SINAVE, the National System of Epidemiological Surveillance, (...) and I am part of the coordination of the health literacy project" (E5), and, "I am part of program coordination, for instance, of an intervention group in the community" (E9).

Regarding competencies and the enabling of groups and the community: the nurses stated that "yes, through formation and often through counseling" (E2), and, concretely, "I am also contributing for the training of groups and of the community, yes" (E28), or, "yes, regarding that I have been working with health education actions" (E20).

Regarding the evaluation of the community: "yes, here is the so-called community diagnosis, we evaluate and elaborate the profile of the community and then a plan" (E5), and, "yes, we have evaluation indexes, be them of process or health, and thus we do this evaluation monthly" (E11).

The relation of their activity with the established indexes for the unit includes knowing them, giving them importance, and contributing to them. "It is mandatory, because this is part of the indicators we have in the unit itself" (E1), but "(...), I, as a nurse, am part of a multidisciplinary team, and my work is part of this, it contributes to identify and evaluate the indicators" (E5). "But well, my activity interferes with the good and bad indicators. If I work well, there are good indicators" (E17). "The vaccination, which is an indicator that depends a lot on nurses and has very good rates in Portugal" (E28).

### 3.3. The Third Category

Focused on the practice of the nurses, systematized in interventions. We aggregated data concerning the nurses' portrayal of their own activity. They see their contributions to the unit as especially important: "nursing has an invaluable role in public health. In all of them, except vaccination, we are the ones who go to the field, we are the ones who talk to people, we are the ones who help, in the background, we execute, we plan" (E8). "We are very important (...) we, nurses, are the ones who manage, my role is vitally important" (E23). Although, as mentioned by others: "I do not decide anything" (E17), or, "(...) I contribute to all indicators of the unit" (E26).

The same can be said about their contributions to determine the activities in the unit. "We, the nurses, decide what we will do, according, of course, to the national plans and regional plan, and the local health plan" (E10). However, others said: "we work in a team, (...) a very specific contribution in the field of nursing" (E1). "The plan of activities includes elaborated projects, which we propose. (...) they are included in a multidisciplinary team" (E5).

The importance given to their interventions is mostly positive, as in "I think so, that it is very important" (E4), "or the vaccination part is exclusive, if I can say this about nursing, but we have good results, only due to the efforts made by the nurses" (E3). "It is very important, the feedback of the users who, by the way, in our profession, gives us the strength to go on" (E28).

The approach of the practice of the nurses and its relation with their formation and aims to determine whether what is performed in practice corresponds to what they had prepared was questioned. It was registered that, for most nurses, this is true. "Yes. What I do corresponds to what I was prepared to do (E5). Yes, I have no questions there about whether my formation is adequate" (E20).

### 3.4. The Fourth Category

This section focuses on the findings about what makes the performance of these competencies difficult or easy, as well as what contributes to, or makes them more difficult and the impact on the nurse's good performance.

Starting with the way they see themselves in work relationships, it seems to be generally agreed upon that teamwork is good and has advantages. "Very much, immense. Teamwork is essential to reach results. I think that we, as nurses, cannot work alone" (E6), or, it "is more productive to work in a team, two heads always think better than one, two or more is always more gratifying" (E8). However, "it depends on the team and depends on what you are doing" (E3), or, "it depends, some things I cannot do alone, and some cannot be done with others" (E9), "a public health nurse cannot work alone, it makes no sense" (E8), and, "teamwork is always better" (E12).

Regarding the desire to change the unit, it was a consensus that the nurses liked where they are and what they are doing. "I really like being where I am" (E7), and, "I really like working here, it is a very good environment, I have autonomy" (E25).

However, regarding changes in public health: "going into the community more, that would be important" (E23). Additionally, "I think there were much more interventions some years ago" (E21), or, "starting to think about informing the population better and to warn them a bit without alarming them too much, of course, but this is our role" (E8). In addition, "(...) public health, somehow, to have more visibility, to show more, regarding nursing, what are the functions and responsibilities" (E6), or, "it was also necessary to change mentalities a lot" (E3). However, "the public health nurses cannot have an administrative role, in the end it is a computer epidemiological investigation. (...) after all this field work was done via computers, you need to go to the field, to evaluate and implement measures" (E5).

Regarding what is difficult and what is easy, and the problems and dilemmas of the nurses, there were some personal issues, but, mostly, they were institutional. Thus, "the main dilemmas are related to everything from the management field, that transcends us, everything about which we do not have control, which is related to a hierarchy, (...) it does not depend on us alone" (E6). "It is the lack of human resources in nursing" (E23).

With regard to what contributes to a good performance, the nurses mentioned "especially: liking what I do, that is essential" (E24), and, "it contributes to have better equipment, time flexibility, multidisciplinary teams, more people, good communication between us" (E2), or, "I think that, first, the knowledge. (...) managing to work in a team, I think it is also an essential quality" (E4), as well as, "I think that what contributes a lot is leadership. This figure is essential in public health, the existence of a nursing coordinator" (E5). Additionally, "first you need to be responsible, to be assertive, to be ethical" (E7).

However, they indicate what would be important to change in an institutional level: "the professionals do not value us as much as we would like. (...) we should value more, one another" (E1), and, "it would be important for us to have more systematized opportunities for training, in specific contexts" (E27), or, "I would change some indicators" (E20).

### 3.5. The Fifth Category

The category includes the data related to the legal and regulatory framework, identified by the nurses, which they state to know, and which they highlight. "I know, I do not know everything in depth, but I know" (E6), or, "I know, I know it exists" (E9), such as, "of course I know, evidently. If I consult them daily (...). I am perfectly within the competencies of the regulations and professional exercise" (E10).

They highlight "this last law, about the role of the specialized nurse" (E15) and "the documents by the Order" (E23).

In data triangulation, the direct observation confirmed the findings of the interviews about the interventions of the nurses. Thus, the most observed interventions were carrying out epidemiological surveillance (n = 5), and managing intervention programs within the scope of prevention, promotion, and protection of the health of the population in general, or

of specific groups. The analysis of the main health indicators, such as mortality and natality, aging index, as well as vaccination and vaccination coverage [6], highlighted the importance and relevance of the nurses, considering the data collected to reach the PNS goals.

#### 4. Discussion

The applications of the two strategies and two analysis techniques led to the creation of Table 2, where we grouped the categories and applied this matrix.

**Table 2.** Application of the matrix of analysis to the five categories.

Categories	Strategies		Techniques	
	Propositions	Emerging Data	Patterns	Hypotheses
1st The knowledge of the competencies by the nurses	The nurses understand their competencies, not all of which are implemented by all nurses [18]	The nurses know well that there are competencies that are defined and know them	The competencies that are understood the most may reflect more theoretical knowledge. The competencies that are understood the least may signify distancing from them [18]	We have come to believe that the specialized nurses in community health and in public health, despite not having the same relation with all competencies, put most of them into practice
2nd The actual interventions and the competencies prescribed	The importance of the intervention of the nurses as the backbone of any health system [19]	The nurses are aware of interventions that correspond to their specific competencies, even though they are not equally involved in all of them	Most public health nurses are mainly engaged with vaccination [20]	Vaccination does not especially stand out in terms of prevalence, but it is the intervention that some highlight the most
3rd The practice of the nurses as systematized in interventions	Nurses are involved in many activities to prevent diseases and contribute to the health of populations. Their activities are not always visible to the public or to political decision makers [21]	Nurses feel that their activities are important for the unit and performs several interventions	It stands out that understanding the health needs, either from the perspective of the provider or from that of the receiver, is very important to prioritize health issues and to improve the most adequate interventions for local situations [22]	It is apparent that the nurses are available for a wide range of activities. Although well prepared, they often seem to be limited by what they are assigned to do.
4th What makes performance of the competencies easy or difficult	To trace a plan to go towards the proposals of nurses to reorganize roles, reinforce communication and work relations with management, and extending the limits of the practice of nursing and public policy [23]	The nurses highlight that they feel good where they are and doing what they do. They point at personal characteristics, such as advantages, and perceive some organizational difficulties	It is recommended that the development of the nurse practitioner as a community expert for response at the individual, community, and population levels including addressing social determinants of health is prioritized [20]	Nurses, apparently, feel prepared and willing to work with others. However, they seem to feel more conditioned by external factors, such as the lack of resources or even of recognition
5th Legal framework and regulations identified by the nurses	Experiences with learning public policies can increase the knowledge and the competencies of nurses, which is necessary for them to influence public policies [24]	The nurses have knowledge about the regulations from the Nurses Order	There will be a normative space for a more effective use of the competencies of the nurses, which may contribute to the Portuguese health system to perform better [25]	It was shown that the knowledge of nurses about regulations and their interest in them is important, among other reasons because regulation changes can depend on their contribution

In the first category, the emerging data and the hypothesis for their explanation suggest that the nurses are familiar with all of their competencies. Therefore, we agree in part with the proposition and the pattern [18], considering that the competencies are understood; even those that are less put into effect in the specific context of the practice of each nurse. However, regarding the hypothesis we formulated from the findings, we highlight that, although the nurses do not have the same relation with all competencies, they practice most of them. It stands out that the expectations of competencies and interventions that are prescribed for the specialized nurses in community and public nursing are overcome, transcending the common image of primary health care by providing care to people, families, groups, and communities. This specialization seems to show a set of competencies that is paramount for the health of the population, but not very visible to them, or even for the nurses at the stage previous to their formation as specialists.

Regarding the real interventions performed by the nurses, which are a part of the second category, we found that the nurses are aware that these interventions correspond to their competencies, though the relation to their competencies are not the same in each intervention. In accordance with the World Health Organization, we know that the nurses are an essential protagonist in any health system [19], as made clear by the ongoing pandemic [2,4,5], as they assume the role of epidemiological surveillance and coordinate vaccinations, for example. In part, we agree with the pattern [20] of focusing on vaccine interventions as the type of intervention in which nurses recognize their role the most, despite the variety of activities they report. However, they are well aware that their interventions contribute to the good indicators of the health of the population [6]. They also know that, for public health, all social determinants of health [26] are important. This has been highlighted by the current pandemic and concrete studies have demonstrated it since the loss of jobs or income associated with it has led to the emergence of other diseases [27].

The third category presents the practice of the nurses as actualized in the form of multifaceted interventions that make clear their availability for many activities. This includes activities that are administrative in nature that would not normally be theirs, but which are relevant for the performance of those activities that are. As indicated by the proposition and pattern of this category, it may be important to prioritize the most relevant interventions [22] and make them more visible [21]. Among the findings, it stands out that the most relevant interventions are those of epidemiological surveillance, even if through its relation with vaccination, and the management and training of groups. The CAS, used here as a theoretical reference, is a way to consider things, to analyze them without losing sight of their complexity, matrixes, and interrelations, more than it is a way of focusing on causes and effects [11]. It values the interaction between agents and/or their environment in such a way that even the simplest agents, with simple behavior guidelines, can produce an emerging complex behavior [11]. This leads us to suppose that the ACES will be a CAS. Since the nurses are one of its agents, and an important one, our hypothesis points out that nurses participate in and promote change in the way that they constantly advocate for and seek more of, valuing and obtaining visibility for themselves.

In the fourth category, we advanced the hypothesis that the nurses feel comfortable working with others, even when conditioned by external factors, such as resources or even lack of recognition from their peers. The fact that these nurses hold a specific training in community health nursing or public health, prepared them for the performance of their competencies. The hypothesis built supposes that the nurses feel happy working with others in a team, but also feel "limited" by the system, including the team, in which they feel diluted. This may bring them some dissatisfaction in the institutional and organizational levels, where what stands out, for example, is the lack of direct nursing superiors. From the perspective of the general theory of systems [28], the environment is related to the totality of internal and external forces that surround the person. This includes intrapersonal, interpersonal, and extra personal stressors, and can affect their normal lines of defense and, therefore, the stability of the system. Considering the presence of nurses in the system,

it is important to recognize that they are affected by the system and the system is also affected by them.

In the fifth category, we addressed the interest of the nurses on regulation, which involves, simultaneously, specific and general laws for them as professionals of health, in addition to the regulations from the Nurses Order. Considering that they know the regulations well, a better knowledge about other regulatory frameworks could increase their political participation [24]. The nurses are the most numerous health class workers in Portugal according to data from the National Institute of Statistics for 2018 [29]. As so, it is reasonable to assume that they may need to take on a more interventional posture, one that can influence changes to the norms that are necessary [25] to open the path towards a more effective use of their competencies, perhaps translated into new interventions [30,31].

As limitations of the study, we could indicate the possibility that our “case” may not be replicable. However, it can become an advantage for the field of nursing, encouraging the making of other studies. Other limitations, of which we are aware, involve the methodology chosen, since other methodologies could lead to different results. The same is true for the characteristics of the geographic area selected, not to mention that it is possible to claim that the sample may not be sufficiently representative.

Regarding the implications of this study for the advancement of scientific knowledge in the fields of health and nursing, as the result of the evidence produced here about these nurses, we highlighted the competences of the nurses that can be applied further by these highly qualified professionals; that they are a valuable resource, as the actual pandemic has shown, and are available to respond to the challenges of the profession and health care services. In other ways, this is a new body of evidence that can encourage further studies. Furthermore, we highlight the need for more awareness about and recognition of nurses, both at the institutional level and their peers. It seems also necessary to invest in multiplying the number of professionals in this field, as the current pandemic has shown. In addition, nurses must face the challenge to value themselves and to make themselves more visible in their interventions since they provide a decisive contribution to the promotion of a population’s health and disease prevention, advancing health sustainability.

## 5. Conclusions

The relevance of this investigation, a case study, is in the finding that specialized nurses in community health and public health consider themselves well prepared and available to intervene in many dimensions, bringing most of their competencies into practice.

They are involved in a great variety of interventions, namely epidemiological surveillance, the management and capacitation of groups, and the improvement of the health of populations. Moreover, nurses contribute to good health indicators, as are contracted, and observed in the ACES. They identify the main factors that facilitate their performance as being their knowledge, acquired in their formation, and the resources at their disposal. Nurses point out obstacles, especially institutional and organizational resources, such as the lack of human and material resources, and closer nursing leadership. Nurses are familiar with the regulations related to them, even when not familiar with them all.

It makes sense to highlight that some of the changes expected and sought seem to be related to potential contributions for the advancement of the nursing profession, as has been highlighted in the context of the COVID-19 pandemic.

In this scenario, where all resources have been shown to be insufficient, the need to broaden the scope of nurses’ competencies comes to light with more relevance. This issue is also discussed in other contexts, such as the rational allocation of human resources in health, even in the order of health sustainability. These changes will, necessarily, need to go through regulation changes, with the community and public health nurses assuming an active and participant role.

**Author Contributions:** Conceptualization, C.C., A.H. and A.C.; methodology, C.C., A.H. and A.C.; software, C.C.; validation, C.C., A.H. and A.C.; formal analysis, C.C., A.H. and A.C.; investigation, C.C.; resources, C.C.; data curation, C.C., A.H. and A.C.; writing—original draft preparation, C.C.;

writing—review and editing, C.C., A.H. and A.C.; visualization, C.C., A.H. and A.C.; supervision, A.H. and A.C.; project administration, C.C. All authors have read and agreed to the published version of the manuscript.

**Funding:** This research received no external funding.

**Institutional Review Board Statement:** The study was conducted according to the guidelines of the Declaration of Hel-sinki, and approved by the Institutional Review Board, Ethics Commission for Health, from the Regional Health Administration of Lisbon and Vale do Tejo, on 10 May 2019, reference 4547/CES/2019.

**Informed Consent Statement:** Informed consent was obtained from all subjects involved in the study.

**Data Availability Statement:** Not applicable.

**Conflicts of Interest:** The authors declare no conflict of interest.

## References

1. Carvalho, E.C.; Souza, P.H.D.O.; Varella, T.C.M.M.L.; Souza, N.V.D.O.; Farias, S.N.P.; Soares, S.S.S. COVID-19 pandemic and the judicialization of health care: An explanatory case study. *Rev. Lat.-Am. Enferm.* **2020**, *28*, e3354. [CrossRef] [PubMed]
2. Chen, S.C.; Lai, Y.H.; Tsay, S.L. Nursing perspectives on the impacts of COVID-19. *J. Nurs. Res.* **2020**, *28*, e85. [CrossRef] [PubMed]
3. Granel, N.; Bernabeu-Tamayo, M.D. Mapping nursing practices in rehabilitation units in Spain and the United Kingdom: A multiple case study. *Nurs. Health Sci.* **2020**, *22*, 521–528. [CrossRef] [PubMed]
4. Soares, C.B.; Peduzzi, M.; Costa, M.V. Nursing workers: Covid-19 pandemic and social inequalities [editorial]. *Rev. Esc. Enferm. USP* **2020**, *54*, e03599. [CrossRef] [PubMed]
5. Pereira, E.G.; Felix, A.M.S.; Nichiata, L.Y.I.; Padoveze, M.C. What is the nursing research agenda for the COVID-19 pandemic? *Rev. Esc. Enferm. USP* **2020**, *54*, e03661. [CrossRef] [PubMed]
6. Cunha, C.; Henriques, M.A.; Costa, A. Vigilância epidemiológica: Ano internacional do enfermeiro. In Proceedings of the Congreso Virtual de la Sociedad Española de Epidemiología (SEE) y da Associação Portuguesa de Epidemiologia (APE), Bilbao, Spain, 21–23, 29–30 October 2020; *Gac Sanit.* **34** (Espec Congr), p. 199. Available online: [https://static.elsevier.es/miscelanea/congreso\\_gaceta2020.pdf](https://static.elsevier.es/miscelanea/congreso_gaceta2020.pdf) (accessed on 20 July 2021).
7. Osingada, C.P.; Porta, C.M. Nursing and sustainable development goals (SDGs) in a COVID-19 world: The state of the science and a call for nursing to lead. *Public Health Nurs.* **2020**, *37*, 799–805. [CrossRef] [PubMed]
8. World Health Organization. WHO Manifesto for a Healthy Recovery from COVID-19: Prescriptions and Actionables for a Healthy and Green Recovery. 2020. Available online: <https://sdgs.un.org/publications/publication-who-manifesto-healthy-recovery-covid-19-32955> (accessed on 18 August 2021).
9. Cunha, C.; Costa, A.; Henriques, M.A. The public health nurse's interventions and responsibilities in Portugal: A scoping review. *Rev. Enferm. UERJ* **2019**, *27*, e37214. [CrossRef]
10. Cunha, C.; Costa, A.; Henriques, M.A. Community health and public health nursing: A systematic literature review. *Rev. Gestão Saúde* **2020**, *11*, 80–96. Available online: <https://periodicos.unb.br/index.php/rgs/article/view/29414> (accessed on 20 July 2021). [CrossRef]
11. Carmichael, T.; Hadzikadic, M. The fundamentals of complex adaptive systems. In *Complex Adaptive Systems. Understanding Complex Systems*, 1st ed.; Carmichael, T., Collins, A., Hadzikadic, M., Eds.; Springer: Cham, Switzerland, 2019; Volume VIII, pp. 1–16.
12. Ordem dos Enfermeiros. Regulamento n° 428/2018, Competências Específicas do Enfermeiro Especialista em Enfermagem Comunitária na Área de Enfermagem de Saúde Comunitária e de Saúde Pública e na Área de Enfermagem de Saúde Familiar. 2018. Available online: <https://dre.pt/pesquisa/-/search/115698616/details/normal?l=1> (accessed on 20 April 2021).
13. Creswell, J.W. *Research Design: Qualitative, Quantitative, and Mixed Methods Approaches*, 3rd ed.; SAGE: Los Angeles, LA, USA, 2009; p. 260.
14. Yin, R.K. *Case Study Research and Applications: Design and Methods*, 6th ed.; SAGE: Los Angeles, LA, USA, 2018; p. 319.
15. Decreto-Lei n° 28/2008. Diário da República: I Série, n° 38. 2008. Available online: <https://data.dre.pt/eli/dec-lei/28/2008/02/22/p/dre/pt/html> (accessed on 22 March 2021).
16. Miles, M.B.; Huberman, A.M. *Qualitative Data Analysis: An Expanded Sourcebook*, 2nd ed.; SAGE: Thousand Oaks, CA, USA, 1994; p. 352.
17. Cunha, C.; Henriques, M.A.; Costa, A. Health research and innovation: Community health and public health nurse interventions. *Rev. ROL Enferm.* **2020**, *43* (Suppl. S1), 32–42. Available online: [https://e-rol.es/wp-content/uploads/2021/01/IC\\_RESEARCH\\_INNOVATION\\_DEVELOPMENT\\_NURSING-2019.pdf](https://e-rol.es/wp-content/uploads/2021/01/IC_RESEARCH_INNOVATION_DEVELOPMENT_NURSING-2019.pdf) (accessed on 23 July 2021).
18. Guedes, V.M.S.; Figueiredo, M.H.S.; Apóstolo, J.L.A. Competencies of General Care Nurses in Primary Care: From Understanding to Implementation. *Rev. Enferm. Ref.* **2016**, *4*, 27–33. [CrossRef]
19. United Nations, UN News. Year of the Nurse and the Midwife Highlights 'Backbone' of Health Systems. 2020. Available online: <https://news.un.org/en/story/2020/01/1054531> (accessed on 15 March 2021).

20. Haron, Y.; Honovich, M.; Rahmani, S.; Madjar, B.; Shahar, L.; Feder-Bubis, P. Public health nurses' activities at a time of specialization in nursing—A national study. *Public Health Nurs.* **2019**, *36*, 79–86. [[CrossRef](#)] [[PubMed](#)]
21. Schaffer, M.A.; Keller, L.O.; Reckinger, D. Public health nursing activities: Visible or invisible? *Public Health Nurs.* **2015**, *32*, 711–720. [[CrossRef](#)] [[PubMed](#)]
22. Cho, S.; Lee, H.; Yoon, S.; Kim, Y.; Levin, P.F.; Kim, E. Community health needs assessment: A nurses' global health project in Vietnam. *Int. Nurs. Rev.* **2018**, *65*, 505–514. [[CrossRef](#)] [[PubMed](#)]
23. Kagan, I.; Shachaf, S.; Rapaport, Z.; Livne, T.; Madjar, B. Public Health Nurses in Israel: A case study on a quality improvement project of nurse's work life. *Public Health Nurs.* **2017**, *34*, 78–86. [[CrossRef](#)] [[PubMed](#)]
24. Byrd, M.E.; Costello, J.; Gremel, K.; Schwager, J.; Blanchette, L.; Malloy, T.E. Political astuteness of baccalaureate nursing students following an active learning experience in health policy. *Public Health Nurs.* **2012**, *29*, 433–443. [[CrossRef](#)] [[PubMed](#)]
25. Temido, M.; Dussault, G. Skill mix between physicians and nurses in Portugal: Legal barriers to change. *Rev. Port Saúde Pública* **2014**, *32*, 45–54. [[CrossRef](#)]
26. Tamayo, M.; Besoain, A.; Rebolledo, J. Social determinants of health and disability: Updating the model for determination. *Gac. Sanit.* **2018**, *32*, 96–100. [[CrossRef](#)] [[PubMed](#)]
27. Silva-Sobrinho, R.A.; Zilly, A.; Silva, R.M.M.; Arcoverde, M.A.M.; Deschutter, E.J.; Palha, P.F.; Bernardi, A.S. Coping with COVID-19 in an international border region: Health and economy. *Rev. Lat.-Am. Enferm.* **2021**, *29*, e3398. [[CrossRef](#)] [[PubMed](#)]
28. Petiprin, A. Nursing Theory. Neuman's Systems Model. Available online: <https://nursing-theory.org/theories-and-models/neuman-systems-model.php> (accessed on 11 April 2021).
29. Instituto Nacional de Estatística (INE). Health in Portugal 2018. Available online: [https://www.ine.pt/xportal/xmain?xpgid=ine\\_inst\\_infografia&INST=427173770&xpid=INE](https://www.ine.pt/xportal/xmain?xpgid=ine_inst_infografia&INST=427173770&xpid=INE) (accessed on 27 April 2021).
30. Varghese, J.; Blankenhorn, A.; Saligram, P.; Porter, J.; Sheikh, K. Setting the agenda for nurse leadership in India: What is missing. *Int. J. Equity Health* **2018**, *17*, 1–10. [[CrossRef](#)] [[PubMed](#)]
31. Jacob, R.R.; Duggan, K.; Allen, P.; Erwin, P.C.; Aisaka, K.; Yang, S.C.; Brownson, R.C. Preparing public health professionals to make evidence-based decisions: A comparison of training delivery methods in the United States. *Front. Public Health* **2018**, *6*, 1–11. [[CrossRef](#)] [[PubMed](#)]