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The role of the nurse in leadership and supervisory positions in long-term care in Catalonia

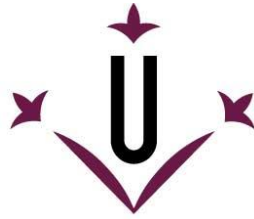
Gemma Horta i Garcia

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Universitat de Lleida

TESI DOCTORAL

The role of the nurse in leadership and supervisory positions in long-term care in Catalonia

Gemma Horta i Garcia

Memòria presentada per optar al grau de Doctor amb Menció Internacional
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La Dra. Montserrat Gea i Sánchez, directora i el Dr. Joan Blanco i Blanco, director i tutor d'aquesta Tesi,

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Que la Tesi “The role of the nurse in leadership and supervisory positions in long-term care in Catalonia”, l'autora de la qual és Gemma Horta i Garcia, ha estat realitzada sota la nostra direcció, reuneix les condicions d'originalitat i està en condicions per a la seva defensa davant del Tribunal corresponent per l'obtenció del grau de Doctor amb Menció Internacional per la Universitat de Lleida.

Lleida, març 2023

Dra. Montserrat Gea i Sánchez

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A l'amor de la meva vida
Als meus pares i germà, per la seva infinita paciència
A en Pere Horta, padrí, tiet i el doctor de la família, a qui tots trobem a faltar

"The task of a leader is to get his people from where they are to where they have not been".

Henry Kissinger

DECLARACIÓ

Aquesta tesi, **“The role of the nurse in leadership and supervisory positions in long-term care in Catalonia”**, presentada per l’obtenció del grau de Doctor, és el resultat del meu treball personal, excepte allà on s’indiqui una altra font.

No ha estat remesa prèviament, ni en tot ni en part, a cap universitat, institució o societat científica, excepte les parts que ja han estat publicades en l’article científic que s’adjunta a annexos.

Lleida, març de 2023

Gemma Horta

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ACRONYMS

- ATS: Ayudante técnico sanitario
- CFI: Comparative fit index
- CI: Confidence interval
- COPD: Chronic Obstructive Pulmonary Disease
- CSIC: Consejo Superior de Investigaciones Científicas
- CWEQ: Conditions for Work Effectiveness Questionnaire
- DOGC: Diari Oficial de la Generalitat de Catalunya
- DUE: Diplomada Universitaria de Enfermería
- EA: Eden Alternative
- ENCOAR: Enhancing the Care of the Older Adult
- ESPI: Enquesta de Salut a la Població Institucionalitzada
- GESEC: Grup d'Estudis Societat, Salut, Educació i Cultura
- IMSERSO: Instituto de Mayores y Servicios Sociales
- INE: Instituto Nacional de Estadística
- JCQ: Job Content Questionnaire
- LE: Life expectancy
- LEB: Life expectancy at birth
- LOPS: Ley de Ordenación de las Profesiones Sanitarias
- NH: Nursing home
- OECD: Organisation for Economic Co-operation and Development
- PES-NWI: Practice Environment Scale-Nursing Work Index
- PEV: Prestació Econòmica Vinculant al servei
- PIA: Programa Individual d'Atenció
- RAE: Real Academia Española

SD: Standard deviation

SSS: Supervisory Support Scale

TCAE: Técnico en cuidados auxiliares de enfermería

TLI: Tucker-Lewis index

TVI: Translation validation index

USA: United States of America

WHO: World Health Organization

ABSTRACTS

1. ABSTRACTS

1.1 ABSTRACT

Introduction: Due to the growing aging population, there is expected to be an increase in the demand for places in long-term care facilities. The profile of the resident – generally frail, dependent, with multiple pathologies and cognitive impairment– presents a challenge for staff working in this sector. Nurses in supervisory and leadership roles must provide an appropriate and safe work environment and ensure the quality of care and attention.

Aim: To analyze the role of nurses in supervisory positions in long-term care facilities in Catalonia and their influence on staff under their charge.

Methodology: This consists of two parts, developed between 2015 and 2016. In the first part, the Supervisory Support Scale was translated from English into Spanish and validated, and the psychometric properties of the scale were evaluated. The second part consisted of an observational study on perceived supervisory support, carried out in 37 long-term care institutions, with the participation of 142 nurses and 390 auxiliary personnel (auxiliary nursing care technicians –TCAEs- and geriatric nursing assistants). The number of cases and the percentage were provided for the categorical variables, and the mean and standard deviation were calculated for the quantitative variables. Spearman's correlation coefficient and a one-way ANOVA were used for the relationship between variables.

Results: The translation and cultural adaptation of the Spanish Supervisory Support Scale and the validation of the scale proved it to be a valid and reliable instrument. The average age of the sample was 40-50 years. Most of the participants spoke Spanish and Catalan and had 10 years of experience in the sector. The work characteristics analyzed obtained a moderate score. Decision-making and empowerment, job effectiveness, perceived supervisory support, and stress and burden of work were associated with job satisfaction. For nurses, supervisory support was the predictive factor in intention to leave the job, and for TCAEs and geriatric nursing assistants this also included all other job characteristics. The lack of staff to perform the daily tasks was correlated with perceived supervisory support. However, the characteristics of the center, such as type – nursing home or long-term care settings–, geographic location and type of funding were not correlated.

Conclusions: The Spanish Supervisory Support Scale is a valid and reliable instrument for measuring supervisory support, as perceived by the nursing staff. This study provides evidence that the supervisory support perceived by the supervised staff influences and has an impact on job satisfaction and intention to leave the job. The characteristics of the center are not associated with the supervisory support perceived by staff working in long-term care settings.

Key words: Nurses; nurse's aide; nursing supervision; supervisory support scale; residential care facilities.

1.2 RESUM

Introducció: Degut a l'envelliment de la població s'espera un increment en la demanda de places en institucions de llarga estada. El perfil del resident, generalment fràgil, dependent, amb pluripatologies i deteriorament cognitiu suposa un repte pel personal que hi treballa. Les infermeres amb càrrecs de supervisió i lideratge han de proporcionar un entorn laboral adequat i segur, i vetllar per la qualitat de les cures i l'atenció.

Objectiu: Analitzar el rol de la infermera que ocupa posicions de supervisió en centres de llarga estada a Catalunya i la seva influència en el personal que té al seu càrrec.

Metodologia: Consta de dues parts, dutes a terme entre el 2015 i 2016. Primer, es va traduir i validar l'escala Supervisory Support Scale de l'anglès al castellà i es van avaluar les propietats psicomètriques de l'escala. La segona part comprèn l'estudi observacional en relació al suport supervisor percebut, realitzat en 37 centres de llarga estada, amb 142 infermeres i 390 auxiliars (TCAE i gerocultores). Per les variables categòriques es va facilitar el nombre de casos i el percentatge, per les variables quantitatives es va calcular la mitjana i la desviació estàndard. Es va emprar el coeficient de correlació de Spearman i l'anova d'un factor per la relació entre variables.

Resultats: La traducció i adaptació cultural de l'escala espanyola de suport supervisor i la validació de l'escala va demostrar que és un instrument vàlid i fiable. L'edat mitjana de la mostra va ser de 40-50 anys, la majoria parlaven castellà i català i tenien una experiència en el sector de 10 anys. Les característiques laborals analitzades van obtenir una puntuació moderada. La capacitat en la presa de decisions i apoderament, l'efectivitat laboral, el suport supervisor percebut i l'estrès i càrrega de treball es van associar a la satisfacció laboral. Per les infermeres, el suport supervisor va ser el factor predictiu en la intenció d'abandonar la feina i per les TCAE i gerocultores a més, totes les altres característiques laborals. La manca de personal per realitzar les tasques diàries es va correlacionar amb el suport supervisor percebut. En canvi, no ho van fer les característiques dels centres segons el tipus –residència o sociosanitari-, la situació geogràfica i el tipus de finançament.

Conclusions: L'escala espanyola de suport supervisor és un instrument vàlid i fiable per mesurar el suport de la persona amb funcions de supervisió, percebut pel personal d'infermeria. Aquest estudi aporta evidència al sustentar que el suport supervisor percebut pel personal supervisat influeix i té un impacte en la satisfacció laboral i intenció d'abandonar la feina. Les característiques del centre no es relacionen amb el suport supervisor percebut pel personal que treballa en l'àmbit de la llarga estada.

Paraules clau: Infermera; auxiliar d'infermera; supervisió d'infermeria; escala de suport supervisor; institucions residencials.

1.3 RESUMEN

Introducción: Debido al envejecimiento de la población se espera un incremento de la demanda de plazas en instituciones de larga estancia. El perfil del residente, generalmente frágil, dependiente, pluripatológico y con deterioro cognitivo supone un reto para el personal que trabaja en el sector. Las enfermeras con cargos de supervisión y liderazgo deben proporcionar un entorno laboral adecuado y seguro, y velar por la calidad de los cuidados.

Objetivo: Analizar el rol de la enfermera que ocupa posiciones de supervisión en centros de larga estancia en Cataluña y su influencia en el personal que tiene a su cargo.

Metodología: Consta de dos partes, llevadas a cabo entre el 2015 y 2016. En primer lugar, se tradujo y validó la escala Supervisory Support Scale del inglés al castellano y se evaluaron las propiedades psicométricas de la escala. La segunda parte comprende el estudio observacional en relación al soporte supervisor percibido, realizado en 37 centros de larga estancia y la participación de 142 enfermeras y 390 auxiliares (TCAE y gerocultores). Para las variables categóricas se proporcionó el número de casos y el porcentaje, para las variables cuantitativas se calculó la media y la desviación estándar. Se usó el coeficiente de correlación de Spearman y ANOVA de un factor para la relación entre variables.

Resultados: La traducción y adaptación cultural de la escala española de soporte supervisor y la validación de la escala demostraron que es un instrumento válido y fiable. La edad media de la muestra fue de 40-50 años, la mayoría hablaban castellano y catalán y tenían una experiencia en el sector de 10 años. Las características laborales analizadas obtuvieron una puntuación moderada. La capacidad en la toma de decisiones y empoderamiento, la efectividad laboral, el soporte supervisor percibido y el estrés y la carga de trabajo se asociaron a la satisfacción laboral. Para las enfermeras, el soporte supervisor fue el factor predictivo en la intención de abandonar el trabajo y para los TCAE además, todas las otras características laborales. La falta de personal para realizar las tareas diarias se correlacionó con el soporte supervisor percibido. En cambio, no lo hicieron las características de los centros como el tipo –residencia o sociosanitario-, la situación geográfica y el tipo de financiación.

Conclusiones: La escala española de soporte supervisor es un instrumento válido y fiable para medir el soporte de la persona con funciones de supervisión, percibido por el personal de enfermería. Este estudio aporta evidencia al sustentar que el soporte supervisor percibido por el personal supervisado influye y tiene un impacto en la satisfacción laboral e intención de abandonar el trabajo. Las características del centro no se relacionan con el soporte supervisor percibido por el personal que trabaja en el ámbito de la larga estancia.

Palabras clave: Enfermera; auxiliar de enfermera; supervisión de enfermería; escala de soporte supervisor; instituciones residenciales.

INTRODUCTION

2. INTRODUCTION

According to demographic data from the World Health Organization (WHO) (1), population aging is a global phenomenon. In 2018, for the first time in history, the number of over-65s surpassed the number of under-fives globally. Projections indicate that in 2050 there will be more than twice as many elderly people as children under the age of five. It is also expected that the 1.5 billion people worldwide aged 65 or over will outnumber adolescents and young people aged 15 to 24 years (1.3 billion) (2). Moreover, it is projected that the number of octogenarians will increase to 426 million in 2050, according to the *Health at a Glance 2021* report (3). As a result, healthcare systems will have to meet the challenge of promoting and encouraging healthy lifestyles and adapt and cater to the needs of older people, especially the most vulnerable (4).

Owing to technological advances and changes in the cultural paradigm and personal preferences, aging at home appears to be a growing phenomenon in some countries (5). However, the number of older people institutionalized in long-term care facilities will increase in order to attend to their health problems, multiple pathologies, cognitive disorders and comorbidities associated with age (6), and will require more specific and complex care (7,8).

One of the problems described by the Organisation for Economic Co-operation and Development (OECD) is that the demand for places by this sector of the population does not coincide the availability and staffing level of care facilities for older people (9).

Currently, in the long-term care settings, for example– the majority of contracted personnel are auxiliary nursing care technicians (TCAEs) and geriatric nursing assistants (hereinafter, both professional groups will be referred to as auxiliary personnel) and nurses. These auxiliary personnel, working together and under the supervision of nurses, provide direct care and attention to residents, assisting and helping them with activities of daily living and recreation (10). The nurses are responsible for administering medication, carrying out treatments, documenting the various interventions and communicating with the residents and their families (11). Moreover, they design and evaluate nursing care plans and have taken on leadership roles, and therefore often delegate tasks to the auxiliary personnel (12,13).

Authors such as McGilton, Chu and Havig (14–16) indicated that effective supervision and leadership have a positive impact on the job satisfaction of the staff working in facilities for older people and, indirectly, on the quality of the care provided to residents. However, Zuñiga et al. (17) identify stress, ambiguity of roles in the workplace, interpersonal conflict and a lack of skills among auxiliary personnel as factors that have a negative impact.

Nowadays, the main problems in the long-term care sector are staff shortages and turnover (18) and the difficulty in recruiting and retaining qualified personnel (19). This situation was exacerbated by the COVID-19 pandemic, which highlighted the precariousness of workers in these facilities and the vulnerability of older people in long-term care, these being the hardest hit groups as regards number of people affected and number of victims (20). Many European countries reported a mortality rate of 30%-60% in long-term care facilities (21) due to evident exposure to infection, rapid spread (22) and difficulty in complying with hand hygiene protocols, social distancing and preventive measures among residents, the majority of whom suffered dementia and/or cognitive decline (20,21,23). Additionally, the inadequate number of staff to attend to the residents was further depleted by sickness absence due to COVID-19, quarantine and leaving the job, thus threatening the provision of basic care services for older people (24). McGilton et al. (19) reflected on this situation from the perspective of residents, their families and the staff working at these facilities, and exposed the continuous devaluation of long-term care and the potential chronicity of this problem.

Furthermore, nursing staff in this sector are discriminated against, with lower salaries and less recognition compared to other healthcare areas, little capacity for promotion, a lack of motivation to carry out their tasks (10), a work overload and few available resources (25,26). The responsibility for addressing these issues and, indirectly, for providing a quality response to the demands and needs of residents, lies with the nurse leaders, supervisory staff and nurse managers.

For these reasons, it was considered appropriate to carry out a research study in this area, so this doctoral thesis is based on the analysis of nurse leadership and supervision in long-term care settings.

The aim of this work is to give visibility to the role of nursing leadership in residential care homes and long-term care facilities. It is also hoped that it will provide the

necessary stimulus to develop policies, protocols and resources for improving the work conditions of staff and for enhancing the role of nurses in these facilities, promoting an optimal and safe work environment and, indirectly, improving the quality of care for residents.

CONCEPTUAL FRAMEWORK

3. CONCEPTUAL FRAMEWORK

This chapter describes the magnitude of the current problem of an aging population and the relevance of services aimed at meeting the needs of older people. It also discusses the importance of nursing staff and geriatric nursing assistants and the leadership and supervisory role of nurses in achieving results and excellence in nursing care.

3.1 THE OLDER POPULATION

This section deals with the changes in population over the past few decades, the implications for social, economic and healthcare systems and the main particularities and characteristics of older people.

3.1.1 Evolution of the population

The aging of the population is one of the most remarkable phenomena of the last century and is due to various demographic factors: firstly, a decline in fertility and the number of births and, secondly, an increase in life expectancy (LE) (27,28).

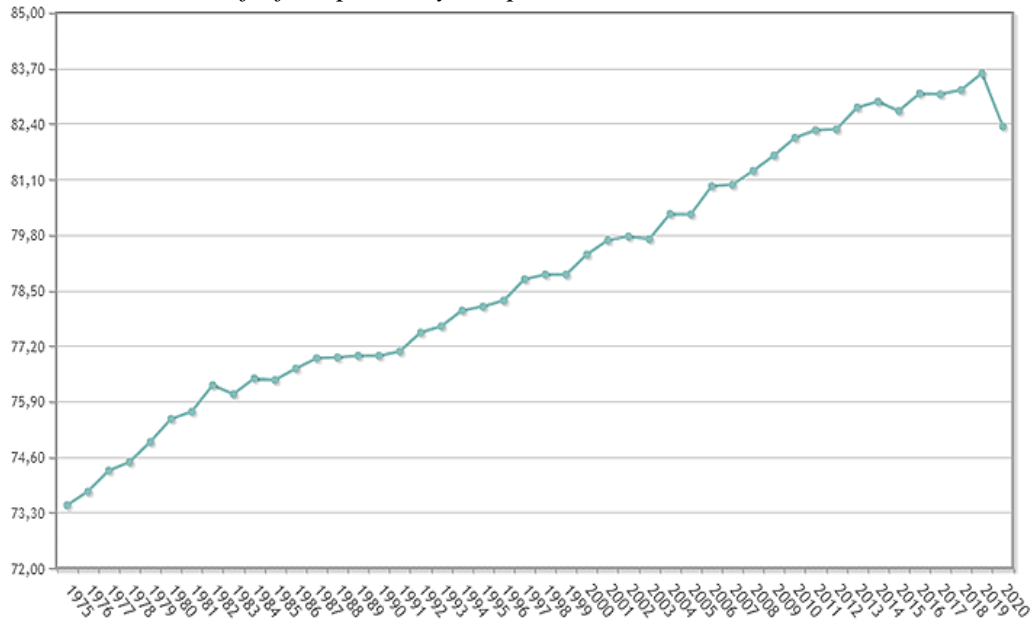
This second factor is possibly one of humanity's greatest achievements. At the beginning of the twentieth century, LE in Spain did not exceed 35 years, while in some European countries it was over 50 years. The maximum increase in LE in Spain took place in the last quarter of the twentieth century, when the average LE for both women and men increased by 5 years, rising to around 79 years in 2001 and 82 years in 2015 (Fig. 1). During this time, the gap between the genders was gradually closing, though there was still a notable difference between them, with women having a greater LE than men (28).

In 2014, Spain was top of the list of European Union countries in terms of LE (86.2 years), followed by France (86 years). With regard to the LE of men, Spain was in third position (80.4 years) together with Sweden, behind Italy and Cyprus (80.7 and 80.9 years respectively) (29).

One of the effects of the COVID-19 pandemic was excess mortality (excess deaths), which affected LE (3). Eurostat published the decrease in LE recorded in European countries in 2020 compared to LE figures in 2019, with the biggest decline reported for

Spain, a fall of 1.6 years for life expectancy at birth (LEB) – although the Spanish National Statistics Institute (INE) put this figure at 1.24 years, based on provisional data on natural population movement) (30). According to the latest data published by the INE, in 2020, LE in Spain was 82.33 years: 79.59 years for men and 85.06 for women.

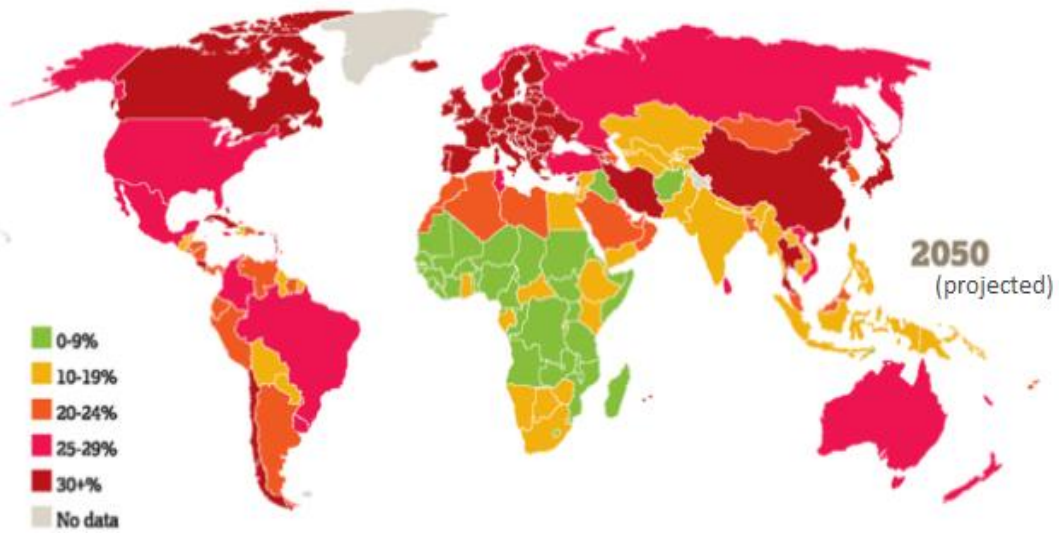
Figure 1. Evolution of life expectancy in Spain since 1975.



Source: INE: Basic demographic indicators (published December 2021, 2020 data).

The WHO and the United Nations World Report on Ageing and Health both predict that the percentage of people over 65 years will have doubled by 2050 (from 11% to 22%). The number of people aged 80 or over is projected to triple, representing 10% of the total population (18), increasing from 143 million in 2019 to 426 million in 2050, worldwide (2). The countries with the highest percentage of people over 65 years will include most European countries, Iran, the United States of America (USA) and China (Fig. 2).

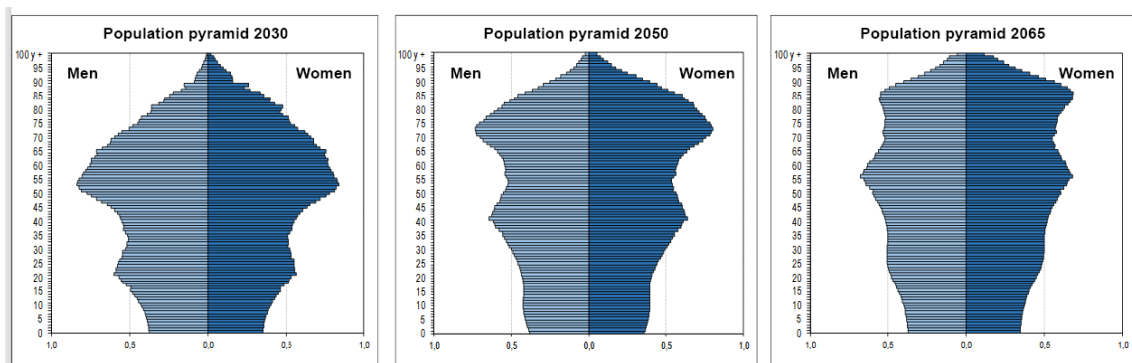
Figure 2. Projected global population aged 60 years and over, 2050.



Source: Global AgeWatch index, 2015, HelpAge International

This trend is also repeated in Spain and the population pyramid will continue to age (31,32) (Fig. 3). According to the provisional statistical data from the ongoing census of the INE, as at 1 January 2022 there were 9,487,119 older people, representing 20% of the total population (47,435,597), and this sector will continue to increase both in number and proportion. The average age of the population –an alternative way to measure this process– is 44.1 years. In 1970 it was 32.7 years.

Figure 3. Population projections for 2030, 2050 and 2065 in Spain



Source: INE, population projections (www.ine.es)

3.1.2 Consequences of population aging

Globally, demographic aging leads to a change in the age structure of the population. As previously mentioned, a fall in birth rate and increase in LE affects the age structure, resulting in a demographic reversal (29).

Meticulously reported by the WHO, the aging process involves a series of fundamental physiological changes caused by the gradual accumulation of cellular and molecular damage throughout life, resulting in a generalized and progressive deterioration of many of the body's functions, increased vulnerability to environmental factors and a greater risk of disease, especially chronic diseases, and death (1).

Although there is a significant diversity in the way these changes are experienced on an individual level, general trends are observed when considering the population as a whole (1,33). However, these losses in capacity can be ameliorated through adaptation, and ageing often brings benefits in terms of experience and knowledge. For example, worsening eyesight can often be rectified by wearing glasses, but suboptimal correction or non-correction of visual impairments can limit mobility, affect interpersonal relationships, be a barrier to accessing information and social resources, increase the risk of falls and accidents, and make driving dangerous (1,34). Similarly, untreated hearing loss affects communication and may contribute to social isolation and loss of autonomy, accompanied by anxiety, depression and cognitive decline (1,34,35).

Another consequence is the social problem that an aging population poses for the health and social care system, given that it increases pension and healthcare spending and creates demand for new health and care services (28,29).

However, older people make multiple contributions through direct participation in the formal or informal workforce, through taxes, consumption, transfer of cash and assets to the younger generations and the numerous, less tangible benefits they provide to their families and communities. A study carried out in 2010 in the United Kingdom showed that public spending on older people (in the form of pensions and other social welfare and healthcare benefits) amounted to £136 billion. However, in return, older people made tax contributions of £45 billion and other direct financial contributions totaling £10 billion. They also added a further £76 billion to the national economy through

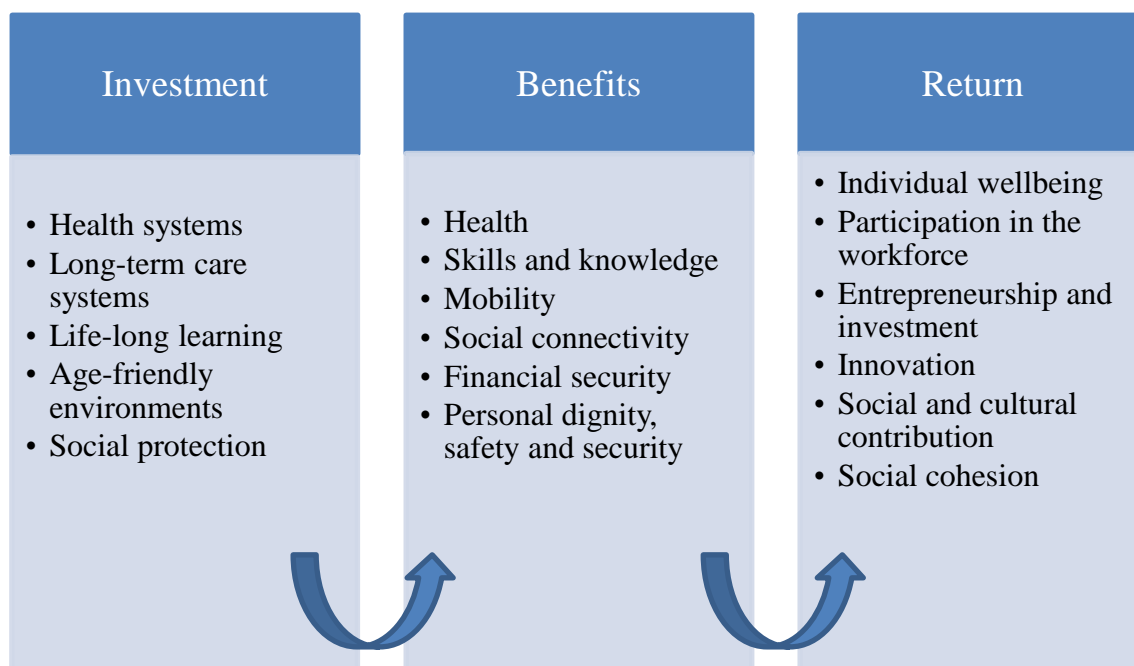
spending, and £44 billion in less tangible economic benefits such as volunteering and providing social care. In fact, after taking into account both the costs and contributions of older people, it was estimated that older people made a net contribution to society of almost £40 billion, a figure that is expected to increase to £77 billion by 2030 (1).

In any case, age should not be a discriminatory factor for accessing healthcare systems (29). As stated by the WHO, in some cases there is a lack of coordination among the various services (medical specialists, primary and hospital care) as well as preparation and specific training of healthcare staff to attend and care for older people (1).

We need to consider this demographic transition and take advantage of the contribution of elderly people if we wish to build cohesive, equitable and safe societies. Moreover, we must ensure that older people are not excluded from their environment, since they are often stereotypically assumed to be weak, a burden, dependent or out of touch with reality (1). Governments and society must drive policies to promote fundamental rights such as basic needs (food, housing, economic situation), mobility, relationships and to be able to make one's own decisions and contribute to the community.

A different approach to the economic implications of population aging would allow us to consider public spending not as a cost but as an investment that facilitates the wellbeing and various contributions of older people, as shown in Figure 4.

Figure 4. Investment, benefits and return on investment in ageing populations



Source: World Report on Ageing and Health (WHO, 2015). Adapted from unpublished information from *World Economic Forum's Global Agenda Council on Ageing*, 2013.

3.1.3 Profile of the population over 65 in Spain

Envejecimiento en red (Network on Ageing), a portal established by the Spanish National Research Council (CSIC), provides information on the living conditions of the population aged 65 and over, based on data from national and international sources. The indicators on demographic evolution, health and economic and social characteristics of this population provide an overview of the situation, the particularities and behaviors of older people in Spain, and the changes experienced in recent years.

According to the latest CSIC report (36), before the COVID-19 crisis, and based on a survey carried out in this population group, 45.4% of respondents said they enjoyed good or very good health, although negative perceptions increased with age. Gender was also a differentiating element with regard to subjective state of health. Among the men, 52.3% self-assessed their health as “good” or “very good”, while only 40% of the women made this claim. According to the same report, women tended to suffer from osteoarthritis and depression, while men were affected by chronic bronchitis and chronic obstructive pulmonary disease (COPD). Diabetes was present in 22.8% of the older people: 24.9% in men and 21.2% in women. Of those surveyed, 22.8% were obese

and 41.5% were overweight. Up to old age, men were more likely to be obese than women, but these figures were reversed among the elderly (23.3% of women compared to 20.7% of men). This deterioration can be explained by changes in diet and a sedentary lifestyle or reduced physical activity, although other factors such as genetics, family history, other associated diseases and certain emotional and personality characteristics may also play a part (3,31).

Another interesting data from this study (36) was that, in Spanish households, the person taking care of the man over 65 years is the partner or spouse in 40.8% of cases, followed by a daughter (26.6%) or formal caregiver (17.1%). The person taking care of the woman who requires help is fundamentally a daughter (42.7%), followed by a son (17.8%), formal caregiver (15.9%) or the partner or spouse (13.4%). Changes in family structure and the progressive incorporation of women in the workforce are some of the factors that have led to the admission of older people to nursing homes (29,37,38). However, in the Spanish context there is an important cultural factor, so this resource is usually a last resort (32).

There are some studies that examine the predictors influencing this decision. Hajek et al. (39) observed that the probability increased if the older person had sensory problems, tended to wander, had limited mobility, depression, dementia or was widowed. These results match with the study by Lini et al. (40), where dependency, the lack of a spouse and/or children, Alzheimer's disease, Parkinson's disease, stroke and cognitive and functional decline were determinants.

3.1.4 Older people in long-term care facilities

As indicated by Katz (41), there is a high variability in the percentage of institutionalized persons older than 65 years according to country, as shown in Table 1. Koreans represent only 0.2%, while 7.9% of older people in Sweden live in nursing homes.

In Spain, 4.1% of older people live in the more than 5,300 registered nursing homes (28). According to data from the Health Survey of the Institutionalized Population in Catalonia (ESPI), the proportion is 7.9% (42). If we compare the data presented by Katz (41) with the data that have appeared subsequently (18,43), the percentage is similar and has been maintained over the years. For example, with a

population of more than 330 million people, the USA has 15,600 settings that accommodate 1,347,600 residents (2016). In the United Kingdom there are 17,678 nursing homes with 405,000 residents (4%) (43). The Swiss have 1,560 nursing homes, accommodating 92,000 people (18).

Table 1. Differences in use of nursing homes in selected post-industrialized countries

<i>Country</i>	<i>% 65 years or older in nursing homes</i>
<i>Australia</i>	<i>5.3</i>
<i>Austria</i>	<i>3.6</i>
<i>Canada</i>	<i>3.7</i>
<i>Germany</i>	<i>3.9</i>
<i>Ireland</i>	<i>4.6</i>
<i>Japan</i>	<i>3.2</i>
<i>Korea</i>	<i>0.2</i>
<i>Luxembourg</i>	<i>4.0</i>
<i>Netherlands</i>	<i>2.4</i>
<i>New Zealand</i>	<i>5.9</i>
<i>Norway</i>	<i>6.0</i>
<i>Sweden</i>	<i>7.9</i>
<i>Switzerland</i>	<i>7.0</i>
<i>United Kingdom</i>	<i>5.1</i>
<i>USA</i>	<i>4.3</i>

Source: Katz, P (2011). An International Perspective on Long-Term Care: Focus on Nursing Homes. J Am Med Dir Assoc; 12: 487-492.

Hirdes et al. (7) determined that the majority of long-term care residents in Canada were women (two-thirds of the population in these facilities). Dementia was the most common diagnosis, affecting between 40.9% and 70.8% of residents. Additionally, some residents presented significant comorbidities such as diabetes, heart failure and/or emphysema and chronic obstructive pulmonary disease (COPD). As a result of their

work, Hirdes et al. concluded that the complex needs and quality of care can vary among the different Canadian provinces in which the study was carried out. Later, Estabrooks et al. (44) examined the prevalence of certain diseases in 30 nursing homes in the provinces of Alberta, Saskatchewan and Manitoba (Canada), with an average capacity of 133 beds (minimum 60 beds, maximum 197). Dementia was again found to be the predominant condition (62.5%), followed by stroke (20%).

Although it is not easy to determine the health status and needs of the residents using long-term care services, in general, the profile of the nursing home user is a woman, with an average age of 80 years, who presents a certain degree of dependency for activities of daily living, cognitive impairment, especially due to dementia, and other associated comorbidities (45). These data coincide with those obtained in Catalonia in 2006, where 98.5% of those surveyed suffered chronic disorders, more than half experienced pain or discomfort (54.8%) and also reported feeling anxious or depressed (54.8%). Sixty-eight percent suffered deterioration and 18.3% were at risk of this occurring. Seventy-eight percent had difficulty carrying out the usual activities of daily living (46).

3.2 SERVICES FOR OLDER PEOPLE

Over the years, certain economically and socially capable countries have had to address the demographic changes and to promote resources and services to attend to and improve care for older people; such as home assistance, adult day care centers and telecare services.

This section describes the historical framework of institutions for older people, the characteristics and diversity of the facilities, and the current care models.

3.2.1 History and evolution of facilities for older people

Traditionally, it has been the woman who has taken care of elderly family members – from ancient Egypt, through the Hebrew world, to nowadays. It is possible that the first charitable institutions for the elderly and the sick and needy were first established in classical Greece. From the third century after Christ, hospitals began caring for the most disadvantaged in society, such as the poor and the elderly (47).

During the Middle Ages, old age again became synonymous with decay and decline and had negative connotations, which led to many older people becoming part of the homeless population. From the eleventh century, some well-to-do elderly people voluntarily went to live in monasteries to spend the last stage of their life there. These retreats, which became well-established in the following centuries, led to many monasteries setting aside part of their property for the elderly. Those who were not so fortunate were often abandoned, leading to the creation of facilities to care for them, such as monastery “infirmaries” or hospitals such as “Hôtel Dieu”, run by the Church. Feudal lords would sometimes take care of their elderly workers until their death; as did the Church, who cared for those who could no longer work owing to their physical or mental condition, leading to the creation of hospices for elderly priests (47,48).

In the Renaissance and the Modern Age, numerous asylums and institutions were established by religious communities, such as the Daughters of Charity and the Brothers Hospitallers of Saint John of God, to care for the most vulnerable. At the same time, England was pioneer in drafting the first legislations in the social sphere, which included the elderly. In 1531, Henry VIII ordered by law that mayors and justices of the peace request that the elderly, the homeless and the disabled be cared for in the various parishes. In 1597, numerous asylums were built for the poor, the elderly, the blind, the lame or any disabled person who was unable to work. Later, in the cities, retirement homes were built for the elderly members of guilds and some orders of knights. The position of civil servant gained ground, and that which was invented for their retirement - what we know as a “pension” today (47,48).

During the Industrial Revolution, older people, after enduring an arduous life of factory work, often found themselves forced to beg. The dominant bourgeoisie alleviated this situation through charity and, later, the welfare state. In rural areas, older people were often abandoned to their fate when they could no longer do their work in the fields. Religious orders and private philanthropic institutions ran the asylums, which often consisted of huge halls with beds where elderly people of both sexes were cared for indiscriminately (47,49).

Progressively, and with the creation of settings that no longer depended on charity, the presence of religious orders in the healthcare sector decreased due to their suboptimal

training and loss of vocational meaning (50,51), leading to the professionalization of the first nurses, through a series of legislative reforms (50).

In the twentieth century, from the 1950s onwards in European countries, though somewhat later in Spain, care for the elderly was included in the public systems of social services. In the 1970s, Spain began to see the emergence of large nursing homes with the capacity to care for people who could no longer live in their own homes (47,48,52).

As stated by Pia Barenys (52), the facilities for the elderly were created to respond to two aspects: firstly, to remedy the person's personal situation, if they could not fend for themselves and/or lacked support and a family network and, secondly, to resolve the global problems of society, such as poverty and hunger. The centers for older people took on the role that was traditionally that of the family, and at the same time tackled the social problem of begging and instability, so their existence was justified by the benefits for older people and society.

3.2.2 The care model

At the end of the 1970s, in general, the residences and nursing homes for the elderly did not have a good reputation. In some cases, the quality of care received by the residents was questioned (6), and there were even reports of abuse, neglect and errors in the residential care centers, revealing professional malpractice and deficient quality of care. Following a report by the US Institute of Medicine, the federal government enacted the Nursing Home Reform Act (1987). This law prompted an unprecedented approach to the quality of life of residents of long-term care facilities, by drawing up a declaration for their rights and calling for a spectrum of services to promote both psychosocial aspects and physical and mental wellbeing (53). As a consequence of this law, in the US, the UK and the Netherlands mainly, a new movement called "Cultural Change" emerged, aimed at responding to the psychosocial needs of residents, focusing not only on the clinical side and care outcomes but also on their quality of life and wellbeing. Some characteristic features of a nursing home in which cultural change was implemented include individualized care for the residents (54) and an environment that makes them feel "at home"; e.g., they have their own furniture, curtains, family photos and personal objects in the room. Moreover, the residents' opinions and personal

preferences are taken into account and there is a close relationship between the staff, the residents and their families. In addition, quality of care and quality of life are optimized and a medicalized system has given way to a more holistic model (54). Two clear examples of this are the Green House (54) and Eden Alternative (55) nursing homes.

The Green House nursing home is a residential long-term or rehabilitative care model with registered trademark The Green House Project®. The first home opened in 2003 in Tupelo, Mississippi (USA). Some of the values espoused by this model include being “real” homes: a maximum of 12 residents, the meals prepared in an open kitchen, the residents decide what time they get up, eat, go to bed and participate in the activities proposed by the home. The staff is empowered since they know the residents best, they know their tastes and preferences, and this places them in a position to make decisions regarding daily care and attention. Moreover, the staff builds closer relationships with the residents and their families. Living in this type of nursing home is more expensive than in a conventional nursing home. Despite the fact that most of the facilities are non-profit, religious and form part of a community, a high proportion of private users are willing to pay more if the quality and care is genuinely better (56). The evidence has shown that facilities with few residents and certain structural characteristics (private room and bathroom, ample spaces) have had lower COVID-19 infection and mortality rates than other types of nursing homes (57).

The philosophy of the Eden Alternative® (EA) nursing homes is also to promote and improve quality for the residents and to create a sense of “being at home”, and allows pets, plants and children. The first home opened in the 1990s in New York and there are currently 250 homes registered in the USA, Canada and Australia. According to Coleman et al. (58) these homes claim to have reduced the use of psychotropics and antibiotics, to have a lower rate of infections and a greater perception of quality of life on the part of the residents. However, the findings of these authors (58), a year after the implementation of this concept of nursing home, did not suggest any significant effect on survival rates, functional and nutritional status, cognition, or any impact on infection rate among residents or use of psychotropic drugs. The results also indicated that staff turnover may have increased during the first year of implementation of EA. The lack of a beneficial effect of this intervention on the survival and infection rates can be explained by the higher proportion of residents who required specialized nursing care.

To date, there is no evidence that Spanish nursing homes have adopted any of the aforementioned models or other existing proposals (59), despite their benefits. One of the most reasonable hypotheses for not having done so is the health status and deterioration presented by the older people living in these facilities. Older people normally go on a waiting list to be assigned a place in a nursing home when they have moderate dependency (degree I); that is, they need help with the basic activities of daily living at least once a day, or need intermittent or some support for their personal autonomy. However, they are not admitted to the nursing home (especially if it is public) until they have reached degree II (severe dependency: they need help with various basic activities of daily living two or three times a day, but do not need a permanent carer or generalized support for their personal autonomy) or degree III (major dependency: they need the indispensable and continuous presence of a caregiver or need generalized support for their personal autonomy). Another hypothesis is that the nursing homes are task-centered, have a high workload and few staff and consequently there is no space or time for personalized, individual care (28).

Unfortunately, the complexity and fragility of the residents is a global phenomenon and poses a challenge for staff working in long-term care facilities and for the administrators, who must be able to respond to this demand with current formulas adapted to the needs of older people and society (19,41).

In recent years, the long-term care sector has experienced a series of problems related to the workforce, the ratio between staff and the residents they have to attend and care for, and the costs and funding of the facilities, which were exacerbated by the current healthcare crisis due to COVID-19 (19).

Some authors and organizations (2,19,60,61) highlighted the heavy workloads of staff in long-term care facilities (nursing staff in particular) due to the lack of human resources and the complexity of the residents living in these facilities. This implies a high turnover of staff and difficulty in contracting and retaining personnel. Moreover, it is tangible that the wages are lower: the average wage in 11 OECD countries is €9/hour, compared to €14/hour in hospital care (9). In addition to this, nursing home staff are undervalued and suffer from a lack of recognition and respect from coworkers and supervisors (62).

3.2.3 *Characteristics of the facilities*

According to the Institute for the Elderly and Social Services (IMSERSO) these facilities have adequate intervention services and programs for the needs of people who require care, and are aimed at improving their quality of life and promoting their personal autonomy. These services may be basic, such as accommodation, maintenance, assistance with the activities of daily living and social and health care, or may also offer specialized services including prevention, advice and guidance for promoting autonomy, social care, empowerment or assistance and personal care (hairdresser, chiropodist), psychological care, occupational therapy and functional rehabilitation. These services may be provided on a permanent basis, in the case where the nursing home becomes the person's habitual residence, or on a temporary basis, when short stays for convalescence are required or for holidays, weekends, illness, or to provide some respite for informal carers (28).

Services for older people in Catalonia are regulated by Decree 284/1996, published in the Official Journal of the Government of Catalonia (DOGC), No. 2237, dated 31 July 1996. The Department of Social Rights makes a distinction between the following:

- **Residential home:** This provides accommodation, maintenance, care, community living and personal support. It consists of a home with shared services and a professional team formed of a service manager, a health and hygiene manager and sufficient personnel to adequately perform the described functions and to ensure a continuous presence 24 hours a day. It is aimed at adults with a sufficient degree of autonomy for the activities of daily living, who require a certain degree of organization and personal support. The main objective is to provide a substitute environment for the home (63).
- **Assisted living:** Provides comprehensive support. The people who live in these facilities require constant supervision and have a social and family situation that requires a substitute home environment. The service is adapted to the degree of dependency of the resident. To provide this support, the facilities have a multidisciplinary team formed of nurses, TCAEs, physiotherapists, occupational therapists and social education, psychology and medical experts. There is also an assisted living manager and a health and hygiene manager (responsable higienicosanitari/a) (64).

Unlike the Spanish state, Catalonia has a **social and health care service**, managed by the Department of Health (65). This includes care services for people who are ill, generally with a chronic illness, and people with disabilities who, due to their special characteristics, can benefit from the simultaneous action of social and health care services to improve their autonomy, reduce their limitations and suffering and facilitate their social reintegration. It includes care for people with dementia or with a neurological disorder that may result in disability, care for the elderly, care for persons with an advanced, terminal illness, and palliative care (66).

The professionals that form the social and health care network provide comprehensive, interdisciplinary and geriatric care that fully meets the needs of the person, respecting and promoting, insofar as possible, their autonomous capacity.

This social and health care network offers inpatient services and other alternative services to hospitalization for people who do not wish to be admitted.

These inpatient services include:

Long-stay unit – Addressed for rehabilitative treatment, maintenance care and prevention of complications, and as a support for older people with long-standing chronic diseases that have resulted in functional disabilities. The aim is to achieve the maximum autonomy possible for the ill person. It includes care for people with advanced dementia or other chronic cognitive disorder (67).

Medium-stay unit – convalescence. For recovering the functions or activities affected by different illnesses or health problems. It caters for older people with underlying illnesses who need functional recovery after undergoing a surgical, medical or traumatological procedure (67).

Medium-stay unit – palliative care. Offers palliative care and comfort to patients with an advanced-stage or terminal illness, oncological or non-oncological. The aim is to manage symptoms and to provide emotional support to the patient and their family (67).

Medium-stay unit – polyvalent. For attending to both convalescent or palliative care patients (67).

Subacute care unit – For people with advanced chronic diseases who, due to their worsening condition, require continuous treatment or continued clinical supervision and require intense care. This type of care is aimed at achieving clinical stabilization and comprehensive rehabilitation (67).

Throughout this thesis, long-term care facilities refer to nursing homes and long-term care services.

With regard to ownership of the entities providing social services, the Department of Social Rights of the Government of Catalonia makes a distinction between public and private. Private entities can be social or commercial initiatives (68).

- **Public entities:** Public entities are those that belong to local (town/city councils, regional councils and provincial councils) and autonomous public administrations and central government.
- **Private social-initiative entities:** These are foundations, associations, cooperatives, voluntary organizations and other non-profit entities and institutions that provide social services. To carry out their work, this sector needs the financial cooperation of the public administrations.
- **Private commercial-initiative entities:** These are legal persons and other private for-profit entities and any type of company recognized by commercial law that provide social services. The commercial sector plays a significant role, especially with regard to the provision of residential and day care services for groups such as the elderly, those with disability, drug dependency, etc. Their activity is controlled and regulated by the public sector.

Depending on the type of funding and user, the nursing homes are classified into public, subsidized, collaborative and private. The social and health care services form part of the portfolio of common services of the Spanish National Health System, which are the care services covered in full by public funding.

- **Public facilities:** owned by the Secretariat for Social Inclusion and Promotion of Personal Autonomy (69).
- **Subsidized facilities:** private establishments that offer a certain number of subsidized places; i.e. assigned to the public network (69).
- **Collaborative facilities:** private establishments that offer a certain number of “collaborative” places. These are places that are offered to the public network, but unlike the subsidized facilities, they are not publicly-owned (69).
- **Private facilities:** as the name suggests, these are privately owned and for private use (69).

Furthermore, *la prestació econòmica vinculant al servei* (PEV) is available, which is a personal and periodical payment subject to the degree and level of dependency and the economic capacity of the beneficiary. It is aimed at covering the costs of the services included in the Individual Care Plan (PIA) when care through a public or subsidized service is not possible due to lack of availability.

3.3 NURSING STAFF IN LONG-TERM CARE SETTINGS

Nursing staff includes both nurses and TCAEs. In nursing homes there is a usually a greater number of care technicians for dependent persons/geriatric nursing assistants and fewer TCAEs and nurses in comparison to long-term care services, where this category of aide is mandatory (geriatric assistants are not allowed). It should be noted that in Catalonia was created the position of "health and hygiene responsible" and just a physician, a pharmacist, a nurse or similar can have this position. The next section describes the legislation that regulates all these professionals, as well as the functions, roles and training of each group.

3.3.1 “Tècnics en cures auxiliars d’infermeria”

These provide direct care and assistance to older people in the activities of daily living, such as bathing and showering, hygiene, dressing, eating, functional mobility, sleep and rest, recreation, etc. (70–72).

TCAEs have a diploma in auxiliary nursing care and their skills and abilities have been regulated at state level since 1973. Decree 203/1997 of 30 July established the training program for this vocational training certificate, published in the DOGC No. 2464, on 28 August 1997. The duration is one academic year comprised of 1400 teaching hours, of which 990 hours are in the education center and the remaining 410 hours in work centers, so that the students acquire skills in various areas of health care, not only in geriatrics.

3.3.2 “Tècnics en atenció a les persones en situació de dependència”

These are equivalent to geriatric nursing assistants and are not recognized as healthcare professionals by the Law on the Regulation of Healthcare Professions (LOPS) (73).

Order ENS/313/2016, of 14 November, establishes the training program for this vocational training certificate (DOGC No. 7254, of 24.11.2016), which enables them to care for people or groups with special physical, mental and social health needs, such as the elderly, the disabled, the chronically ill and convalescents at home or in a care facility, to maintain and improve their quality of life by providing non-healthcare support and assistance with psychosocial activities and household management,

applying appropriate strategies and procedures to maintain and improve their personal autonomy, their relationships with the environment and their occupational integration. In addition to the above, they take into account prevention, safety measures and standards and referral to other services where necessary.

Career opportunities may include: manager or floor manager in residential care facilities, caregiver for the elderly or people with physical, mental or sensory disabilities in different institutions, or home care technician.

The professional settings include care homes for the elderly or people with physical, mental or sensory disabilities, supervised apartments, adult day centers, rehabilitation centers, leisure and recreation centers, occupational integration centers for people with disabilities, home care services and live-in help.

This training program is more comprehensive than those in other countries, where these tasks are carried out by non-regulated staff and training is more basic. In the USA, for example, the course is 75 hours, but this may vary according to state (74), in Taiwan it is 90 hours (75) and in Canada there is a lack of regulated training and a standardized exam is taken prior to joining the workforce. There is a wide variety of training programs and content and, consequently, skills, responsibilities and knowledge differ among auxiliary personnel (76).

It should be noted that this qualification is newly created, and therefore coexists with the same functions as the geroculturists. This was a figure that was trained in courses aimed at people with little training for their labour insertion but who are not considered to be a health profession and who can only act in the field of residences but not in the field of social and health care.

3.3.3 Health and Hygiene Responsible

This position exists only in Catalonia and the functions are regulated by Decree 176/2000, consisting of (77):

- a) Providing users with access to the public healthcare resources regardless of existence of other healthcare resources

- b) Proper organization and administration of medicines
- c) Supervising the menus to be served and ensuring that they comply with the dietary guidelines indicated in the care management document
- d) Updating the data in the care management document of each resident
- e) Conditions of hygiene in the establishment and among users and staff
- f) Development and application of the necessary protocols for the proper care of users.

The Catalan Department of Social Welfare and Family (now the Ministry of Social Rights) indicated that it would be difficult to include the diversity of functions carried out by the "health and hygiene responsible" in a specific academic qualification. For example, the functions in sections a), b) and d) could be carried out by a person trained in management and organization without requiring specific healthcare knowledge. However, some of the functions in section e) require public healthcare training and could be carried out by professionals in this area: medicine, pharmacy, biology, veterinary or nursing graduates. The functions described in section c), with regard to the supervision of menus served and their compliance with the dietary guidelines indicated in the care management document, and the functions in section e), regarding the conditions of hygiene among users, often presenting multiple geriatric syndromes or a diverse range of disabling pathologies, requires the use of different techniques to carry out proper hygiene (transfer, mobilization) which can only be supervised by professionals with basic care training; that is, staff with a nursing degree or diploma or a degree in medicine and surgery. Function f), development and application of necessary protocols for the proper care of users, requires that the professional has the capacity to perform this function. Attending the people cared for in nursing homes involves mostly care protocols and certain healthcare protocols; e.g., for incontinence, pressure sores and falls, which can only be carried out by healthcare staff with a diploma or degree in nursing or a degree in medicine.

The health and hygiene manager should be qualified to detect particular situations that may arise while caring for persons who require assistance and to implement the corresponding measures. These situations are usually related to the particularity of the degenerative process presented by the dependent person and can only be handled by a health and hygiene manager with basic care training; i.e., someone with a diploma or degree in nursing or a degree in medicine.

In addition, the shared responsibility for the functions of this professional figure with the technical manager, (Article 20.4 of Decree 176/2000) does not mean that the health and hygiene manager and the person in charge of managing the center have the same functions. The health and hygiene manager should inform the person managing the center of the tasks entrusted to them in accordance with their functions and the technical manager should adopt the necessary measures to carry out the instructions of the health and hygiene manager.

If the technical manager does not adopt the measures indicated by the health and hygiene manager, the latter may communicate this to the relevant inspectors in order to avoid administrative or civil or criminal liability in the event of a claim. For this reason, the shared responsibility should be understood in the sense that each person is responsible for their own functions, according to the first additional provision of Law 16/1996, of 27 November 27, regulating the actions of inspectors in the area of social services and amending Legislative Decree 177/1994.

Persons who manage the health and hygiene services of care homes for the elderly should possess personal characteristics that will facilitate the proper performance of the functions of this position.

Although many of these characteristics can be acquired, developed or enhanced during the initial and continued training, it is always advisable to consider the personal profile prior to the start of training.

The following are considered to be the main capabilities:

- Agile and efficient problem solving and decision making
- Adaptability to new situations and new challenges
- Coordination with other services and professionals in their field of work
- Building positive interprofessional relationships
- Promotion of the wellbeing of persons cared for in their areas of professional intervention.

3.3.4 Nurses

The Order of May 7, 1915 was a legal reference in the creation of the nursing discipline. The establishment of the first nursing schools at the beginning of the twentieth century enabled it to become a profession (78).

Later, this collective, together with other auxiliary and midwife positions, became technical healthcare assistants (ATS). From 1977, nursing studies could be integrated into the university instead of being a higher-level vocational training course, under the title of University Diploma in Nursing, with duration of three academic years. Underpinned by a new paradigm and philosophy, the nurse went from a subordinate role as a physician's assistant to a more autonomous role (50,79). Law 44/2003, of November 21, on the regulation of Healthcare Professionals gave the healthcare system a legal framework that makes the integration of professionals possible and ensures that they meet the levels of competence in relation to right to health (73).

In the 2009-2010 academic year, and generally in all Spanish universities in 2010-11, nursing studies became a university degree (47), with four years academic training.

In addition, it is possible to study the Geriatric Nursing Specialty regulated by Royal Decree 450/2005, April 22, and Order SAS/3225/2009, November 13, which approves and publishes the training program for the specialty (73). The program consists of a series of competencies necessary for the proper exercise of the profession, covering the following areas:

- Basics of gerontology
- Experimental, clinical, psychological and social gerontology
- Health education in the gerontological field
- Legal framework and social and health care policies in Gerontological Nursing
- Bioethics in Gerontological Nursing
- Research in Gerontological Nursing
- Managing gerontological care and services

The duration of the specialty training is two years, with a prerequisite of a diploma or degree in Nursing.

Following the creation of this specialty, the Catalan Society of Geriatrics and Gerontology defined a Decalogue of advanced competencies for all nursing professionals of any type of facility or service, whether residential, social and health, primary and community care or acute hospitalization. These competencies include: nurse leadership, care management, the nurse's role within the multidisciplinary team,

health education, professional development, safety, professional ethics, emotional support, research and teaching.

Caring has always been the essence of the nursing professional and involves comforting, calming, communicating, creating, mobilizing and helping the person to overcome the difficulties that arise. The practice of caring is dynamic, as it continues to evolve and change over time; and it is an art, since it integrates technique, intuition and sensitivity (50). Care is provided mainly with the hands, but also through the eyes, touch and words (50).

Collière (80) states that caring is a necessary act throughout the life process, particularly in moments of change or transition, such as birth, puberty, adult age, old age and death.

Today's nursing practice is based on diverse conceptual models that focus on nursing intervention, through a systematic and organized practice called the nursing process. This is aimed at achieving objectives to solve real or potential problems that affect the person who needs help. It includes the following steps: assessment and data collection, diagnosis or identification of problems, intervention planning, execution and implementation and, finally, evaluation and analysis of results (50).

3.4 LEADERSHIP AND SUPERVISION IN LONG-TERM CARE SETTINGS

This section defines the concepts of leadership and supervision, describes the different styles, examines the influence of both concepts on the residents and the nursing staff who work in long-term care settings, and discusses different instruments for measuring supervisory support.

3.4.1 Definition of leadership

Leadership is understood as the process in which individuals influence others to understand and support organizational objectives and to achieve shared goals (81). According to Backman et al. (26), leadership concerns the behavior of the individual and the ability to innovate, inspire, guide, challenge and persuade in order to achieve specific objectives. Nursing leadership can be associated with certain personal characteristics, such as reflection, responsiveness, commitment, creativity, resilience,

vision, courage and innovation (82). Other specifications may be determined by personal characteristics such as age, experience and emotional intelligence, which could be positively correlated with leadership behavior and practice (83).

3.4.2 *Leadership styles*

Below are the six most commonly described leadership styles (84):

- **Transformational leadership:** Characterized by encouraging relationships and motivating team members.
- **Transactional leadership:** The leader acts as a change manager and engages in exchanges with employees that lead to an improvement in results and output.
- **Autocratic leadership:** Ideal in emergency situations, the leader takes decisions without considering the opinions of their subordinates.
- **Laissez-Faire:** Contrary to the previous style, the leader does not take decisions, leaving this to the employees, who act without guidance or supervision. This is a hands-off approach, which results in infrequent changes.
- **Task-oriented leadership:** This involves planning the activities, clarifying the roles among teams or groups of people, setting objectives and developing and continuously monitoring processes.
- **People-oriented leadership:** Focuses on the support, development and recognition of team members.

While it is true that, traditionally, positions of power, communication and decision making have been used in a unilateral and hierarchical manner, Forbes & Thompson (81) suggest that this approach is problematic, since it has been found to promote staff turnover and reduce communication and teamwork. However, relationship-oriented leadership improves team cohesion, facilitates communication across the board and reduces staff turnover. Adopting the most appropriate style not only empowers the nursing staff, but also retains the authority necessary to ensure that the best interests of the organization are served (85).

For some years now, the focus has been on leadership in the area of healthcare, in both hospitals and care homes for older people (83). In some cases, researchers have focused on the administrators and managers of the facilities (85), and in others, on the nursing staff in leadership positions, and have established a relationship between leadership and

the achievement of results among the residents and health staff in these facilities. In the systematic review conducted by Sfantou et al. (84) the association between the different leadership styles and quality indicators was examined. The authors concluded that there was a correlation between leadership and patient outcomes (mortality in 30 days, safety, injuries, pain, use of restraint, etc.) in most of the articles selected. Moreover, leadership was identified as a key element for good coordination and performance in the provision of services, among both patients and healthcare professionals.

Previously, Etherton (86) stated that a leadership style centered on people and relationships was associated with better positive results when compared to a task-oriented leadership style. In contrast, Havig et al. (87), in their study on 22 long-term care facilities, concluded that a task-oriented leadership style had a more positive effect on job satisfaction than people-oriented leadership.

Castle et al. (88) examined the association between the leadership styles of the Administrator and the Director of Nursing and quality of care. In their study they analyzed transactional leadership in particular, which is based on motivating the employees, and the transformational style, which means involvement in governance and in the work environment, demonstrating that consensual leadership between the Administrator and the Director of Nursing was associated with a greater quality of care.

3.4.3 The role of the nurse in leadership and supervisory positions

Supervision is defined as the action of supervising, according to the dictionary of the Institute for Catalan Studies (89). In the healthcare context, it consists of all those activities through which supervisors, managers and coordinators can express leadership in improving the learning and teaching of nursing care (90).

However, we need to make a distinction between formal and informal supervision. Formal supervision is carried out by a nurse appointed to an approved position (e.g., nurse manager, supervisor, charge nurse, coordinator) and the organization is authorized to act. Informal supervision is carried out by a person who does not have formal authority but is able to persuade and influence other members of the care team (91). For example, when delegating a task, the nurse ensures that the member of the care team assigned to the task has the appropriate knowledge, skills and attitude and that they perform the task correctly. In addition, at any level of management responsibility, they

ensure that, and take co-responsibility, all members of the care team have the necessary competence to adequately attend to the health problems of the persons being cared for, and establish mechanisms to guarantee this, as set out in Articles 10 and 13 of the Code of Ethics for nurses in Catalonia (92).

In long-term care facilities the nurses supervise the TCAEs who provide most of the direct care. This supervision is a complex activity that includes monitoring, guidance and feedback from the nursing staff (93).

According to the integrative review conducted by McGilton et al. (94), the performance of the supervising nurse influences various outcomes among the nursing assistants, including job satisfaction and staff turnover, which in turn have an impact on resident quality of care. This also directly affects their ability to implement optimal oral healthcare for institutionalized people and dementia care (93).

Many authors, including Eriksson and Fagerberg (95), coincide in stating that most staff in leadership or supervisory positions do not have sufficient academic training, nor the skills or tools necessary to lead their teams. These shortcomings are even more evident in the case of junior staff. In their studies, they describe the factors that influence their actions as junior supervisors. There are personal influences, such as clinical expertise and interpersonal and supervisory skills, and organizational influences such as the complexity of the residents, management of multigenerational employees, role expectations and multiple changes in the expectations of residents and their families. Finally, there are external influences beyond the nurses' control, such as the education system, Ministry of Health regulations and the practice standards of colleges of nursing.

If we look at the Nursing Degree education program in Spain, it includes critical analysis training and the evaluation of different care situations, though excludes aspects such as critical thinking, leadership and decision making in relation to teamwork and staff management. Although there is the dilemma of whether a leader is born or made, it would be worth investing some time during the training of future nurses to develop aspects that will help them to be good leaders should the opportunity arise.

Unfortunately, anyone who wishes to pursue managerial and supervisory positions will require further training, starting with a master's degree, such as the master's in Leadership and Management of Nursing Services of the University of Barcelona (120

credits) or the graduate degree in Leadership, Management Skills and Management Development in Health and Social Organizations, aimed at executives and managers of health, social and care organizations for people with dependency.

Nurses in charge of auxiliary personnel or those with similar positions (informal supervision) must make use of their own skills and adopt the necessary strategies to be able to lead their team, manage conflicts when they arise, address the needs of patients/residents and their families, and achieve good outcomes and optimal care.

3.4.4 Instruments for measuring supervisory support

The growing interest in nursing leadership and supervision has led to the development and use of valid and reliable instruments that can be used to measure and evaluate these concepts in organizations.

Below are the most commonly used instruments, allowing the measurement of supervisory support whether formal or informal, as perceived by the healthcare staff:

- *Manchester Clinical Supervision Scale*©: Evaluates supervision quality and effectiveness and the opinion of supervisees regarding the impact of the clinical supervision on their professional development, improvement of skills and time for reflection and the quality of the supervisory relationship. It consists of 36 items on a Likert scale (1-5), ranging from “strongly disagree” to “strongly agree”, and is formed of seven subscales: trust/rapport, supervisory support/advice, improved care/skills, importance/value of the clinical supervision, finding time, personal issues and reflection. The scale was developed in the United Kingdom and has been used as an outcome measure in more than 80 clinical supervision evaluation studies in 12 countries worldwide (96). To date, it has been translated into 18 languages (97).
- *Perceived Supervisor Support (PSS)*: Evaluates the perception of supervisory support by supervisees and is applicable in many areas and organizations, not only in healthcare and nursing contexts. It consists of 36 items, scored from 1 to 7 on a Likert scale (1= strongly disagree, 7= strongly agree). The scale was developed by Kottke & Sharafinski (98) and has the same format and wording as the Perceived Organizational Support scale (POS).

- *Supervisory Support Scale (SSS)*: Measures the level of support of the supervising nurse in the long-term care setting. Interviewees were asked about their perception of their immediate supervisor, including the extent to which they demonstrate empathy, reliability and build connections with their staff. This scale is based on two factors: to respect uniqueness and to be reliable. It was developed by McGilton in 2010 (99) and consists of 15 items. The minimum score is 15 and the maximum 75, on a Likert scale (1= strongly disagree, 5= strongly agree). It is the result of merging two scales: the Charge Nurse Scale (CNS) and the Unit Manager's Scale (UMS), based on Winnicott's theory. Supervisory support was defined as the degree to which the leader demonstrated empathy and reliability. The internal consistency was 0.40-0.70 and the coefficient alpha 0.94, demonstrating good validity and reliability.

Although the following questionnaires do not solely assess the performance or support of the supervisor, it is worth mentioning:

- *Job Content Questionnaire (JCQ)* scale, developed by Karasek & Theorell in 1990 (100). The instrument has a length of 49 questions, the average completion time is 15-30 minutes and has been translated into 29 languages. It includes a dimension that covers the impact of support of coworkers and supervisors, social relations in the workplace, psychological and physical demands, and job insecurity.
- *Practice Environment Scale-Nursing Work Index (PES-NWI)*, developed by Lake in 2002 (101). It consists of 31 items, allows measuring the environment of nursing practice and is aimed at nurses who work in magnetic and non-magnetic hospitals. This questionnaire evaluates aspects such as nurse participation in hospital affairs, nursing foundations of quality of care, nurse manager, leadership and support of nurses, staffing and resource adequacy and collegial nurse-physician relations.

To date there is no evidence that they have been translated to Spanish and validated, apart from the scale developed by Karasek & Theorell (102), Lake (101) and McGilton (103). The methodology used for translating and validating the Supervisory Support Scale (SSS) will be described throughout this thesis. The decision to choose this scale over others for evaluating perceived supervisory support is due to the contextualization in the long-term care settings and consideration of the factors regarding the uniqueness and trust of the supervised staff in relation to the supervising nurse.

To conclude this chapter, it must be emphasized that population aging is a global phenomenon, due to various causes, and has implications for society, structures and organizations. Although the majority older people opt to stay at home with some kind of help or support, such as, for example home care services and telecare services, others have to live in nursing homes and long-term care facilities because of their health status, lack of a family network or through their own decision. These facilities have left aside medicalized models to give way to a more holistic and individualized care model, although this is not easy due to multiple factors, including cognitive impairment, fragility and associated comorbidities presented by a large part of the residents. To all this, we must add the problems of the long-term sector in relation to healthcare staff, such as staff turnover, difficulty in retaining staff, work absenteeism, disproportionate workloads, lack of training adapted to the needs of staff, little recognition and motivation, etc., all of which are currently aggravated by the COVID-19 pandemic.

To date, little is known about the support of supervisory staff in long-term care settings who are leading the care and attention of residents in Catalonia. As we have seen, the profile of the user of nursing homes and health and social care centers has been changing over the years, worldwide. These facilities have become complex, due to the problems that have come to light with respect to the employment situation of workers and the health status and needs of the residents.

JUSTIFICATION

4. JUSTIFICATION

This doctoral thesis achieves two important aims: firstly, to validate a measurement instrument in the Spanish context that is comparable with existing international data and which allows assessment of the perception by nursing staff in the long-term care sector of the support received from the person who supervises them each day. It is essential that health and social care professionals are trained and have the necessary knowledge and skills to respond to and care for older people living in nursing homes and making use of healthcare services (104), and nurses who are able to adapt to the changing situation of long-term care, with an aging population and users that are increasingly fragile, dependent and complex, taking into account their autonomous role, the capacity to care, and leadership, intrinsic to the nursing profession (25,105). In addition to having trained and qualified personnel and indicators that determine excellence in care, it is necessary to be able to measure supervisory performance in this context, since this is an aspect not previously explored in Spain and which is key to understanding the role of the nurse in leadership and supervisory positions, in terms of the staff supervised and the achievement of resident outcomes, and how these facilities and the corresponding teams are organized and managed. Moreover, the translation of this instrument to Spanish and its subsequent validation will allow data to be compared with other Spanish-speaking countries.

Furthermore, this thesis provides a study that, conducted by means of a quantitative methodology in 37 nursing homes and social and healthcare facilities throughout Catalonia, gives us information about the profile of the nursing personnel (nurses and TCAEs) and geriatric nursing assistants working in the facilities and their perception of certain work characteristics, for example decision making capacity, empowerment, work effectiveness, supervisory support received, and job satisfaction. It was also thought appropriate to analyze to what extent are these work-related aspects associated with job satisfaction or intention to leave. The use of the validated scale of perceived supervisory support by nurses, TCAEs and geriatric nursing assistants provide us with information regarding the level of satisfaction of those supervised and the influence of, firstly, the personal factors, such as age and seniority, and the organizational factors of the nurses, TCAEs and geriatric nursing assistants; and, secondly, the characteristics of the type of center, financing, and geographic location of the long-term care facilities.

This all provides an overview of the situation of nursing in long-term care settings in Catalonia, which can enable the development of policies and strategies to build loyalty among healthcare workers and to address the shortage and turnover of these workers.

This is the main aim and essence of this study, to contextualize all the elements that allow and analysis of the role of the nurse in supervisory positions in long-term care settings and how to improve the visibility of the autonomous and leadership role of these healthcare professionals through the validation of a measurement instrument.

HYPOTHESES AND AIMS

5. HYPOTHESES AND AIMS

5.1 HYPOTHESES

The following working hypotheses were established for this thesis:

1. Nursing staff and geriatric nursing assistants in long-term care facilities perceive greater job satisfaction and have less intention to leave the job when they receive greater support from the nurse supervisor, have decision-making capacity, empowerment and work effectiveness, and have less burden and stress.
2. In public long-term care facilities the perception of nurse supervisory support among nursing staff is greater than in private ones.
3. Nursing staff in long-term care facilities located in rural areas perceive greater supervisory support than those in urban areas.

5.2 AIMS

a) Primary aim

- To analyze the role of the nurse in supervisory positions in long-term care facilities (nursing homes and long-term care settings) in Catalonia and their influence on staff under their charge.

b) Secondary aims

- To translate and culturally adapt a scale for measuring the perceived support of the person carrying out nursing supervisory tasks in the long-term care settings, from the English to the Spanish context.
- To determine the reliability (internal consistency) and validity of the divergent or discriminant construct of the Spanish version of the scale.
- To describe the socio demographic and work characteristics of the nursing staff and geriatric nursing assistants who work in long-term care facilities in Catalonia.
- To examine the association between the work characteristics (decision-making capacity and empowerment, burden and stress, work effectiveness and perceived supervisory support) and job satisfaction/intention to leave the job among nurses and auxiliary personnel in the long-term care sector in Catalonia.
- To examine the association between age and years worked at the facility for nurses and auxiliary personnel, the ratio between nurses/auxiliary personnel and residents, the perceived lack of personnel to carry out the daily tasks, and the possibility of caring for the same residents in relation to supervisory support.
- To analyze the influence of the type of facility (nursing home or long-term care setting), the type of funding (public, subsidized, collaborative, private) and its geographic location (province, urban or rural) in relation to the supervisory support, as perceived by the nursing staff and geriatric nursing assistants working there.

METHODOLOGY

6. METHODOLOGY

This section describes the methodology used in this thesis to respond to the established aims. It is necessary to point out that the project consists of two parts:

- a) The first part is formed of two phases. Phase I consists of the translation, back translation and cultural adaptation of the *Supervisory Support Scale* from English to Spanish.

In phase II, the translated scale is validated in order to measure the support of the supervisory nurse in our context.

- b) The second part consists of the study with quantitative methodology, which allows us to identify the profile of the nurses and auxiliary personnel who work in long-term care settings and to examine different analysis models. Firstly, the association between the work characteristics perceived by the nursing staff and geriatric nursing assistants, such as decision-making capacity and empowerment, work effectiveness, burden and stress and supervisory support in relation to degree of job satisfaction and intention to leave the job. Secondly, the association between the personal factors of the workers, the organizational factors and the perceived supervisory support. Finally, the characteristics of the facilities (according to type of facility, funding and geographic location) and the perceived supervisory support by the nurses and auxiliary personnel.

This thesis forms part of a wider project, with the participation of the Council of Nursing Colleges of Catalonia, the interdisciplinary research group *Grup d'Estudis Societat, Salut, Educació i Cultura* (GESEC) of the University of Lleida, and the research group Enhancing the Care of the Older Adult (EnCOAR) of the University of Toronto (Canada).

6.1 PHASE I: METHODOLOGY OF THE TRANSLATION, BACK TRANSLATION AND CROSS-CULTURAL ADAPTATION

This section describes the methodology used for the translation, back translation and cross-cultural adaptation of the scale for measuring supervisory performance, the Supervisory Support Scale (SSS) developed by McGilton (2010).

Firstly, consent was obtained from the author of the scale, Dr. Katherine S. McGilton, a senior scientist at the Toronto Rehabilitation Institute (TRI) and professor at the University of Toronto.

A multidisciplinary working group formed of healthcare professionals, linguists, professional translators and a methodology expert was then set up to carry out the translation, back translation and cross-cultural adaptation of the scale (106). To find out whether there already existed a version validated to Spanish, a literature search was run on various databases, including Medline, Scopus, Cinahl and Cuiden. No translated or culturally-adapted version was found in Spanish, nor any other measurement scales for nurse leadership in long-term care settings.

6.1.1 Translation of the SSS

Two bilingual linguists independently translated the scale from English to Spanish trying to make sure that the translation was semantic, and the translators were asked to provide a conceptual and idiomatic equivalence where possible. The two translations were then compared. Once the two linguists had reached a consensus, the first version of the instrument was created (T1).

6.1.2 Back translation

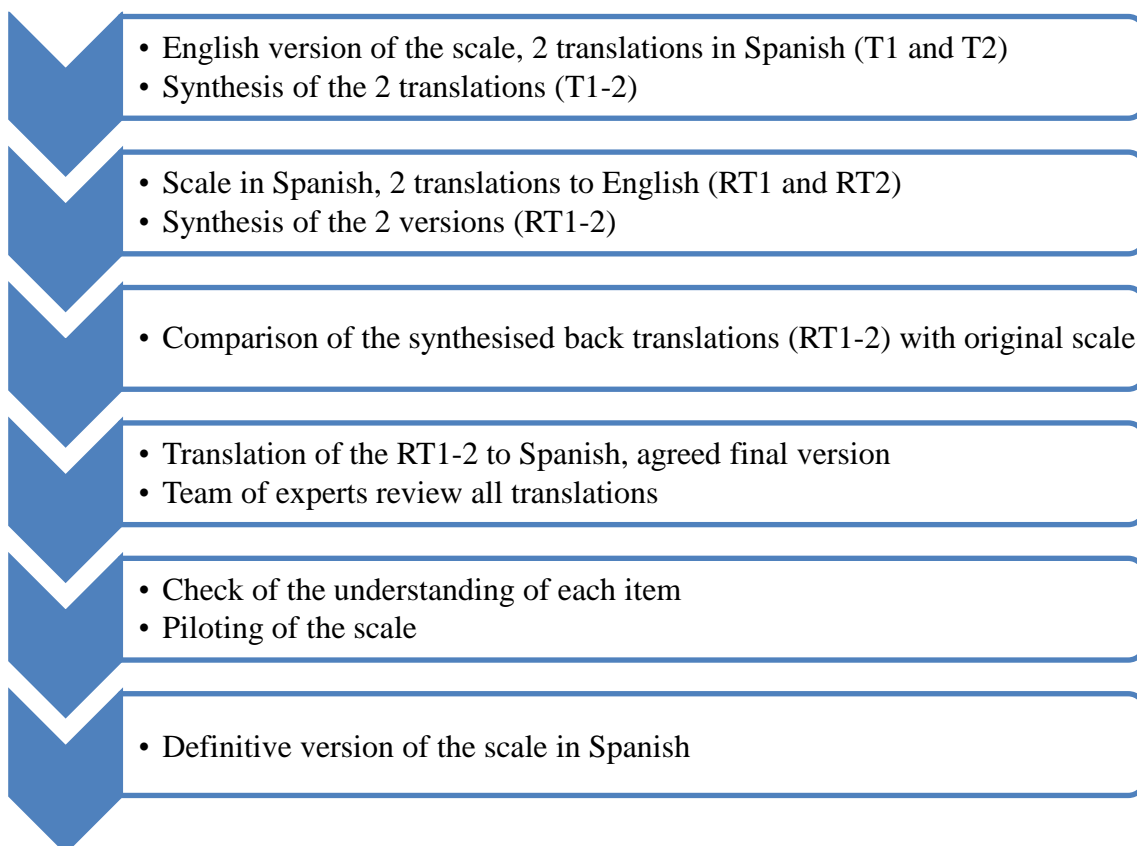
This new Spanish version was then translated into English by two professional bilingual native-English translators, different to the previous linguists, resulting in two back translations, with the corresponding reports from each one (RT1 and RT2). A synthesis was created of the two back translations (RT1-2) in order to check the concordance with the original version of the scale.

6.1.3 Evaluation of the semantic and conceptual equivalence

The resulting new English version was then translated into Spanish to obtain the definitive version of the translation. The panel formed of healthcare professionals, translators and linguists together reviewed all the reports and translations in order to validate the process and to adapt the language to the context of the study, taking into account semantic and conceptual equivalence. The entire process of translation, back translation and cross-cultural adaptation of the scale is shown in Figure 4.

Semantic equivalence is achieved when different sentences have the same meaning in both the translated version and the original version. Conceptual equivalence is achieved when the same item or question in both instruments reflect the same concept.

Figure 5. Diagram of the three phases of the process of translation, back translation and cross-cultural adaptation of the SSS to the Spanish context.



Source: Own preparation based on the process of the translation and back translation of the scale.

6.2 PHASE II: METHODOLOGY OF THE VALIDITY AND RELIABILITY OF THE SUPERVISORY SUPPORT SCALE

This section presents the methodology used to determine the validity and reliability of the supervisory support scale translated to Spanish, corresponding to Phase II of this study.

The two essential metric characteristics of the scale are (107):

- Reliability: Measure a variable consistently, using internal consistency, intraobserver reliability and interobserver reliability.
 - Internal consistency: The degree of interrelation and coherence of the scale items.
 - Intraobserver reliability: Refers to the repeatability of the instrument when administered with the same method and in the same population at two different times.
 - Interobserver reliability: The degree of coincidence between two or more evaluators assessing the same subjects with the same instrument.

- Validity: Measure what you want to measure. There are three types:
 - Validity of content or the degree to which the instrument is able to measure most of the dimensions of the construct.
 - Validity of criteria. This establishes the validity of an instrument by comparing it with an external criterion or reference test (gold standard). This can be:
 - Concurrent: the result of the questionnaire coincides with a gold standard.
 - Predictive: the degree to which it is able to predict a certain outcome.
 - Divergent or discriminant construct validity. This is the degree to which the measurement resulting from the questionnaire answers can be considered a measure of the studied phenomenon.

6.2.1 Design

Analytical observational study of scale validation to calculate the reliability and validity of the SSS translated into Spanish.

6.2.2 Sample and participants

Following an exhaustive census and an accounting of 928 long-term care facilities (nursing homes and long-term care settings) in Catalonia in 2015 –conducted by a group of social and healthcare experts from the Council of Nursing Colleges of Catalonia and the research team– a representative sample was recruited from all the facilities. A confidence level of 95% was established and an accuracy of ± 0.05 , with standard deviation (SD) of 0.15, resulting in a sample of at least 34 facilities. These were selected intentionally, in order to achieve the maximum representation in terms of size (based on number of beds) and geographical location, throughout the Catalan territory (provinces and rural or urban setting) and type of funding (public, subsidized, collaborative or private). Once these criteria had been established, 37 facilities were selected and a phone call was made to the director or manager, inviting them to participate in the study. After obtaining consent, the group of experts and the research team held informative sessions at the facilities on different days and at different times to encourage participation and inform people about the study. Participants from the morning, afternoon and evening shifts voluntarily completed the questionnaire, to which was attached a cover letter explaining the purpose of the study, the risks and benefits, and the mechanisms for ensuring confidentiality and anonymity in data collection and processing. The research protocol of the study was approved by the Ethics Committee of the Official College of Nurses of Lleida (089352).

To carry out the validation of the supervisory support scale, the data from the questionnaires completed by the TCAEs and geriatric nursing assistants were analyzed, given that it is usually the nurses who are in charge of the care processes for the elderly and, among other functions, coordinate and supervise the tasks of the auxiliary personnel.

6.2.3 Data collection

After obtaining permission from all the facilities participating in the study, the data was collected between October 2015 and July 2016 with the voluntary participation of nursing staff and geriatric nursing assistants working in long-term care settings. The group of social and healthcare experts from the Council of Nursing Colleges of Catalonia and the research team presented the project in each of the selected facilities, trying to cover all work shifts, and distributed the questionnaires among the staff. They were on hand for several days at each facility to answer any questions from the staff. All those who were interested in participating in the study completed the questionnaire anonymously, placing it in an envelope once they had finished.

6.2.4 Data analysis

After rejecting invalid questionnaires (poorly completed, blank, etc.) the validation of the instrument was carried out with the collaboration of the EnCOAR research team. The answers from the Spanish version of the supervisory support scale were analyzed to evaluate reliability, validity and dimensionality. Exploratory factor analysis was used to understand its factor structure: 1) firstly, the values of the polychoric correlation matrix were compared with the expected eigenvalues from random data using parallel analysis (108) and 2) secondly, factor loadings with rotation of the Spanish scale were compared with those of the English version. Confirmatory factor analysis using structural equation modelling evaluated the validity and reliability of the measures and goodness of fit. The analysis was performed using Stata 16 software (109). Divergent or discriminant construct validity was assessed by examining whether the support of the nurse in supervisory roles varied among the different facilities in Catalonia.

It was hypothesized that there would be differences between the 37 long-term care facilities, given that some were public, some private and others mixed, and given the different workload of the supervisors in each of them. One-way analysis of variance was the test of significance used to examine differences between the facilities. Then, the mean and standard deviation were calculated for each item on the scale according to the long-term care facility.

6.3 METHODOLOGY OF THE OBSERVATIONAL STUDY ON PERCEIVED SUPERVISORY SUPPORT

This section describes the methodology for addressing the secondary aims 3, 4, 5 and 6.

6.3.1 Design

This is a multisite cross-sectional study.

6.3.2 Sample and participants

It was used the same sample (37 long-term care facilities) as that described in section 1 of the methodology. For the observational study with quantitative methodology it was also included the data of the nurses, in order to know the profile of these professionals who work in nursing homes and long-term care facilities in Catalonia and their work characteristics, such as decision-making capacity and empowerment, work effectiveness, perceived supervisory support, burden and stress, and job satisfaction. As previously mentioned, the nurses are in charge of delegating and supervising the TCAEs and geriatric nursing assistants (informal supervision) but it can also be the case that nurses supervise their own colleagues and other professional groups (formal supervision). Establishing these working relationships makes clear the need to examine and analyze the nurses' answers in relation to perceived supervisory support and the associations they make between this and job satisfaction and intention to leave. It is also necessary to examine the personal and organizational factors of the staff and the characteristics of the facility in relation to perceived supervisory support.

6.3.3 Dependent variables

- Job satisfaction –defined as the set of beliefs and emotions that individuals have about the job and the position they occupy (110) – was measured using the General Job Satisfaction Scale (111), developed by Hackman & Oldham (112). These authors considered that the worker must perceive the importance and meaningfulness of their work and the tasks they carry out, know how well they performed and whether they are succeeding or failing. The scale had a considerable internal consistency (Cronbach's alpha of between 0.74 and 0.80), with a high score indicating high job satisfaction. For this study, the scale as adapted based on 5 questions, including "I am generally satisfied with my job", scored on a 7-point

Likert scale (1=strongly disagree, 7=strongly agree), where it was asked to what degree the employee was satisfied and happy with their job.

- Intention of leaving the job was measured with the item: “I often think about leaving this job”, with a maximum score of 7 points.

6.3.4 Independent variables

- Supervisory support was measured using the previously validated Spanish version of the SSS. It consisted of 15 items, scorable from 1 to 5 (1=strongly disagree, 5=strongly agree), which evaluates the nurses’ perception of the support they receive from the person supervising.
- Decision-making capacity and empowerment were measured by adopting the instrument for measuring the dimensions of empowerment, developed by Yeatts and Cready (113). The authors divided this instrument into five subscales:
 - Decision-making capacity
 - Ability to modify the work
 - The supervisory team seriously listens to the nurse aides/assistants
 - The supervisory team consults the nurse aides/assistants
 - Overall empowerment

The internal consistency of the subscales was 0.63-0.80, with a high score indicating a high perception of empowerment. This instrument has already been validated to English (114), so it was translated directly to Spanish. Cronbach’s alpha for the nurses in this study was 0.80 and for the auxiliary personnel it was 0.82. This scale was chosen above other scales for measuring decision-making capacity and empowerment since it is focused on nursing staff and takes supervision into account. For this study, the items were grouped into three subscales: a) decision-making capacity (seven items), b) supervisor’s ability to consult the workers (three items) and c) overall empowerment (eight items). All items were scoreable on a Likert scale, where 1=strongly disagree and 5=strongly agree.

- Work effectiveness was measured using the questionnaire *Conditions for Work Effectiveness* (CWEQ-II), translated and validated by Mendoza et al. (115). The three subscales used included questions about opportunities (seven items), support (nine items) and resources (seven items). Each item was scoreable on a scale of 1 to

5, with 1=none and 5=a lot. The internal consistency for nurses was 0.93, and 0.91 for auxiliary personnel.

- The burden and stress scale was adapted from the outcome survey from California Homecare Workers (114). The internal consistency of the scale was 0.63-0.75. A high score indicated high levels of stress and burden. This scale contained 16 items (scoreable from 1 to 5 on a Likert scale, where 1=never, 5=always, when specifying the frequency with which certain situations or behaviors were occurring, or 1=strongly disagree, 5=strongly agree). Given that there is currently no record of the scale being validated in the Spanish context, it was translated, assuming possible biases in its use and interpretation of the results, although Cronbach's alpha for nurses and auxiliary personnel indicated good reliability, being 0.78 and 0.72 respectively. It was decided to use this scale and not others that deal more generally with burden and stress because it focused on the relationship between healthcare staff and the resident, the behavior and attitude of the older person, problems related to family members and the worker's emotional state.

6.3.5 Socio-demographic variables

- Age and seniority (years worked at the facility)
- Education
- Staff-to-resident ratio: Expressed in the item "How many residents do you attend to each day?"
- Staffing level: "There are usually enough nurses/auxiliary personnel working in the facility/unit", Likert scale, where 1=strongly disagree, 5=strongly agree.
- Caring for the same residents: "I usually look after the same residents every day", Likert scale, where 1=strongly disagree, 5=strongly agree.
- With regard to the variables of the facilities, these were classified into nursing homes and long-term care settings.
- As regards location, if the facility was in a municipality with fewer than 10,000 inhabitants it was considered to be rural, and urban if located in a municipality with more than 10,000 inhabitants. Also taken into account was the Catalan province in which the facility was located.

- The facilities were differentiated into four different categories according to type of funding: public, subsidized, collaborative and private.

6.3.6 Data analysis

Descriptive statistics were used to characterize demographic and work characteristics variables. The categorical variables were represented by providing the percentage (relative frequency) and the number of cases (absolute frequency). For the continuous quantitative variables, the mean and standard deviation were calculated.

To study the relationship between variables, we examined the correlations using Spearman's correlation. The multiple linear regression analysis identified: a) the main influence of the support of the supervisory nurse, decision-making capacity and empowerment, work effectiveness, and burden and stress on job satisfaction and intention to leave, and b) the influence of age, seniority, staff-to-resident ratio, staffing level and daily care of the same residents on perceived supervisory support.

The association between the characteristics of the facility (type of facility, funding and geographic location) in relation to the support of the supervisory nurse was determined using one-way ANOVA.

All data analyses were run using the statistical package IBM-SPSS (V 26.0). In all cases, the level of statistical significance was 5% ($\alpha=0.05$).

RESULTS

7. RESULTS

In this section the results of the study are presented to respond to the established aims. To make the results clearer, this section is structured into three parts: first, the results of phase I: translation, back translation and cross-cultural adaptation of the scale, then the results of phase II: reliability, validity and exploratory and confirmatory factor analysis of the translated scale and, finally, the results of the observational study on supervisory support.

7.1 PHASE I: TRANSLATION, BACK TRANSLATION AND CROSS-CULTURAL ADAPTATION (AIM 1)

This section describes the process of translation, back translation and cross-cultural adaptation of the SSS scale, to respond to Aim 1.

7.1.1 *The measurement instrument*

The SSS consists of 15 items for measuring the degree of the perceived support provided by the person supervising and the relationship between them and the supervised staff. Although many other scales fit this purpose, the scale developed by McGilton (99) was chosen, since its design is adapted to the long-term care sector. The 15 items are as follows:

1. My supervisor recognizes my ability to deliver quality care.
2. My supervisor tries to meet my needs.
3. My supervisor knows me well enough to know when I have concerns about resident care.
4. My supervisor tries to understand my point of view when I speak to them.
5. My supervisor tries to meet my needs in such ways as informing me of what is expected of me when working with my residents.

6. I can rely on my supervisor when I ask for help, for example, if things are not going well between myself and my co-workers or between myself and residents and/or their families.
7. My supervisor keeps me informed of any major changes in the work environment or organization.
8. I can rely on my supervisor to be open to any remarks I may make to him/her.
9. My supervisor keeps me informed of any decisions that were made in regards to my residents.
10. My supervisor strikes a balance between residents'/families' concerns and mine.
11. My supervisor encourages me even in difficult situations.
12. My supervisor makes a point of expressing appreciation when I do a good job.
13. My supervisor respects me as a person.
14. My supervisor makes time to listen to me.
15. My supervisor recognizes my strengths and areas for development.

7.1.2 Direct translation

The translation of the SSS from English to Spanish was carried out independently by two native Spanish-speaking bilingual translators, resulting in two translations (Table 2). During the process, the two translators noted whether they had any difficulties with the translation or any doubts about the semantic or conceptual equivalence of the items.

Table 2. Direct translation by two translators of the SSS to Spanish

Translator 1	Translator 2
1. Mi supervisor reconoce mi habilidad para proporcionar cuidados de calidad.	1. Mi supervisor/a reconoce mi habilidad para prestar cuidados de calidad.
2. Mi supervisor intenta conocer mis necesidades.	2. Mi supervisor/a intenta conocer mis necesidades.
3. Mi supervisor me conoce suficientemente para saber cuándo tengo preocupaciones acerca del cuidado de mis pacientes.	3. Mi supervisor/a me conoce lo suficiente para saber cuándo me preocupa el cuidado de mis pacientes.
4. Mi supervisor intenta entender mi punto de vista cuando hablo con él.	4. Mi supervisor/a intenta entender mi punto de vista cuando hablo con él/ella.
5. Mi supervisor intenta conocer mis necesidades, una manera es informándome de lo que se espera de mí al trabajar con mis residentes.	5. Mi supervisor/a intenta conocer mis necesidades, una manera es informándome de lo que se espera de mí al trabajar con mis residentes.
6. Puedo confiar en mi supervisor cuando pido ayuda, por ejemplo, si las cosas no van bien entre mis compañeros y yo o entre mis residentes y/o sus familias o yo.	6. Puedo confiar en mi supervisor cuando pido ayuda, por ejemplo, si tengo problemas con mis compañeros o con los residentes y/o sus familias.
7. Mi supervisor me mantiene informado de la mayoría de los cambios en el entorno laboral u organización.	7. Mi supervisor/a me mantiene informado de la mayoría de los cambios en el entorno laboral u organización.
8. Puedo confiar en mi supervisor de estar abierto a cualquier comentario que puedo hacer con él / ella.	8. Puedo confiar en mi supervisor que será receptivo/a a cualquier comentario que puedo hacer con él / ella.

Translator 1	Translator 2
9. Mi supervisor me mantiene informado de cualquier de las decisiones que se tomaron en cuanto a mis residentes.	9. Mi supervisor/a me mantiene informado de cualquier de las decisiones que se tomaron referente a mis residentes.
10. Mi supervisor establece un equilibrio entre las preocupaciones de los residentes / familias y las mías.	10. Mi supervisor/a establece un equilibrio entre las preocupaciones de los residentes / familias y las mías.
11. Mi supervisor me anima incluso en situaciones difíciles.	11. Mi supervisor/a me anima incluso en situaciones difíciles.
12. Mi supervisor me muestra su reconocimiento cuando hago un buen trabajo.	12. Mi supervisor/a me muestra su reconocimiento cuando hago un buen trabajo.
13. Mi supervisor me respeta como persona.	13. Mi supervisor/a me respeta como persona.
14. Mi supervisor me proporciona tiempo para escucharme.	14. Mi supervisor/a busca tiempo para escucharme.
15. Mi supervisor reconoce mis fortalezas y áreas a desarrollar.	15. Mi supervisor/a reconoce mis fortalezas y áreas a desarrollar.

The two versions were shared and compared by the translators. After reaching a consensus, a final version was created, as shown in Table 3.

Table 3. Synthesis of translations 1 and 2 of the SSS to Spanish.

1. Mi supervisor reconoce mi habilidad para proporcionar cuidados de calidad.
2. Mi supervisor intenta conocer mis necesidades.
3. Mi supervisor me conoce suficientemente para saber cuándo me preocupa el cuidado de mis residentes.
4. Mi supervisor intenta entender mi punto de vista cuando le hablo.
5. Mi supervisor intenta conocer mis necesidades, una manera es informándome de lo que se espera de mí al trabajar con mis residentes.
6. Puedo confiar en mi supervisor cuando pido ayuda, por ejemplo si tengo problemas con mis compañeros de trabajo o con los residentes y/o los familiares.
7. Mi supervisor me mantiene informado de la mayoría de los cambios en el entorno laboral u organización.
8. Puedo confiar en mi supervisor de estar abierto a cualquier comentario que puedo hacer con él/ella.
9. Mi supervisor me mantiene informado de cualquiera de las decisiones que se toman en cuanto a mis residentes.
10. Mi supervisor establece un equilibrio entre las preocupaciones de los residentes y/o familias y las mías.
11. Mi supervisor me anima incluso en situaciones difíciles.
12. Mi supervisor me muestra su reconocimiento cuando hago un buen trabajo.
13. Mi supervisor me respeta como persona.
14. Mi supervisor me proporciona tiempo para escucharme.
15. Mi supervisor reconoce mis fortalezas y áreas a desarrollar.

7.1.3 Back translation

The agreed version was translated back to the original language by two native English-speaking bilingual translators, in order to check concordance with the original version (Table 4).

Table 4. Back translations (RT1 and RT2) of the SSS from Spanish to English.

	Backtranslation 1	Backtranslation 2
1. Mi supervisor reconoce mi habilidad para proporcionar cuidados de calidad.	My supervisor recognizes my ability to deliver quality care.	My supervisor recognizes my ability to deliver quality care.
2. Mi supervisor intenta conocer mis necesidades.	My supervisor tries to meet my needs.	My supervisor tries to meet my needs.

	Backtranslation 1	Backtranslation 2
3. Mi supervisor me conoce suficientemente para saber cuándo me preocupa el cuidado de mis residentes.	My supervisor knows me well enough to know when I am concerned about resident care.	My supervisor knows me well enough to know when I am concerned about the care of my residents.
4. Mi supervisor intenta entender mi punto de vista cuando le hablo.	My supervisor tries to understand my point of view when I speak to them.	My supervisor tries to understand my point of view when I speak to him.
5. Mi supervisor intenta conocer mis necesidades, una manera es informándome de lo que se espera de mí al trabajar con mis residentes.	My supervisor tries to meet my needs in such ways as informing me of what is expected of me when working with my residents.	My supervisor tries to get to know my needs , one way is by letting me know what is expected of me when working with my residents.
6. Puedo confiar en mi supervisor cuando pido ayuda, por ejemplo si tengo problemas con mis compañeros de trabajo o con los residentes y/o los familiares.	I can rely on my supervisor when I ask for help, for example, if things are not going well between myself and my co-workers or between myself and residents and/or their families.	I can rely on my supervisor when I ask for help, for example if I have problems with co-workers or residents and/or family members.
7. Mi supervisor me mantiene informado de la mayoría de los cambios en el entorno laboral u organización.	My supervisor keeps me informed of any major changes in the work environment or organization.	My supervisor keeps me informed of most changes in the work environment or organization.
8. Puedo confiar en que mi supervisor será receptivo/a a mis comentarios.	I can rely on my supervisor to be open to any remarks I may make to him/her.	I can rely on my supervisor to be open to any remarks I may make to him/her.
9. Mi supervisor me mantiene informado de	My supervisor keeps me informed of any decisions	My supervisor keeps me informed of any decisions

cualquiera de las decisiones que se toman en cuanto a mis residentes.	that were made in regards to my residents.	that were made in regards to my residents.
10. Mi supervisor establece un equilibrio entre las preocupaciones de los residentes y/o familias y las mías.	My supervisor strikes a balance between residents/families' concerns and mine.	My supervisor strikes a balance between residents/families' concerns and mine.
11. Mi supervisor me anima incluso en situaciones difíciles.	My supervisor encourages me even in difficult situations.	My supervisor encourages me even in difficult situations.
12. Mi supervisor me muestra su reconocimiento cuando hago un buen trabajo.	My supervisor makes a point of expressing appreciation when I do a good job.	My supervisor makes a point of expressing appreciation when I do a good job.
13. Mi supervisor me respeta como persona.	My supervisor respects me as a person.	My supervisor respects me as a person.
14. Mi supervisor me proporciona tiempo para escucharme.	My supervisor makes time to listen to me.	My supervisor makes time to listen to me.
15. Mi supervisor reconoce mis fortalezas y áreas a desarrollar.	My supervisor recognizes my strenghts and areas for development.	My supervisor recognizes my strenghts and areas for development.

7.1.4 Evaluation of the semantic and conceptual equivalence

Most of the items of the supervisory support scale were translated in the same way by four translators. There was consensus on the selection of certain adverbs or expressions to improve understanding and comprehension, without changing the semantic meaning of the sentence. For example, between “*proporcionar*” and “*prestar cuidados*” “*proporcionar cuidados*” was chosen, since the verb “*proporcionar*” is used more often and “*prestar*” could be associated with returning something borrowed. Between “*suficientemente*” and “*lo suficiente*”, the latter was chosen as it is more easily read and

understood. The expressions “*estar abierto*” and “*receptivo*” were also reviewed. The working group chose the second option, since, according to the Spanish Royal Academy (RAE) ‘*estar receptivo* means to receive or be capable of receiving, whereas a person is described as being “open” when they are frank, honest and receptive.

The translation and back translation of the scale was carried out in 2015 when the use of inclusive language was not yet standardized. Although the nursing profession is widely feminized, and one of the translators used *supervisor/a* (masculine/ feminine noun) in the translation from English to Spanish, it was eventually decided to translate *supervisor* (in English) as ‘*supervisor*’ (masculine noun) in Spanish. Another point to note is that this version is in Castilian Spanish and adapted to the context of Spain, so it is possible that it would need to be adapted again if it were to be used in Spanish-speaking countries beyond Spain, such as in South America.

The definitive version of the Spanish supervisory support scale, agreed by the panel of experts and after checking the understanding of the items, is as follows:

1. Mi supervisor reconoce mi habilidad para proporcionar cuidados de calidad.
2. Mi supervisor intenta conocer mis necesidades.
3. Mi supervisor me conoce lo suficiente para saber cuándo me preocupa el cuidado de mis pacientes/residentes.
4. Mi supervisor intenta entender mi punto de vista cuando le hablo.
5. Mi supervisor intenta conocer mis necesidades, una manera es informándome de lo que se espera de mí al trabajar con mis pacientes/residentes.
6. Puedo confiar en mi supervisor cuando pido ayuda, por ejemplo, si tengo problemas con mis compañeros de trabajo o con los pacientes/residentes y/o los familiares.
7. Mi supervisor me mantiene informado de la mayoría de los cambios en el entorno laboral u organización.
8. Puedo confiar en que mi supervisor será receptivo/a a mis comentarios.
9. Mi supervisor me mantiene informado de cualquiera de las decisiones que se toman en cuanto a mis pacientes/residentes.

10. Mi supervisor establece un equilibrio entre las preocupaciones de los pacientes/residentes y/o familias y las mías.
11. Mi supervisor me anima incluso en situaciones difíciles.
12. Mi supervisor me respeta como persona.
13. Mi supervisor me muestra su reconocimiento cuando hago un buen trabajo.
14. Mi supervisor me proporciona tiempo para escucharme.
15. Mi supervisor reconoce mis fortalezas y áreas a desarrollar.

7.2 METRIC CHARACTERISTICS OF THE SCALE (AIM 2)

Here we will provide the results for internal consistency (reliability) and the divergent or discriminant construct validity in order to respond to Aim 2, since the analysis of the psychometric properties of the original scale developed by McGilton (99) was based on these two tests. Moreover, the author demonstrated construct validation through the positive association between supervisory support and personal satisfaction, and the negative association between supervisory support and stress. To be able to compare the two versions of the scale, it was decided to repeat these two metric characteristics of the scale.

7.2.1 Reliability

To determine the reliability of the scale translated and culturally adapted to Spanish the internal consistency was calculated, using Cronbach's alpha coefficient (107). This quantifies the consistency of the instrument to ensure that the items measure a single construct, which is homogeneous. It is the assessment of the stability of the scores between the different elements of the measurement instrument. Cronbach's alpha values range between 0 and 1, where 0 means no reliability and 1 means perfect reliability (116). In this case, a positive correlation was shown between positive items, with a range of 0.44 to 0.78 (Table 5). The alpha coefficient of the total of all 15 items on the scale was 0.96, indicating good reliability.

Table 5. Item-item correlations of the supervisory support scale among auxiliary personnel.

Item	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15
1	1														
2	0.78	1													
3	0.66	0.72	1												
4	0.67	0.75	0.67	1											
5	0.67	0.76	0.70	0.74	1										
6	0.55	0.67	0.58	0.72	0.68	1									
7	0.46	0.53	0.44	0.51	0.55	0.57	1								
8	0.56	0.65	0.57	0.74	0.67	0.75	0.66	1							
9	0.52	0.57	0.50	0.56	0.59	0.58	0.74	0.67	1						
10	0.56	0.62	0.56	0.60	0.65	0.65	0.65	0.69	0.72	1					
11	0.65	0.72	0.63	0.68	0.70	0.68	0.60	0.75	0.64	0.71	1				
12	0.67	0.71	0.61	0.64	0.69	0.62	0.59	0.70	0.60	0.67	0.78	1			
13	0.55	0.59	0.55	0.64	0.61	0.62	0.54	0.67	0.57	0.58	0.61	0.59	1		
14	0.54	0.61	0.56	0.60	0.63	0.63	0.59	0.71	0.61	0.62	0.68	0.63	0.66	1	
15	0.63	0.68	0.65	0.63	0.66	0.64	0.55	0.66	0.57	0.62	0.66	0.74	0.59	0.70	1

Note: All correlation coefficients were highly significant (p value <0.001).

7.2.2 Divergent or discriminant construct validity

The discriminant validity of the Spanish version of the supervisory support scale differed significantly between the facilities in the sample ($F = 4.13, p \leq 0.0001$) (Table 6). For example, in facilities 9, 13 and 26 the score of the variable was significantly higher than in facilities 11, 14 and 32 (Bonferroni test $p < 0.05$).

Table 6. Discriminant validity in the 37 facilities among auxiliary personnel

Facility	Score for supervisory support among auxiliary personnel Mean \pm SD	Number of participants in each facility
13	67.14 \pm 10.12	7
26	63.67 \pm 10.97	3
9	62.11 \pm 10.15	9
15	61.67 \pm 6.66	3
10	60.50 \pm 2.12	2
3	59.00 \pm 13.53	5
35	58.82 \pm 8.68	11
8	55.67 \pm 11.93	3
16	55.64 \pm 12.03	11
4	55.53 \pm 9.62	19
24	55.47 \pm 10.89	15

Facility	Score for supervisory support among auxiliary personnel Mean \pm SD	Number of participants in each facility
31	54.75 \pm 11.85	8
30	53.11 \pm 10.74	9
12	52.75 \pm 8.96	4
20	52.50 \pm 14.66	14
5	52.05 \pm 13.78	20
28	51.50 \pm 11.63	8
6	50.57 \pm 8.06	7
1	50.39 \pm 7.28	18
21	50.09 \pm 12.21	11
36	50.09 \pm 6.99	11
18	49.91 \pm 16.56	23
7	49.83 \pm 12.59	6
2	49.21 \pm 12.18	14
37	48.23 \pm 11.82	13
29	47.27 \pm 11.64	11

Facility	Score for supervisory support among auxiliary personnel Mean \pm SD	Number of participants in each facility
27	46.56 \pm 8.52	9
25	45.57 \pm 11.95	14
34	45.46 \pm 19.91	13
17	45.00 \pm 10.83	23
23	40.94 \pm 10.67	18
19	40.86 \pm 9.87	7
22	40.00 \pm 16.23	10
33	37.47 \pm 14.02	15
11	37.12 \pm 15.97	17
14	33.67 \pm 13.76	6
32	26.88 \pm 12.83	8
Total	48.92 \pm 14.01	405

ANOVA

$F=4.13, p<0.0001$

7.2.3 Exploratory and confirmatory factor analysis

The exploratory factor analysis showed that the two structural factors of the Spanish supervisory support scale coincided with the structure of the original English version. A parallel analysis comparing the eigenvalues of the polychoric correlation matrix with the random expectations justified these two factors. The factor loadings with rotation maintained the pattern of belonging to each factor.

The confirmatory factor analysis supported the validity and reliability of this measure and confirmed the factor structure where 10 items represented the supervisor's ability to respect the uniqueness of the nursing staff, "respecting uniqueness"; and 5 items represented the supervisor's ability to gain the trust of the staff, "being reliable". The standardized factor loadings varied within a narrow range: 0.75-0.86 for the latent variable "respecting uniqueness" and 0.76-0.88 for the latent variable "being reliable". The confidence interval (CI) of 90% of the root mean square error of approximation (RMSEA) was 0.097 to 0.116, the comparative fit index (CFI) and the Tucker-Lewis index (TLI) were a close fit but lower than 0.95, and the standardized root mean square residual (SRMR) was 0.040 (Table 7). The mean score of each of the 15 items ranged between 2.89 and 3.96, with a standard deviation of 1.01 to 1.26, and the standardized factor loading ranged between 0.75 and 0.93 (Table 7).

Table 7. Confirmatory factor analysis of the two-factor model, on the supervisory support scale, among auxiliary personnel.

Item Response options: 1=strongly disagree, 2=disagree, 3=neither agree nor disagree, 4=agree, 5=strongly agree	Mean ± Standard deviation	Standardized factor loading (Confidence interval 95%) Two latent variables
Items associated with the latent variable <i>Respecting uniqueness</i>		
1. Mi supervisor reconoce mi habilidad para proporcionar cuidados de calidad.	3.31 ± 1.09	0.79 (0.75, 0.83)
2. Mi supervisor intenta conocer mis necesidades.	3.10 ± 1.13	0.86 (0.83, 0.89)
3. Mi supervisor me conoce suficientemente para saber cuándo me preocupa el cuidado de	3.31 ± 1.20	0.78 (0.74, 0.82)

mis residentes.		
4. Mi supervisor intenta entender mi punto de vista cuando le hablo.	3.38 ± 1.11	0.83 (0.80, 0.87)
5. Mi supervisor intenta conocer mis necesidades, una manera es informándome de lo que se espera de mí al trabajar con mis residentes.	3.20 ± 1.09	0.85 (0.82, 0.88)
11. Mi supervisor me anima incluso en situaciones difíciles.	3.07 ± 1.26	0.86 (0.83, 0.88)
12. Mi supervisor me muestra su reconocimiento cuando hago un buen trabajo.	2.89 ± 1.26	0.84 (0.80, 0.87)
13. Mi supervisor me respeta como persona.	3.96 ± 1.01	0.75 (0.70, 0.79)
14. Mi supervisor me proporciona tiempo para escucharme.	3.36 ± 1.14	0.78 (0.74, 0.82)
15. Mi supervisor reconoce mis fortalezas y áreas a desarrollar.	3.23 ± 1.20	0.82 (0.79, 0.85)
Items associated with the latent variable <i>Being reliable</i>		
6. Puedo confiar en mi supervisor cuando pido ayuda, por ejemplo si tengo problemas con mis compañeros de trabajo o con los residentes y/o los familiares.	3.47 ± 1.25	0.82 (0.78, 0.85)
7. Mi supervisor me mantiene informado de la mayoría de los cambios en el entorno laboral u organización.	3.16 ± 1.15	0.76 (0.72, 0.81)
8. Puedo confiar en que mi supervisor será receptivo/a a mis comentarios.	3.30 ± 1.11	0.88 (0.85, 0.91)
9. Mi supervisor me mantiene informado de cualquiera de las decisiones que se toman en cuanto a mis residentes.	3.17 ± 1.13	0.80 (0.76, 0.84)
10. Mi supervisor establece un equilibrio entre las preocupaciones de los residentes y/o familias y las mías.	3.03 ± 1.10	0.83 (0.79, 0.86)
Covariance between latent variables		0.93 (0.90, 0.95)

Fit index		
Chi-square (<i>df</i>) Test of model versus saturated		483.0 (89) p < 0.001
Root mean squared error of approximation (90% confidence interval)		0.107 (0.097, 0.116)
Comparative fit index		0.926
Tucker-Lewis index		0.912
Standardised root mean squared residual		0.040
Coefficient of determination		0.985

7.3 RESULTS OF THE OBSERVATIONAL STUDY ON PERCEIVED SUPERVISORY SUPPORT

This section presents the results that respond to the secondary aims 3, 4, 5 and 6.

7.3.1 Socio-demographic characteristics of the participants (Aim 3)

In this study we obtained 150 questionnaires from nurses and 409 from auxiliary personnel. After discarding the questionnaires that were poorly completed, invalid or blank, we analyzed the data from the final sample formed by 142 nurses and 390 TCAEs and geriatric nursing assistants. As shown in Table 8, the nurses (average age of 40 years) were slightly younger than the auxiliary personnel (average age of 47 years), but there was very little difference in the number of years working in long-term care, with an average of 10.16 years among nurses and 9.8 years among auxiliary personnel. Spanish, followed by Catalan, were the main lingua francas among both auxiliary personnel and nurses, and more than 70% worked full time. Of the nurses, 41.7% were diploma nurses and 11.9% graduate nurses. In addition, 37.1% of the nurses also had a specialty in Geriatrics. With regard to auxiliary personnel, 61.5% were TCAEs and 25.2% geriatric nursing assistants.

Table 8. Socio-demographic characteristics of the study participants.

	(% , unless indicated otherwise)	
Socio-demographic characteristics	Nurses (N=142)	Auxiliary personnel (N=390)
Women	129 (90.8%)	352 (90.2%)
Men	13 (9.2%)	38 (9.8%)
Age in years, average (standard deviation)	40 (SD 11.2)	47 (SD 12.3)
Native language		
Spanish	71 (50%)	224 (57.4%)
Catalan	65 (45.7%)	138 (35.3%)
Other languages	6 (4.3%)	28 (7.3%)
Education		
TCAE		256 (65.6%)
Geriatric nursing assistants		105 (26.9%)
Ayudante Técnico Sanitario (ATS)	1 (0.7%)	
Diplomada Universitaria en Enfermería (DUE)	63 (42.9%)	
Nursing degree	18 (12.2%)	
Postgraduate degree in geriatrics	4 (2.7%)	
Specialty in geriatrics	56 (37.1%)	
Other qualifications	5 (3.4%)	29 (7.5%)
Current contract		
Full time	101 (71.1%)	317 (81.2%)
Part time	37 (26%)	63 (16.1%)
Sporadically	4 (2.9%)	10 (2.7%)
Years working in long-term care (average)	10.1 years (SD 8.23)	9.8 years (SD 7.42)

7.3.2 Work characteristics of the nurses and auxiliary personnel (Aim 3)

Table 9 shows the mean and standard deviation of the scores assigned for each work characteristic among nursing staff and geriatric nursing assistants. In decision-making capacity and empowerment, the range is between 18 and 90 points, in stress and workload it ranges between 16 and 80 points. As regards work effectiveness, the range is between 23 and 115 points. The minimum scorable for perceived supervisory support was 15 points and the maximum 75 points. Finally, job satisfaction was measured with a minimum of 7 points and a maximum of 35 points.

The auxiliary personnel (TCAEs and geriatric nursing assistants) perceived less decision-making capacity and empowerment compared to nurses, but the degree of stress, work effectiveness, satisfaction and supervisory support was similar in both groups. All the work characteristics obtained a moderate score, apart from burden and stress, which obtained 10 points less compared to the average among nurses and 9 points less among TCAEs and geriatric nursing assistants.

Table 9. Work characteristics among nurses and auxiliary personnel

	Nurses (N=142)		Auxiliary personnel (N=390)	
	Mean	SD	Mean	SD
Decision-making and empowerment (range: 18-90)	63.5	8.26	55.8	9.87
Burden and stress (range: 16-80)	38.4	7.55	39.2	7.63
Work effectiveness (range: 23-115)	65.2	15.88	64.3	15.09
Supervisory support (range: 15-75)	49.1	15.63	49.03	14.10
Job satisfaction (range: 5-35)	24.04	4.74	24.4	5.24

7.3.3 *Work characteristics associated with job satisfaction and intention to leave (Aim 4)*

In the first regression model we included the work characteristics decision-making capacity and empowerment, work effectiveness, perceived supervisory support and burden and stress of the staff and job satisfaction/intention to leave. Both for nurses and for TCAEs and geriatric nursing assistants, decision-making and empowerment, work effectiveness and support from the person in the supervisory role was associated positively with job satisfaction; contrary to stress, which was negatively associated with job satisfaction. Thus, the greater the decision-making capacity and empowerment, work effectiveness and supervisory support, the greater the job satisfaction. Conversely, the more burden and stress the staff had, the less their job satisfaction.

In the case of the nurses, the coefficient with the highest magnitude was support from the person supervising, followed by work effectiveness and, to a lesser extent, stress.

Among the auxiliary personnel, the highest magnitude was in work effectiveness and in decision-making. Again, the factor with the lowest magnitude was stress, as shown in Table 10.

Table 10. Work characteristics and job satisfaction by nurses and auxiliary personnel.

	Job satisfaction among nurses (N=142)	Job satisfaction among auxiliary personnel (N=390)
Work characteristics		
Decision-making and empowerment	0.388 (p<0.001*)	0.393 (p<0.001*)
Burden and stress	-0.203 (p=0.017*)	-0.182 (p<0.001*)
Work effectiveness	0.492 (p<0.001*)	0.427 (p<0.001*)
Supervisory support	0.497 (p<0.001*)	0.387 (p<0.001*)

Table 11 shows the results of the regression including the work characteristics in relation to intention to leave the job. Both among the nurses and the TCAEs and

geriatric nursing assistants, decision-making capacity and empowerment, work effectiveness and supervisory support were associated negatively with intention to leave. Burden and stress were positively associated with intention to leave in both groups. For the nurses and auxiliary personnel, the support of the person supervising was the factor with the highest magnitude, reaching statistical significance as a predictor in intention to leave. In the case of the TCAEs and geriatric nursing assistants, in addition, the dimensions of decision-making and empowerment, burden and stress and work effectiveness reached a statistically significant relationship with intention to leave, although the magnitudes of the relationship were low.

Table 11. Work characteristics and intention to leave by nurses and auxiliary personnel.

Predictor	Intention to leave among nurses (N=142)	Intention to leave among auxiliary personnel (N=390)
Decision-making and empowerment	-0.129 (p=0.142)	-0.172 (p=0.001*)
Burden and stress	0.122 (p=0.148)	0.157 (p=0.002*)
Work effectiveness	-0.145 (p=0.100)	-0.233 (p<0.001*)
Supervisory support	-0.260 (p=0.002*)	-0.273 (p<0.001*)

7.3.4 Personal and organizational factors associated with supervisory support (Aim 5)

To respond to Aim 5 we included personal factors (the nurses' and auxiliary personnel's age and years worked at the facility) and organizational factors (staff-to-resident ratio, number of staff to carry out the work, and attending to the same residents each day) and supervisory support. Table 12 shows the association between these factors using Spearman's correlation. With regard to the nurses, years worked at the facility, the ratio of nurses to residents, and caring for the same residents each day was negatively associated with perceived supervisory support, while among the auxiliary personnel age too was negatively associated with perceived supervisory support.

In both groups, the number of staff to carry out the daily tasks was the factor with the highest magnitude and reached statistical significance in relation to supervisory support.

Table 12. Personal and organizational factors and perceived supervisory support.

Personal and organizational factors	Perceived supervisory support among nurses (N=142)	Perceived supervisory support among auxiliary personnel (N=390)
Age	0.003 (p=0.970)	-0.065 (p=0.200)
Years worked at the facility	-0.059 (p=0.501)	-0.03 (p=0.949)
Staff-to-resident ratio	-0.169 (p=0,056)	-0.103 (p=0.052)
Staffing level	0.431 (p<0.001)	0.256 (p<0.001)
Attending to the same residents each day	-0.123 (p=0.149)	-0.007 (p=0.898)

7.3.5 Characteristics of the facility associated with supervisory support (Aim 6)

At this stage in the data analysis, a one-way ANOVA was performed. The perception that nurses had of their immediate supervisor in nursing homes and long-term care settings was very similar, although the nursing homes were better scored. With regard to funding, there was a higher perception of supervisory support in the subsidized facilities and a lower perception in the private facilities. In rural and urban facilities there was a difference of almost 10 points, reaching statistical significance as a predictor for supervisory support. The facilities located in the province of Lleida were the best scored in terms of perceived supervisory support (mean=52.9 points), followed by those in Tarragona (52.3 points), Barcelona (47.5) and, finally, Girona (41.9). The province factor also reached statistical significance in relation to the supervisory support perceived by the nurses.

With regard to auxiliary personnel, the scores were similar between the different categories and classification of the facilities. For example, in nursing homes and long-term care settings the scores obtained were 47.14 points and 50.74 points respectively.

Unlike the nurses, the TCAEs and geriatric nursing assistants rated better the support of the nurse with supervisory functions working in the long-term care facilities. With respect to the geographic location of the facilities, those in rural areas were better scored than those in urban areas. As in the case of the nurses, the facilities in the province of Lleida were positioned in first place, followed by Tarragona, Barcelona and Girona, according to the scores obtained for perceived supervisory support. Regarding the funding of the facilities, the auxiliary personnel working in subsidized facilities considered that they received more supervisory support than those in public, collaborative and private facilities. As shown in Table 13, statistical significance was reached in nursing homes and long-term care settings. Contradictorily, the province factor was statistically significant but the urban/rural characteristic was not.

Table 13. Perceived supervisory support reported by nurses and auxiliary personnel and characteristics of the facility.

	Supervisory support					
Facility characteristics	Nurses (N=142)			Auxiliary personnel (N=390)		
<i>Type of facility</i>	M	SD	P	M	SD	P
Nursing home	49.9	15.29	0.680	47.14	14.16	0.020*
Long-term care setting	48.76	15.88		50.74	13.87	
<i>Geographic location</i>						
Urban	47.17	15.50	0.002*	48.83	13.40	0.591
Rural	56.96	13.79		49.77	16.51	
<i>Province</i>						
Lleida	52.9	15.2	0.019*	51.7	13.8	0.012*
Barcelona	47.5	15.8		47.6	13.8	
Girona	41.9	17.4		45.6	15.8	
Tarragona	52.3	10.1		49.2	11.4	
	Supervisory support					

Facility characteristics	Nurses (N=142)			Auxiliary personnel (N=390)		
<i>Funding</i>						
Public	48.85	16.39	0.837	49.27	13.64	0.908
Subsidized	51.73	16.09		50.32	11.34	
Collaborative	49.67	16.63		48.70	15.73	
Private	47.04	10.70		48.58	12.68	

*p<0,05.

DISCUSSION

8. DISCUSSION

The results of this doctoral thesis provide relevant findings considered necessary for improving the care practice and the performance of nurse leaders and supervisors in long-term care settings.

In the Spanish healthcare context there is a clear lack of evidence of supervisor performance and its implications for nursing staff and residents in facilities for older people.

In order to carry out a general discussion of the results of this thesis, it was thought convenient to base it on the three hypotheses and the aims established before beginning this study, and to analyze the findings separately, according to each one.

8.1 AIM 1: TRANSLATION AND CROSS-CULTURAL ADAPTATION OF THE SUPERVISORY SUPPORT SCALE

In this study we used the translation-back translation method, which offers the best methodological quality for achieving the aim of adapting the scales within the healthcare context.

A panel of experts was formed, made up of linguists, translators and healthcare professionals, who discussed the different translations in the process until agreeing on a final Spanish version of the scale (96,97). The panel took into account the semantic and conceptual equivalences and discussed certain discrepancies that emerged during the process. There was no change in the meaning of each item, and verbs, expressions and adverbs were selected to facilitate the staff's understanding of the questionnaire and to avoid misinterpretations.

To date, this scale has also been translated into Chinese. As stated by Tian et al. (117), the procedure followed was the exact same as that used for the Spanish version; that is, two bilingual translators translated the scale into Chinese and agreed on a single version, then two different translators translated this version back into English. This new version was compared to the original version. Unlike with the Spanish version, the Chinese expressions were adjusted accordingly, based on the translation validity index

(TVI), making it possible to evaluate the equivalence of the different translations of the version.

In the Chinese version, *supervising nurse* was specified. However, in our context, we did not contemplate specifying the term *nurse*, as the person who supervises the auxiliary personnel and the nurses –as the immediate superior– is generally another nurse.

8.2 AIM 2: VALIDITY AND RELIABILITY OF THE SPANISH SUPERVISORY SUPPORT SCALE

We examined the psychometric properties of the Spanish translation of the scale based on the data obtained from the questionnaires completed by the auxiliary personnel in order to determine the validity, reliability and factor analysis versus the original version. The results obtained supported the usefulness of the scale.

With regard to the reliability of the adapted scale, the results were similar to those of the original scale (93). We found a positive internal consistency among the items, ranging from 0.44 to 0.78, with a Cronbach's alpha value of 0.96. The values of the original scale ranged from 0.40 to 0.70 with an alpha coefficient of 0.94, proving that both versions have optimal reliability.

Initially, it was considered that supervisory support in Catalan long-term care facilities could be relevant to the work environment of nursing staff, as is the case in Canada. The validity of the construct of the Spanish version of the SSS was demonstrated using a process similar to that used in a previous study by McGilton et al. (99). Where staff perceived the support of their supervisor, this was positively associated with job satisfaction, as is the case in other studies (110,118,119). In the same way, with an effective supervisor, the workload was perceived as lighter. This would explain how supervisors can influence the job satisfaction of long-term care personnel and their intention to stay in the job (10,110). To achieve this goal, nurses in formal or informal supervisory positions must have the knowledge, skills and attitude to be able to supervise effectively. First of all, the competencies of nurses should be broadened, since the only competencies contemplated in Article 4, regarding the general principles of the nursing profession, of Law 44/2003, of November 21, on the Regulation of Healthcare Professions (73) are those related to the care, research, teaching, clinical management

(defined as the use of resources for activities related to the care and treatment of patients) (120), prevention, information and healthcare education. This implies that nurses in leadership positions could work in an informal, non-regulated role (121). Moreover, this gap in institutional support is accompanied by a lack of training programs provided by the workplaces themselves, aimed at effectively training the nurses in team management and supervision (122,123). With such limited or non-existent training, nurses would not be able to recognize the value or potential benefits of supervision, nor the complexity of a supervisory role (123).

The two factors identified in the original scale highlighted two key attributes of supervisors: being reliable and respecting uniqueness.

These were also proven in the Spanish Supervisory Support Scale, as there was a moderate adjustment of the model. In Catalonia, supervisors working in long-term care are expected to be reliable and have the trust of those they supervise. As has been found in other areas, having an effective supervisor who can be relied upon when it comes to facilitating work and offering support in the provision of care, can help create a healthy work environment (124). The supervisor's respect for the uniqueness of the auxiliary personnel is also important, as other researchers have found (125). Taking time to listen to the personnel, recognizing their strong points and meeting their need for support, all help to build effective work relationships, necessary for carrying out the work required in the long-term care sector (99,123).

8.3 AIM 3: SOCIO-DEMOGRAPHIC AND WORK CHARACTERISTICS OF THE STUDY PARTICIPANTS

This study was conducted in 37 facilities in Catalonia, intentionally selected to provide a sample as heterogeneous and as representative as possible, taking into account the type of facility (nursing home or long-term care setting), geographic location (province, and urban or rural), and the type of funding (public, subsidized, collaborative or private). All the participants were anonymous volunteers.

Of the questionnaires collected, 150 were completed by nurses and 409 by auxiliary personnel. After discarding those that were blank or incorrectly completed, the data from 142 nurses and 390 TCAEs and geriatric nursing assistants were collected and analyzed. Our results showed that most of the participants were female, with an average

age of 40-50, who knew and spoke Spanish and Catalan, had sufficient work experience and years worked in long-term care facilities, and had a full-time contract.

Bridging the gap between Catalonia and Canada, since two types of nurses converge there, the results were similar to those found by Squires et al. (126). Their study was conducted in 89 facilities, and the participants were 757 nurses, 309 of whom were registered nurses (RN), and 448 licensed practical nurses (LPN). Of the total, 87.3% were female (n=661) and 64.3% were aged 40 years or over. Among the RNs, 53.7% worked part time, 39.5% full time and 6.8% sporadically. In contrast, 50.9% of the LPNs had a full-time contract, 39.5% a part-time contract, and 9.4% were hired sporadically. RNs claimed to have 11.6 years (average) of working experience in the nursing sector and 5.5 years in their current workplace. LPNs had a shorter working experience (6.9 years) and less time worked at the current facility (4.3 years).

Chamberlain et al. (72) observed that most of the auxiliary personnel participating in their study in Canada were female, and more than half were aged 40 or over, the same as in this study.

In a study with 1,351 participants (auxiliary personnel), Estabrooks et al. (44) reported that 92.5% were female, 31.5% were aged between 40 and 49 years, and 25.9% were aged between 50 and 59 years. Only 39.8% of the participants had been born in Canada. English was the first language of 51.2% of the participants, followed by Tagalog (18%), and Filipino (9.6%). The average number of years working as auxiliary personnel was 10 years and time working in the current facility averaged 4.8 years. Along the same lines, the direct-care workforce in the USA is mainly composed of women (87%), people of color (59%) and immigrants (26%) (104).

Summing up these results from the literature, it can be affirmed that most of the personnel working in long-term care are women aged between 40 and 50 years, which is consistent with our findings. This profile makes us reflect on the fact that these personnel will be retiring within the next 20-25 years. Considering that the number of new nurses, TCAEs, and geriatric nursing assistants deciding to work in long-term care is not in proportion to the growing demand for beds in long-term care facilities and the

number of older people, it is urgent to develop strategies and formulas to make work in this sector more attractive, better valued, and safer (9).

In this study we also examined work characteristics such as decision-making capacity, empowerment, burden and stress, work effectiveness and job satisfaction, and the perception of supervisory support among nurses and auxiliary personnel. The nurses reported higher levels of decision-making capacity and empowerment, work effectiveness and perception of supervisory support, less stress and burden, but the same degree of job satisfaction as the TCAEs and geriatric nursing assistants, as shown in Table 9.

In the study by Rodríguez-Monforte et al. (127) the work characteristics perceived by the nurses were very similar to those in our findings. In Canada, nurses (N= 81) perceived greater decision-making capacity and empowerment (mean = 67 points), work effectiveness (mean = 68 points) and supervisory support (mean = 54 points) than Catalan nurses did (63.5 points, 65.2 points and 49.1 points) and less burden and stress (22 points versus 38.4 points among Catalan nurses). The perception of job satisfaction averaged 24 points in both studies. For the Canadian auxiliary personnel, the characteristics with the greatest magnitude were also decision-making capacity and empowerment, work effectiveness and supervisory support, although the scores varied considerably. For example, with regard to perception of supervisory support there was a difference of 16 points (56 points in Canada versus 40 points in Catalonia), and a difference of 9 points (an average of 73 points in the Canadian study and 64 in the Catalan study) with respect to work effectiveness. With regard to burden and stress, Rodríguez-Monforte et al. (127) reported an average of 23 points; 16 points lower than in the Catalan study. The perception was similar in relation to job satisfaction (25 points in Canada, 24 points in Catalonia). These differences could lead one to consider that working conditions are more favorable in Canada, and that some work-related characteristics are valued differently depending on the context in which they are examined. However, caution must be exercised when interpreting these results. Firstly, the qualifications and training of nurses and auxiliary personnel vary considerably in Canada and Spain, as mentioned in the conceptual framework section. Consequently, it would be necessary to determine what their responsibilities are, the tasks and workloads of the different groups working in long-term care facilities. Secondly, it would be necessary to examine whether there are other factors that condition the perception of the

work characteristics, such as salary, the worker-resident ratio, how the personnel and daily tasks are organized, inner workings of the facilities, communication between the different teams, etc.

8.4 AIM 4: WORK CHARACTERISTICS ASSOCIATED WITH JOB SATISFACTION

This study examined the influence of certain work characteristics, such as decision-making capacity and empowerment, perception of supervisory support, work effectiveness, burden and stress on job satisfaction among nurses, TCAE and geriatric nursing assistants. In both groups, there was a positive association between decision-making capacity and empowerment, perception of supervisory support and work effectiveness, and a negative association between burden and stress, and job satisfaction, as shown in Table 10. These results partly confirm Hypothesis 1 of this study and are consistent with those of Rodríguez-Monforte (127), who found the same positive associations, and negative association with regard to burden and stress, both for nurses and auxiliary personnel, as other studies have shown (110,128).

The review conducted by Aloisio et al. (129) identified individual factors such as age, health status, self-determination/autonomy, psychological empowerment, job involvement and fatigue and stress as being significantly associated with job satisfaction. This is consistent with our findings with regards to decision-making capacity and empowerment being associated with self-determination and autonomy and fatigue and stress. Conversely, gender and nursing experience were found to be unimportant or misleading factors; as was being a beneficiary of the facility, supervisor/manager support, financial resources, ratio of personnel and social relationships. These conclusions may be surprising, since previous studies pointed in the opposite direction as regards the influence of organizational and personal factors on job satisfaction among nursing staff (nurses and TCAE) and geriatric nursing assistants.

In a previous study by the same author (130) the multi-variable analysis revealed that the number of hours worked, fatigue, empowerment and work commitment were associated with job satisfaction. However, the authors were unable to prove any association with leadership; contrary to what occurred in our study, where the perception of supervisory support was a determining factor in job satisfaction. The

initial conclusions of Aloisio et al. (130) partly coincided with our results, since empowerment and stress also influenced the job satisfaction of the participants in the study, as did supervisory support.

The work environment is a significant factor, according to the study conducted by Choi et al. (62). Everything indicates that active participation in workplace issues, an effective manager or director and access to adequate resources influences job satisfaction. This is consistent with our findings in relation to decision-making capacity and empowerment, supervisory support and work effectiveness. Another finding from the study conducted by these authors (62) is that there is a higher job satisfaction among nurses working in public facilities than those working in private facilities. However, this study does not examine this association, as it was not included in the aims.

Previously, Probst et al. (128) examined other measurements of the perceived work environment and proved that supervisor attitude, organizational climate, having enough time to perform tasks, and the perception of being valued, were associated with greater job satisfaction; all consistent with our findings. These results highlight the importance of the role of the person supervising auxiliary personnel, in line with the study by McGilton et al. (131) who stated that greater supervisory support had an impact on the job satisfaction of the personnel, as we have also proven in this present study.

Although we have not examined the financial factor in this project, Bishop et al. (125) determined that a higher salary, bonuses, health insurance and more time to dedicate to each resident was associated with greater job satisfaction among TCAE. However, they were unable to prove the hypothesis regarding the influence of the quality of supervision provided by RNs and LPNs. In our case, given that there is only one type of nurse, we only examined the association between perceived supervisory support and job satisfaction among nursing personnel and geriatric nursing assistants, without taking into account the quality of supervisory performance.

Everything suggests that healthcare personnel working in the long-term care sector are moderately satisfied with their job, as is reflected in the scores obtained, which are shown in Table 9. They often have to deal with the aggressive attitudes and undesirable behavior of the residents or their families, and have to be able to manage their own emotions and those of others (72,132), though this does not prevent them from considering the great work they perform and the valuable contribution they make to

cares for older people. As we have seen previously, greater job satisfaction among personnel in long-term care facilities implies an increase in the quality of attention and care provided to residents (94,110,129), which needs to be considered when promoting strategies and policies to improve the situation of institutions and long-term care facilities.

8.5 AIM 4: WORK CHARACTERISTICS ASSOCIATED WITH INTENTION TO LEAVE THE JOB

As shown in Table 11, in this study the lack of supervisory support perceived by the long-term care staff is significantly associated with intention to leave among nurses and auxiliary personnel, becoming a major predictive factor. Our results also show an association between decision-making capacity and empowerment, work effectiveness, burden and stress as predictive factors among TCAE and geriatric nursing assistants, thus confirming Hypothesis 1.

The results of this study are consistent with the literature. Pélissier et al. (133) stated that the deterioration of residents, proximity to death, and the lack of equipment could be reasons for leaving the job; as well as the work relationships between nurses and managers/supervisors, and residents. With regard to auxiliary personnel, the authors highlight workload, salary and health problems as reasons for leaving the job. In our study, there were differences between nurses and TCAE and geriatric nursing assistants. Among nurses, only supervisory support was a predictive factor in leaving the job, while among auxiliary personnel all the work characteristics played a part.

In the model proposed by Choi et al. (62) they examined factors related to the long-term care staff and the facility. They concluded that age, training and work history were associated with the intention to leave the job. In addition, supervisory support had an impact on job satisfaction among nurses, TCAE and geriatric nursing assistants, as demonstrated by our study.

However, stating that they often think about leaving the job does not mean that they actually do leave. Rosen et al. (134) studied staff turnover and retention, focusing exclusively on the nurse aides/nursing assistants with full-time contracts (minimum of 30 hours per week). A year later, out of the initial 620 participants, 85.5% were still in the same workplace, 8.4% had moved to a different facility with more promotion

opportunities, and the remaining 5.8% had left the job. The reasons for leaving the job included low job satisfaction, emotional wellbeing and health problems. Although the approach of this study departs from that proposed by Rosen et al. (134), we were able to prove that supervisory support is associated with the nurses' intention to leave. With regard to the auxiliary personnel, intention to leave was also associated with decision-making capacity and empowerment, work effectiveness, burden and stress. To determine whether our sample of participants will leave the job in the future would require a more exhaustive study. However, the degree of job satisfaction among the participants (24 points for nurses, TCAE and geriatric nursing assistants), the perception of support from the person supervising (49 points) and the full-time contract of more than 70% of the sample, would indicate that there is no foreseeable intention to leave the job.

8.6 AIM 5: PERSONAL AND ORGANIZATIONAL FACTORS ASSOCIATED WITH SUPERVISORY SUPPORT

Age, years worked at the facility, staff-resident ratio, perception of the lack of personnel to carry out the daily work, and the possibility of caring for the same residents were examined in relation to supervisory support. The only factor that was significantly associated with supervisory support was the lack of sufficient personnel to carry out the daily work, among both nurses and auxiliary personnel (TCAE and geriatric nursing assistants), as shown in Table 12. However, there were some differences between the two groups: in the case of the nurses, the older they were and the greater the number of staff to carry out the tasks, the higher their perception of supervisory support. In contrast, the more time working at the facility, the higher the ratio of residents to staff, and the lower the possibility of caring for the same residents, the lower their perception of supervisory support; in the case of the auxiliary personnel, all these factors except for number of staff to carry out the work, were negatively associated with supervisory support.

To date, in our context, the personal and organizational factors in relation to supervisory support has not been studied. Interpreting these data is therefore complicated and should be done with caution. We would first need to know who supervises the nurses. Given the differences in how these institutions are organized, it could be the case that in some facilities there is a director of nursing, while in others there is no immediate superior

apart from the manager or director of the facility. However, it is the nurse who, formally or informally, supervises the TCAE and geriatric nursing assistants and delegates tasks to them as required. The absence of formally-defined leadership competencies for nurses (135–138) makes the staff perceive that there is a lack of support and authority.

In any case, personal factors such as age and years worked at the facility are not associated with perceived supervisory support, but the fact of not having sufficient staff to carry out tasks does have an impact on the relationship with the supervisor. These results coincide partly with those obtained by Lin et al. (139), which proved that the age of the auxiliary personnel and the ratio between the workers and the residents were factors that influenced perceived supervisory support.

To a certain extent, the teams working in long-term care facilities understand that the ratio between workers and residents is variable and that it is not always possible to attend to the same residents all the time. Where there is a greater number of staff, of nurses in the facility and greater stability and permanency within the team, good opportunities are created for developing skills in the supervisory role and process systems and structures for improving their performance (123). However, it is fundamental to establish direct and effective communication between the nurses, the TCAE and the geriatric nursing assistants in order to ensure good coordination and leadership in care provision (93,136,140,141). In facilities with a high level of cohesion facilitated by the supervisor's leadership style, the nursing staff tends to feel listened to and help each other by working together in decision making, employing multiple formal and informal communication methods and using effective resources for problem solving (81).

When supervisors receive recognition and are trusted by the staff, they have more control over specific situations, but they must be flexible in order to meet the expectations and needs of the staff (95). When change is necessary, an empathetic and compassionate leadership style on the part of the supervisor would mean an optimal transition process for the staff. In contrast, if the leadership style is rigid, with a one-way approach, change can be seen as disruptive and complex, resulting in low acceptance and resistance to change (142).

8.7 AIM 6: INFLUENCE OF THE CHARACTERISTICS OF THE FACILITY ON SUPERVISORY SUPPORT

Hypotheses 2 and 3 of this study have been confirmed, as the supervisory support perceived in rural facilities was slightly higher than in urban areas, and was higher in public facilities than private ones. However, we were unable to prove the association between the facility's characteristics and perceived supervisory support –although there was a significant association by province among nurses, TCAEs and geriatric nursing assistants. Also, it was found a significant association by geographic location (urban or rural) among nurses and the type of facility among auxiliary personnel (NH, where the geriatric nursing assistants predominate and long-term care settings, where the TCAEs work), as shown in Table 13. A possible explanation for this fact is that NH and long-term care services operate differently. For auxiliary personnel, the tasks are basically the same, although the characteristics and organization of a long-term care settings is more similar to those of a hospital than a NH. Moreover, it is difficult to interpret the significance obtained by province and urban and rural area among nurses, as it is in the long-term care sector that nurses show greater decision-making capacity and empowerment, and also have a more autonomous role, often without the support of other colleagues, basically because they are in charge and perform as a reference nurse in the facility. Consequently, nurses have to act and assume the responsibility of this situation with the residents (12,87,136).

In Catalonia, no studies to date have explored how the characteristics of the facilities could be associated with the performance of those with supervisory roles, perceived by the long-term care staff. Based on the results of this study, everything suggests that their performance depends solely on personal skills such as empathy, assertiveness and ability to communicate (93) and on aspects related to daily practice, such as experience, and a working knowledge of team management and conflict and problem resolution (12).

In the analysis to determine the discriminant validity of the scale, we assumed that there would be differences regarding supervisory support, given the different workloads and the type of financing of the 37 facilities that make up the study sample. We confirmed

this hypothesis, as facilities 9, 13 and 26 obtained better scores than facilities 11, 14 and 32. However, the fact of a nursing home or long-term care service being public or private would not explain why the perceived supervisory support was higher in one than the other. In this case, the three highest-scored facilities were a publicly-funded rural nursing home and two long-term care settings, one rural and one urban, both of them collaborating facilities. The three lowest-scored facilities were a collaborative rural nursing home, a public urban nursing home, and a public long-term care setting. This disparity in the profile of the facilities with the highest and lowest scores for perceived supervisory support could be due to the significant difference in the way of working and understanding nurse leadership in Catalan facilities. Consistently, professional development differed between facilities and was based mainly on the knowledge and competencies acquired through previous work experience (123,136,137).

In some cases, the person supervising does not receive any formal training for the position and lacks the sufficient knowledge to be able to manage nursing teams (131). The supervising and leading nurse needs updated knowledge about how to perform their job, assess the training needs of their personnel, and understand the medical and social needs of the residents of long-term care facilities. In addition, they must know the tasks performed by the personnel under their charge, be able to identify whether they lack knowledge or experience, or have specific needs such as interpersonal communication, how to manage dementia behaviors, etc. (131,137). Supervisors need comprehensive training that includes not only clinical aspects but also other skills such as management, organizational, health promotion and educational skills (82).

Although supervisory support is associated with staff satisfaction, and has an impact on the quality of the care received by the resident, supervisory support in itself cannot be considered a qualitative indicator in care for older people, as there are other factors involved. Examining and understanding the structures of healthcare services, such as work environment and the workers' attitude towards their work environment, are important quality improvement efforts (94). Moreover, if an institution is owned by a for-profit organization or a non-profit organization (the two main types of facilities in English-speaking countries, according to the funding model) it could affect the structure, process and results of the quality of care for residents (143).

In the review conducted by Comondore et al. (144), many studies evidenced a higher quality of care in non-profit facilities than for-profit facilities. However, they showed no significant difference in quality according to the ownership of the facility. In addition, a smaller number of studies proved statistically significant differences in favor of for-profit facilities. As already mentioned, we cannot conclude that facilities with a higher level of perceived supervisory support necessarily imply that the quality of care and attention provided to residents is also high. However, this study has proved that perceived supervisory support is greater in public facilities located in rural areas than that in private facilities in urban areas.

This study did not take into account the financial performance of the facilities or the quality of care, nor the job satisfaction of the personnel, since that was not the purpose, although there is evidence that sheds light in this respect. For example, Chesteen et al. (145) concluded that there was no direct association between the measurements of the quality of results and the non-profit facilities, although these had better quality processes. Private and for-profit facilities tend to have a better financial performance but poorer results in terms of the wellbeing of workers and residents than non-profit facilities (143,144).

Based on the response capacity of long-term care facilities to deal with the COVID-19 pandemic, the results of the literature review carried out by Kruse et al. (146) are consistent with what has been stated previously. Most of the selected studies proved an association between private facilities and an increase of cases, outbreaks and/or mortality due to COVID-19. According to unadjusted figures, for-profit nursing homes showed poorer COVID-19 results (i.e. number of resident deaths due to COVID-19). Characteristics such as a lower staff-to-resident ratio and limited access to proper personal protection equipment (PPE) was significantly associated with the type of funding (for-profit) and cases and outbreaks of COVID-19. As this study predates the crisis caused by the pandemic, it is not possible to compare our results with those of the scientific literature.

To summarize, it is fundamental to have validated instruments that can be used in our context, specifically a tool that allows us to measure the degree of support of the person with supervisory functions, perceived by the nursing staff. This is an important task, considering the impact it has on job satisfaction and intention to leave among

professionals. These professionals, mostly women, with experience in long-term care, are accustomed to considerable workloads, are committed and value the importance of attending to and caring for older people. Although the characteristics of the facilities do not influence the perceived supervisory support, this improves when the person performing the supervisory tasks has adequate training, experience, knowledge, and the necessary skills for managing and communicating with the different nursing teams.

8.8 LIMITATIONS

This study has certain limitations. The first of these is related to the original scale, which was based on a relationship theory and not on a leadership theory, and was only validated in one province in Canada. However, given that some leadership theories are based on the importance of relationships, this should not be a problem, and we consider the validation of the scale to Spanish to be perfectly useful.

Another limitation is that the Spanish Supervisory Support Scale was only validated in the Catalan context, but the measurement instrument was easy to use and could be applicable to Spain and in other Spanish-speaking countries, given that the original version of the scale does not include cultural connotations that would make its translation difficult. That said, we cannot rule out that the language and wording would need to be adapted according to the Spanish-speaking country.

It must be noted that when measuring the work characteristics “decision-making capacity and empowerment” and “burden and stress” no instruments validated to Spanish were available. Therefore, there may be biases, and the results should be interpreted with caution. However, a direct translation was carried out and the internal consistency showed good reliability.

In addition, the purposive sampling strategy could limit the generalizability of the findings. However, this procedure was followed so that the sample would be as representative as possible in terms of the characteristics of the long-term care facilities, based on type, geographic location and funding. Moreover, participation was voluntary, and there was a low response rate in some facilities, which needs to be taken into account when interpreting some of the results. Apparently, research in the area of long-term care and particularly that focused on the workers, is a new phenomenon in

Catalonia and the staff were doubtful about participating in the study despite the guarantee of confidentiality.

Finally, we would like to point out that it was a cross-sectional study, and therefore no temporal relationships could be established.

8.9 FUTURE LINES OF RESEARCH

The completion of this doctoral thesis has met the established aims but also opens up other lines of research, which need to be addressed in other projects.

1. The supervisory support scale allows the valid and reliable measurement of the degree of satisfaction of supervised personnel and the relationship between them. The translation and validation of the Spanish supervisory support scale will promote the development of comparative studies with other Spanish-speaking countries and different sociocultural contexts.
2. A second possible line of research would be that based on the training received by the nurse supervisors working in long-term care settings and the quality of the current programs in our area of study. Content in interpersonal, clinical, organizational, leadership and management skills should be included in university education more generally. In addition, it is clear to consider a training intervention study on competencies and skills in leadership and supervision, in order to evaluate the attitude of professionals before and after the aforementioned training and to determine whether they meet the needs of the position occupied by the nursing professional and their work environment.
3. The leadership styles reported in this thesis have highlighted several aspects related to their performance, the achievement of results in job satisfaction and intention to leave and supervision behavior that may merit future research. The analysis of the style that predominate in the long-term care facilities would help to understand and design new strategies with the aim to enhance work conditions, decision making and empowerment of staff.

4. Because supervisory support is a psychological property and could not be thought to characterize specific occupations it tends to vary from workplace to workplace. Establishing an association between other roles of supervision and features of the LTC facility types may be interesting to explore and results may be used to develop relevant strategies.

5. Finally, a last line of research is proposed, based on longitudinal studies to know the factors and causes that influence the decision of the nursing staff to stay or to leave their job in the long-term care settings, as well as the impact on the quality of care provided to institutionalized older people.

CONCLUSIONS

9. CONCLUSIONS

The conclusions of this doctoral thesis are based on the analysis of the role of the nurse in leadership and supervisory positions in long-term care settings. These results confirm some of the proposed hypotheses, given that the staff (nurses, TCAEs and geriatric nursing assistants) showed greater job satisfaction when they had more decision-making capacity and empowerment, better work effectiveness, perceived support from the nurse supervising and less burden and stress. Moreover, all these factors were also associated with intention to leave the job. However, if a NH or long-term care setting was public and located in a rural area it was not associated with greater perceived supervisory support among the nurses, the TCAEs and the geriatric nursing assistants than private facilities located in an urban area.

In accordance with the established aims, we have reached the following conclusions:

- The role of the nurse occupying supervisory positions in long-term care facilities influences and has an impact on the supervised personnel.
- The translation and cross-cultural adaptation of the supervisory support scale in the Spanish context allows measurement of the perception of support received by the nursing staff and geriatric nursing assistants from the person supervising in long-term care settings.
- The Spanish Supervisory Support Scale has obtained satisfactory psychometric properties in relation to the supervisory support perceived by staff in long-term care settings and it has proven to be a valid and reliable instrument.
- The staff (nurses, TCAEs and geriatric nursing assistants) who work in long-term care facilities in Catalonia are in the majority female, have an average age of 40-50 years, normally speak Spanish or Catalan and have a full-time contract. Their work experience in the sector is around 10 years. They also present a moderate degree of decision-making capacity and empowerment and work

effectiveness. It is considered that the support received from the supervisor is modest, but the perceived burden and stress are high.

- Decision-making capacity, empowerment, work effectiveness and supervisory support are factors that are positively associated with job satisfaction. However, burden and stress are negatively associated with job satisfaction, both among nurses, TCAEs and geriatric nursing assistants. The perceived supervisory support is the predictive factor in the intention to leave the job.
- The only factor associated with perceived supervisory support is the lack of sufficient staff for carrying out the daily tasks. Conversely, perceived supervisory support is not influenced by age, years worked at the facility, staff-to-resident ratio, nor attending to the same people each day.
- The characteristics of the facility (nursing home or long-term care service, funding and geographic location) are not associated with perceived supervisory support by the staff (nurses, TCAEs and geriatric nursing assistants).

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APPENDICES

11. APPENDICES

11.1 DATA COLLECTION NOTEBOOK - NURSES



Comprensión de las Estructuras, Procesos y Resultados relacionados con el Liderazgo Eficaz en centros de Larga Estancia

Introducción

Le invitamos a participar en este estudio que tiene por objetivo obtener una mejor comprensión de los factores, comportamientos, rasgos y resultados relacionados con el liderazgo en su centro de larga estancia (LE). Este cuestionario es anónimo y confidencial, los datos se obtendrán a partir de todos los cuestionarios completados y se utilizarán para fines de investigación.

Instrucciones

Este cuestionario es solo para Enfermeros/as. Si NO es enfermero/a, por favor no conteste este cuestionario.

Al responder, piense en el centro de larga estancia en el que trabaje con MAYOR frecuencia. Por favor, conteste las preguntas en el espacio facilitado y devuelva este cuestionario al personal responsable del estudio.

Gracias.

SECCIÓN A: INFORMACIÓN SOBRE EL PARTICIPANTE

1. ¿Qué título se aproxima más al cargo que ocupa en este centro? (MARQUE CON UN CÍRCULO UNA SOLA RESPUESTA)

1. Enfermera
2. Auxiliar de enfermería y/o gerocultor
3. Otro Especificar: _____

2. ¿Es Vd. una enfermera con responsabilidades gestoras en este centro?

1. Si
2. No

3. Años de antigüedad en el centro.

_____ (Número de años)

4. Indique cuál de las siguientes opciones refleja su máximo nivel de formación en España.

1. ATS
2. DUE
3. Grado en Enfermería
4. Post-grado en Geriatría
5. Master, Especialista en Geriatría, Doctorado
6. Otro

Especificar: _____

5. En la actualidad Vd. trabaja:

1. A tiempo completo (>37,5hrs/semana)
2. A tiempo parcial (<37,5hrs/semana)
3. Esporádicamente

6. Indique su sexo.

1. Hombre
2. Mujer

7. Año de nacimiento.

19____ (Escribir año)

8. ¿Cuál es su lengua materna?_____

9. ¿Cuántos años lleva ejerciendo la función actual? _____ años

10. ¿Cuántos residentes atiende cada día?_____

11. ¿Cuántas enfermeras trabajan con usted en su mismo turno?_____

12. ¿Cuántas enfermeras se necesitan para trabajar en su unidad o en su turno?

13. Normalmente hay suficientes enfermeras trabajando en mi unidad/centro.

1. Totalmente en desacuerdo
2. En desacuerdo
3. Ni de acuerdo ni en desacuerdo
4. De acuerdo
5. Totalmente de acuerdo

14. Normalmente cuido a los mismos pacientes/residentes cada día.

1. Totalmente en desacuerdo
2. En desacuerdo
3. Ni de acuerdo ni en desacuerdo
4. De acuerdo
5. Totalmente de acuerdo

SECCIÓN B: TOMA DE DECISIONES

La finalidad de esta escala es evaluar su capacidad para tomar decisiones en el trabajo. Para cada ítem en esta sección por favor, valore en qué medida está de acuerdo en que estas afirmaciones están PRESENTES EN SU PUESTO DE TRABAJO ACTUAL. Marque con un círculo el número que representa cómo se siente al lado de la declaración.

Por favor, utilice esta escala para responder las siguientes preguntas:	Totalmente en desacuerdo	En desacuerdo	Ni de acuerdo ni en desacuerdo	De acuerdo	Totalmente de acuerdo
1.Las enfermeras decidimos quien realiza las tareas cada día.	1	2	3	4	5
2.Las enfermeras proporcionamos información que se usa para el plan de cuidados de los pacientes/residentes.	1	2	3	4	5
3.Las enfermeras decidimos que pacientes/residentes pueden ir al comedor (si se da el caso).	1	2	3	4	5
4.Estoy autorizado/a a tomar mis propias decisiones.	1	2	3	4	5
5.Tomo muchas decisiones por mi cuenta.	1	2	3	4	5
6.Trabajo con supervisión en la toma de decisiones sobre mi trabajo.	1	2	3	4	5
7.Las enfermeras trabajamos con supervisión en la toma de decisiones sobre nuestro trabajo.	1	2	3	4	5

Por favor, utilice esta escala para responder las siguientes preguntas:	Totalmente en desacuerdo	En desacuerdo	Ni de acuerdo ni en desacuerdo	De acuerdo	Totalmente de acuerdo
8. Cuando hay que hacer cambios en nuestro trabajo, normalmente se nos consulta cómo deberían ser esos cambios.	1	2	3	4	5
9. El personal supervisor nos consulta nuestra opinión, antes de tomar una decisión.	1	2	3	4	5
10. Se nos consulta para ayudar en la toma de decisiones sobre nuestro trabajo.	1	2	3	4	5
11. NO poseo todas las habilidades y conocimientos que necesito para hacer mi trabajo.	1	2	3	4	5
12. Poseo todas las habilidades y conocimientos que necesito para hacer mi trabajo y los uso.	1	2	3	4	5
13. Siento que influyo positivamente en la vida de otras personas con mi trabajo.	1	2	3	4	5
14. En este trabajo, he logrado muchas cosas (buenas) que valen la pena.	1	2	3	4	5

	Totalmente en desacuerdo	En desacuerdo	Ni de acuerdo ni en desacuerdo	De acuerdo	Totalmente de acuerdo
15. Trato muy eficazmente los problemas de mis pacientes/residentes.	1	2	3	4	5
16. Puedo crear fácilmente una atmosfera relajante con mis pacientes/residentes.	1	2	3	4	5
17. Se me permite tomar mis propias decisiones sobre cómo hacer mi trabajo.	1	2	3	4	5
18. En el trabajo, tomo muchas decisiones por mi cuenta o con otras enfermeras.	1	2	3	4	5

SECCIÓN C: ESTRÉS Y CARGA DE TRABAJO

La finalidad de esta escala es evaluar el estrés y la carga de trabajo en el cuidado de pacientes/residentes en su centro, incluyendo la interacción con ellos y sus familiares. Para cada ítem de esta sección, deberá indicar en qué grado está de acuerdo que estas afirmaciones están PRESENTES EN SU PUESTO DE TRABAJO ACTUAL. Por favor, marque con un círculo el número que representa cómo se siente al lado de la afirmación.

¿Con qué frecuencia tiene las siguientes preocupaciones acerca de sus pacientes/residentes?	Nunca	Raramente	A veces	A menudo	Muy a menudo
1. Me preocupa que mis pacientes/residentes puedan hacer algo peligroso a ellos mismos y a otros cuando no estoy allí.	1	2	3	4	5
2. Me preocupa la seguridad de mis pacientes/residentes cuando no estoy allí.	1	2	3	4	5
3. Me preocupa que alguien pueda aprovecharse de mis pacientes/residentes cuando no estoy allí para protegerlos.	1	2	3	4	5
4. Me preocupa como otros trabajadores del centro tratan a mis pacientes/residentes cuando no estoy allí.	1	2	3	4	5

¿Con qué frecuencia sus pacientes/residentes han hecho lo siguiente?	Nunca	Raramente	A veces	A menudo	Muy a menudo
5.¿Con qué frecuencia le ha gritado un paciente / residente en los últimos 6 meses?	1	2	3	4	5
6.¿Con qué frecuencia un paciente/residente le ha amenazado en los últimos 6 meses?	1	2	3	4	5
7.¿Con qué frecuencia tiene conflicto entre lo que un paciente/residente quiere que haga y lo que Vd. quiere hacer?	1	2	3	4	5
8.¿Algún paciente/residente tiene problemas de comportamiento?	1	2	3	4	5
9.¿Durante los últimos 6 meses, sus pacientes / residentes se han enojado y le han gritado?	1	2	3	4	5
10. ¿Sus pacientes/residentes le hacen demandas poco razonables como que haga tareas que Vd. no debería hacer?	1	2	3	4	5
11. ¿Se ha lesionado mientras trabajaba como enfermera en su centro?	1	2	3	4	5
12. ¿Alguna vez algún residente le ha hecho insinuaciones de carácter sexual no deseadas?	1	2	3	4	5

Las siguientes cuatro afirmaciones se refieren a comportamientos que los familiares pueden tener. ¿En qué medida está de acuerdo con estas afirmaciones?	Totalmente en desacuerdo	En desacuerdo	Ni de acuerdo ni en desacuerdo	De acuerdo	Totalmente de acuerdo
13. Algunos familiares no confían en mí.	1	2	3	4	5
14. Algunos familiares critican el trabajo que hago.	1	2	3	4	5
15. La familia espera que haga cosas que no forman parte de mi trabajo.	1	2	3	4	5
16. La familia aprecia lo que hago por el paciente / residente.	1	2	3	4	5

SECCIÓN D: EECTIVIDAD EN EL TRABAJO

La finalidad de esta escala es evaluar los recursos, apoyo y oportunidades a los cuales Vd. tiene acceso con el fin de hacer su trabajo en el centro. Para cada ítem de esta sección, por favor indique en qué grado está de acuerdo que las siguientes afirmaciones están PRESENTES EN SU PUESTO DE TRABAJO ACTUAL. Por favor, marque con un círculo el número que represente como se siente en relación a cada frase.

¿CUÁNTO DE CADA TIPO DE OPORTUNIDAD TIENE VD. EN EL TRABAJO?	Nada		Algo		Mucho
1. Trabajo desafiante.	1	2	3	4	5
2. La oportunidad de ganar nuevas habilidades y conocimientos en el trabajo.	1	2	3	4	5
3. El acceso a programas de formación para el aprendizaje de nuevos conocimientos.	1	2	3	4	5
4. La oportunidad de aprender cómo funcionan este tipo de centros.	1	2	3	4	5
5. Tareas en las que usar todas mis habilidades y conocimientos.	1	2	3	4	5
6. La oportunidad de acceder a mejores puestos de trabajo.	1	2	3	4	5
7. La oportunidad de asumir distintas funciones no relacionadas con el trabajo actual.	1	2	3	4	5

¿CUÁNTO APOYO TIENE EN SU ACTUAL EMPLEO?	Nada		Algo		Mucho
8. Información específica de cosas que hace bien.	1	2	3	4	5
9. Comentarios concretos sobre cosas que podría mejorar.	1	2	3	4	5
10. Indicaciones útiles o consejos para la resolución de problemas.	1	2	3	4	5
11. Información o sugerencias sobre posibilidades de trabajo.	1	2	3	4	5
12. Posibilidad de formación o educación adicional.	1	2	3	4	5
13. Ayuda cuando hay un problema en el trabajo.	1	2	3	4	5
14. Ayuda para obtener acceso a las personas que pueden realizar el trabajo.	1	2	3	4	5
15. Ayuda para conseguir materiales y suministros necesarios para realizar el trabajo.	1	2	3	4	5
16. Reconocimiento e incentivos por un trabajo bien hecho.	1	2	3	4	5

¿Cuánto acceso a recursos tiene Vd. en su trabajo actual?	Nada		Algo		Mucho
Tiene los materiales necesarios para el trabajo.	1	2	3	4	5
1. El tiempo disponible para hacer el papeleo necesario.	1	2	3	4	5
2. El tiempo disponible para cumplir los requisitos de trabajo.	1	2	3	4	5
3. La adquisición de ayuda puntual cuando es necesaria.	1	2	3	4	5
4. Influencia sobre las decisiones acerca de la obtención de los recursos humanos (permanentes) para su unidad.	1	2	3	4	5
5. Influencia sobre las decisiones acerca de la obtención de suministros para su unidad.	1	2	3	4	5
6. Influencia sobre las decisiones acerca de la obtención de equipamiento para su unidad.	1	2	3	4	5

SECCIÓN E: APOYO DEL SUPERVISOR

A continuación hay 15 afirmaciones que describen cómo se siente acerca de su supervisor. Por favor, sea lo más honesto posible. Sus respuestas son confidenciales y no serán compartidas con otras personas que trabajan con usted. Si usted trabaja con más de un supervisor, por favor responda a estas preguntas en relación al supervisor con el que trabaje más a menudo.

	TOTALMENTE EN DESACUERDO	EN DESACUERDO	NI DE ACUERDO NI EN DESACUERDO	DE ACUERDO	TOTALMENTE DE ACUERDO
1. Mi supervisor reconoce mi habilidad para proporcionar cuidados de calidad.	1	2	3	4	5
2. Mi supervisor intenta conocer mis necesidades.	1	2	3	4	5
3. Mi supervisor me conoce lo suficiente para saber cuándo me preocupa el cuidado de mis pacientes/residentes.	1	2	3	4	5
4. Mi supervisor intenta entender mi punto de vista cuando le hablo.	1	2	3	4	5
5. Mi supervisor	1	2	3	4	5

<p>intenta conocer mis necesidades, una manera es informándome de lo que se espera de mí al trabajar con mis pacientes/residentes.</p>					
<p>6. Puedo confiar en mi supervisor cuando pido ayuda, por ejemplo, si tengo problemas con mis compañeros de trabajo o con los pacientes/residentes y/o los familiares.</p>	1	2	3	4	5
<p>7. Mi supervisor me mantiene informado de la mayoría de los cambios en el entorno laboral u organización.</p>	1	2	3	4	5
<p>8. Puedo confiar en que mi supervisor será receptivo/a a mis comentarios.</p>	1	2	3	4	5

9. Mi supervisor me mantiene informado de cualquiera de las decisiones que se toman en cuanto a mis pacientes/residentes.	1	2	3	4	5
10. Mi supervisor establece un equilibrio entre las preocupaciones de los pacientes/residentes y/o familias y las mías.	1	2	3	4	5
11. Mi supervisor me anima incluso en situaciones difíciles.	1	2	3	4	5
12. Mi supervisor me muestra su reconocimiento cuando hago un buen trabajo.	1	2	3	4	5
13. Mi supervisor me respeta como persona.	1	2	3	4	5
14. Mi supervisor me proporciona tiempo para	1	2	3	4	5

escucharme.					
15. Mi supervisor reconoce mis fortalezas y áreas a desarrollar.	1	2	3	4	5

SECCIÓN F: SATISFACCIÓN EN EL TRABAJO

Por favor, indique su nivel de satisfacción en cada uno de los siguientes aspectos en su actual trabajo en este centro. Marque con un círculo la respuesta que más claramente indique cómo se siente en relación a cada afirmación.

	Totalmente en desacuerdo	En desacuerdo	Ligeramente en desacuerdo	Ni de acuerdo ni en desacuerdo	Ligeramente de acuerdo	De acuerdo	Totalmente de acuerdo
1. En general, estoy muy satisfecho con mi trabajo.	1	2	3	4	5	6	7
2. Con frecuencia pienso en abandonar este trabajo.	1	2	3	4	5	6	7
3. En general estoy satisfecho con el tipo de trabajo que hago en este empleo.	1	2	3	4	5	6	7
4. La mayoría de mis compañeros están muy satisfechos con este trabajo.	1	2	3	4	5	6	7
5. Mis compañeros piensan a	1	2	3	4	5	6	7

menudo en dejar el trabajo.							
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11.2 DATA COLLECTION NOTEBOOK - AUXILIARY PERSONNEL



Comprensión de las Estructuras, Procesos y Resultados relacionados con el Liderazgo Eficaz en centros de Larga Estancia

Introducción

Le invitamos a participar en este estudio que tiene por objetivo obtener una mejor comprensión de los factores, comportamientos, rasgos y resultados relacionados con el liderazgo en su centro de larga estancia (LE). Este cuestionario es anónimo y confidencial, los datos se obtendrán a partir de todos los cuestionarios completados y se utilizarán para fines de investigación.

Instrucciones

Este cuestionario es solo para Auxiliares de Enfermería/Geriatría. Si NO es auxiliar de Enfermería/Geriatría, por favor no conteste este cuestionario.

Al responder, piense en el centro de larga estancia en el que trabaje con MAYOR frecuencia. Por favor, conteste las preguntas en el espacio facilitado y devuelva este cuestionario al personal responsable del estudio.

Gracias.

SECCIÓN A: INFORMACIÓN SOBRE EL PARTICIPANTE

1. ¿Qué título se aproxima más al cargo que ocupa en este centro? (MARQUE CON UN CÍRCULO UNA SOLA RESPUESTA)

1. Auxiliar de Enfermería
2. Auxiliar de Geriatría
3. Otro

Especificar: _____

2. Años de antigüedad en el centro.

_____ (Número de años)

3. Indique cuál de las siguientes opciones refleja su máximo nivel de formación en España.

1. Técnico en Auxiliar de Enfermería
2. Auxiliar de Geriatría
3. Estudiante de Enfermería
4. Otro

Especificar: _____

4. En la actualidad Vd. trabaja:

1. A tiempo completo (>37,5hrs/semana)
2. A tiempo parcial (<37,5hrs/semana)
3. Esporádicamente

5. Indique su sexo.

1. Hombre
2. Mujer

6. Año de nacimiento.

19____ (Escribir año)

7. ¿Cuál es su lengua materna? _____

8. ¿Cuántos años lleva ejerciendo la función actual? _____ años

9. ¿Cuántos residentes atiende cada día? _____

10. ¿Cuántas auxiliares trabajan con usted en su mismo turno? _____

11. ¿Cuántas auxiliares se necesitan para trabajar en su unidad o en su turno? _____

12. Normalmente hay suficientes auxiliares trabajando en mi unidad/centro.

1. Totalmente en desacuerdo
2. En desacuerdo
3. Ni de acuerdo ni en desacuerdo
4. De acuerdo
5. Totalmente de acuerdo

13. Normalmente cuido a los mismos pacientes/residentes cada día.

1. Totalmente en desacuerdo
2. En desacuerdo
3. Ni de acuerdo ni en desacuerdo
4. De acuerdo
5. Totalmente de acuerdo

SECCIÓN B: TOMA DE DECISIONES

La finalidad de esta escala es evaluar su capacidad para tomar decisiones en el trabajo. Para cada ítem en esta sección por favor, valore en qué medida está de acuerdo en que estas afirmaciones están PRESENTES EN SU PUESTO DE TRABAJO ACTUAL. Marque con un círculo el número que representa cómo se siente al lado de la declaración.

	Totalmente en desacuerdo	En desacuerdo	Ni de acuerdo ni en desacuerdo	De acuerdo	Totalmente de acuerdo
1. Las auxiliares decidimos quien realiza las tareas cada día.	1	2	3	4	5
2. Las auxiliares proporcionamos información que se usa para el plan de cuidados de los pacientes/residentes.	1	2	3	4	5
3. Las auxiliares decidimos que pacientes/residentes pueden ir al comedor (si se da el caso).	1	2	3	4	5
4. Estoy autorizado/a a tomar mis propias decisiones.	1	2	3	4	5
5. Tomo muchas decisiones por mi cuenta.	1	2	3	4	5
6. Trabajo con supervisión en la toma de decisiones sobre mi	1	2	3	4	5

trabajo.					
7. Las auxiliares trabajamos con supervisión en la toma de decisiones sobre nuestro trabajo.	1	2	3	4	5
8. Cuando hay que hacer cambios en nuestro trabajo, normalmente se nos consulta cómo deberían ser esos cambios.	1	2	3	4	5
9. El personal supervisor nos consulta nuestra opinión, antes de tomar una decisión.	1	2	3	4	5
10. Se nos consulta para ayudar en la toma de decisiones sobre nuestro trabajo.	1	2	3	4	5
11. NO poseo todas las habilidades y conocimientos que necesito para hacer mi trabajo.	1	2	3	4	5
12. Poseo todas las habilidades y conocimientos que necesito para hacer mi trabajo y los uso.	1	2	3	4	5

13. Siento que influyo positivamente en la vida de otras personas con mi trabajo.	1	2	3	4	5
14. En este trabajo, he logrado muchas cosas (buenas) que valen la pena.	1	2	3	4	5
15. Trato muy eficazmente los problemas de mis pacientes/residentes.	1	2	3	4	5
16. Puedo crear fácilmente una atmosfera relajante con mis pacientes/residentes.	1	2	3	4	5
17. Se me permite tomar mis propias decisiones sobre cómo hacer mi trabajo.	1	2	3	4	5
18. En el trabajo, tomo muchas decisiones por mi cuenta o con otras auxiliares.	1	2	3	4	5

SECCIÓN C: ESTRÉS Y CARGA DE TRABAJO

La finalidad de esta escala es evaluar el estrés y la carga de trabajo en el cuidado de pacientes/residentes en su centro, incluyendo la interacción con ellos y sus familiares. Para cada ítem de esta sección, deberá indicar en qué grado está de acuerdo que estas afirmaciones están PRESENTES EN SU PUESTO DE TRABAJO ACTUAL. Por favor, marque con un círculo el número que representa cómo se siente al lado de la afirmación.

¿Con qué frecuencia tiene las siguientes preocupaciones acerca de sus pacientes/residentes?	Nunca	Raramente	A veces	A menudo	Muy a menudo
1. Me preocupa que mis pacientes/residentes puedan hacer algo peligroso a ellos mismos y a otros cuando no estoy allí.	1	2	3	4	5
2. Me preocupa la seguridad de mis pacientes/residentes cuando no estoy allí.	1	2	3	4	5
3. Me preocupa que alguien pueda aprovecharse de mis pacientes/residentes cuando no estoy allí para protegerlos.	1	2	3	4	5
4. Me preocupa como otros trabajadores	1	2	3	4	5

del centro tratan a mis pacientes/residentes cuando no estoy allí.					
¿Con qué frecuencia sus pacientes/residentes han hecho lo siguiente?	Nunca	Raramente	A veces	A menudo	Muy a menudo
5. ¿Con qué frecuencia le ha gritado un paciente / residente en los últimos 6 meses?	1	2	3	4	5
6. ¿Con qué frecuencia un paciente/residente le ha amenazado en los últimos 6 meses?	1	2	3	4	5
7. ¿Con qué frecuencia tiene conflicto entre lo que un paciente/residente quiere que haga y lo que Vd. quiere hacer?	1	2	3	4	5
8. ¿Algún paciente/residente tiene problemas de comportamiento?	1	2	3	4	5
9. ¿Sus pacientes/residentes le hacen demandas poco razonables como que haga	1	2	3	4	5

tareas que Vd. no debería hacer?					
10. ¿Se ha lesionado mientras trabajaba como auxiliar en su centro?	1	2	3	4	5
11. ¿Alguna vez algún residente le ha hecho insinuaciones de carácter sexual no deseadas?	1	2	3	4	5
Las siguientes cuatro afirmaciones se refieren a comportamientos que los familiares pueden tener. ¿En qué medida está de acuerdo con estas afirmaciones?	Totalmente en desacuerdo	En desacuerdo	Ni de acuerdo ni en desacuerdo	De acuerdo	Totalmente de acuerdo
12. Algunos familiares no confían en mí.	1	2	3	4	5
13. Algunos familiares critican el trabajo que hago.	1	2	3	4	5
14. La familia espera que haga cosas que no forman parte de mi trabajo.	1	2	3	4	5
15. La familia aprecia lo que hago por el paciente / residente.	1	2	3	4	5

SECCIÓN D: EFECTIVIDAD EN EL TRABAJO

La finalidad de esta escala es evaluar los recursos, apoyo y oportunidades a los cuales Vd. tiene acceso con el fin de hacer su trabajo en el centro. Para cada ítem de esta sección, por favor indique en qué grado está de acuerdo que las siguientes afirmaciones están PRESENTES EN SU PUESTO DE TRABAJO ACTUAL. Por favor, marque con un círculo el número que represente como se siente en relación a cada frase.

¿CUÁNTO DE CADA TIPO DE OPORTUNIDAD TIENE VD. EN EL TRABAJO?	Nada		Algo		Mucho
1. Trabajo desafiante.	1	2	3	4	5
2. La oportunidad de ganar nuevas habilidades y conocimientos en el trabajo.	1	2	3	4	5
3. El acceso a programas de formación para el aprendizaje de nuevos conocimientos.	1	2	3	4	5
4. La oportunidad de aprender cómo funcionan este tipo de centros.	1	2	3	4	5
5. Tareas en las que usar todas mis habilidades y conocimientos.	1	2	3	4	5
6. La oportunidad de acceder a mejores puestos de trabajo.	1	2	3	4	5
7. La oportunidad de asumir distintas funciones no relacionadas con el trabajo actual.	1	2	3	4	5

¿CUÁNTO APOYO TIENE EN SU ACTUAL EMPLEO?	Nada		Algo		Mucho
8. Información específica de cosas que hace bien.	1	2	3	4	5
9. Comentarios concretos sobre cosas que podría mejorar.	1	2	3	4	5
10. Indicaciones útiles o consejos para la resolución de problemas.	1	2	3	4	5
11. Información o sugerencias sobre posibilidades de trabajo.	1	2	3	4	5
12. Posibilidad de formación o educación adicional.	1	2	3	4	5
13. Ayuda cuando hay un problema en el trabajo.	1	2	3	4	5
14. Ayuda para obtener acceso a las personas que pueden realizar el trabajo.	1	2	3	4	5
15. Ayuda para conseguir materiales y suministros necesarios para realizar el trabajo.	1	2	3	4	5
16. Reconocimiento e incentivos por un trabajo bien hecho.	1	2	3	4	5

¿Cuánto acceso a recursos tiene Vd. en su trabajo actual?	Nada		Algo		Mucho
17. Tiene los materiales necesarios para el trabajo.	1	2	3	4	5
18. El tiempo disponible para hacer el papeleo necesario.	1	2	3	4	5
19. El tiempo disponible para cumplir los requisitos de trabajo.	1	2	3	4	5
20. La adquisición de ayuda puntual cuando es necesaria.	1	2	3	4	5
21. Influencia sobre las decisiones acerca de la obtención de los recursos humanos (permanentes) para su unidad.	1	2	3	4	5
22. Influencia sobre las decisiones acerca de la obtención de suministros para su unidad.	1	2	3	4	5
23. Influencia sobre las decisiones acerca de la obtención de equipamiento para su unidad.	1	2	3	4	5

SECCIÓN E: APOYO DEL SUPERVISOR

A continuación hay 15 afirmaciones que describen cómo se siente acerca de su supervisor. Compruebe el cuadro que refleja su relación con su supervisor. Por favor, sea lo más honesto posible. Sus respuestas son confidenciales y no serán compartidas con otras personas que trabajan con usted. Si usted trabaja con más de un supervisor, por favor responda a estas preguntas en relación al supervisor con el que trabaje más a menudo.

	Totalmente en desacuerdo	En desacuerdo	Ni de acuerdo ni en desacuerdo	De acuerdo	Totalmente de acuerdo
1. Mi supervisor reconoce mi habilidad para proporcionar cuidados de calidad.	1	2	3	4	5
2. Mi supervisor intenta conocer mis necesidades.	1	2	3	4	5
3. Mi supervisor me conoce lo suficiente para saber cuándo me preocupa el cuidado de mis pacientes/residentes.	1	2	3	4	5
4. Mi supervisor intenta entender mi punto de vista cuando le hablo.	1	2	3	4	5
5. Mi supervisor intenta conocer mis necesidades, una manera es informándome de lo que se espera de mí al trabajar con mis pacientes/residentes.	1	2	3	4	5

6. Puedo confiar en mi supervisor cuando pido ayuda, por ejemplo, si tengo problemas con mis compañeros de trabajo o con los pacientes/residentes y/o los familiares.	1	2	3	4	5
7. Mi supervisor me mantiene informado de la mayoría de los cambios en el entorno laboral u organización.	1	2	3	4	5
8. Puedo confiar en que mi supervisor será receptivo/a a mis comentarios.	1	2	3	4	5
9. Mi supervisor me mantiene informado de cualquiera de las decisiones que se toman en cuanto a mis pacientes/residentes.	1	2	3	4	5
10. Mi supervisor establece un equilibrio entre las preocupaciones de los pacientes/residentes y/o familias y las mías.	1	2	3	4	5

11. Mi supervisor me anima incluso en situaciones difíciles.	1	2	3	4	5
12. Mi supervisor me muestra su reconocimiento cuando hago un buen trabajo.	1	2	3	4	5
13. Mi supervisor me respeta como persona.	1	2	3	4	5
14. Mi supervisor me proporciona tiempo para escucharme.	1	2	3	4	5
15. Mi supervisor reconoce mis fortalezas y áreas a desarrollar.	1	2	3	4	5

SECCIÓN F: SATISFACCIÓN EN EL TRABAJO

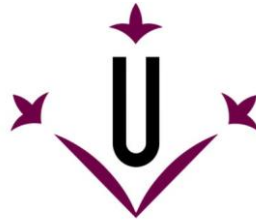
Por favor, indique su nivel de satisfacción en cada uno de los siguientes aspectos en su actual trabajo en este centro. Marque con un círculo la respuesta que más claramente indique cómo se siente en relación a cada afirmación.

	Completa mente en desacuerdo	En desacuer do	Ligerame nte en desacuerd o	Ni de acuerdo ni en desacuer do	Ligerame nte de acuerdo	De acuer do	Comple tamente de acuerdo
1. En general, estoy muy satisfecho con mi trabajo.	1	2	3	4	5	6	7
2. Con frecuencia pienso en abandonar este trabajo.	1	2	3	4	5	6	7
3. En general estoy satisfecho con el tipo de trabajo que hago en este empleo.	1	2	3	4	5	6	7
4. La mayoría de mis compañeros están muy satisfechos con este trabajo.	1	2	3	4	5	6	7

5. Mis compañeros piensan a menudo en dejar el trabajo.	1	2	3	4	5	6	7
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Gracias por participar - ¡Su contribución es valiosa!

11.3 "CROSS-CULTURAL VALIDATION AND PSYCHOMETRIC TESTING OF THE SUPPORTIVE SUPERVISORY SCALE IN SPANISH" MANUSCRIPT



Universitat de Lleida

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Cross Cultural Validation and Psychometric Testing of the Supportive Supervisory Scale in Spanish

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Title: Cross Cultural Validation and Psychometric Testing of the Supportive Supervisory Scale in Spanish

ABSTRACT

Objective: To develop and psychometrically test the Supervisory Support Scale in Spanish. The Spanish version of the Supportive Supervisory Scale could be useful for cross-cultural comparisons of supervisory support, which is a key factor to improving work relationships in long-term care facilities.

Design: Validation was carried out with 405 participants in 37 long-term care facilities between October 2015 and July 2016 in two phases: 1) Translation and retrotranslation using “forward-back-forward” method; 2) Psychometric Testing Procedures, testing the scale’s reliability, dimensionality and construct validity.

Methods: One-way analysis of variance was the test of significance performed to examine the differences among the facilities and Pearson product-moment correlations were used to assess construct validation of the scale. After the mean and standard deviation were calculated for each supervisory score for each facility. Structural equation modeling was used to confirm the dimensions of the scale.

Results: The item-to-item correlations were positive, ranging from 0.44 to 0.78, indicating good reliability of the scale. The coefficient alpha for the total scale was 0.96. The 15-item had mean item scores which ranged from 2.89 to 3.96 (SD = 1.01–1.26). Standardized factor loadings ranged within a narrow range: 0.75-0.86 for the “respecting uniqueness” latent variable and 0.76-0.88 for the “being reliable” latent variable. Construct validity was demonstrated as measure was positively associated with job satisfaction ($r = 0.412, p < 0.0001$) and was negatively correlated with HCAs’ stress and burden.

Conclusion: There is evidence for the validity of the supervisory support perceived by staff in Catalonia nursing facilities, despite cultural and health service contextual differences. The two-factor solution identified in the original scale that highlighted two key attributes of the supervisor; being reliable and respecting uniqueness, was also demonstrated in the Spanish Supervisory Support Scale as there was a moderate fit of the model.

Key words: instrument translation; long-term care facilities; nurse leadership; supervisory support scale; supervisors; nursing

SUMMARY STATEMENT OF IMPLICATIONS FOR PRACTICE

What does this research add to existing knowledge in gerontology?

- To adapt and translate a tool to measure supervisors' supportive characteristics working in long-term care facilities designed in Canada, to make it culturally viable in Spanish.
- The Spanish version of the Supportive Supervisory Scale is a key factor to improving work relationships in long-term care facilities, and ultimately the quality of care delivered to patients.

What are the implications of this new knowledge for nursing care with older people?

- The Supportive Supervisory Scale is a useful tool that measures supportive supervision, conceptualized as the extent to which regulated nurses demonstrated empathy and reliability while supervising health care aides.
- The relationships and coordination within professionals are key factors in the development of the routinely tasks and the organization of care.

How could the findings be used to influence policy or practice or research or education?

- The Spanish version of the Supportive Supervisory Scale could be useful for cross-cultural comparisons of supervisory support.
- The two-factor solution identified in the original scale that highlighted two key attributes of the supervisor; being reliable and respecting uniqueness, was also demonstrated in the Spanish Supervisory Support Scale.

Introduction

Globally, health systems are facing challenges linked to the growth of an ageing population and their dependence on the health care system which may vary based on their specific health care needs. A policy response that includes support for cost-effective health services is required (Song & Chen, 2015) while maintaining a focus on quality. Increasing numbers of older people in the population will require more long-term care facilities (United Nations & Department of Economic and Social Affairs, 2017). With this growing demand, attention has focused on leadership and staff management in long-term care facilities, including the implications when nurses in supervisory (or leadership) roles are placed in these positions without any additional education or preparation (West et al., 2016). Interprofessional relationships and the coordination of professionals are key factors in the design, organization and delivery of care. Specifically in long-term care facilities, where the role of nurses as leaders of care could contribute to better outcomes and greater stability in the work environment (Corazzini et al., 2010), the research in this field of inquiry has been limited (McGilton et al., 2016).

More recently, there is growing attention to the characteristics of the effective nurse leader. This includes the supportive dimension of leadership, which include actions that develop supportive relationships among team members (Akerjordet & Severinsson, 2008). One of the key factors of an effective supervisor is their ability to nurture and maintain positive relationships with each staff member (McGilton, 2010). Health professionals have to work together in interdisciplinary approaches to care. Collaborative respectful relationship within teams leads to the development of advanced competencies that contribute to the achievement of best practices. The leader who respects the uniqueness of each team member fosters an environment where their relationships with the team and its members flourish (Sousa & Rojjanasrirat, 2011). Supportive leadership contributes to work satisfaction and the development of a qualified team resulting in a shared understanding of the goals of care and the achievement of the best possible outcomes (Chamberlain et al., 2016). Effective nurse supervisors foster improved work environments and determine the staff's capability to attend residents' needs (Escrig-Pinol, Hempinstall et al., 2019)

The Supportive Supervisory Scale of regulated nurses in long-term care facilities, developed by McGilton (2010), is a useful tool that measures supportive supervision, conceptualized as the extent to which regulated nurses demonstrated empathy and reliability while supervising health care aides (i.e. often referred to as nursing assistants or nursing aides). The Supervisory Support Scale has been used in several studies related to job satisfaction and intent to turn over among health care aides in long-term care facilities (Bethell et al., 2018; Caspar et al., 2019). Construct validation of the Supervisory Support Scale has been demonstrated in that the supportive supervisors (as measured with the Supervisory Support Scale) have been

1
2
3
4 positively correlated with health care aides' job satisfaction, and a negative relationship has been
5 associated with the amount of supportive supervision and the stress of their staff, that is, more
6 satisfied with the supervisor and less stress perceived in the workplace (McGilton et al., 2007).
7 But the conception and development of the Supervisory Support Scale was made in Canada and
8 its use outside of the Canadian system is limited.
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11 A similar validated tool is necessary in the Spanish context, in order to gain an
12 understanding of effective supervision in Spanish long-term care facilities. The Supervisory
13 Support Scale is a tool which can be used in human resources, team management and research,
14 and with the adaptation and validation to the Spanish context, cross-cultural comparisons could
15 be made if there is evidence that this translated scale has good psychometric properties. The
16 cultural translation of the scale into Spanish provides an extension to the application to other
17 Spanish speaking countries (even as, depending on the country of implementation, we
18 recommend a review of local meanings and differences on work positions and their
19 categorizations).
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24 The purpose of this study was to translate the Supervisory Support Scale to make it
25 culturally viable, and to determine its reliability and validity in the Catalonia region in Spain and
26 to compare the factor structures of the tool between Canada and Spain.
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29 30 **Design**

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32 An analysis of responses to the Supervisory Support Scale was undertaken to obtain reliability
33 and validity information about the Supervisory Support Scale Spanish Version. This process of
34 cultural adaptation was based on previous steps related to instrument translation
35 (Maneesriwongul & Dixon, 2004; Sousa & Rojjanasrirat, 2011) and was executed in **two phases.**
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39 Phase 1: Translation and retrotranslation using "forward-back-forward" method.
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42 In this phase, three bilingual linguistic experts translated the English scale into Spanish and the
43 first version of the Spanish instrument was created when they achieved consensus. Then two
44 different linguists translated this first Spanish version into English independently. Afterwards, the
45 new English version was translated back into Spanish again and a second version was created.
46 During the creation of the second final Spanish version, an agreement was reached by three
47 nurses on the best translation while attending to the cultural context of the tool. For example,
48 during the consensus process, an agreement about the translation of specific terms (i.e. long-
49 term care-Facilities/Centros de Larga Estancia) was achieved, words related with the name of the
50 work position (charge nurse = enfermera con responsabilidades gestoras; role = rol; current job
51 = función actual) and other linguistic, grammatical and semantic issues were addressed to
52 facilitate the understanding of the scale by the long-term care staff. Overall, the individual items
53 appeared to have face validity and Spanish speaking participants were able to understand the
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3 items. The amended Spanish version of the tool retained the same form and consisted of the
4 same 15 questions as the Canadian version. It also included a 5-point scale to measure the
5 supervisors' behaviors, with response options "always," "often," "occasionally," "seldom," and
6 "never" similar to the original scale (McGilton, 2010).
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10 Furthermore, in terms of who was being asked to complete the scale and rate their
11 supervisors, we had to adapt the name to identify the comparable work position in the Spanish
12 context. In Canada the staff member that usually completed the scale was the health care aides
13 (McGilton, 2010) however in Spain both, the auxiliares de enfermería (nursing assistants) and the
14 auxiliares de geriatría/gerocultores (geriatric assistants) were asked to complete the scale.
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17 Phase 2: Psychometric Testing Procedures

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19 We aimed to recruit a representative sample of the 928 long-term care centers in Catalonia. To
20 do so, we set a confidence level of 95% and precision of +/- 0.05 (SD 0.15), resulting in a required
21 sample size of at least 34 long-term care facilities.
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24 Participants

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26 The Spanish version of the scale was completed by 405 participants the majority of whom were
27 either Spanish or Catalan. Only 7% of the participants had a first language different other than
28 Spanish or Catalan. Ninety- two percent of the participants were women, and 82% had full-time
29 positions. The average age was 42.83 years old (SD 12.26) with an average of time working in the
30 center of 9.80 years (SD 7.42). More characteristics of the sample of the health care aides are
31 shown in Table 1.
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34 Data collection

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36 The data collection took place between October 2015 and July 2016 with a voluntary
37 participation. Validation was carried out with 405 participants after rejecting void questionnaires
38 (badly fulfilled, blank). We were able to distribute the measure in 37 facilities as part of a larger
39 study, and they were purposively sampled according to variations in the facility sized and
40 different types of funding (public, private or mixed). The research protocol was approved by the
41 Ethics Committee of the Official College of Nurses of Lleida (089352). The centers and subjects
42 participated after being informed and guaranteed that data collection was on a volunteer basis
43 and all information was anonymized.
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50 Data analysis

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53 An analysis of the replies to the Spanish Supervisory Support Scale was undertaken to evaluate
54 its reliability, validity, and dimensionality. Exploratory factor analysis was used to understand its
55 factor structure: (1) eigenvalues of the polychoric correlation matrix were compared to
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3 eigenvalues expected from random data using Parallel Analysis (Hayton, Allen, & Scarpello,
4 2004), and (2) rotated factor loadings of the Spanish version were compared to those of the
5 English version (McGilton, 2010). Confirmatory factor analysis using structural equation
6 modelling evaluated the validity and reliability of the measures and the goodness-of-fit. Analyses
7 were performed with Stata 16 (StataCorp, 2019).
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10
11 The Spanish Supervisory Support Scale was assessed for discriminative validity by
12 examining if supervisory support varied between the different facilities in Spain. It was
13 hypothesized that there would be differences between the 37 long-term care facilities in Spain,
14 given the differing workload of the supervisors within the facilities as some were private and for
15 profit. One-way analysis of variance was the test of significance performed to examine the
16 differences among the facilities. After, the mean and standard deviation were calculated for each
17 supervisory score for each facility.
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20 21 22 **Results**

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24 As less than 1% of the data were missing; no corrections had to be made. Scores on the Spanish
25 Supervisory Support Scale were found to be distributed normally and covered the range of
26 possible scores between 15–75. The mean score was 49 out of a possible 75 for the supervisors,
27 which represents a moderate level of support.
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30 31 **Reliability**

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33 The coefficient alpha for the Spanish Supervisory Support Scale was 0.96 and item-to-item
34 correlations ranged from +0.44 to +0.78 (Table 2); indicating good reliability for the scale. Mean
35 item scores ranged from 2.89 to 3.96 with standard deviations from 1.01 to 1.26 (Table 3).
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38 The exploratory factor analysis showed that the two factor structure of the Spanish Supervisory
39 Support Scale was consistent with the structure of the original English version. A parallel analysis
40 comparing the eigenvalues of the polychoric correlation matrix with random expectations
41 justified two factors. Rotated factor loadings upheld the pattern of item membership in each
42 factor. The confirmatory factor analysis supported the validity and reliability of these measures
43 and confirmed a factor structure where 10 items represented the supervisor's ability to respect
44 the uniqueness of the staff member, "respecting uniqueness"; and 5 items represented the
45 supervisor's ability to be reliable with staff, "being reliable". Standardized factor loadings ranged
46 within a narrow range: 0.75-0.86 for the "respecting uniqueness" latent variable and 0.76-0.88
47 for the "being reliable" latent variable. The fit of the model was moderate (Table 3).
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52 53 **Discriminant Validity**

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3 The discriminant validity of the Spanish Supervisory Support Scale differed significantly between
4 facilities ($F=4.13$, $p<0.0001$, see Table 4). For example, within Facilities 9, 13, and 35 scores on
5 the tool are significantly higher than those for Facilities 32, 14, and 11 (Bonferroni multiple-
6 comparison tests $p < .05$, see Table 4).
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9 Discussion

10 We adapted a tool developed in Canada to measure the supportive capacities of supervisors in
11 Catalonia, Spain. The tool was translated into Spanish and refined by experts and nurses working
12 in Spain. Then, we determined the measure's reliability and selected items to analyze the factors
13 structure. The psychometric testing of the Spanish Supervisory Support Scale was carried out
14 with a large Spanish sample of 'auxiliares de enfermería' and 'auxiliares de geriatría/gerocultores'
15 (i.e., Spanish health care aides) and the findings lend support for the scale's utility. It appears that
16 supportive supervisors in Spanish long-term care facilities may be of importance to the work
17 environments of health care aides as it is in Canada.
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20 In terms of the reliability of the adapted scale, the results are similar to those of the
21 original (McGilton, 2010). A positive internal consistency between items was found a range
22 between 0.44 and 0.78 with an alpha of 0.96, while the original scale situated between 0.40 and
23 0.70 with an alpha of 0.94.
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25 The two-factor solution identified in the original scale that highlighted two key attributes
26 of the supervisor; being reliable and respecting uniqueness, was also demonstrated in the
27 Spanish Supervisory Support Scale as there was a moderate fit of the model. It would appear
28 that in Catalonia, supervisors working in long-term care facilities are also expected to be reliable
29 and dependable with the staff they supervise. As found in other work settings, having a
30 supportive supervisor who can be relied upon to facilitate workload and support care helps to
31 create a healthy work environment (Escrig-Pinol, Corazzini et al., 2019). In addition, respecting
32 the uniqueness of the health care aides in Spanish nursing facilities is also important for the
33 supervisor as respecting uniqueness has been found by other researchers (Sousa & Rojjanasirat,
34 2011). Taking time to listen to staff, recognizing their strengths, meeting their needs, helps build
35 effective work relationships necessary for the work that is required in long-term care facilities
36 (McGilton, 2010). In addition, evidence of the construct validity of the Spanish version of the
37 Supervisory Support Scale was demonstrated in a similar process used in earlier work by
38 McGilton et al (2007), in that, if staff perceived their supervisors in Spanish long-term care
39 facilities as supportive this was positively associated with staff members' job satisfaction.
40 Likewise, if they perceived their supervisors as supportive, they perceived less burden in their
41 workplace. It appears that supervisors can influence health care aides' job satisfaction and intent
42 to stay (Bethell et al., 2018; Chamberlain et al., 2016) and as such, more education and support
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3 might be required to ensure supervisors in Spanish long-term care facilities have the prerequisite
4 knowledge, skills and attitudes to supervise effectively.
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7 The discriminate validity of the scale was also examined. There were significant variations
8 between health care aides' assessments of their supervisors in different Catalan long-term care
9 facilities. This implies that the Spanish Supervisory Support Scale can identify differences in the
10 amount of supportive supervision which occurs in the different long-term care facilities in the
11 region, which is similar to results obtained by the English Supervisory Support Scale tool in
12 Canada (McGilton, 2010). The ability to discriminate has yielded the opportunity to conduct case
13 study research focusing on long-term care facilities with either a high or low rating in terms of
14 supervisory support (Escrig-Pinol, Corazzini et al., 2019). As the scale did not require major
15 modifications with participants in different countries speaking different languages, the
16 opportunity to conduct cross-cultural comparison in future work is encouraging.
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22 Understanding best practices in long-term care facilities internationally is important work
23 as we need to learn from one another and identify best practices. Efforts to create common data
24 metrics for global use will support thriving among long-term care residents and staff and an
25 international team of researchers are currently focusing on this endeavor (Corazzini et al., 2019).
26 WE-THRIVE (Worldwide Elements To Harmonize Research In Long-term care Living
27 Environments), is a consortium with the main goal to develop jointly an international long-term
28 care research measurement body of knowledge that can be used in diverse long-term care
29 facilities (including low and middle socio-economic countries) for comparative research
30 (Corazzini et al., 2019), and the Supervisory Support Scale tool may be one such instrument to
31 advance this goal.
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37 **Limitations**

38 The study has some limitations and the first is related to the original scale. It is based on a
39 relational theory, not a leadership theory, and the validation of the scale occurred only in one
40 Canadian province. However, given that some leadership theories are grounded in the
41 importance of relationships this is not problematic. The Spanish translated version was only
42 validated in the Catalan context, but the measure was easy to use and appears applicable to other
43 Spanish speaking countries, because it does not include cultural connotations that made
44 translation difficult to achieve.
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49 **Conclusion**

50 We demonstrated that the amount of supervisory support perceived by their staff can be
51 reported. The Canadian designed SSS was translated to Spanish and there is evidence for the
52 validity of the measure. Future research is required to determine if different factors contribute
53 to the ability of a supervisor to be supportive in different societies and how this then relates to
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4 staff or resident outcomes. This may ultimately lead to international research focused on how to
5 improve supervisory effectiveness through interventions focused at the individual and facility
6 level in English and Spanish speaking countries.
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Table 1: Characteristics of the sample of the health care aides (n=405).

	Health Care Aides (n = 405) Number (% of total)
Gender, female	372 (92%)
First spoken language	
Spanish	223 (55%)
Catalan	136 (34%)
Catalan-Spanish	16 (4%)
Other	30 (7%)
Education	
Nursing Assistant	264 (64%)
Geriatric Assistant	105 (26%)
Trainee Nurse	10 (3%)
Other	26 (7%)
Job Title	
Nursing Assistant	216 (53%)
Geriatric Assistant	181 (44%)
Other	8 (2%)
Currently working	
Full time	332 (82%)
Part time	63 (15%)
Causal	10 (3%)
Years worked in this role [quartiles: 25 th %tile, median, 75 th %tile]	[5, 11, 16]
Years worked in Long-Term Care [quartiles]	[4, 8, 13]
Number of residents responsible for [quartiles]	[15, 25, 35]
Number of support workers you work with [quartiles]	[1, 3, 4]

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Table 2. Item-to-item correlations for 15-item Supportive Supervisory Scale, for health care aides

Item	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15
1	1														
2	0.78	1													
3	0.66	0.72	1												
4	0.67	0.75	0.67	1											
5	0.67	0.76	0.70	0.74	1										
6	0.55	0.67	0.58	0.72	0.68	1									
7	0.46	0.53	0.44	0.51	0.55	0.57	1								
8	0.56	0.65	0.57	0.74	0.67	0.75	0.66	1							
9	0.52	0.57	0.50	0.56	0.59	0.58	0.74	0.67	1						
10	0.56	0.62	0.56	0.60	0.65	0.65	0.65	0.69	0.72	1					
11	0.65	0.72	0.63	0.68	0.70	0.68	0.60	0.75	0.64	0.71	1				
12	0.67	0.71	0.61	0.64	0.69	0.62	0.59	0.70	0.60	0.67	0.78	1			
13	0.55	0.59	0.55	0.64	0.61	0.62	0.54	0.67	0.57	0.58	0.61	0.59	1		
14	0.54	0.61	0.56	0.60	0.63	0.63	0.59	0.71	0.61	0.62	0.68	0.63	0.66	1	
15	0.63	0.68	0.65	0.63	0.66	0.64	0.55	0.66	0.57	0.62	0.66	0.74	0.59	0.70	1

Note: All correlation coefficients were highly significant (p-value < .001).

Table 3 Confirmatory factor analysis of two factor model proposed by McGilton (2010), including mean, standard deviation, and standardized factor loadings of each Supervisory Support Scale item, for health care aides (N = 405).

Item Response options: 1=never, 2=seldom, 3=occasionally, 4=often, 5=always	Mean ± Standard Deviation	Standardized factor loading (95% confidence interval) Two latent variables
Items associated with <i>Respecting uniqueness</i> latent variable		
1. My supervisor recognizes my ability to deliver quality care.	3.31 ± 1.09	0.79 (0.75, 0.83)
2. My supervisor tries to meet my needs.	3.10 ± 1.13	0.86 (0.83, 0.89)
3. My supervisor knows me well enough to know when I have concerns about resident care.	3.31 ± 1.20	0.78 (0.74, 0.82)
4. My supervisor tries to understand my point of view when I speak to them.	3.38 ± 1.11	0.83 (0.80, 0.87)
5. My supervisor tries to meet my needs in such ways as informing me of what is expected of me when working with my residents.	3.20 ± 1.09	0.85 (0.82, 0.88)
11. My supervisor encourages me even in difficult situations.	3.07 ± 1.26	0.86 (0.83, 0.88)
12. My supervisor makes a point of expressing appreciation when I do a good job.	2.89 ± 1.26	0.84 (0.80, 0.87)
13. My supervisor respects me as a person.	3.96 ± 1.01	0.75 (0.70, 0.79)
14. My supervisor makes time to listen to me.	3.36 ± 1.14	0.78 (0.74, 0.82)
15. My supervisor recognizes my strengths and areas for development.	3.23 ± 1.20	0.82 (0.79, 0.85)
Items associated with <i>Being reliable</i> latent variable		
6. I can rely on my supervisor when I ask for help, for example, if things are not going well between myself and my co-workers or between myself and residents and/or their families.	3.47 ± 1.25	0.82 (0.78, 0.85)
7. My supervisor keeps me informed of any major changes in the work environment or organization.	3.16 ± 1.15	0.76 (0.72, 0.81)
8. I can rely on my supervisor to be open to any remarks I may make to him/her.	3.30 ± 1.11	0.88 (0.85, 0.91)
9. My supervisor keeps me informed of any decisions that were made in regards to my residents.	3.17 ± 1.13	0.80 (0.76, 0.84)
10. My supervisor strikes a balance between clients/ families' concerns and mine.	3.03 ± 1.10	0.83 (0.79, 0.86)
Covariance between latent variables		0.93 (0.90, 0.95)
Fit Indexes		
Chi-square (<i>df</i>) Test of model vs saturated		483.0 (89) p < 0.001
Root mean squared error of approximation		0.107
Comparative fit index		0.926
Tucker-Lewis index		0.912

Table 4. Divergent construct validity across the 37 facilities for health care aides

Facility	Supervisory Support Score Health Care Aides Mean \pm SD	Number of respondent health care aides in facility
13	67.14 \pm 10.12	7
26	63.67 \pm 10.97	3
9	62.11 \pm 10.15	9
15	61.67 \pm 6.66	3
10	60.50 \pm 2.12	2
3	59.00 \pm 13.53	5
35	58.82 \pm 8.68	11
8	55.67 \pm 11.93	3
16	55.64 \pm 12.03	11
4	55.53 \pm 9.62	19
24	55.47 \pm 10.89	15
31	54.75 \pm 11.85	8
30	53.11 \pm 10.74	9
12	52.75 \pm 8.96	4
20	52.50 \pm 14.66	14
5	52.05 \pm 13.78	20
28	51.50 \pm 11.63	8
6	50.57 \pm 8.06	7
1	50.39 \pm 7.28	18
21	50.09 \pm 12.21	11
36	50.09 \pm 6.99	11
18	49.91 \pm 16.56	23
7	49.83 \pm 12.59	6
2	49.21 \pm 12.18	14
37	48.23 \pm 11.82	13
29	47.27 \pm 11.64	11
27	46.56 \pm 8.52	9
25	45.57 \pm 11.95	14
34	45.46 \pm 19.91	13
17	45.00 \pm 10.83	23
23	40.94 \pm 10.67	18
19	40.86 \pm 9.87	7
22	40.00 \pm 16.23	10
33	37.47 \pm 14.02	15
11	37.12 \pm 15.97	17
14	33.67 \pm 13.76	6
32	26.88 \pm 12.83	8
Total	48.92 \pm 14.01	405
ANOVA	$F=4.13, p<0.0001$	