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# Models of care for people with dementia applied in practice

## Modele opieki nad pacjentami z demencją stosowane w praktyce

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STRESZCZENIE

**MODELE OPIEKI NAD PACJENTAMI Z DEMENCJĄ STOSOWANE W PRAKTYCE**

**Cel.** Praca przedstawia modele opieki nad pacjentami z demencją stosowane w różnych ośrodkach opieki oraz określa ich skuteczność i wpływ na lepszą jakość życia osób cierpiących na demencję.

**Metody.** Zastosowano przegląd literatury z wykorzystaniem zasad PRISMA. Publikacje o charakterze naukowym i zawodowym w języku angielskim były wyszukiwane w specjalistycznych bazach: EBSCO HOST, CINAHL, MEDLINE, PubMed oraz Wiley Online Library za pomocą słów kluczowych, a następnie były wybierane według czasu publikacji i innych określonych kryteriów.

**Wyniki.** Całkowita liczba zidentyfikowanych rekordów wyniosła 1998, z czego do ostatecznego opracowania wybrano 29 publikacji. Określono dwa obszary tematyczne według słów kluczowych oraz strategii wyszukiwania literatury: modele opieki nad osobami z demencją oraz geriatryczne modele opieki. Następnie sformułowano cztery koncepcje zawarte w modelach, które ukazują szczególny charakter i zasady opieki: podejście biopsychospołeczne , praktyka opieki skoncentrowana na osobie, środowisko opieki, oraz Montessori w opiece nad pacjentem z demencją.

**Wnioski.** Większość przedstawionych modeli zaleca wdrażanie kompleksowej, zintegrowanej i skoncentrowanej na osobie opieki, ukierunkowanej na uhonorowaniu i zintegrowaniu historii życia osoby i jej potrzeb w codziennej pomocy, w odpowiednim i dostosowanym do potrzeb środowisku. Obecnie najbardziej innowacyjny model oparty jest na wdrażaniu metody Montessori w codziennych czynnościach pacjenta.

Słowa kluczowe: **demencja, model, opieka, opieka skoncentrowana na osobie**

ABSTRACT

**MODELS OF CARE FOR PEOPLE WITH DEMENTIA APPLIED IN PRACTICE**

**Aim.** The study highlights the different concepts of dementia care models which are used in different care settings and determine the effectiveness and contribute to a better quality of life for people with dementia.

**Methods.** This literature review use PRISMA process for data collection and analysis. Scientific and professional publications in English were searched through international specialized databases; EBSCO HOST, CINAHL, MEDLINE, PubMed and Wiley Online Library. The review results were founded by key words and then selected according to the publication time frame and other shaped criteria.

**Results.** In total 1998 references were identified for the thematic content analysis, in the final review we included 29 studies. Two thematic areas were identified according to the keywords and literature search strategy: dementia care models and geriatric models of care. Further, we formed four concepts highlighted in models that reflect the specific characteristics and principles of care: biopsychosocial approach, person-centred care practice, environment of care, and Montessori for dementia care.

**Conclusions.** Most of featured models advocated the implementation of comprehensive, integrated and person-centred care, focused to honour and integrate an individual's life story with their needs into daily care as much as possible in an appropriate and customized environment. Currently the most innovative model is based on implementation of Montessori approach into person's daily activities.

Key words: **dementia, model, care, person-centred care**

## INTRODUCTION

The numbers of people estimated to be living with dementia worldwide in 2019 were over 50 million and this number will have reached 152 million in 2050. It became the most feared disease because there is a new case in the world every three seconds [1]. The clinical manifestations of each form of dementia are similar and include a range of clinical syndromes that affect many aspects of a person's cognitive functions [2,3]. It appears disturbed balanced interaction with the environment, for example: inability to recognize known objects, their purpose and how to use them; inability to recognize family and friends; repetitive behaviours patterns; catastrophic reactions; and situationally inappropriate behaviours [4]. Behavioural and psychological symptoms of dementia are frequent in dementia [5], represent a major challenge in the care, and make people with dementia increasingly dependent on others for normal activities of daily living. Ferreira et al. [5] emphasized that four major frameworks attempt an explanation of behavioural and psychological symptoms aetiology: biological, behavioural, environmental vulnerability and unmet needs.

In the late 80's and 90's social models also began to implement in care of people with dementia, focused to understand the emotions and behaviours of the person with dementia within the context of social circumstances and biography. By learning about each person with dementia as an individual, with his or her own history and background, care and support can be designed to be more appropriate to individual needs [6]. There was a move away from regarding people with dementia as incapable and excluding them from society, and towards a 'new culture of dementia care', which encouraged looking for the person behind the dementia [7,8]. The philosophy is based on person-centred care and provided opportunity to maximise well-being by focusing on the other dimensions that affect a person's quality of life, founded on a psychosocial and spiritual paradigm [7]. This approach of care places people and their families at the centre of decisions and seeing them as experts, working alongside professionals to get the best outcome [3]. Since Kitwood's model of psychological needs and well-being in dementia [9], the philosophy has been expanded to include relationship-centred care which emphasizes the caring relationships and interdependence between all partners in care [10]. The identification of the person-centred concept has led to the development of innovative interventions and strategies to improve the quality of care for people with dementia in different care settings [11]. There is a widely used concept in nursing, which requires the formation of particular relationships built on mutual trust, understanding, and a sharing of collective knowledge [10,12,13]. Methods and models based on this approach are focused on the environmental modifications that promote orientation and decrease negative stimulation, and assist older people with dementia to wander without feeling confined or being restrained [14]. This "innovative culture" of dementia care acknowledges the full personhood of the individual [12] to ensure that people living with dementia are included, heard, and understood.

## AIM

The aim of this study was to present the models of care used in the treatment of people with dementia in different care settings. A 'model of care' is a multifaceted concept, which broadly defines the way health services are delivered with the aim to ensure that a person receives "the right care at the right time, delivered by the right people in the right place" [15]. Models should have psychological approach, focusing on patient satisfaction with nursing care and job satisfaction among nurses. The main objective of this literature review is to present the specific characteristics and principles of care concepts that have been developed for caring older people and people with dementia.

## METHODS

### Design

This study describes different models of dementia care which were developed and implemented in different health care settings, nursing homes, community and in-home nursing care. We conducted a literature review to deal with evolving knowledge and concepts [16] regarding research topic. Systematic search strategy of relevant literature creates a firm foundation for advancing knowledge, and provides an insight into the structure of the phenomenon and context definition. It facilitates theory development, identification and definition of key concepts, closes areas where a plethora of research exists, and uncovers areas where research is needed [17].

### Search strategies

Literature search was conducted from September 2018 to June 2020 to identify relevant published articles in international databases summarized in Table 1. The PRISMA guidelines were used to review available databases and decide on the applicability of the revised sources [18]. The search was limited only to the English language regardless of time limitation and study design. Search strategy mainly focused on the review of care models for people with dementia, which models are already developed and how they are used around the globe. We did not directly focus on their effectiveness and research-based evidence.

For search the following international databases were used: Medline, EBSCOhost, CINAHL, PubMed, and Wiley Online Library. Using Boolean operator, we used the following keywords (combination): model AND care AND dementia AND nursing AND person-centred. The literature review procedure is presented in Figure 1.

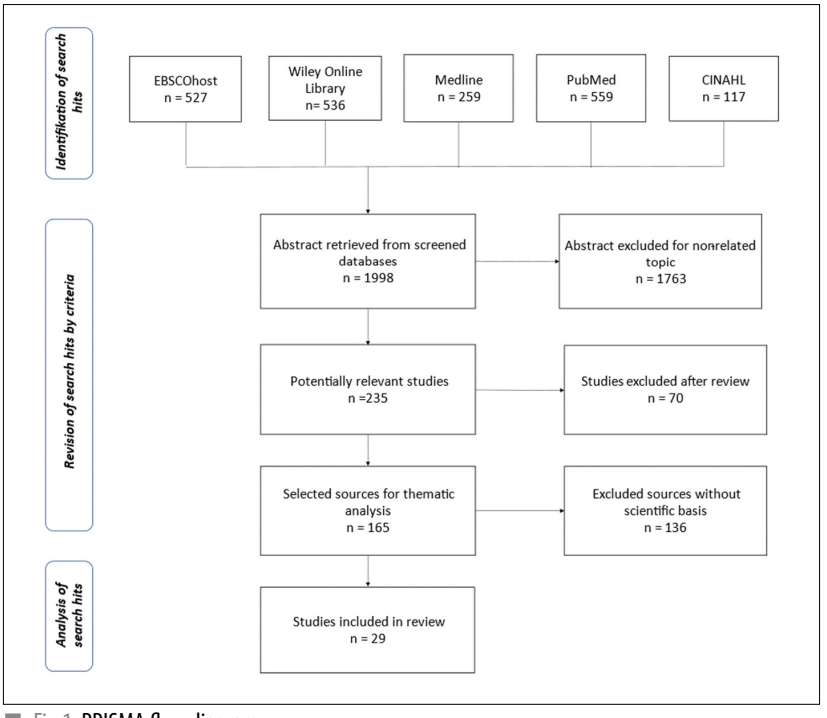


Fig 1. PRISMA flow diagram

## Search outcome

In the first review phase, we found that there is little evidence-based research published, which describes a model of care, as evaluates the outcomes associated with model aspects. Based on keywords combination, we received a total of 1998 references. After initial abstract screening, we excluded publications, which did not include a description of a particular model of care (n=1763). We have included studies that report interventions designed for development and implementation of a particular model into practice, as well as studies that report the results of the implemented model (n=235). We excluded all duplications (n=70) and in addition, we limited the search to publications in full text. We identified 165 sources for further thematic analysis, of which we excluded sources (n=136) without a scientific basis. In the final review we included 29 publications based on the criteria described below. Criteria for including the topic in our studies was the brief description of: purpose of the model, structure/components of the model, implementation process and models outcome if available.

## Quality appraisal

Search strategy in the first phase of searching covers scientific articles published in peer-reviewed scientific journals. The literature selection was based on the availability and appropriateness of content. Potentially relevant units were critically evaluated by limiting to the model's description. The approach used in the publication's selection provides enough resources coverage and thus a necessary basis for quality research. Criteria used for the final set of including units and the way of data processing are in accordance with the research goals.

## Data synthesis

Literature review was based on key scientific documents that describe and explain the concept. The fundamental goal was focused to upgrade concept understanding, especially in those parts, which explain the importance of the concept implementation into practice. Showing data results has been done on the basis guidelines for the concepts analysis model, developed by Walker & Avant [19]. In nursing it is the most often used research plan. Outcomes are presented in two tables that include an explanation of dementia and geriatric care models, and a description of the concepts that occur most frequently in these models.

# RESULTS

According to the keywords and literature search strategy, we formed two thematic areas: (I) dementia care models focused on integrated care approaches to maintain wellbeing and quality of life people with dementia and (II) geriatric models of care, which are not directly related to dementia, but they are used for management of disease symptoms and satisfying different patient's needs. The models are presented in Table 1, which is divided into four guiding columns: the name of the model, references of each model, the purpose in/or aims of the model, and outcomes of the model. Individual cell summarizes the key concepts of the presented model. We identified twelve dementia care models, which are mostly based on person-centred care, and five geriatric models which are used in various nursing settings. Further, we formed four concepts highlighted in Table 2. that reflect the specific characteristics and principles of care represented in each model: (I) biopsychosocial approach; (II) person-centred care practice; (III) environment of care; and (IV) Montessori for dementia care.

## Biopsychosocial approach

A more holistic approach reorients the current medical disease – dominated model of care that can be impersonal for those oriented to well-being that encompasses all four human dimensions: bio-psycho-social-spiritual [41]. The biopsychosocial approach systematically considers biological, psychological, and social factors and their complex interactions in understanding health, illness, and health care delivery [42]. Kitwood [7] argued that when dealing with persons with dementia, psychological needs should be considered and included. The most important are comfort – the feeling of trust that comes from others, attachment – security and finding familiarity in unusual places,

Tab. 1. The model focused on integrated care approaches for dementia patient

| MODEL | REFERENCE | AIMS OF MODEL | OUTCOME |
|---|---|---|---|
| **DEMENTIA CARE MODELS** | | | |
| **The Progressively Lowered Stress Threshold (PLST)** | Smith M., (et al.), 2006, [20] | The aim is education of caregivers and personalized care, focused on supporting the person with dementia, helping them to use remaining skills and abilities while minimizing the risk of unnecessarily triggering negative reactions and responses by adapting the environment and care routines. | The model provides a useful approach for planning and evaluating care across settings and is also understood easily by nonprofessional caregivers, allows flexibility to modify the plan of care based on the person's changing needs, and can be applied by knowledgeable nurses with diverse specialty backgrounds. |
| **NDB – The need-driven dementia-compromised behaviour model** | Whall A.L., (et al.), 1999, [21] | Promotes an evidence-based, person-cantered approach which explains that behaviours are meaningful and that dementia behaviours may be symptoms of unmet physical needs. | The NDB model help nursing staff identifying behaviour changes in persons with dementia and the need for physical assessment to design corrective interventions that will improve care for this population. When behaviour change is unnoticed, dismissed, or not understood, critical needs are left untreated and unresolved. |
| **A Kitwood person-centred care, personhood and Enriched Model of dementia** | Kitwood T., 1997, [7]<br>Penrod J., (et al.) 2007, [22]<br>Mitchell G. & Agnelli J., 2015, [3] | Focused on the dementing process rather than the demented state, emphasizing the social-psychological milieu. To achieve the best possible quality of life and to reduce challenging behaviours. | It reduces need-driven dementia-compromised behaviours and help maintain personhood in the face of declining mental powers. |
| **A Personhood model for dementia care** | Buron B., 2010, [11] | To provide a framework for PCC in the nursing home setting, organize existing person-cantered interventions, and guide the development of future interventions in the NH setting. | The attention to all levels of personhood in the care of residents living with dementia in general results in improved communication and relationships and contributes positively to the quality of their life. |
| **VIPS** | Røsvik J., (et al.), 2011, [23]<br>Brooker D. & Latham I., 2016, [24] | The model is designed to help care providers think though the issues in the provision of person-centred care in a systematic way. | After using the model, the nursing home residents showed significantly less depressive symptoms over time. |
| **Senses Framework** | Nolan M.R., (et al.), 2006, [10]<br>Ryan T., (et al.), 2008, [25] | The relationship-centred care, as captured by the model, promotes a way of understanding the factors necessary to creating positive relationships, and highlights some of the structures and interactions that maintain such relationships. | The use of this framework within a relationship-centred approach can provide a better way of 'enriching' the care older people receive, whilst also paying close attention to the needs of family and paid carers. |
| **The Newcastle Model** | James I. & Stephenson M., 2007, [26]<br>Jackman L. & Beatty A., 2015, [27] | It provides a framework and a process to help understand challenging behaviour, identify unmet needs and develop care plans to meet those needs. | Represent the best clinical practice and research into challenging behaviour in dementia care, with staff to feel involved in all phases (carer-centred, person-focussed). |
| **Dementia-Capable Care Model** | Warchol K., 2012, [2]<br>Borson S. & Chodosh J., 2014, [28] | The care team delivers the specific care interventions an all-daily activities, which are abilities-based, person-centred, and designed to facilitate the optimum level of function, safety, health, and emotional well-being. | Successful engagement in meaningful activity facilitates emotional well-being and maintains physical health to minimize falls, wounds and contractures. Higher function and maintenance of health and emotional status reduce the likelihood of hospitalization. |
| **Montessori-Based Dementia Programming** | Orsulic-Jeras (et al.), 2000, [29]<br>Skrajner (et al.), 2007, [30]<br>Camp K., 2010, [31] | The purpose is to engages people with dementia, while utilizing their remaining skills and abilities and attending to their past interests, occupations, to improving their physical, social and emotional engagement with their environments. | Montessori activities elicited more constructive engagement and pleasure and less passive engagement and negative affect. |
| **Montessori Methods for Dementia** | Elliot G., 2011, [8]<br>Bourgeois M.S., (et al.), 2015, [32] | The model focus on a prepared environment and its goal is to set individuals with dementia up for success – expose abilities – and engage individuals in purposeful living. | Approach outcomes was in replacing the anxiety, agitation, aggression, and apathy with engagement, focus of attention, language expression, positive mood, accessing memories, emotional connectedness and social participation. |
| **ABLE** | Roberts B.L., (el al.), 2015, [33] | Person-centred model incorporates Montessori principles and activities to better address resident and family needs. The model developed four core components: (A) abilities and capabilities of the resident, (B) background of the resident, (C) leadership, cultural change and education, (D) physical environment changes. | The impact on residents' daily life was substantial, in particular, changes in medication use and frequency of behavioural and psychological symptoms of dementia. Results indicated in changing resident behavioural and psychological symptoms of dementia, improving staff confidence and awareness of person-cantered care and improving family satisfaction with the care of their relatives. |
| **Montessori for Aging and Dementia** | Douglas N., (et al.), 2018, [34] | Innovative person-centred approach that can be adopted for individuals or groups as a philosophy of care with goal to support people by creating a prepared environment, filled with cues and memory supports, that enables individuals to care for themselves, others, and their community. | Individuals maintain their roles and their identity throughout the full course of their life. They are empowered to care for themselves and others, enable to be as independent as possible, have a meaningful place in the home and community and to possess high self-esteem. |

Tab. 1. (cd.) The model focused on integrated care approaches for dementia patient

| MODEL | REFERENCE | AIMS OF MODEL | OUTCOME |
|---|---|---|---|
| **GERIATRIC MODEL OF CARE** | | | |
| **Person-centred Nursing Framework** | McCormack B. & McCance T., 2010, [13] McCance T.V., (et al.), 2011, [35] | The person-centred nursing framework comprises four constructs -prerequisites, which focus on the attributes of the nurse; the care environment, which focuses on the context in which care is delivered; person-centred processes, which focus on delivering care through a range of activities; and expected outcomes, which are the results of effective person-centred nursing. | The focus is on developing therapeutic relationships. The person-centred nursing framework has utility in helping to understand the dynamics of the components of person-centeredness and overcoming the siloed nature of many current perspectives. |
| **Creating avenues for relative empowerment (CARE)** | Li H., (et al.), 2012, [36] | It aimed to improve outcomes for older people and their family caregivers. The programme prepared family caregivers for common characteristics and behaviours of hospitalized older people and provided strategies to assist them in taking an active role during the hospitalization. | Improving family caregivers' confidence and knowledge may improve family participation in care of older people and lead to positive outcomes for the older person and caregiver. |
| **Hospital elder life program (HELP)** | Reuben (et al.), 2000, [37] Singler in Thomas (2017) [38] | The model maximizes independence at discharge; assist with transition from hospital to home and prevent unplanned readmissions. | The benefits are in staff awareness of the special needs of people with dementia and modification of the environment to accommodate these needs. Also, in reducing staff burden and a positive cultural change through ongoing staff education and multidisciplinary collaboration. |
| **A comprehensive geriatric assessment (CGA)** | Ellis, (et al.), 2017, [39] | This multi-dimensional, assessment is focused to determine the medical, mental, and functional problems of older people with frailty in order to develop a coordinated and integrated plan for treatment and long-term follow-up. | Has been shown to be effective in improving functional status, preventing institutionalization, and reducing mortality. |
| **The Geriatric Resource Nurse (GRN) model** | Boltz, (et al.), 2010, [40] | The goal is to improve the geriatric knowledge and expertise of the bedside nurse, which is essential to implementing system-wide improvement in the care of older adult patients. | The GRN model provides staff nurses, via education and modelling by a geriatric advanced practice nurse, with explicit content to identify and address specific geriatric syndromes, such as falls and confusion, and to implement care strategies that discourage the use of restrictive devices and promote patient mobility |

inclusion – being involved in the lives of others, occupation – being involved in the processes of normal life, and identity – what distinguishes a person from others and makes them unique. Due to the clinical manifestations of the disease [3], there are principles of holistic treatment compared with conventional care practices of utmost importance for people with dementia.

## Person-centred care practice

The person-centred care sees dementia as a condition that needs to be understood from a biological, a psychological and sociological perspective, and recognises that all these perspectives interact to determine the person's experience of the condition [24]. Dementia typically results in dependency and disability, and persons with dementia are at risk of being denied the opportunity for autonomy and respect for personhood. Attention to personhood includes recognition of the centrality of relationship, the uniqueness of persons and our embodiment [7]. Person-centred care is a global philosophy of care underpinning nursing practice [10] and requires health care professionals to plan and provide assistance in such a way that clients are honoured and valued and are not lost in the tasks of caregiving [43]. The person-centred nursing framework, a theoretical model of McCormack and McCanceu [13] offers a description of these specific concepts and their and has been used as a tool that can assist nursing staff to identify barriers to change and to focus the implementation and evaluation of developments in practice [35].

## Environment of care

From the perspective of person-centred nursing, McCormack and McCance [13] highlight that the care environment has a major influence on the operationalization of person-centred nursing, and has the greatest potential to limit or enhance the facilitation of person--centred processes. It is necessary to create a positive and right environment of care not only for patients, but also for employees and caregivers [7]. Florence Nightingale also emphasized that the environment has a significant impact on persons [21], which, from a holistic view, considers the patient's background and current situational factors that affect demented persons [22]. The models based on environmental view assists the nurse in providing an environment compatible with preferences and abilities of the person with dementia, a perspective suitable for dementia care [21]. The importance of environmental modifications that promote orientation and decrease negative stimulation can influence older people with dementia to move around without feeling confined or being restrained [14]. This supports the persons in everyday life and enables them to live with meaning and purpose [32], which is also reflected in the health-related quality of life of family members and caregivers [33].

Tab. 2. Specific characteristics and principles of dementia care models

| MODEL | Biopsychosocial approach | Person-centred care practice | Environment of care | Montessori for dementia |
|---|---|---|---|---|
| **DEMENTIA CARE MODELS** | | | | |
| **The Progressively Lowered Stress Threshold (PLST)** | built upon key elements of the Ecological Theory of Aging to meet the specific needs at the time of the problem; person-environment interaction | provide the patient unconditional positive regard; maximize the level of safe function by supporting all areas of loss | modified environment to support losses and enhance safety; support and assistance with problem-solving to caregivers | |
| **NDB – The need-driven dementia- compromised behaviour model** | biomedical and phenomenological strategies | holistic view considers the patient's background and current situational factors, engagement, beliefs and values; sharing decision-making | social and physical aspects of the environment | |
| **A Kitwood person-centred care, personhood and Enriched Model of dementia** | malignant social psychology (psychological needs); see the person not the disease; positive person work | single assessment process; increase independence and quality of life; autonomy, recognition, respect and trust | creating a positive and right environment of care; for patients, employees and caregivers | |
| **A Personhood model for dementia Care** | biologic, individual and sociologic personhood | resident-cantered care model; physical and mental well-being of persons with dementia; autonomy | environments that encourage strong relationships, promote resident's active role in community | |
| **VIPS** | value people regardless of age or cognitive ability | support basic psychological needs; individualised approach, recognising uniqueness | social environment; all staff involved in decision-making process | |
| **Senses Framework** | supports physically, psychologically, existentially elements | relationship- centred care; security, belonging, continuity, achievement; meaningful activity, valued goals | creating an 'enriched environment' | |
| **The Newcastle Model** | identify major psychosocial factors that contribute to behavioural changes | holistic assessment to recognise and address the unmet patient's needs | patient's life history and experience; social environment | |
| **Dementia-Capable Care Model** | facilitate active engagement; engage family members | abilities-focused approach on the person's remaining abilities; integrate an individual's life story into daily care | supported and empowered caregivers; staff and caregivers provided with effective practical dementia skills | |
| **Montessori-Based Dementia Programming** | improving their physical, social and emotional engagement | enable persons with dementia to express their interests, memories, and ultimately themselves | activity items are taken from the everyday environment; allow staff and family members to play a pivotal role | Montessori-based methods maintain or improve the level of functioning and independence |
| **Montessori Methods for Dementia** | focus on the abilities, needs, and interests of person | focus on strengths of the person; creating worthwhile and meaningful roles, routines, and activities | adapt environment according to needs, interests, and abilities; the environment looks and feels like home | Montessori principles included in daily activities |
| **ABLE** | includes elements from a social ecological model and the Montessori method; engage with families and the community | help to extend and retain remaining abilities of the person | physical environment changes; leadership, cultural change, and staff education | expansion Montessori principles to community members living with dementia |
| **Montessori for Aging and Dementia** | focus on the abilities, needs, interests and strengths of elders in supportive environment | support memory loss and sensory impairment and facilitate independence | supports individuals by placing needed memory, visual, auditory, tactile and olfactory cues in the environment | elders are empowered to care for themselves and others; make contributions and have a meaningful place in the home and community |
| **Person-centred Nursing Framework** | physical, psychological patients' needs | therapeutic caring relationship between professionals, patients and their family; humanistic caring framework in nursing practice | the patient's values history; culture of the workplace | |
| **Creating avenues for relative empowerment (CARE)** | increase communication between family caregivers and health care providers | relationship-centred approach with family members; identify specific caregivers needs and activities for the families | support for family caregivers | |
| **Hospital elder life program (HELP)** | maintaining cognitive and physical functioning of high-risk older adults | meeting person's needs for nutrition, fluids, and sleep; promoting mobility within the limitations of physical condition; personal attention and support | assisting with the transition from hospital to home keeping older people oriented to their surroundings | |
| **A comprehensive geriatric assessment (CGA)** | systematic evaluation of physical, cognitive, affective, social, financial, environmental, and spiritual components | a holistic plan for treatment, rehabilitation, support and long term follow up; promoting independence; individualized care planning | safety of environment; social circumstances consideration; modified ward environment | |
| **The Geriatric Resource Nurse (GRN) model** | physical, psychologic health care issues; ageing – sensitive practices manage older adult's specific geriatric needs | support patient autonomy; family-centred; nursing organizational and practice model; evidence-based practice | competent nursing staff; integrated into the organisation and culture of care | |

### Montessori for dementia

The Montessori-based activities implemented in dementia care practice include all the mentioned concepts with multidisciplinary approach to dementia care, which includes elements from a social ecological model and the Montessori Method [32]. A psychologist Camp first discovered the connection between Montessori's pedagogy principles and dementia care, and with his colleagues developed "Montessori-Based Dementia Programming" [31]. The programming engages people utilizing their remaining skills and abilities with attending to their past interests and occupations. Camp et al. [31,44] also developed an assessment tool to provide information for creation of person-specific interventions for individuals with dementia, with the use of detailed personal history and personal preferences interview. Another Montessori Method for Dementia was developed in Ontario, Canada and extends the tenets of person-centred care by expanding the focus on the abilities, needs, interests, and strengths of the person, and by creating worthwhile and meaningful roles, routines, and activities for the person within a supportive physical environment [8,32,45]. The overall goal of this approach is to connect what is known about the patients in the past to their present abilities and to adapt the activities and the environment according to their needs, interests, and abilities. The approach has had positive results and has since been adopted also in Australia. In 2014, Association Montessori International (AMI) created a Montessori Advisory Group for Montessori for Dementia and Aging to develop guidelines for the application of a Montessori approach with its focus on creating an environment that supports independence [34]. Visually organized environment provides useful cues and allows for attention to activities that are personally relevant to the elder [46] to compensate memory deficits and invite the individuals to engage in and care for the environment. With this philosophy, elders may continue to care for themselves with as much independence as possible in order to maintain self-respect and dignity [34]. Two models developed in Australia, the ABLE model developed an Australian geriatric health service and outlined the four core areas of the model are (A) abilities and capabilities of the resident; (B) background of the resident; (L) leadership, cultural change, and education; and (E) physical environment changes [33].

## DISCUSSION

Models of dementia care must address the whole-person systems of the patient, families, and care providers involved in dementia care [22]. Most of featured models advocated the implementation of comprehensive, integrated and person-centred care. The latter was the most often highlighted of the four concepts that was formed according to the literature review. In person-cantered care, focus is to honour and integrate an individual's life story with their needs into daily care as much as possible. It is not just about activities; it is also about the way professionals and people think about care delivered and their mutual relationships. The models based on this approach are designed to help care providers think through the issues in the provision of care and intervention delivered in a systematic way [24], and provide the foundation for a psychoeducation intervention to assist of formal and family caregivers in understanding behaviours and planning care for persons with dementia [20]. Warchol [2] argued that it is important to educate care staff on how to modify the activity, the approach, and the environment to engage the person in familiar activities, using familiar supplies associated with a familiar routine which will facilitate higher levels of engagement, independence, and emotional well-being. With active and optimum engagement, physical health is maintained, which minimizes falls, wounds and contractures; facilitates positive behaviour expressions; and maintenance of health and emotional status reduce care costs. Thus, it is important that dementia models support abilities-focused approach, which means that assessments and care interventions must focus on the person's remaining abilities instead of what has been lost, as highlighted in the Dementia-Capable Care Model [28]. The dementia models, such is PLST model, resulted in an increase in socialization, sleep and dietary intake and a reduction in disruptive behaviours such as agitation, wandering, and repetitive questioning with a subsequent reduction in psychotropic medications [14]. Models based on the establishment and maintenance of personhood such as: Kitwood's model, VIPS and a Personhood model in general result in improved communication and relationships [11,23] and significantly less depressive symptoms over time [24]. The Senses Framework, identified through six senses, reflects the subjective and perceptual nature of important determinants of care for both older people and staff [10,24]. The NDB model assists the nursing staff in providing an environment compatible with preferences and abilities of the person with dementia [21]. In addition, the Montessori models are based on all highlighted concepts, but the most important is a prepared environment with its goal to set individuals with dementia up for success – expose abilities – and engage individuals in purposeful living. The environment looks and feels like home – needs are met according to interests and abilities, and individuals live with meaning and purpose [8]. According to Skrajner et al. [30], Montessori-based activities allow people with dementia to demonstrate their competence, fulfil meaningful social roles and contribute positively to their community. The method implementation shows benefits in increasing level of engagement, less time spent sleeping during daytime hours, increased display of pleasure, enhancing conversation abilities, decrease of disruptive behaviours, decrease of self-engagement behaviours, improving family member visitor satisfaction, and decrease of family members sense of frustration [8,29,31,47].

Geriatric models target the prevention of complications that occur more commonly in older adults and the hospital factors that contribute to complications by employing evidence-based, ageing-sensitive interventions, promoting interdisciplinary communication and emphasising discharge planning [48]. Evidence showed significant improvement in the degree of cognitive impairment

among patients with impairment at admission in persons included in the HELP program [37] and avoided hospital admission in CGA program [38]. The GRN model provides staff nurses, via education, with explicit content to identify and address specific geriatric syndromes, such as falls and confusion, and to implement care strategies that discourage the use of restrictive devices and promote patient mobility [40,49]. The Person-centred Nursing Framework has been used as a tool that can assist nursing staff to identify barriers to change and to focus the implementation and evaluation of developments in practice [13,35].

Several models recognize and support the important role that informal caregivers, family and volunteers play in helping people with dementia. The application of CARE program has showed that improving family caregivers' confidence and knowledge may improve family participation in care of older people [36]. Principles of the PLST model are used to equip caregivers with the knowledge and skills to recognize the subtle behavioural changes indicative of heightened anxiety in an effort to provide timely and appropriate intervention [20]. The HELP program highlights the importance of educated and adequately supervised volunteers [37], and models based on Montessori activities emphasize the active role and involvement of family members in daily care and education [8,28,33]. Regardless of which model of care is used, it is especially important to engage family members as soon as cognitive impairment is suspected. To improve the level of dementia care also a number of system changes at an organizational level is required, which includes staff education, environmental changes and a new philosophy of care that identified, emphasized and built upon the current abilities of people with dementia [8,33]. Those components require transforming the culture and processes of health care into a person-centred, sustainable, dementia-capable structure [28,46].

## CONCLUSIONS

The cognitive impairment is characterized for older people and regardless of dementia illness, all the elderly needs comprehensive treatment and person-centred approach. The presented models have some common points but most often highlighted is person-centred practice which provides nurses and other staff with evidence-based alternatives when considering person-centred dementia care. Person-centredness can only happen if there is a person-centred culture in place in care settings that enables staff to experience person-centredness and work in a person-centred way [50]. Carefully prepared and modified environment that support losses and enhance safety, meets and nurtures the needs of each person and looks and feels like home it is becoming increasingly important. The Montessori approach for people with dementia, currently the most innovative model for dementia care, is designed to suit the treatment of all older people and can be implemented in different environments. Its goal is to enable individuals to circumvent existing deficits with the purpose of not only maintaining function, but to achieve higher levels of functioning, to have the chance to make decisions and thereby contribute significantly to their community.

An essential feature of such care models is a focused integration of expert disease management with comprehensive understanding of the patient's and family's experiences of illness, with consideration of past and present needs, interests, abilities, skills, roles and routines. Model systems not only provide information, but also offer person-centered planning and opportunities for self-on and self-esteem, as well as address cultural differences. All this supports and helps people with dementia and their caregivers choose what they need.

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