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We also welcome "negative" results (i.e., studies which do not support a hypothesized difference or association) provided that the design was robust. Discussion papers that elaborate issues and challenges facing health care in one country are welcomed, provided the discussion is grounded in research-based evidence. The authors are addressing a global audience and a local one.

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Implementation of nursing case management to improve community access to care: A scoping review

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Abstract

Background: Case management is an approach used to help patients locate and manage health resources as well as to enhance effective communication among patients, families, and health systems. Nurses' role as case managers has been proven effective in reducing healthcare costs among patients with chronic diseases. However, little is known about its implementation in improving access to care in community-based settings.

Objectives: This scoping review aimed to examine the components of nursing case management in improving access to care within community settings and to identify the issues of community-based nursing case management for future implications.

Design: This study was conducted following the framework of scoping review.

Data Sources: The authors systematically searched five electronic databases (CINAHL, PubMed, Science Direct, Scopus, and Google Scholar) for relevant studies published from January 2010 to February 2021. Only original studies involving nurses as one of the professions performing case management roles in the community-based settings, providing 'access to care' as the findings, were included.

Review Methods: The article screening was guided by a PRISMA flowchart. Extraction was performed on Google Sheet, and synthesis was conducted from the extraction result.

Results: A total of 19 studies were included. Five components of nursing case management to improve access to care were identified: 1) Bridging health systems into the community, 2) Providing the process of care, 3) Delivering individually-tailored health promotion and prevention, 4) Providing assistance in decision making, and 5) Providing holistic support. In addition, three issues of nursing case management were also identified: 1) Regulation ambiguity, 2) High caseloads, and 3) Lack of continuing case management training.

Conclusion: Care coordination and care planning were the most frequent components of nursing case management associated with access to care. These findings are substantial to improve nurses' ability in performing the nursing process as well as to intensify nurses' advocacy competence for future implications.

Keywords

case management; care manager; nursing process; health service accessibility; health resources; nurses' role

Access to health care is still a persistent challenge in the healthcare system around the world. Since the Alma Ata Declaration of 1978, 134 countries and 67 international organizations have committed to eliminating the barriers to universal health coverage (UHC), thus providing accessible health services for all populations (Pan American Health

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Organization, 2019). One dimension indicating the UHC is the proportion of people covered by the health system. Based on the report from the World Bank and World Health Organization (WHO), half of the global population could not obtain basic health services due to poor access (WHO, 2017). Access to health care is defined as reaching a health care service, provider, or institution to utilize appropriate services in proportion to their need for care (Levesque et al., 2013). It comprises three distinct components: 1) being able to gain entry into the healthcare system; 2) being able to locate provided health care services; and 3) being able to communicate with trusted health care providers (Agency for Healthcare Research and Quality, 2020). The commitment to accelerate the UHC should be accompanied by efforts to strengthen community-based health care services and maintain appropriate healthcare financing systems.

Case management is used as an approach to promote better coordination of health care services and enable broader access to all populations. This intervention helps optimization of available resources; enhances communication among health care providers, patients, and their families; and serves as patient advocates within the health care system (Fabbri et al., 2017). As the largest occupational group in the health sector (WHO, 2020), the nursing profession contributes to important roles in case management. Within nursing, a case manager is a nurse responsible for case finding, multidimensional assessment, care delivery, monitoring, and evaluation of health outcomes of a patient and their families (Bertuol et al., 2020). To deliver effective case management intervention, a nurse case manager should obtain clinical, managerial, and financial skills. In addition, not only should a nurse case manager be proficient in the health and well-being of individuals across the lifespan, but also adept in communication (with patients, families, and health care team) and the health care system (Fabbri et al., 2017).

Currently, nurse case managers work in multiple settings from hospitals, home health services, or patient homes (Armold, 2019). It has been known as one strategy to reduce health care costs (van Voorst & Arnold, 2020). There was strong evidence of using case management to significantly reduce the patients' hospital use and improve their quality of life (Joo & Liu, 2017; van Voorst & Arnold, 2020). For individuals with chronic illnesses transitioning between hospitals and their communities, case management is often cited as an effective intervention to improve access to health care services (Joo & Liu, 2017). According to the Commission for Case Management Certification (CCMC) in the United States, on average, two-thirds of nurse case managers work within community settings (Armold, 2019). However, the majority of evidence focused on improving patients' and families' quality of life, cost-effectiveness, and reduced hospital readmission rates. Information about community-based case management implementation in relation to its impact on access to health care is limited.

This scoping review aimed to examine the components of nursing case management in improving access to care within community settings as well as the issues for future implications. Two research questions were formulated: 1) "What are the components of nursing case management interventions to necessarily improve access to health care?" and 2) "What are the issues faced by nursing professions in delivering case management interventions?" This study is expected to provide existing information on how nursing case management contributes to leaving no one behind in the health system.

Methods

As the topic of community-based case management's impact on access to health care has not been comprehensively reviewed, this study employed a scoping approach to evidence synthesis from existing literature following the guidelines by Arksey and O'Malley (2005): 1) formulation of the research question(s), 2) identification of relevant studies, 3) study selection, 4) charting the data, and 5) collating, summarizing, and reporting the results. A scoping review does not usually apply critical appraisal for selected studies as it includes a wide spectrum of studies and aims to broadly sum up the research findings (Nam et al., 2015).

Search Methods

Five electronic databases (CINAHL, PubMed, Science Direct, Scopus, and Google Scholar) had been searched to retrieve relevant references. Keywords of ((community) AND ("case manage*")) AND (nurs*) AND (access) AND (care) were applied to identify original studies published between January 2010 and February 2021 with free full-text availability in English or Bahasa Indonesia.

Eligibility Criteria

References were included if those were original studies employing quantitative, qualitative, or mixed methods; involving nurses as one of the professions performing case management roles; providing "access to health care" as the main finding; and published in peer-reviewed journals. Conversely, studies were excluded if they did not describe case management intervention or roles of nurse case manager; only focused on other types of health workers (i.e., community health workers, traditional healers); and in the form of review, editorial, commentary, book, policy documents, or government document.

Screening

Initially, 505 references were identified, of which 35 were duplicates. Two authors then independently screened 470 studies by title and abstract. After screening by title and abstract, the full texts of 34 studies were assessed for eligibility. After screening the full text, 15 studies were excluded. Six studies employed study designs that did not fit into the inclusion criteria, five studies focused on other

types of health workers, and four studies provided no explanation about community case managers. Nineteen studies were found to meet the aim of this scoping review (Figure 1).

Data Extraction

Narrative tables were used to chart, collate, and summarize selected studies. The data charting table was created to identify themes from research findings in accordance with the research questions and purpose (Tricco et al., 2016). The data extraction table was formulated to insert the following information from selected studies: author, publication date (year), sample, design, research objectives, and findings.

Data Analysis

Data analysis was conducted by two authors, who summarized the major findings from selected studies to draw themes and subthemes independently (Tricco et al., 2016). Next step, the authors merged the data analysis and performed joint analysis to determine the sub-themes of research questions.

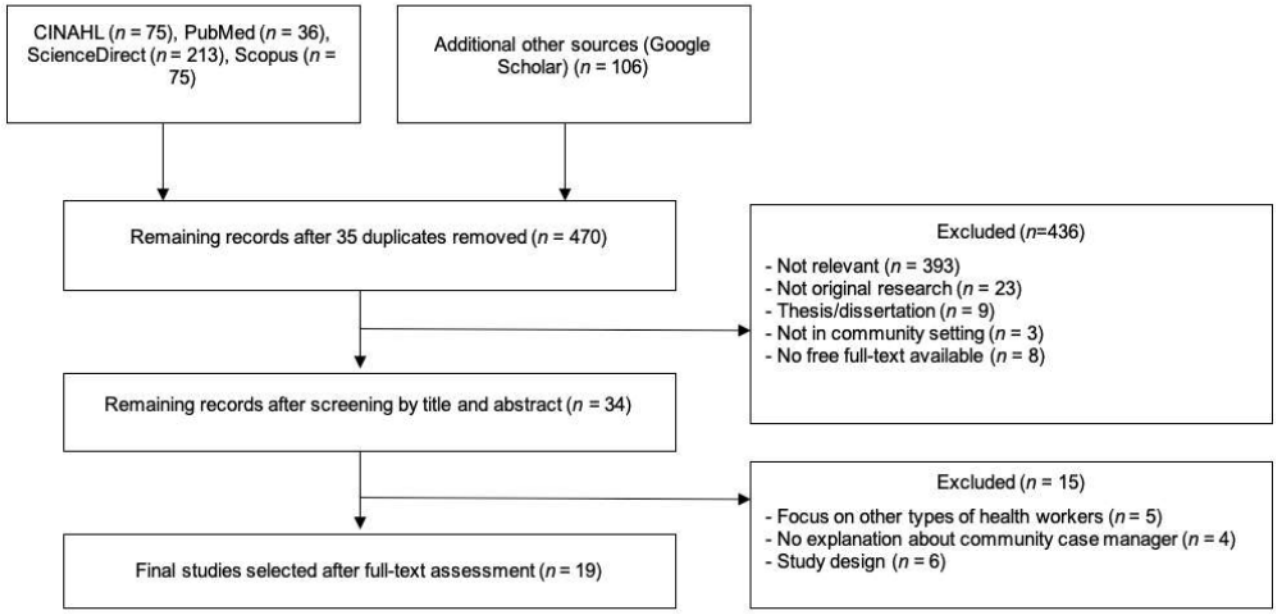

Figure 1 Flowchart of searching and screening strategy

Results

Search Results

Table 1 Characteristics of selected studies

Categories	Details	Total	%
Design of studies	Qualitative studies	10	52.6
	Quasi-experimental	3	15.8
	Analytical studies	4	21.1
	Others	2	10.5
Year of publication	2010-2013	6	31.6
	2014-2017	6	31.6
	2018-2020	7	36.8

Table 1 presents the characteristics of selected studies after the final full-text assessment. The majority of studies are qualitative studies, while the remaining articles included quasi-experimental studies, analytical studies (cross-sectional, case study, and cohort study), mixed-method study, and a study utilizing grounded theory.

Analytical Findings

As seen in Table 2, five components of nursing case management interventions to improve access to health care were deduced, namely: 1) bridging health systems into the community, 2) providing the process of care, 3) delivering individually-tailored health promotion and prevention, 4) providing assistance in decision making, and 5) providing holistic support. There were also three issues of nursing case management identified, namely: 1) regulation ambiguity, 2) high caseloads, and 3) lack of continuing case management training. Table 3 presents a detailed summary of the final studies selected.

Table 2 Themes and subthemes derived from the selected studies

Studies	Components						Issues	
	Bridging health systems into community	Providing the process of care	Delivering individually-tailored health promotion and prevention	Providing assistance in decision making	Providing holistic support	Regulation ambiguity	High caseloads	Lack of continuing case management training
Balard et al. (2016)	V	V			V	V		
You et al. (2016)	V					V		
Williams et al. (2011)	V							
Uittenbroek et al. (2018)	V	V	V	V			V	V
Tønnessen et al. (2017)	V					V		
Setiawan and Dawson (2018)	V					V		
Setiawan et al. (2016)	V		V					
Manthorpe et al. (2012)	V	V			V	V		
Klein and Evans-Agnew (2019)	V	V		V			V	
Hudon et al. (2015)	V	V	V	V				
Hensley (2011)	V			V	V	V	V	
Head et al. (2010)	V	V			V	V	V	V
Gage et al. (2013)		V						
Dhingra et al. (2016)	V	V			V			
David et al. (2019)		V		V			V	V
Cicutto et al. (2020)	V	V	V					
Chapman et al. (2018)		V	V		V	V	V	
Brown et al. (2011)	V	V	V		V		V	
Borgès Da Silva et al. (2018)	V	V						

Bridging Health Systems Into Community

Nurse case managers should be able to engage clients and their families in the health system. This was the most common role, as mentioned in the 16 studies. Nurse case managers are responsible for interpreting the information from the health system to clients and vice versa (Balard et al., 2016). In one case, a nurse case manager becomes the only health worker in the designated area; thus, it is important to obtain community trust (Setiawan & Dawson, 2018) so that initial treatment could be promptly delivered (Setiawan et al., 2016). Service provided towards clients and family members from the vulnerable population would eventually help reduce delays in receiving medical care (Setiawan et al., 2016; Tønnessen et al., 2017). To ensure the continuity of this role, a nurse case manager should possess strong collaboration skills with other health professions (Borgès Da Silva et al., 2018; Uittenbroek et al., 2018; Klein & Evans-Agnew, 2019). Shared care could be in the form of communicating with family physicians or arranging schedules with general physicians, referrals, or other community health resources (Hensley, 2011; Williams et al., 2011; Hudon et al., 2015; Klein & Evans-Agnew, 2019).

Providing the Process of Care

As many as 13 studies emphasize the importance of a nurse case manager in providing the process of care. The care process includes five essential steps: assessment, problem analysis, planning, implementation, and evaluation (Hudon et al., 2015; Klein & Evans-Agnew, 2019; Toney-Butler & Thayer, 2020). Following those steps, a nurse case manager should determine the formulation of a care plan to meet clients' needs (Head et al., 2010; Brown et al., 2011; Manthorpe et al., 2012; Gage et al., 2013; Balard et al., 2016; Dhingra et al., 2016; Borgès Da Silva et al., 2018; Chapman et al., 2018; David et al., 2019; Cicutto et al., 2020). The care plan should be shifted from traditionally task-oriented to person-centered care (Uittenbroek et al., 2018) and involve family members to maintain the continuity of care.

Delivering Individually-Tailored Health Promotion and Prevention

Six studies reported that nurse case managers provided personalized health promotion and disease prevention along with case management itself. The development of personalized service plans helped the patients and families understand where they were leading (Hudon et al., 2015). Furthermore, it indicated that nurse case managers prepare different approaches to each patients' condition so that the health information obtained would be completely in accordance with the patients' needs. For example, Cicutto et al. (2020) presented that the nurse case managers catered face-to-face visits to teach asthma management (asthma control, inhaler utilization technique) for children diagnosed with asthma, and Brown et al. (2011) provided additional information besides regular diabetes self-management education sessions. Moreover, Uittenbroek

et al. (2018) showed flexible and creative personalities were needed in terms of giving chronic care health education for the elderly into their daily routine. In general, a nurse case manager should perform promotive and preventive care to empower clients to be aware of lifestyle that might cause disturbance in health (Chapman et al., 2018; Uittenbroek et al., 2018); the goal is not only to improve patients' understanding about one's health but also to change their health-seeking behavior (Setiawan et al., 2016).

Providing Assistance in Decision Making

Five studies reported the nurse case manager's role in assisting patients and their families in making decisions regarding the treatment and health status. Patients who had easy access to nurse case managers were reported to have better communication with health professions, better participation in the process of improving their health and well-being, and better healthcare transition (Hensley, 2011; Hudon et al., 2015). To be able to do that, a nurse case manager should own the leadership, articulation, and mediation skills (David et al., 2019).

Providing Holistic Support

Seven studies reported that the nurse case manager contributed to provide holistic support towards patients and their families. As mentioned in one study focusing on the elderly, patients, and their families emphasized that nurse case manager's clinical expertise and psychological support contributed to the improvement of the continuum of care provided (Manthorpe et al., 2012). In another study, elderly and caregivers saw a case manager as a person to be "present", "help others", "respond to all the questions", and to be "aware of everything"; thus, it is important for a case manager to show caring behaviors (Balard et al., 2016). A nurse case manager should also be aware of any cultural or environmental barriers that might hamper one's health status (Brown et al., 2011).

Issues of Nursing Case Management

Three sub-themes of issues of nursing case management were identified. First, the regulation ambiguity issue was raised in terms of the roles and legal aspects. In one study conducted in Indonesia, the legal aspect for prescribing becomes an issue since nurses are not allowed to prescribe medication, yet sometimes they are the only health provider in the rural areas (Setiawan & Dawson, 2018). In Australia, they consistently agreed that gatekeeper and direct service provision were not the case manager roles. This study suggests that case managers should just coordinate care service and plan (You et al., 2016). In Norway, case managers often found that balancing their roles as a care-manager and a provider was a challenging task, also to set the limits between being private and professional and consider between patients' needs and limited resources grant (Tønnessen et al., 2017).

The second issue of nursing case management is about the high caseloads; as mentioned in one study, a nurse case manager should perform multiple roles, thus working overtime (Klein & Evans-Agnew, 2019). The third issue in nursing case management is the lack of continuing case management training. Experienced nurses should serve as expert role models and consultants to the case management staff and help to develop training curriculum for case managers (Head et al., 2010). It is also mentioned that the understanding and recognition of a nurse case manager might depend on one's adequate training, although, so far, there is no consensual model of course or training for nurse case managers (David et al., 2019).

Discussion

This study provided evidence on components of community-based nursing case management and related issues within the last ten years. To the best of our knowledge, this is the first scoping review to describe the components and issues in the implementation of case management in improving community access to care.

This study discovered that nurse case managers connect, coordinate, collaborate, and care for the patients/community with health care service providers through holistic and personalized care provision. Also, it revealed that most of the nursing case management models cater to specific targeted populations. For example, elderly (Manthorpe et al., 2012; Gage et al., 2013; Balard et al., 2016; You et al., 2016), patients with long-term illness (Hudon et al., 2015; Uittenbroek et al., 2018), palliative patients (Head et al., 2010; Dhingra et al., 2016), students/children (Setiawan et al., 2016; Setiawan & Dawson, 2018; Klein & Evans-Agnew, 2019; Cicutto et al., 2020) and people living with mental health problems (Chapman et al., 2018) are the populations reported as the beneficiaries in this study. In one study conducted in Norway, Tønnessen et al. (2017) displayed nurse case managers as health providers to serve diverse populations with varied health conditions. Nurse case managers also play the same role towards adults under certain primary health care, as presented in a Canadian study (Borgès Da Silva et al., 2018). This finding showed that nursing case management could be implemented in bridging a broad range of cases and ages to improve access to care in various populations.

Another highlighted finding of this review was related to the issues that occurred during the implementation of nursing case management in the community settings. Case managers struggle with the ambiguity of the nurse case managers' roles and deal with high caseloads as well as limited case management training. A study by Joo and Huber (2014), which reviewed nursing case management, also reported unclear and confusing roles for nurse case managers in the United States. Periodically nurse case managers wished to set clear boundaries, but due to the patient's condition, nurse case managers were still required

to provide direct care. It shows that the sense of caring remains a principle among nurse case managers. Advance training would be required for case managers to equip themselves in dealing with these issues (Machini et al., 2020; Muscat, 2020).

This review found the implementations of community-based case management are different according to each country's health care system requirements. Developed countries like Australia, Norway, and Spain clearly divided the roles and responsibilities between nurses and nurse case managers. Case managers are only expected to perform their natural roles of the case manager. On the other hand, several countries' nurse case managers are also counted on to provide direct care services to the community besides performing their role as case managers. For example, in England, nurses can hold their role as case managers while simultaneously working as practice nurses in the clinic (Iliffe et al., 2011), as district nurses providing visits towards housebound clients in the community (Challis et al., 2011), and as disease-specific nurses in either secondary care settings or the community (Whittingham & Pearce, 2011). Also, in Indonesia, nurse case managers could be the only health professional in the particular area, so one should be familiar with disease management and treatments. Differences in roles of nurse case managers among countries are seen as the result of different health system issues and challenges in each nation.

There is a limitation to this scoping review. The terminology of community nursing management may vary among countries. As a result, it is plausible that several essential articles might not be included in this study. Therefore, future review studies should include more terminologies for the keywords in literature searching.

Implications for Nursing Management and Health Policy

In the era of UHC reform, many countries committed to provide accessible health services for all populations despite the consequences of high spending. This commitment should be accompanied by efforts in strengthening the community-based health care services. This study showed that nurse case managers improve the access of care for different populations in the community in both urban and rural areas. Besides, previous studies have provided evidence on the implementation of case management to reduce health care spending and the number of readmissions or rehospitalization (Joo, 2014; Duarte-Climents et al., 2019). This is the starting point for the government to incorporate the implementation of community-based nursing case management into the policy level. In addition, the government still has to consider the needs and challenges in determining which case management model is most suitable to the population.

Table 3 Detailed summary of the final studies selected

Study	Sample	Design	Objectives	Major findings
Balard et al. (2016) France	Elderly, caregivers, case managers	Qualitative, opened-ended, and guided interviews	To explore the users' (elderly and their informal caregivers) and case managers' first experiences of case management	Case managers delivered care to clients and subsequently helped patients and their families engage with the health system, be familiarized with health information and administrative processes, and make decisions. Case managers were also seen to perform caring behavior such as responsive, helpful, present, and aware.
You et al. (2016) Australia	Case managers (with nursing, social work, Allied Health, and other backgrounds)	Qualitative study, semi-structured interview	To explore the perceptions about case managers' role in establishing community aged care in Australia	The study reported 16 essential roles of case manager (CM) in Australia for community aged care. However, CM felt that the roles of broker, mediator, and counselor were ambivalent. Moreover, they consistently agreed that gatekeeper and direct service provision were not the case manager roles. This study suggested that case managers coordinate care services and plans.
Williams et al. (2011) United Kingdom	Patients receiving or had recently received care by community matrons	An inductive qualitative design using a semi-structured interview	To explore patients' views and experiences of the community matrons' roles in one primary care provider organization	The study showed that community matrons (CMs) assist the patients in the community to obtain easier and shorter coordination and communication with general physicians, including the referral to advanced health facilities.
Uittenbroek et al. (2018) The Netherlands	District nurses (nurses and social workers)	A qualitative study of in-depth interview	To explore how district nurses and social workers experience new professional roles as case managers within embrace a person-centered and integrated care service for community-living older adults	The reflection of the case manager about providing case management was related to the central element of person-centered and integrated care, such as proactive and preventive care delivery that includes monitoring, self-management support, care coordination, and network collaboration. Case management followed the nursing process framework. District nurses focused more on healthcare and medical problems, while social workers focused more on psychosocial aspects.

Table 3 (*Cont.*)

Tønnessen et al. (2017) Norway	Group meetings with care managers (nurses, occupational therapists, physiotherapists, and social workers)	Qualitative	To investigate the conflicting expectations and ethical dilemmas and to discuss future clinical implications	The study identified the responsibility of care managers in providing services to vulnerable populations. However, balancing between the task of care manager and health provider appears as a challenge.
Setiawan and Dawson (2018) Indonesia	Primary healthcare workers (nurse, midwives, *kader - cadre*)	Interpretative qualitative methodology	To report on the implementation of community case management (CCM) to reduce infant mortality in a rural district	Nurses and midwives gained confidence and trust from the community because they were often the only ones who could administer medication in the village. CCM reportedly thrived the primary health care workers (PHCWs) clinical reasoning despite the confusion of their prescription role.
Setiawan et al. (2016) Indonesia	Mothers and health workers	Qualitative	To investigate the implementation of community case management (CCM) in the Kutai Timur district from the perspective of mothers who received care	Treatment provision could be initiated by primary health care workers (PHCWs) in villages; therefore, it reduced delays in receiving medical help. Besides, participants were more likely to seek help from PHCWs than traditional birth attendants since PHCWs were employed in the village. Moreover, under the CCM scheme, families with sick babies were frequently visited by PHCW.
Manthorpe et al. (2012) England	Nurse case managers, older people, family carers	Case study	To understand the effects of nurse case manager (NCMS) working in primary care in the English national health service (NHS) from multiple perspectives and how this new role impacts social workers	The opinions of older people receiving nurse case management revealed the value of high-intensity assistance to individuals with major health and social needs. Older people or their carers reported the improvement of continuity of care provision and psychosocial support. NCM supplemented social services by identifying unmet needs.
Klein and Evans-Agnew (2019) United State of America	School nurses	Grounded theory	To develop a theory describing the processes and actions for school case management targeting children with chronic conditions	Nurses provided direct nursing care in several forms for children in the school.
Hudon et al. (2015) Canada	Patients and family members	Descriptive, qualitative, in-depth interview	To examine experience of patients and their family members with care integration as part of a primary care case manager (CM) intervention	Easy access to the CM nurse facilitated communication. This also allowed closer follow-up when needed. The privileged access to CM nurses fostered better communication with their family physicians. Participants reported improved access to personalized information, communication, coordination, and decision-making assistance, as well as better healthcare transition.
Hensley (2011) United States of America	Case managers with nursing background and professionals from other disciplines	Qualitative, focus group interview	To explore the perceptions and experiences of community-based mental health case managers in the field of Medicare prescription drug benefits	These managers saw themselves as an essential bridge in the process of medication utilization for their clients. Case managers allocated their time to talk with clients by phone and browse the Medicare websites, assisting the client in understanding the information and making decisions about Medicare benefits.
Head et al. (2010) United States of America	Users, nurses	Quasi-experiment	To integrate palliative care principles and practices into the daily routines of a Medicaid managed care provider	Provision of palliative care case management included assessment of physical and psychosocial complications experienced by patients with serious illnesses, pharmaceutical interventions, identification of community resources to assist palliative care patients, and assistance in hospice referrals.
Gage et al. (2013) England	Elderly, nurses	Case study	To compare community matrons in holding case management roles for impact on service utilization and costs	The roles of case management were varied among nurses. Meanwhile, community matrons were working more intensively on the elderly and those taking more medication than nurse case managers.

Table 3 (*Cont.*)

Dhingra et al. (2016) United States of America	Adult users	Retrospective cohort study	To evaluate a diverse population served by an interdisciplinary model of community-based specialist palliative care and the variation in service delivery over time and identify subgroups with distinct illness burden profiles	Case managers played roles in conducting a comprehensive assessment (medical evaluation and mental health wellness of patients and their family), formulation of goals of care and advance care plans, evaluation of the need for home care, and evaluation of the need for care coordination and hospice eligibility. In delivering care, the duties were assigned to an interdisciplinary team including nurses, physicians, social workers, nurses who provided telephone support, and chaplains. Individuals who received more home visits and telephone calls had greater health improvement.
David et al. (2019) Spain	Nurses	Literature review and qualitative approach including individual interviews	To present and discuss the central aspects of the case manager nurse work process in three Spanish autonomous communities	As case managers, nurses should understand the health-illness process as a result of a complex interaction of factors at various levels of life; perform care beyond individual needs because the scope is broad and include not only patients but also the caregivers; own the leadership, articulation and mediation skills.
Cicutto et al. (2020) United States of America	Users, caregivers, school nurses	Quasi-experiment	To describe the elements of asthma care program and its utilization by school nurses and school health teams in two urban school districts	A school nurse provided case management and case coordination, including delivering care (asthma management, asthma control, and medication management) and providing asthma education to both clients and parents/guardians. Barriers in conducting case management, among others, are difficulty in making contact with carers, restricted access to health-care records outside school settings, and time limitations experienced by school health teams.
Chapman et al. (2018) United States of America	Public county-based mental health delivery system	Mixed methods approach, including a semi-structured interview	To describe how psychiatric mental health nurse practitioners (PMHNP) are made use of, determine obstacles to full access, and evaluate PMHNP's economic contribution to public health systems	A PMHNP provided case management services, including formulating care plans (medication management, crisis stabilization, and crisis intervention), assisting clients in administrative issues, and performing promotive functions (empower clients to be aware of lifestyles that might cause disturbance in health).
Brown et al. (2011) United States of America	Adult users	Quasi-experiment	To explore the feasibility of adding a nurse case manager to diabetes self-management education to foster users' attendance and increase utilization of other available health care services	Roles of a nurse case manager, among others, are: providing health education and consultation about diabetes self-management, assisting patients in coping with cultural and environmental barriers, assisting patients in locating and accessing health care facilities, as well as collaborating with health care teams. Individuals who had higher contacts with nurse case managers attended diabetes self-management education sessions more often. In addition, participants expressed preference of having face-to-face contact with the nurse case managers than by telephone.
Borgès Da Silva et al. (2018) Canada	Adult users, primary health care organizations	Cross-sectional	To evaluate patients' experience of care in primary care as it pertained to the nursing role	Patients experienced better access to primary health facilities as nurses acted as case managers and systematically followed patients. In addition, sharing care between nurses and general physicians could enhance primary care access.

Conclusion

Care coordination and care planning were the most components of nursing case management frequently associated with access to care. This scoping review showed that nurse case managers improve the access of care for different populations in the community, both urban and rural areas, besides reducing health care spending and the number of readmissions or rehospitalization. However, the initiation of implementation still has to consider the issues, needs, and challenges of each country in determining which case management model is most suitable to the population. Also, clear regulation and continuing training for case management should be provided by the authorities to reduce the occurrence of possible constraints during the implementation. Further research is needed to find a nursing case management model according to primary health care to accelerate achieving UHC and develop validated measurement tools to measure access to care based on the components of the community nursing case management model.

Declaration of Conflicting Interest
The authors have no conflict of interest to declare.

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Authors' Contribution
All authors contributed equally to the study conceptualization, methodology, article search, data analysis, writing, and editing of the manuscript. All authors approved the final version of the article.

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Self-control in old age: A grounded theory study

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Abstract

Background: Self-control is associated with multiple positive outcomes. There are several studies on self-control, yet no literature describing the mechanism of self-control in old age.

Objective: This study aims to develop a substantive theory on the exercise of self-control in old age.

Methods: Grounded Theory methodology developed by Glaser & Strauss was utilized in the conduct of this study with ten (10) older adults as participants following the set of inclusion and exclusion criteria. Individual in-depth interviews of 30-45 minutes were observed to gather the needed verbatim narrative responses from each participant after careful consideration of the ethical procedures approved by the University research ethics board. Major themes with their respective sub-themes were generated after rigorous analysis of the participants' responses following the steps provided by Glasser & Strauss in conducting grounded theory studies.

Results: This study resulted in the formulation of three propositions such as: (1) Older adults exercise self-control differently, (2) several personal motivations are involved in the exercise of self-control, and (3) the exercise of self-control leads to life satisfaction. From the propositions emerged the Theory of Self-control in Old age, which states that the process of self-control encompasses the human capability of exercising self-restraint to overrun different types of desires, passions, and temptations. The theory posits that older adults vary in their exercise of self-control depending upon their personal motivations. The theory also assumes that the exercise of self-control results in life satisfaction as displaying self-control is attributed to a host of positive life outcomes.

Conclusion: The present study has important implications in the field of gerontology and health care services since the older population is growing, and so does the demand for health care services. The need to understand the choices and decisions of older adult clients is fundamental in individualizing the health care services that may be designed and provided for them.

Keywords

self-control; grounded theory; old age; inductive approach; nursing

In life, human beings struggle to make optimal decisions so often, which require the exertion of self-control. Self-control is crucial before making any personal decision or choice (De Ridder et al., 2012). The decisions may involve economic choices, decisions about lifestyle preferences, moral choices, and personal predilections (Baumeister et al., 2007). Self-control is mainly the restraint that people use on their desires and impulses (Baumeister, 2012). More specifically, it is the capability to overrule or override one's response. Self-control is a self-initiated practice in which the individual himself instigates the process (Duckworth et al., 2014).

Late-life is often seen as a stage where there are multiple losses in various life domains. Empirical evidence shows that a decrease in physical function and cognitive ability is prevalent in late life, attributed to the biological changes in aging (Baltes & Mayer, 2001; Sadang & Palompon, 2021; Salthouse, 1996; Schaie, 1989). Considerably, the decline of the physical function of old people as well as the older adults' mental agility is linked with the aging changes at the biological level (Baumeister & Alquist, 2009). Resultantly, there is a decrease and loss of physical and cognitive functioning. As defined in this study, self-control is a cognitive process governing one's emotions, actions, and feelings. Notably, the exercise of

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self-control involves cognitive function. The link between the cognitive decline in aging and the capacity to exercise self-control in old age remains largely unknown although this might have a bearing on the older adults' decisions affecting health, financial, social, and other life domains. Self-control is consequential; thus, this essential concept needs further investigation (Baumeister et al., 2007).

Population growth and longevity of older people mean that the health care decisions they make, the investments they focus on, and the general choices they take in life will become increasingly important to the society other than themselves (Boals et al., 2011). The exercise of self-control comes into the picture when an older adult is faced with a decision to take. The decisions to control, restrain, suppress or act out are but consequential and will affect the older adult himself and other people (Tangney et al., 2004). Remarkably, older adults display various life decisions in terms of their physical health, how they engage socially with others, in financial matters, and others (Sadang & Palompon, 2021). Varied life avenues require the demonstration of self-control. The practice, according to many researchers, yields positive outcomes (Tangney et al., 2004). Although this is common knowledge, yet many older adults come up with poor choices in terms of health practices, fail in financial management, and sometimes have a strained relationship with other people as a result of the poor exercise of self-control (De Ridder et al., 2012). This requires deeper understanding and investigation. Since the exercise of self-control is consequential, the idea of delving deeper into this concept is not only vital but relevant.

Existing literature states that self-control is an essential element for attaining one's goals, being successful in one's undertaking, and resisting ones' selfish and one's potentially harmful impulses. Since desires and temptations are ever-present, there is a need to exercise self-control. Although there were studies on children's self-control in relation to their success in later life (Mischel & Ebbesen, 1970; Mischel et al., 1989), the mechanism of self-control in old age has not been well documented. Hence, the knowledge on the exercise of self-control in old age in terms of their health practices and behaviors and their social and financial dealings requires deep elaboration. The foregoing clearly shows the need to investigate the mechanism of self-control in old age to provide an elaborate description of how it is exercised in later life and its impact on the various life aspects of older adults. Hence, the purpose of this study was to generate a substantive theory of self-control among older adults in old age. The knowledge thereof will provide a succinct idea and understanding about this human quality trait which is deemed essential before making optimal life decisions.

The present study has important implications in the field of gerontology and also in health care services since the older population is growing over the past years. Hence, there is an expectation obviously of a growing demand for health care services. So, there is a need for health care professionals to understand elderly clients. The need to understand the choices and decisions of older adult clients is fundamental in individualizing the health care services that may be designed and provided for them.

Methods

Design

The Grounded Theory method developed by Glaser and Strauss (1967) was followed in undertaking this research study with the main aim of generating a substantive theory of self-control in old age. Systematic collection of qualitative data was employed to selected participants to gather datasets by carrying out a one-on-one in-depth interview to obtain a rich description of how people in old age exercise self-control. In this research study, the participants' subjective experiences were explored to better understand their exercise of self-control in late life (Streubert & Carpenter, 2011). The purpose of Grounded Theory is to explore and describe a phenomenon in naturalistic settings. The target of Grounded Theory is to reach a conceptual theory that can explain and predict the experiences of the interview persons in relation to their life conditions (Glaser & Strauss, 1967). Moreover, an inductive approach to theory development was utilized. The process involved in this study included gathering qualitative data, analyzing the data collected, developing hypotheses and propositions, and finally generating a substantive theory (Streubert & Carpenter, 2011). The theory develops and evolves during the actual research process as an interplay between data collection and analysis ensues.

Participants

The participants were selected following inclusion criteria, which included the following: (a) willingness to participate in the research study, (b) 60 years old and above, (c) resident of Iligan City, (d) no cognitive disabilities, and (e) able to articulate and express thoughts, ideas and experiences. The cognitive level was assessed through the usage of a short portable mental questionnaire (Pfeiffer, 1975). Exclusion criteria were: (a) those who were cognitively impaired, (b) physically and psychologically frail, and (c) those who were unwilling to participate in the study.

Sampling

Theoretical sampling was employed in the study involving ten (10) older adults from Iligan City, Philippines. Theoretical sampling is the process of generating theory from the data (Glaser & Strauss, 1967). In this study, theoretical sampling was methodologically followed throughout the interview process.

Data Gathering Process

A face-to-face interview using an in-depth interview was conducted by the researcher in collecting qualitative data. The interview session was carried out within 30-45 minutes until data saturation was reached and theoretical sampling

was attained. The conversation was recorded in an audio recorder, and permission was sought to record the conversation explaining its necessity to capture every single detail of the dialogue. A semi-structured interview style was employed, and guide questions were used.

Ethical Considerations

Ethics approval of the protocol by the Cebu Normal University- Research Ethics Committee (CNU-REC) with CNU-REC code 229/2019-02 Caorong was secured as part of the research protocol. Permission and approval from the Office of the Senior Citizens Affairs (OSCA) – Iligan Chapter president was also observed prior to the conduct of this study. Each of the participants was given a copy of the informed consent duly approved by the CNU-REC. The researcher comprehensively explained the content of the informed consent in the dialect that the participant understood. After a thorough explanation and discussion, the participants were asked to sign the informed consent form. The researcher assured that participation is voluntary and that at any given rate if the study participant should wish to stop participating, it should be recognized and respected.

Analysis

After having gone through some initial analysis of the data gathered, the researcher made some notes on what key concepts needed elaboration. The research participants were then asked about the concepts that needed elaboration until key and important concepts were described, elaborated, and clarified. When there was a redundancy of the information gathered from the research participants, this signaled that there was already data saturation. Constant comparison was made by comparing the findings with the existing findings. This method was essential in constructing theoretical categories which represented the core categories or concepts of the study on self-control in old age (Streubert & Carpenter, 2011).

Grounded Theory involves several steps such as coding, memo writing, theoretical sampling, and the method of constant comparison (Glaser & Strauss, 1967). In this study, reading the qualitative data several times was done, and for chunks of data that had been gathered, labels were then made. The labels were based on the meaning that emerged from the data. After open coding one set of data, interconnections between categories and codes were created. The process is called axial coding. At this stage of the data analysis, the researcher integrated the categories identified in the axial coding process. The selection of the core categories was made by systematically relating the categories discovered. Moreover, the categories were then validated through finding existing relationships. Further development was made by filling in categories that require more refinement and development (Streubert & Carpenter, 2011).

Memo writing was an essential aspect of the coding process (Glaser & Strauss, 1967). This was initiated as soon as coding was started. It involved theorizing and commenting about the codes. Reflections and ideas about codes and relationships between codes were made, which created the link between raw data and formal theorizing and hypothesis creation (Streubert & Carpenter, 2011). The research participants' perceptions, ideas, and experiences of self-control were explored and investigated using open ended-questions. The guide questions were primarily rooted from the main research question, which was 'how do individuals in old-age exercise self-control'. The idea was to ground the data which were systematically collected to describe self-control in old age. Moreover, probing questions or statements were used to prompt answers and explanations. Statements such as 'please elaborate or expound', 'tell me more', 'can you please clarify', 'what was the outcome', 'please, expound', 'I'd like to hear more', etc. were used.

Results and Discussion

In this section, the basic description of the participants and their self-control process are presented. Ten older adults who were residents of Iligan City were recruited to join the research. All of the older adults who participated were within the age range of 62-92 years. Fifty percent (50%) of the participants were male. Table 1 indicates the basic information of the participants.

Table 1 Participants' Profile

Code	Age	Gender	Religion	Marital status
TOM	64	Male	Islam	Married
ZEN	69	Female	Iglesia ni Cristo	Widowed
ROB	63	Male	Roman Catholic	Widowed
REM	76	Female	Roman Catholic	Widowed
DEB	64	Female	Seventh Day Adventist	Married
DAN	92	Male	Islam	Married
MAX	78	Male	Roman Catholic	Married
TEL	62	Female	Protestant	Widowed
CEL	70	Female	Islam	Separated
TED	78	Male	Roman Catholic	Married

Through constant comparative analysis, theoretical categories emerged, which were essential in the identification of the core theoretical categories which would substantiate the theory of control in old age. Four theoretical categories were formulated from the sixteen sub-categories identified about the theory of self-control in old age, namely: (1) self-introspection and assessment, (2) decision and choice of action, (3) action, reaction and conduct as an indication of self-control, and (4) outcome and impact of self-control.

Theoretical Category 1: Self-introspection and Assessment

The process of self-control is initiated by an older adult who engages personally in self-introspection and assessment. By introspection, the cognitive thought process is activated

when a situation arises. This involves self-appraisal by an older adult concerning the advent of the situation or experience. Self-introspection primarily involves examination or assessment of one's thought and emotional processes. The reflection involves looking into and considering one's experience, valuing one's moral standards, and taking into consideration the lessons gained from the past experiences.

Sub-category 1: *Involvement of thinking and assessment*

In exercising self-control, the older adults engaged the thought process through thinking and considering the next course of action or response. The display of self-control by the older adults involves not only the concept of thinking but also discerning in deep thought the possibilities and consequences of one's action or response. This stage of the process encompasses the process of assessment.

> "You really have to engage in thinking. Thereafter, you can make a decision. It is really a personal decision and that you are aware that there are consequences of your choices and decision which would impact you." **ROB**

Sub-category 2: *Valuing moral standards*

This pertains to the strong influence and consideration of moral standards in self-control exercised by the older participants. As many older adults have a strong sense of spirituality, their exercise of self-control is driven by a highly personal motive of being afraid to commit sins and because of the fear of God and wanting to please Him.

> "Well, the motivation for a religious person, for example, is avoidance of sin because the moment you don't control yourself, you transgress the criteria of moral… or you violate the sharia (law). That's the bottom line." **TOM**

Sub-category 3: *Knowledge and lessons gained through experience*

The learnings gained from their past experiences gave them significant reasons to avoid experiencing the same situation again, such as having experienced conflict within the family as well as suffering due to poor health choices before.

> "Hypothetically, you can control, or you can tame yourself to exercise self-control. You learn from exercising it. And you develop already that kind of self-discipline. You can now internalize through yourself the virtue of discipline or the virtue of self-control how to attain self-control." **TOM**

Theoretical Category 2: Decision and Choice of Action

Self-control as a process involves the ability of an individual to govern one's actions, feelings, or emotions. The process also involves deciding and choosing the next course of action. The choice of action comes out after having engaged in self-introspection or assessment. The decision is as well influenced by thinking of the positive and negative consequences of the actions. Furthermore, deciding the next course of action includes the consideration of the health-related changes as well as the current circumstance that the older adult is experiencing. The decision is also driven by outer and inner personal motives.

Sub-category 1: *Involvement of personal decision and choice*

The exercise of self-control involves decision-making and choosing the next course of action or behavior to employ. The individual himself does the exercise of self-control. Older adults view self-control as a process involving personal decisions and choices. The decision process includes weighing the pros and cons of a certain action or the negative or positive consequences of the decision before coming up with a choice on what to take and do as the next course of action.

> "Self-control is a mental process. For instance, in a certain situation, I choose not to get affected since I am afraid of another (heart) attack. In such a case, I really weigh things out. For example, I would not readily react to provocations to abate a situation because it could very well lead to conflict. Self-control is a cognitive process. It is a self-initiated process." **ROB**

Sub-category 2: *Thinking of the consequence of one's decision*

In the exercise of self-control, before the older adult decides what to do next, he looks at the possible consequences of his decision and his choice of action. The older adult's choice of action is in consideration of the consequences both positive and negative of one's decision and choice of action.

> "Before going to America, I was actually engaged in all sorts of vices. I was involved in drinking intoxicants and gambling. I did all those vices, but when I left the country, I also left those vices. I controlled myself to leave those vices so that I would not have any problems with my family and children. My family remains intact after leaving those vices. I actually now live a comfortable life." **TED**

Sub-category 3: *Consideration of age and health-related changes*

Older adults go through several changes in cognition, emotion, physical strength, and health, among other human aspects. The decision and choice of action by the study participants were actually influenced by their current state of health as they now are keen on considering the different changes they are experiencing. Current changes in the aspect of health, for instance, had made them become motivated to demonstrate more self-control. They have changed their old practices to what now is necessary and recommended for them to do.

> "I usually do physical exercises every morning for 15-20 minutes. I usually force myself to get up so that I could expose my body to the sunlight before 8 am. This is so that I would be exposed to the sunlight for Vitamin D." **REM**

Sub-category 4: *Consideration of current life circumstance*

This category reflects that older adults go through varied life circumstances. Obligations and duties do not stop with aging. Certain responsibilities and obligations by older adults need to be fulfilled and accomplished. Many older adults exercise self-control to carry through their responsibilities in life.

> "If I won't control my spending and just squander my money carelessly, then for sure I will not have enough money for future use. Although I wanted to eat rice, I restrain myself because eating rice could potentially cause my sugar to rise. I am also financially incapable of affording rice for myself and my helper's consumption." **REM**

Sub-category 5: *Inner motivations of the exercise of self-control*

According to the participants, their exercise of self-control includes inner motivations. Such inner motivation included the want to avoid sin and to abide by moral standards. Fear of God also surfaced as an inner motive in self-control exercise as well as giving value to the Divine commands.

> "The number one reason why I exercise self-control is because of fear to commit sin to God. I also don't like any trouble, and I don't want to experience a headache." **REM**

Sub-category 6: *Various outer motivations of the exercise of self-control*

Other than the inner motives of exercising self-control, various outer motivations of the exercise thereof were also discovered. The various outer motivations in the exercise of self-control among the study participants included wanting to maintain social relationships intact, promoting health status, and managing financial resources well for future use.

> "If I would not control my spending and just squander my money carelessly, I would not have enough funds for future use. There are really times that I suffer an asthma attack. During those times, there is really a need for me to purchase my asthma medication which costs over a thousand pesos. So, I really need to have some money on those times." **REM**

Theoretical Category 3: Action, Reaction or Conduct as Indications of Self-control

The third theoretical category reflects the decision and choice of the individual who exercises self-control. These are manifested or indicated in his or her actions, reactions, or conduct. Under this theoretical category are sub-categories such as restraining the self from acting out, resisting temptation and passion, and suppressing inner feeling, involving struggles to control the self as well as the changing degree of self-control. The third theoretical category is supported by the following subcategories below:

Sub-category 1: *Restraining self from acting out*

This sub-category reflects the manifestation of self-restraint by an individual who exercises control in terms of his actions. By restraining himself, he is engaged in a deliberate action of his choosing. The choice of action is processed within himself taking on different considerations such as the possible consequences.

> "Sometimes I get angry with my husband over minor things such as when our kitchen is messy. At home, I really like things to be in their proper places, but my husband has this habit of putting candy wrappers on my vases which I dislike. When that happens, I gently reprimand him. I now have self-restraint, but before, I usually throw things at him and sometimes even give him a smack." **DEB**

Sub-category 2: *Resisting temptation and passion*

Human beings are surrounded by different and varying types of desires, passions, and temptations. However, there are temptations and desires that need to be resisted because of the harm they could bring. This is where the exercise of self-control is needed. The exercise of self-control against the desires and passion of an individual entails struggle and effort.

> "Well, of course, with the basic control is fasting. It should also be observed throughout your daily life. For example, if you can control partaking food like this one (points at the food on the table) … learning from this virtue for your daily life, you can control not taking any food like taking any sweets, palatable food, cold drinks and all that. You can control yourself even if it is palatable or satisfying through drinking cold water. I don't even care for cold water or sweets or chocolate. I don't care for those. I just take vegetable, and I cannot even finish a cup of rice. So that is the result of fasting." **TOM**

Sub-category 3: *Suppressing inner feelings*

Expressing emotions and feelings are inherent in a man. There are constant engagements and interactions among people anytime and anywhere. The experience may often evoke the expression of feelings and emotions, yet, consequently, certain situations necessitate the exercise of self-control to keep the good social relationship going and avoid unnecessary expressions of words that may not be received well by others.

> "I know how to control myself. For instance, when provoked, I am aware that I should not get angry because it could cause my blood pressure to rise. In such a case, what I do is restrain myself. When it comes to food prohibitions, I just eat a little to ease my desire. That, I think is practicing self-control." **ROB**

Sub-category 4: *The changing degrees of self-control*

This subcategory entails the varying degrees and levels of the display of self-control among older adults. There are older adult participants who had more self-control, or their level of self-control now had increased due to age. Yet, some older adults also are less able to control themselves by giving in to desires and whims. Hence the older

participants really have varying degrees or levels of self-control.

> "There is actually a great impact that my self-control now has increased. For instance, before I really wanted that those who are indebted to me will really pay me back. Nowadays, I still allow other people to borrow money from me, yet I consider lending people money like an act of charity." **REM**

Sub-category 5: *Struggles in controlling self*

For older people, exercising self-control involves the element of struggle. This occurs because there are outward and inward pressures of either satisfying one's desire or refraining from doing something or acting out, which requires effort and conscientiousness.

> "For example, I am not in contact with my wife, and you are still an organism (me). What is the mechanism of self-control that you are not in contact with your wife? No cohabiting. No sexual pleasure. You cannot also commit Zina (adultery) because that is haram (prohibited)…I don't look at naked bodies. If it's in front of me, I look away, and it's very hard, especially for the male. I turn away. I have interest, but I refrain. Who is not interested after all?" **TOM**

Theoretical Category 4: Outcome and Impact of Self-control

The final theoretical category encompasses the different outcomes, results, and impact of exercising self-control. Many of the older adults expressed that exercising self-control led to positive outcomes. However, there are negative outcomes as well of displaying low self-control. Additionally, the results of displaying self-control as emphasized by the older adults do not only impact other people but also relatively impact them. They even conveyed that exercising self-control made them feel happy and satisfied.

Sub-category 1: *Feeling of satisfaction and happiness*

This subcategory is the reflection of the ultimate result of exercising self-control which is the feeling of happiness and satisfaction. Several older adults who joined the study stated when asked, 'what do they feel upon exercising self-control?', that they feel happy and satisfied. This may be due to them doing actions they are so strongly motivated to act about or behave a certain way that they feel strong about, giving them happiness and satisfaction. Furthermore, not all older adults happen to have perfect self-control. There are older people who display a lesser degree of self-control given a situation. The next subcategory under this last theoretical category exhibits the consequences of not practicing control or having less self-control.

> "I feel happy because I can please Allah. I can please the Lord, and Allah loves the people who exercise self-control. He loves people who renounce the world. So…you control, you fast, you renounce, you deprive yourself… that would make Allah very happy." **TOM**

Sub-category 2: *Consequences of losing control*

The results of having less or no self-control are generally linked to negative consequences such as conflicts with other people, trouble, and strained relationships with others people. These occurrences were experienced by the older adults themselves, as discovered from the in-depth interview.

> "I really cannot control my self especially when it comes to reprimanding my children. I will not stop saying things until I have said what I needed to say to my children, even if it is hurtful to them. That is my weakness. I also am not able to control myself when I am angry at my spouse." **DEB**

With the establishment of the core categories supported by the identified subcategories and the participants' narrations, comes now the understanding of the process of self-control in old age. The process begins with the older adults engaging initially in what is called self-introspection followed by the act of choosing and deciding. The decision and choice of the older adults will then be reflected in their actions and conduct, which would then yield some outcome and impact.

Hypotheses Derived from the Results

The generation of the substantive theory was derived through employing the constant comparative analysis method of the qualitative data, which were systematically gathered. The analysis resulted in the identification and formulation of subcategories and theoretical categories respectively, which in turn became the basis of developing and generating the research hypotheses. The developed hypotheses showcase the relationships between variables identified which emerged from grounding the qualitative data sets. The exploration and analysis resulted in the following hypotheses:

Hypothesis 1: *Self-control is a personal decision which is self-initiated by an older adult driven by one's own personal motive*

The hypothesis identified depicts that the exercise of self-control by an older adult is self-initiated—each older adult exercises self-control differently. The driving force for the exercise and practice of self-control depends on one's own personal motives or specific personal goals. This assumption was induced from the narratives of the selected study participants. Some participants practice or exercise self-control in order to maintain good relations with other people, while others practice self-control to follow moral standards or in consideration of the health-related changes they experience.

The different personal motivations of the older adults in their exercise of self-control are highly personal. They significantly vary in their personal motivations. The personal motivations to exercise self-control are influenced by past experiences and the lessons gained from those experiences.

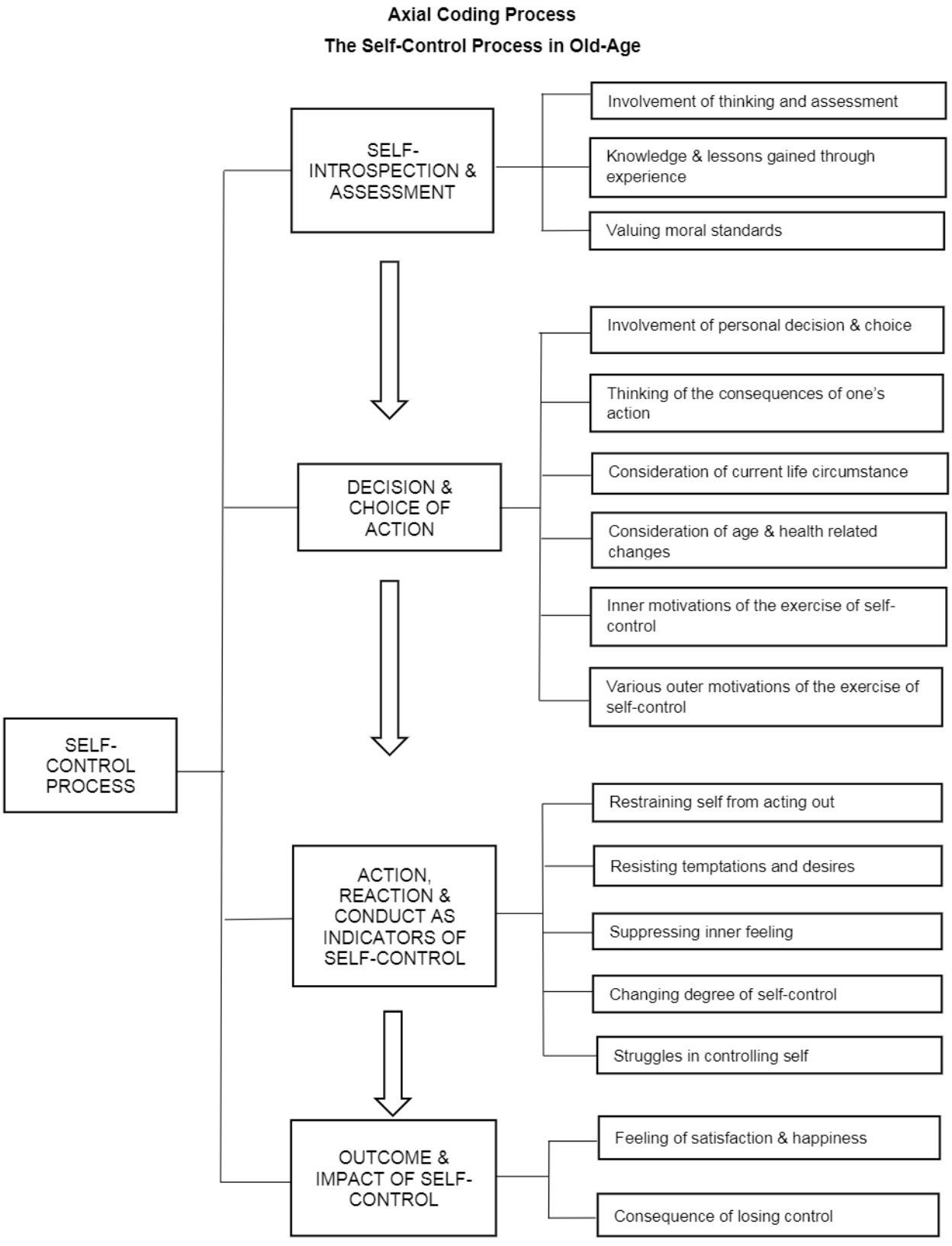

Figure 1 The schematic diagram of the axial coding process

Hypothesis 2: ***There is a relationship between health status, interpersonal relationships, spirituality, financial status, and the exercise of self-control among older adults***

It was established from the data collected one motivation of the older adults in their exercise of self-control is the consideration of the health-related changes they now experience in late life. Some research participants revealed that they are now more careful in terms of their food intake. They avoid doing things that may aggravate their current health condition or health issues. They further revealed that they had to struggle to engage in physical exercises to improve their health status and avoid foods not recommended for them to eat even if the food is of their liking.

On the other hand, they are aware that they are already in their sunset years, and this realization increases their spiritual connection. Many participants said that they restrain themselves from giving in to some of their desires since they are afraid of God and are therefore afraid to commit sins. When confronted with situations where giving in would lead them to commit sin, they would readily exercise and practice self-control to avoid sinning.

Hypothesis 3: ***Older adults who have high self-control have better life satisfaction***

When asked what emotions they feel when they exercise self-control in a given situation, several participants answered that they feel happy and have personal satisfaction. As an example, they said that avoiding argumentation or refraining from speaking back ill words has preserved their good relationships with other people, and as a result, they feel happy. Maintaining good relationships with loved ones, family, relatives, neighbors, and other people are considerable factors for life satisfaction.

Propositions Derived from the Hypotheses

The following are the propositions formulated from the generated hypotheses grounded from the qualitative data obtained.

Proposition 1: ***Older adults exercise self-control differently***

The first proposition was derived from the first hypothesis, which states that self-control is a personal decision which is self-initiated by an older adult driven by one's own personal motive. People exert self-control on a daily basis across different life domains such as in health, in their interpersonal relationships and dealings, in financial matters, and others. Since human beings are in constant interaction with their environment, the exercise of self-control is vital. Human beings possess the capability of exercising self-control which involves the thought process of decision making and choosing which action or behavior to exercise, display or demonstrate. The exercise of self-control differs from one older adult to another as individuals have different personal motives and capabilities and are unique in many ways.

Self-control, according to Vohs and Baumeister (2004), is the ability of a person to suppress or inhibit behaviors or responses intentionally and consciously. Similarly, self-control is seen as the capacity of an individual to alter responses in terms of morals, values, ideals, and expectations of other people behind some long-term goals (Baumeister et al., 2007). In the field of psychology and philosophy, there is a contention that self-control is needed to suppress an immediate urge to consume. Not smoking cigarettes, not drinking alcoholic beverages, or not consuming fatty foods are just some examples of exhibiting self-control. Those who claim to show self-control prefer rewards or benefits in the future, such as longer lives and better health (Henden, 2008).

The term self-control is often used in many disciplines, which may often also refer to self-regulation, conscience, willpower, and delayed satisfaction (Moffitt et al., 2011). As defined by Henden (2008), self-control refers to a person's capacity in a lesser or larger degree. There are individuals with a low level of self-control who may have distinct characteristics in terms of attitude and behavior. These individuals may also have the tendency to pursue immediate gratification rather than delaying it. There are also explorations in the behavioral science that inspect self-control demonstration in early childhood and determine the changes of the self-control practice during the life course (Jackson et al., 2009; Kochanska et al., 2001). Persons with high self-control, on the other hand, are seen to be more successful in handling relationships with other people as well as having more satisfying relations with them (Finkel & Campbell, 2001). The impact of exercising self-control also to cope with stress and maintain psychological health is also found to be positive (Englert & Bertrams, 2015).

Several researches consider self-control to range from poor to good behavioral control (Dick et al., 2010). Many investigators had the assumption which suggests that an individual's ability to regulate self or not differs in a qualitative sense (Friese & Hofmann, 2009; Hofmann et al., 2009; Strack & Deutsch, 2004). Good self-control is said to involve a conscious regulatory process that includes several subcomponents. They include one's ability to adjust and monitor one's behavior when anticipating results, delaying gratification, suppressing problematic behavior, and being goal-directed. On the other side, individuals who are unable to control themselves are more spontaneous with their actions sidetracking the necessity of conscious planning. They are also unable to delay gratification or even appropriately modify responses (Pearson et al., 2013).

In accomplishing daily-mundane tasks, which often require decision-making, self-control is indeed needed. However, many people find it extra challenging to exert self-control which leads to failure in accomplishing tasks such as eating healthy, doing exercise to saving money (Baumeister et al., 1998; Baumeister et al., 2007; Carver & Scheier, 2001).

Proposition 2: ***There are various motivations involved in the exercise of self-control***

The next proposition was developed from the assumption that there is a relationship between health status, interpersonal relationships, spirituality, financial status, and the exercise of self-control among older adults. It could be argued that there are various motivations behind the exercise of self-control by an individual. The inner drives and motivations come in different forms as human beings inherently have different aspirations and life goals and aims.

Self-control is established as a person's ability to regulate his own thoughts, actions, and feelings (De Ridder et al., 2012). Moreover, the practice of self-control helps resolve motivational conflicts experienced by an individual between short-term and long-term goals (Fujita, 2011). Persons who are good at controlling themselves easily resist temptations that would otherwise be in conflict with the valued long-term pursuits. Essentially, persons of this type are certainly engaged in action and behaviors that help achieve or attain goals and motivations.

Motivations are classified as either intrinsic or extrinsic. The reason behind the action or behavior of a person in a particular way is driven by his or her motivations. Intrinsic motivation implies that an individual engages in activity because the person finds it enjoyable, satisfying, or interesting as his or her inner motivation. On the other hand, extrinsic motivation means that a person is driven to do things that will lead him to achieve some personal gains such as money (Deci & Ryan, 1985; Ryan & Deci, 2000).

Henden (2008) suggested that self-control involves the notion of a person having the capacity to bring one's action in line with his intention in seemingly competing motivations. This could be elucidated when a person has the intention to resist, for instance, another cigarette and was able to resist it despite having a strong desire for it. Edmund argues that self-control is a form of intentional control over one's behavior; thus, self-control is a person's ability to control himself.

According to Baumeister et al. (2007), there is a need to resist temptations as these may bring about long-term consequences. For instance, one must attempt to resist the temptation to eat unhealthy food, or to go to sleep for extended hours or act in a violent manner since undeniably failure to repel impulses and temptations may lead to crime, alcoholism, teen pregnancy, drug addiction, venereal diseases or underachievement in education among other (Baumeister & Alquist, 2009; Baumeister et al., 2007).

Proposition 3: ***The exercise of self-control leads to life satisfaction***

The hypothesis that older adults who exercise self-control have better life satisfaction is the basis for the above proposition. Findings of this current study show that older adults who exercise self-restraint on matters they feel strong about and are motivated to do about find themselves feeling happy after exercising self-control. The feeling of happiness is associated with the positive outcomes of the exercise of self-control, such as maintaining good interpersonal relationships.

Self-control is a strong determining factor for success in life (De Ridder et al., 2012). There are a number of adaptive outcomes associated with the exercise of self-control which include better interpersonal relationships, better physical health, and better intellectual performance (Finkel & Campbell, 2001; Schmeichel et al., 2003; Will Crescioni et al., 2011). Exercising high self-control is a pertinent aspect of a person's behavior for a person to have a successful and healthy life (De Ridder et al., 2012; Tangney et al., 2004). It was found out that behaviors such as minimized aggression, reduced criminality (Dewall et al., 2007), better interactions (Finkel & Campbell, 2001), less abuse of alcohol, smoking, and other prohibited substances (Sayette, 2004), and high self-esteem and improved interpersonal skills were all related to the practice of high self-control. Moreover, Hofmann et al. (2014) stated that self-control is a person's ability to override one's inner response and to interrupt undesirable behavioral inclinations or impulses.

Additionally, greater self-control is also positively attributed to psychological adjustments and negatively predicts psychopathology (Tangney et al., 2004). It was also found out that the more self-control a person exhibits, the fewer are the experiences of symptoms and stress while having better mental health (Boals et al., 2011). This finding was corroborated by the results of the study by Jensen-Campbell and Malcolm (2007) and Bogg and Roberts (2004), that there is a link between self-control and higher quality and satisfying relationships. The essence of self-control in reaching significant life outcomes is widely known. Empirical evidence shows that high self-control practice positively predicts well-being, satisfaction with life, and positive affect. High self-control here means the ability of a person to regulate his thoughts, feelings, and behaviors (De Ridder et al., 2012; Hofmann et al., 2014).

There is a well-established relationship between self-control and optimal functioning (Tangney et al., 2004). They also posited that people's capacity to practice self-control displays their adaptive nature, which has some implications that they also live more happy and healthy lives. Moreover, there is also evidence pointing out that people with a higher level of self-control are seen to feel satisfied with their lives as well as experience positive emotions more than those who have low levels of self-control (De Ridder et al., 2012; Hofmann et al., 2014). Additionally, self-control was seen by many researchers to be elemental in one's personality trait. Having conscientiousness is attributed to longevity, physical health, and other relevant health behaviors (Bogg & Roberts, 2004; Friedman et al., 1993; Goodwin & Friedman, 2006). Succinctly, self-control is a catchall essential human trait necessary for attaining a good life; thus, self-control demonstration is associated with a number of positive life outcomes.

The Theory of Self-control in Old age

The theory of self-control in old age assumes that self-control is a self-initiated process of governing one's actions, emotions, and feelings driven by one's own personal motives. It is also assumed that older adults exercise self-control differently as there are various personal motivations involved in the exercise thereof. Moreover, it is posited that the exercise of self-control among older adults leads to life satisfaction. The theory suggests that the ability to exercise self-control involves introspection and assessment and the thought process of deciding and choosing what actions or behavior to display, and the individual himself does the exercise of self-control. The theory suggests that self-control involves deciding and choosing an action or behavior that is highly grounded on the person's inner drive and personal motivations. It also involves weighing and assessing possible consequences of one's action before initiating a response or action.

The theory generated could be classified as a middle-range theory since it addresses specific phenomena by explaining what exercise of self-control is in old age, why it occurs, and how it occurs among older adults. This middle-range theory on the exercise of self-control in old age suggests that older adults vary in their exercise of self-control. The degree of self-control is linked to one's own personal motives and one's attainment of specific aims and life objectives. The theory further suggests that there are different factors and motivations involved in the exercise of self-control among older adults. The display of self-control presupposes various personal motives such as attaining personal interest and general well-being, maintaining social status or standing, having better interpersonal relationships, accomplishing personal obligations and responsibilities, and having better health. Furthermore, the theory assumes that the practice or exercise of self-control results in personal satisfaction as displaying self-control is attributed to a host of positive life outcomes.

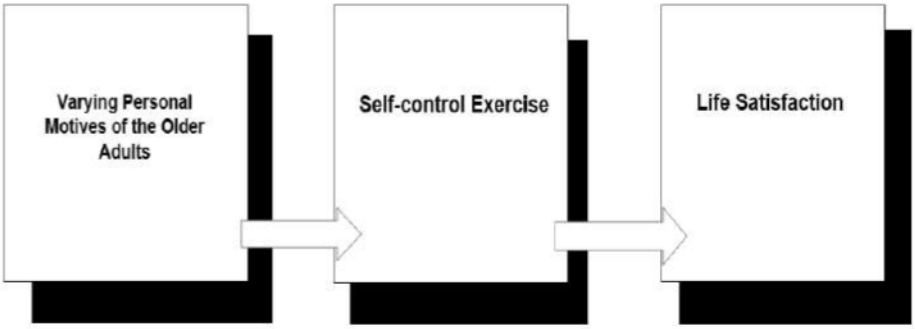

Figure 2 Schematic diagram of the Theory of Self-control in Old age

The diagram shows that the exercise of self-control among older adults entails the involvement of varying motivational factors. It is assumed in the theory that the motivating factors include the aspect of wanting to maintain health, accomplishing obligations, maintaining social status, having better relationships, and attaining general well-being. As seen in the figure, attaining life satisfaction is an outcome for exercising self-control, as presented in Figure 2.

Conclusion

The exercise of self-control in old age is a necessary aspect of any choices and decisions in life besides being consequential. The choices and decisions of older people in varied life avenues necessitate the practice of self-control as outcomes will have an impact not only on them but also on other individuals and society in general. Older people are not exempt but are also faced constantly with life decisions and choices in terms of their physical health, social relationships, and economic choices as such the practice of self-control is necessary as positive outcomes are expected. The present study has important implications in the field of gerontology and health care services since the older population is growing, and so does the demand for health care services. The need to understand the choices and decisions of older adults is foundational in individualizing health care services. Further, the theory also provides a broader view and a better perspective in understanding older adults in their life choices and decisions.

Declaration of Conflicting Interest

There is no conflict of interest.

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Data Availability Statement

The full transcribed verbatim responses of the participants were kept in a password-protected computer during the analysis of this research work and was permanently deleted after the completion of her dissertation paper for confidentiality and ethical purposes.

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The development of Spiritual Nursing Care Theory using deductive axiomatic approach

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Abstract

The concepts of spirituality and spiritual well-being are not novel ideas as they have been subjects of scrutiny in several studies. However, there has yet to be a formalized framework of spiritual nursing in the Philippines despite its importance. Developing such a framework is significant, especially since holistic nursing believes in the relationships among body, mind, and spirit. Thus, the Spiritual Nursing Care theory was conceptualized, which states that every person has holistic needs, including spiritual needs that must be satisfied to attain spiritual well-being. It forwards that for the patient's spiritual needs to be met, what is required is the triumvirate interconnection among the nurse, the external environment, and the spiritual nursing care which may be provided by the nurse as a healthcare provider and the significant others or family as part of the external environment. The theory has two propositions that were subjected to validation studies that either strengthened or repudiated the propositions presented: (1) the meaning of spirituality differs from person to person, and (2) the patient's spiritual well-being is influenced by the nurse's spiritual care competence, as well as the patient's internal and external variables.

Keywords

Spiritual Nursing Care Theory; spirituality; holistic nursing; health personnel; Philippines

Spirituality is an evolving concept that has significance in relation to bodily health. It is also considered an aspect of health. Gone are the days when spirituality was limited to the esoteric; it has now been deemed to have practical applications, such as in nursing care. There is extensive literature about the connection between spirituality and its influence on health and well-being (Puchalski, 2001; Koenig & Cohen, 2002; Chaves & Gil, 2015; Ebrahimi et al., 2017). Furthermore, strong spirituality has been linked to resilience (Koenig, 2012). Thus, it would be remiss not to incorporate the spiritual component in the practice of nursing care, which considers the holistic care of the person to be its goal. Yousefi and Abedi (2011), in their study, posit that real and complete healthcare can only be possible through sensitivity to the patient's spiritual needs.

The concept of spirituality has gained increasing interest from researchers. Although it has significance in the healthcare profession in general, the spiritual component is still most often associated with nursing care (Timmins & McSherry, 2012). History would show that even in the past or ancient forms of nursing, patient care was always holistic, including both spiritual and religious care. This may be because caring is an important component of nursing practice. Although some measure of care is to be expected in other forms of healthcare, it can be said that in nursing, the nurse takes a more active and invested role in their patient's well-being as their task is not just to diagnose or dispense, but to provide holistic care. This is also an important factor to consider as to the rationale of developing a Spiritual Nursing Care Theory. Spiritual care is compatible with nursing care as patient care is more than just the medical aspect of nursing. The nurse has to meet not just the medical needs of the patient but all aspects which deal with the patient's well-being. Not only is it demanded from nurses by nature of their profession, but studies would show that they are also well-suited for the task.

In a study that compared how doctors and nurses provided emotional care, it was found that the respondent doctors would reassure their patients by continuing clinical

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care and explaining the curative nature of the treatment. Furthermore, they believed that they could not reassure patients if they discussed the latter's fear with them. In contrast, nurses relied on psychological and social skills, often being open and discussing patients' concerns with them, this being their way of providing reassurance and emotional support (Forsey et al., 2013).

Furthermore, the majority of the international literature and studies have supported the increasing importance of spiritual care and recognize it as an important component of nursing care that is well-rounded and holistic (Koenig, 2012; Chaves & Gil, 2015; Ebrahimi et al., 2017). The concepts of *spirituality*, *spiritual needs*, and *spiritual well-being* have also been discussed and defined in various studies. Fisher defines *spirituality* as a *"personal quest for understanding answers to ultimate questions about life, about the meaning and about relationships that are sacred or transcendent"* (Fisher, 2011). Meanwhile, according to a study by Guerrero-Castaneda and Flores (2017) on spiritual nursing care as perceived by older persons, older people make use of spirituality and religiosity to find a sense of life amidst all of the radically developing circumstances brought about by advancing age. (Narayanasamy et al., 2004) identified specific *spiritual needs* of older persons, including religious beliefs and practices, absolution, seeking connectedness and comfort, and healing or looking for meaning and purpose. *Spiritual Well-Being* was defined as the *"ability to experience and integrate meaning and purpose in life through a person's connectedness with self, others, their environment, or a power greater than oneself and the totality of circumstances that would lead a person to say that his life is going well"* (Fisher, 2011).

It can thus be inferred that studies generally agree that spirituality is a state of being of a person; however, there is still an evident lack of consistency in the definition of spirituality (Timmins et al., 2015). In addition, while there have been studies conducted to investigate the spiritual needs of aged persons in residential homes and those at the end of life stage in intensive care units (Erichsen & Büssing, 2013), there is unexplored potential in studying their spiritual well-being. According to the National Health Service Scotland (2009), all healthcare staff, caregivers, and families could provide spiritual care. However, there is also a significant lack of literature concerning the three-way relationship between the nurse, the patient, and his or her family as current studies on spiritual nursing care tend to be general and broad. In light of all of these, there seems to be a great need to address these huge gaps in nursing literature related to Spiritual Nursing Care. For these reasons, the researcher wanted to develop a Spiritual Nursing Care Theory.

In this study, the author wanted to explore another perspective that considers the interconnection of the healthcare provider, specifically the nurse, the family, and the patient himself or herself. There has yet to be a formalized framework of Spiritual Nursing Care in the Philippines despite its importance. Developing such a framework is significant because compared to traditional forms of healthcare which make use of equipment and facilities that may not be available, spiritual nursing care requires only the competency of the healthcare provider, specifically the nurse, in giving spiritual care. As of now, spiritual needs are considered only a small component of the holistic needs of a person. However, the author argues that the concepts of spirituality, spiritual needs, and spiritual well-being, which have been studied in previous literature, can all be interconnected in one formal theoretical framework. One way of understanding spirituality is the perception of a person on the importance of or how strong his or her spiritual practices or beliefs make up a part of his life. Spiritual needs are specific needs that must be addressed by the healthcare provider, in this case, the nurse, so that the patient can attain meaningful well-being, or be more specific, spiritual well-being. When spiritual needs are satisfactorily addressed, spiritual well-being is achieved and contributes to holistic health care. The author posits that spiritual well-being is as important as physical, emotional, and mental health, which deserves due consideration.

This paper was meant to explore the patient's understanding and perception of the concept of spirituality, the influence of the cultural elements of the patient's external environment on the practice of spiritual nursing care, as well as the competencies of the nurse in providing spiritual care, and its link to attaining spiritual well-being for the patient. The eventual aim of this paper was to develop a comprehensive, holistic, and spiritually inclusive nursing care framework, which values the importance of each stakeholder. This paper can be of help to patients, the family, nursing practitioners, scholars, learners, and curriculum planners who may decide to incorporate spiritual nursing care as a part of the curriculum and the nursing profession as a whole. It would serve to add to the minimal knowledge of spiritual nursing care within the Philippine context.

Methods

The theory proposed in this paper on spiritual nursing care was conceptualized through the deductive form of reasoning. Deductive reasoning is the systematic and logical process whereby a conclusion is reached based on the concurrence of multiple premises that are generally assumed to be true (Sternberg, 2009). According to Creswell and Plano Clark (2007), utilizing deductive reasoning by the researcher would involve the researcher working from the 'top down' starting with a theory to hypothesis and then to data to add to or contradict the theory.

The deductive method is used to construct a deductive axiomatic system or theory. The essence of an axiomatic approach as used in the field of logic and mathematics is that a group of statements, called propositions, are derived through the use of deductive logic applied to another more fundamental set of statements serving as basic

assumptions, also known as axioms. Axioms represent the foundation statements in a deductive system. Meanwhile, a concept is defined as representing views or descriptions of some aspect of the real world. A concept of something is not the same as the thing itself (Lambert, 1973).

Finally, a theory is a set of logically related statements, including some law-like basic assumptions having testable implications, are an explanation and description of some concept. All theories are deductive systems. Kerlinger (1973) defines a theory as a set of interrelated constructs or concepts, propositions, as well as a systemic view of phenomena through specifying relations among variables with the objective of explaining and predicting such phenomena. Theories are those which knit together observations (Thompson, 2005).

The Spiritual Nursing Care Theory was developed following a deductive axiomatic approach. Within the framework of nursing theories and models, the author also used an empirical quantitative approach in her theory generation (Jacox, 1974) in developing the Spiritual Nursing Care Theory. The researcher identified the phenomena that she wanted to investigate within her field of study, specified, then classified concepts used when describing these phenomena. A broad topic in the field of nursing was chosen, specifically in gerontology, which was of interest to the researcher and which had the potential for further study. The topic chosen was the role of spirituality in nursing care. The next step was to research and gather related literature on the selected topic. The researcher then developed propositions on how two or more concepts are related. To elaborate, by identifying patterns among the studies made by prominent scholars in the field, the researcher was able to single out statements that were generally accepted to be true (axioms) to serve as a starting point for deducing and inferring other truths which would be the building blocks of the theory (propositions). The researcher then linked propositions to each other in a systematic way to come up with the theory.

Walker and Avant (1995) identified four levels of nursing theories, which include practice theories, mid-range theories, grand theory, and metatheory. The term 'grand theory' is an alternative term to 'model'. In contrast to grand theories, which do not easily find an application and are furthermore broad and abstract, mid-range theories are more restricted in their focus. Mid-range theories are also abstract, but only moderately so. Moreover, they are composed of measurable variables. The Spiritual Nursing Care Theory developed is an example of a mid-range theory that specifies how the propositions, and the concepts of spirituality, spiritual needs, spiritual well-being, and spiritual nursing care are related to each other, but which propositions remain measurable. The Spiritual Nursing Care Theory may also easily be applied in actual nursing practice.

The related literature in the succeeding discussion was gathered to formulate the premises to base the more specific propositions, which made up the foundation of the proposed theory on Spiritual Nursing Care.

Results and Discussion

Five axioms were generated after thoroughly reviewing the literature and studies and were used as a basis for generating the two propositions, which served as the framework for the development of the Spiritual Nursing Care Theory. The connection between spirituality and health has been the subject of study since time immemorial. In the past, and even until now, the caring for the body and the spirit was done by the same person acting as both therapist or counselor and religious leader (Fradelos et al., 2014). Spirituality is linked to the human spirit and is an important component of human existence (McKee & Chappel, 1992). Many people consider their spirituality and religion as a crucial part of their existence. Spirituality also serves as a source of support and contributes to people's well-being, and helps them cope with everyday struggles (Purdy & Dupey, 2005).

Health professionals also recognize the part spirituality plays in healthcare (Monareng, 2012). Monareng, in her study, goes on to state that it is the holistic perspective on human functioning and in nursing which demands that nurses take into account aspects of spirituality when they provide nursing care (Monareng, 2012).

Studies exploring spirituality from a holistic approach revealed that patients use religious or spiritual beliefs and practices to cope with suffering such as illness and stress (Koenig, 2012). One of the findings from Koenig (2012) was that religious people tend to spend less time in the hospital. He then claims in his study that healthcare providers, including nurses, have an obligation to the patient to include the patient's religious beliefs in their care and incorporate their faith (spirituality) in promoting healing. The nature of nursing is to care, and thus it would make sense for nurses to have a more direct hand in attending to the spiritual needs of patients.

Various studies also show that people who are more spiritual have better adaptive capabilities. They tend to adapt more quickly to health complications compared to their counterparts, who are less spiritual (Strandberg et al., 2007). Levin et al. (1996) meanwhile explored connections between spiritual beliefs and practices and health. His findings are corroborated by studies that revealed the many ways spirituality can prevent illness and promote well-being, such as by positively impacting physical health, lessening the risk of disease, and influencing responsiveness to treatment (Baker et al., 2015).

Holistic approaches in healthcare take into consideration all aspects of the individual, and his or her needs, including mental, social, and spiritual needs. Research regarding spirituality suggests that meeting patients' spiritual needs has a positive contribution to their adaptation to illness and improving rehabilitation (Levin et al., 1996). Based on the literature mentioned above (Purdy & Dupey, 2005; Strandberg et al., 2007; Koenig, 2012; Baker et al., 2015), it can be said that *every person has holistic needs, which may include spiritual needs* (**Axiom 1**).

As people grow older, some tend to contemplate more on matters of mortality and spirituality (**Axiom 2**). Researchers posit that the natural process of aging comes with it the consciousness that life will eventually end. This creates a context where older adults are more accepting of deepening their understanding of their mind, body, or spirit (Atchley, 1999).

Spirituality is a complex and abstract subject with many perspectives. It is something that touches all people in different degrees. By sex, various studies have suggested that females are more spiritual than males. The same study revealed that people with higher educational attainment tend to be less spiritual than those who finished lower levels. Furthermore, this same study demonstrated that spirituality decreases as income levels increase. As for health status, some studies indicate that religiosity or spirituality appears to positively correlate with physical health (Ellison & Levin, 1998). While patients and their families have different understandings and degrees of spirituality, individual nurses also have different levels of spirituality. Nurses are primarily trained in the physical and nursing care of the patient; however, their levels of spirituality can also impinge positively on their care of the older person. Other studies have also shown how providing spiritual care is influenced by multiple factors, including the spirituality of the healthcare provider and their understanding of the spiritual practices of the patients (Schleder et al., 2013). A study by Kisvetrová et al. (2013) found that nurses living in a predominantly secular country would tend to see themselves as non-religious and, as a consequence, therefore, believe that providing spiritual/religious care was not something they were likely to do. Thus, what the literature would show is that nurses are indeed aware of the concept of spiritual care or spiritual nursing; however, they may differ in their interpretation and how they administer such care because of their differing understandings of spirituality. Therefore, it helps to understand that *people have different understanding and levels of spirituality* (**Axiom 3**).

Internal and external environment contributes to a person's spirituality (**Axiom 4**). People can find meaning in life in different ways and through different avenues (Eckersley, 2005). People would often have many things which are important to them, such as their family, friends, career, hobbies, interests, and desires. All of these are avenues through which people can find meaning in life.

People can also find spirituality in their connection with their nation or ethnic group since spirituality is one of the deepest forms of interconnection. There is a link between interconnectedness and physical well-being. For example, it was found that socially isolated people five times likelier to die compared to those who have strong ties with their family, friends, and or community (Berkman & Glass, 2000).

In addition, empirical studies would show that health cannot be reduced to just an organic and natural objective process, but rather is connected to the experiences of individuals and groups, which are in turn related to the cultural characteristics of a society (Minayo, 2006).

The literature affirms that healthcare practices vary depending on a person's culture and that culture is the basis for their explanations for their suffering and illness, their search for meaning in these occurrences, treatment choices, and life reevaluation (Mello & Oliveira, 2013). In 1996, the World Health Organization (WHO), as well as the United Nations Educational, Scientific and Cultural Organization (UNESCO), recognized the importance and significance of cultural aspects in international health (Mello & Oliveira, 2013). The two international organizations stated that health care, which includes nursing care, and culture should be approached in a way that integrates the two from the perspective of benefiting individuals and countries (Mello & Oliveira, 2013).

Based on the above literature, it can be seen how the internal and external environment of a person, both his socio-cultural and physical environment, can influence his spirituality.

Holistic nursing care includes spiritual care (**Axiom 5**). Taylor (2002), as cited in Monareng (2012), defines 'spiritual nursing care' as those activities that facilitate and provide for a healthy balance between the bio-psychosocial and spiritual aspects of the person, and thus contributing to a sense of wholeness and overall well-being. To adequately address the concerns of their older patients, nurses must be knowledgeable of their patient's spiritual needs, meet these needs and contribute to maintaining their patient's positive spirituality. The concept of spirituality has gained researchers' interest in recent years. Although spirituality is present in general healthcare literature, the spiritual component of healthcare is still mostly associated with nursing care (Timmins & McSherry, 2012). Even in the oldest forms of nursing, patient care was said to be holistic and included spiritual and religious care as well. During the Byzantine era, the patients in the hospitals received physical and spiritual care (Papathanasiou et al., 2013). In addition, theories of nursing recommend a holistic model for healthcare. It has already been substantiated that patient care cannot be and should not be one-dimensional but should be holistic and composed of all aspects such as the biological, psychological, social, and spiritual dimensions (Papathanasiou et al., 2013). Florence Nightingale, who can be said to be the founder of modern nursing, introduced important elements necessary for the healing process. Some examples included the environment, touch, light, scents, music, silent reflection, and even birds. Each of those elements helped the patient connect with others, with nature, and with the divine (Nightingale, 1860).

Holistic care may be defined as a comprehensive model of caring and is the heart of nursing (Strandberg et al., 2007; Albaqawi et al., 2021). Holistic care is built upon the principle of holism which puts forward the idea that for people, the whole is greater than the sum of its parts. In addition, mind and spirit both affect the body (Tjale & Bruce, 2007). Holistic care then is that care that recognizes that the patient is a whole. Furthermore, it acknowledges

that there is interdependence and interconnection between and among the patient's biological, social, psychological, and spiritual dimensions. Holistic care, being a comprehensive model of caring, includes the following components – education, self-help, medication, complementary treatment, and communication (Morgan & Yoder, 2012).

Holistic care is also applied in nursing. In the context of holistic nursing, the patient's attitude, opinions, emotions, thoughts, and even culture and spiritual beliefs and practices are factored in the care plan and are considered essential to the recovery, happiness, satisfaction, and well-being of the patient (Selimen & Andsoy, 2011).

From the axioms generated, the following ideas were put forward as propositions to form the backbone of the theory on Spiritual Nursing Care. The first proposition posited states that *the meaning of spirituality differs from person to person* (**Proposition 1**).

The second proposition posited is that *the patient's spiritual well-being is influenced by the nurse's spiritual competence as well as the patient's internal and external variables* **(Proposition 2).**

Spiritual Nursing Care Theory

The theory being proposed in this paper on Spiritual Nursing Care states that every person has holistic needs, which may include spiritual needs that must be satisfied for the person to attain spiritual well-being. The theory forwards that in order to achieve spiritual well-being and for the person's spiritual needs to be satisfied, what is required is the triumvirate interconnection among the nurse, the external environment, and the spiritual nursing care which may be provided by the nurse as the healthcare provider and the significant others or family as part of the external environment.

The Spiritual Nursing Care theory claims that spiritual needs are part and parcel of the totality of needs of the patient; it is not lesser than any other need. They should be considered and dealt with holistically and accorded great weight. The theory postulates that satisfaction of spiritual needs contributes to the overall well-being, as it may contribute to the improvement of the physical and emotional well-being of the patient (Bangcola, 2019). Thus, it is assumed that people who find themselves spiritually satisfied would have a more positive attitude towards healing, both emotionally and physically, and are therefore more responsive to healthcare interventions.

The schematic diagram of the theoretical framework for this study was based on the work of the author, the Spiritual Nursing Care theory, which proposed that holistic care for patients is composed of three interlocking factors that contribute to the satisfaction of the patient's spiritual needs to attain spiritual well-being: the external environment which includes the nurse as the healthcare provider, and which necessitates that he or she must have enough spiritual competency to provide spiritual nursing care; the culture of the patient's family or significant others; and at the center is the spiritual nursing care itself.

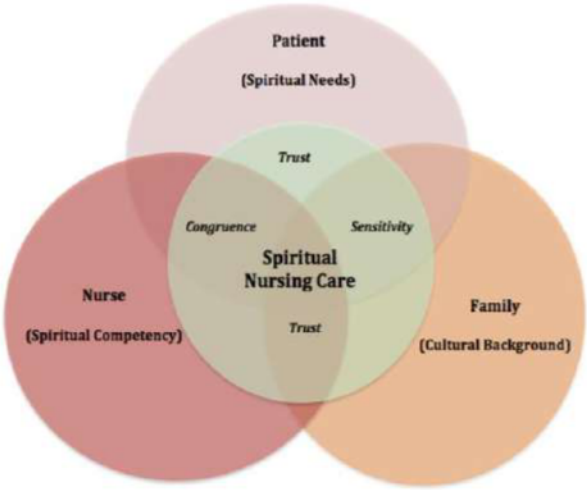

Figure 1 Spiritual Nursing Care Framework

Figure 1 illustrates the Spiritual Nursing Care Framework, which involves the tripartite relationship between the nurse as the healthcare provider, the family as providers of support, and the patient having spiritual needs.

The theoretical framework is composed of four components: (1) spiritual nursing care, (2) the nurse's spiritual competency, (3) the cultural background of the patient, both as part of the external environment, and (4) the patient's spiritual needs.

The Spiritual Nursing Care theory proposes that patients have spiritual needs as part of their holistic needs. When these needs are satisfied, they will have a more positive attitude towards healing and thus are more responsive to healthcare interventions which may be manifested in their satisfaction with the spiritual nursing care provided by the nurse. The trust between the nurse and the patient will help in the nursing aspect by creating an atmosphere of rapport between the nurse and the patient, thereby making the patient support the decisions of the nurse when it comes to the spiritual aspects of nursing care. As illustrated in the above schematic diagram, there must be trust between the nurse and the family members of the patient also because they both act as a healthcare provider and support system for the patient.

Furthermore, there must be trust since the nurse is expected to provide spiritual nursing care, which must be sensitive to the patient's needs and the cultural background of the patient's family. This, in turn, will help make the patient's family trust that the spiritual nursing care provided by the nurse will redound to the benefit of the patient. On the part of the nurse, as a healthcare provider, he or she must have spiritual competency in order to address the spiritual needs of his or her patient adequately. Competence refers to a set of traits and characteristics which form the basis for optimal performance. In other words, spiritual competency then is that defined set of

attitudes, knowledge, and skills in the domains of spirituality that every nurse should have to effectively and ethically practice nursing, regardless of whether or not they consider themselves spiritual or religious.

There must be congruence between the nurse's spiritual competency and the spiritual nursing care to be provided in order to satisfy the patient's spiritual needs. As defined in nursing, culturally congruent practice is that application of evidence-based nursing, which is in line with the preferred cultural values and practices, beliefs, and worldview of patients (Marion et al., 2016). Therefore, the spiritually congruent practice would be nursing which is sensitive to the preferred spiritual or religious beliefs of the patient and his or her significant others. Meanwhile, spiritual competence is the process wherein nurses demonstrate congruent spiritual practice. In other words, the nurse needs to be spiritually competent in providing spiritual nursing care that is congruent with the patient's spiritual needs.

In whatever healthcare setting, the nurse is likely to have patients with culturally diverse beliefs and practices concerning their own health, wellness, and illnesses. This is where the interaction between the nurse and the external environment (socio-cultural) would also be essential. Not only must the nurse provide culturally sensitive spiritual nursing care, he or she must also provide spiritually congruent nursing care. There may be instances where the personal belief system of a nurse may not match those of his or her patient. In this instance, there may be a conundrum since the nurse may have difficulty relating to his or her patient, which in turn may hinder the nurse from providing adequate spiritual care. Hence, it is necessary for the nurse to interact with the external environment of the patient or his family to be more specific. This is because, in the family setting, most persons develop and form their values and belief systems as influenced by their socio-cultural background.

Meanwhile, the family members may not be expected to have the same spiritual competence as the nurse as they are already in a unique position of being the primary and fundamental emotional support of the patient. What is required is that they be sensitive to the *spiritual needs* of the patient and assist them as much as they are able. They should also assist the nurse in understanding how best to satisfy the spiritual needs of the patient and handle any confusion the nurse may have as to specific cultural and religious practices, as the family members are likely to come from the same socio-cultural environment as the patient.

It is only with the nurse's spiritual care competence that is congruent with the nursing care provided and is sensitive to the cultural background of the patient's family, which would complete the holistic spiritual nursing care provided to the patient. It is through this three-way symbiotic relationship that holistic spiritual nursing care may be perfected. If the nurse is able to provide optimum physical, pharmacological and spiritual assistance to the patient and the family environment delivers spiritual guidance, then the patient can attain positive health status within his given physical illness or bodily condition.

Conclusion

The essence of spiritual nursing care is the understanding that spirituality can mean different things to different people, especially considering the physical and socio-cultural environment. The Spiritual Nursing Care theoretical framework involves three groups: the patient, the nurse, and the family or significant others as part of the external environment. It is also composed of three components: the nurse's spiritual care competence, the cultural elements of the external environment, and the spiritual nursing care, the intersection of which directly influence the satisfaction of the patient's spiritual needs.

The higher the spirituality or how much the patient believes himself to be faithful, the higher the impact the corresponding faithfulness of his significant others would impact him. In providing holistic nursing care that includes spiritual care, there must be congruence between the nurse's spiritual competency as well as the spiritual nursing care provided to meet patients' spiritual needs. In other words, the spirituality inclusive nursing care provided would be the practical application of the nurse's spiritual competency, the former's effectiveness in meeting the patient's spiritual needs to attain spiritual well-being, being directly influenced by how competent the nurse may be.

Declaration of Conflicting Interest
The author declares no conflict of interest in this study.

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Barriers to exclusive breastfeeding: A cross-sectional study among mothers in Ho Chi Minh City, Vietnam

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Abstract

Background: Exclusive breastfeeding provides numerous benefits to the health of infants, mothers, economics, and the environment. However, during the exclusive breastfeeding period, the mothers face many barriers.

Objective: This study aimed to describe the perceived barrier of breastfeeding and compare its differences among mothers in Vietnam according to demographic and individual characteristics.

Methods: A cross-sectional study was conducted among 246 women in Ho Chi Minh City, Vietnam. Data were derived from the original survey using a self-administered questionnaire asking about the barriers of breastfeeding in three aspects: maternal, infant, and socio-environment. Descriptive statistics, Independent t-test, and ANOVA were used to describe the mothers' characteristics and the breastfeeding barriers.

Results: The barrier from the infants was the most noticeable, followed by socio-environment and maternal barriers, respectively. Breastfeeding in public places (M = 2.93, SD = 0.92), baby's illness (M = 2.74, SD = 0.99), and insufficient milk supply (M = 2.70, SD =0.99) were considered as major barriers to six-month exclusive breastfeeding among mothers in Ho Chi Minh City, Vietnam. Among the age groups, mothers who were more than 35 years old perceived had lower breastfeeding barriers than the younger mothers (F = 3.67, p = 0.03).

Conclusion: The investigation of the barriers against exclusive breastfeeding practice can help nurses and midwives develop breastfeeding promotion programs to promote exclusive breastfeeding rate for women in Vietnam.

Keywords

barrier; exclusive breastfeeding; perception; mothers; nurses; midwives; Vietnam

Breastfeeding is the most efficacious feeding method for the child, especially the exclusive breastfeeding in the first six months of infant's life provides irrefutable benefits for the infant's health, mother's health, economics, and the environment. To illustrate, a baby who receives only breast milk in the first six months of life is less mortality and morbidity of gastrointestinal infection diseases, pneumonia, asthma, or diarrhea compared to non-breastfed infants (Ballard & Morrow, 2013; Biks et al., 2015). Additionally, exclusive breastfeeding for infants in the first six months is also significantly associated with higher scores in the intelligence quotient test than those who have no exclusively breastfed (Tasnim, 2014). Regarding the mother's health, exclusive breastfeeding significantly reduces breast cancer and ovarian cancer, and it postpones returning the menstrual period as a lactational amenorrhea method (Labbok, 2016; Victora et al., 2016). For economics, Walters et al. (2016) estimated the economic benefits of breastfeeding across seven countries in Southeast Asia; the results found that the

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health care treatment could be saved 300 million US dollars annually by reducing the incidence of diarrhea and pneumonia by providing adequate breastfeeding. Furthermore, breastfeeding is assumed as climate compatible because of the nature of breast milk, e.g., no need for heating, no need the refrigeration to store, and breast milk can be used at any time with the right temperature.

Because of the advantages of breast milk, World Health Organization (WHO) recommends mothers worldwide exclusively breastfeed their infants during the first six months after birth (WHO, 2011). However, globally only 40% of infants aged 0-6 months are exclusively breastfed (WHO, 2017). In Vietnam, only 24% of infants are breastfeeding exclusively for the first six months despite the multiple breastfeeding promotion programs that have been launched by the government (UNICEF, 2016).

During six-month exclusive breastfeeding, the mothers could face many challenges, barriers, or difficulties. The common barriers are the perception about insufficient breast milk, and breast milk does not provide all the necessary vitamins and supplements (Kim & Chapman, 2013; Nguyen et al., 2018; Xuan & Nguyen, 2018). Another barrier of exclusive breastfeeding is the mother's perception about foods and other liquids more nutritious than breast milk; therefore, formula milk, water, and solid food are commonly introduced before six months of age (Lundberg & Thu, 2012). In addition, mothers also face the barrier to exclusive breastfeeding due to the need to return to work outside the home or the feeling of uncomfortable to breastfeed in public places, such as restaurants, workplaces, shopping centers, and public transport (Coomson & Aryeetey, 2018). Besides, physical breast problems, such as mastitis, breast engorgement, sore nipples, and cracked or inverted nipples, become the challenge for mothers who breastfeed their children exclusively for six months (Babakazo et al., 2015; Karkee et al., 2014).

Additionally, each culture has its own belief when it comes to breastfeeding. Some of these are helpful to mothers and babies, while others could negatively impact a baby's health. For example, there is a widespread belief among Vietnamese mothers that colostrum is dirty milk and should throw away (Dixon, 1992). Discarding colostrum is associated with higher odds of non-exclusive breastfeeding during six months (Tamiru et al., 2012).

According to Health Promotion Model, perceived barriers to action are anticipated, imagined, or real blocks and costs of understanding a given behavior (Pender et al., 2011). In the context of exclusive breastfeeding, perceived barriers refer to perceptions about inconvenience, difficulty, or obstacles in performing exclusive breastfeeding to the babies; the higher the perceived barriers to breastfeeding, the less implementation of exclusive breastfeeding among them (Kim & Chapman, 2013). Few studies documented the barriers of exclusive breastfeeding in the Vietnam context (Kim & Chapman, 2013; Nguyen et al., 2018). These studies were conducted in the Northern and Middle of Vietnam, where they have different cultures from the Southern of Vietnam. Therefore, conducting research in identifying the barriers of exclusive breastfeeding practices among mothers in the Southern of Vietnam was important. The findings from this study give comprehensive pictures about barriers of exclusive breastfeeding for six months among mothers in Ho Chi Minh City, Vietnam. It also provides baseline information for future researches on the relevant topic. In addition, the findings can help nurses and midwives to manage the exclusive breastfeeding practice and develop appropriate intervention to minimize the perception of barriers among Vietnamese mothers; hence, promoting the rate of exclusive breastfeeding among infants in Vietnam.

Methods

Study Design

This was a quantitative study with a cross-sectional design to identify breastfeeding barriers among mothers in Ho Chi Minh City, Vietnam. It relied on secondary data of the research on "Factors predicting six-month exclusive breastfeeding among mothers in Ho Chi Minh City, Vietnam", conducted by Nguyen et al. (2021). The data were collected from three hospitals named University Medical Center, Hung Vuong hospital, and Tu Du hospital at Ho Chi Minh City, Vietnam.

Sample Size and Sampling Method

The population of the study was mothers who were having babies aged from six to nine months. The study inclusion criteria for mothers included a mother from 18 years old or older, having a baby from six to nine months, being able to communicate in the Vietnamese language. For infants, the criterion included a singleton baby with a gestational age of at least 37 weeks. The exclusion criteria for mothers were mothers with chronic disease or other diseases in which breastfeeding was not allowed by physicians. The exclusion criteria for infants were infants with congenital disabilities or admission to the hospital during the first six months.

The sample size was calculated using Cochran's formula (Cochran, 1977). The estimated proportion of exclusive breastfeeding in Vietnam was 20% (UNICEF, 2016), the error of precision was accepted at 5%, and the confidence interval of 95% was assumed. Therefore, the total sample size in the current study was 246 mothers.

Instruments

The samples of this study were drawn from the secondary data of the original research, which was mentioned previously. The original survey was conducted using a self-administered questionnaire for collecting data. The Perceived Barriers to Breastfeeding Scale was developed by the first author based on the literature review (Babakazo et al., 2015; Coomson & Aryeetey, 2018; Kim & Chapman, 2013) and the concept of perceived barriers to action from the Health Promotion Model (Pender et al., 2011) to

measure mothers' perceptions of factors which were considered as breastfeeding barriers. The content validity of the scale was tested with three breastfeeding experts, and the item-level content validity (I-CVI) index of this scale was 0.91. Originally, this scale was developed in English and translated into the Vietnamese language using the back-translation technique.

The Perceived Barriers to Breastfeeding Scale consisted of 20 items that covered three aspects of breastfeeding barriers: maternal barriers (item 1-10), infant barriers (item 11-14), and socio-environment barrier (item 15-20). The maternal aspect reflects the negative attitude or belief of mothers about breastfeeding practice, the lack of breastfeeding technique or skills, lack of confidence, mother's physical and psychological changes that would bar the exclusive breastfeeding practice. The infant aspect reflects the false belief of mothers about the benefits of breast milk for infants and infant's physical and psychological conditions. The socio-environment aspect reflects the negative mothers' perception of inadequate support from family and health care providers, working status, and the adverse effect of formula advertisement against the exclusive breastfeeding practice. The response scale to each item was scored from 1 (strongly disagree) to 4 (strongly agree). Therefore, the total scores were ranged from 20 to 80, which a higher score means a higher level of perceived breastfeeding barrier. The psychometric properties of the scale were tested with internal consistency reliability of the scale was 0.92.

Data Collection

Data were derived from the secondary data of the original research; hence, the detailed information of the data collection could be seen in the study of Nguyen et al. (2021).

Data Analysis

Data were coded and analyzed using SPSS (statistical package for the social sciences) software program version 18.0. Descriptive statistics were used to describe the participant characteristics, compute the mean and standard deviation of the Perceived Barriers to Breastfeeding Scale. Independent t-test, one-way ANOVA were used to determine the different means between mother's characteristics and perceived barriers to breastfeeding. If a statistically significant difference was found when running ANOVA, a post hoc test was done to find a specific difference between the groups. Prior to performing the ANOVA, the assumptions were tested to ensure the accuracy of the findings and confirm no violation of statistical assumptions.

Ethical Consideration

The current study obtained approval for secondary use from the first author of the original survey with the agreement for using the data. Additionally, the Institutional Review Board (IRB) Committee from the University of Medicine and Pharmacy at Ho Chi Minh City (no.992/HĐĐĐ-ĐHYD) approved this study. Furthermore, this study also received the mothers' agreement to participate in the study. Mothers were also informed that they had the right to withdraw from the research and were assured about confidentially of the obtained information.

Results

Participant's Characteristics

Among 246 mothers, 61.4% of them aged 26 to 35 years. Slightly half of the mothers achieved the high school or diploma educational levels (52.0%), got the normal delivery (53.7%), and were the primiparous mothers (52.0%).

Table 1 Mothers' characteristics by frequency and percentage (*N* =246)

Individual Characteristics	*n*	%
Mother's age		
< 25 years old	46	18.7
25 – 35 years old	151	61.4
> 35 years old	49	19.9
Mother's education		
Less than high school	62	25.2
High school or diploma	128	52.0
Bachelor or higher	56	22.8
Delivery method		
Normal delivery	132	53.7
Cesarean section	114	46.3
Parity		
Primiparous	128	52.0
Multiparous	118	48.0

Perceived Barriers to Breastfeeding

The average total score of perceived barriers to breastfeeding was 49.24 (*SD* = 14.57), which was ranged from 22 to 76. The score in each item was varied from 1 to 4, which a higher score means a higher level of perceived breastfeeding barrier. The details of each item were presented in Table 2.

For the maternal aspect, the results revealed that the item "My breastfeeding is not successful as expected due to insufficient breastmilk" had the highest mean score (*M* = 2.70, *SD* = 0.99), followed by the item "Lack of knowledge about breastfeeding technique results in my unsuccessful practice" (*M* = 2.69, *SD* = 0.99). The item "During breastfeeding, I often have negative emotion (such as feeling anxious, agitated, angry, disgusted, or rageful)" had the lowest mean score (*M* = 2.04, *SD* = 0.90).

For the infant aspect, the item "My baby's illness makes breastfeeding very hard" was the highest mean score (*M* = 2.74, *SD* = 0.99), followed by the item "My baby's irritating mood makes the breastfeeding harder" (*M* = 2.60, *SD* = 0.97), and the item "Exclusive breastfeeding does not provide my baby with enough nutrition" had the lowest mean score (*M* = 2.26, *SD* = 0.92).

For the socio-environment aspect, the results showed that item "Breastfeeding in public places is uncomfortable to me" had the highest mean score (*M* = 2.93, *SD* = 0.92), followed by the item "Lack of support from family members

makes my breastfeeding practice more difficult" (*M* = 2.45, *SD* = 0.89). The lowest mean score was the item "Formula advertisement from TV, parent magazines, etc., makes me feel unsure of continuing breastfeeding" (*M* = 2.31, *SD* = 0.88).

Table 2 Descriptive statistics of perceived barriers to breastfeeding (*N* = 246)

Do you think that the following items were barriers to your breastfeeding?	*M*	*SD*
Maternal		
1. Breastfeeding is an exhausting process	2.34	0.84
2. Breastfeeding interferes with my sleeping pattern	2.56	0.97
3. Breastfeeding in front of family members is an embarrassing process for me	2.42	0.99
4. Experiencing physical breast problem (for example, sore or cracked nipple, breast engorgement) discourages me from continuing breastfeeding	2.52	1.01
5. Lack of knowledge about breastfeeding technique results in my unsuccessful practice	2.69	0.99
6. Breastfeeding makes me feel nervous about my body changes (such as weight gain, saggy breast)	2.27	0.87
7. I haven't enough skills to practice breastfeeding	2.45	0.92
8. My breastfeeding is not successful as expected due to insufficient breastmilk	2.70	0.99
9. Breastfeeding interferes with my daily life activities	2.31	0.83
10. During breastfeeding, I often have negative emotion (such as feeling anxious, agitated, angry, disgusted, or rageful)	2.04	0.90
Infant		
11. Exclusive breastfeeding does not provide my baby with enough nutrition.	2.26	0.92
12. It is difficult for me to keep my baby latch on my breast	2.46	0.94
13. My baby's irritating mood makes breastfeeding harder	2.60	0.97
14. My baby's illness makes breastfeeding very hard	2.74	0.99
Socio-environment		
15. Breastfeeding in public places is uncomfortable to me	2.93	0.92
16. Breastfeeding limits my social activities with others	2.43	0.83
17. Lack of support from family members makes my breastfeeding practice more difficult.	2.45	0.89
18. Return to work affects my breastfeeding adversely	2.43	0.79
19. Formula advertisement from TV, parent magazines, etc. makes me feel unsure of continuing breastfeeding	2.31	0.88
20. Lack of support from healthcare personnel makes my breastfeeding practice more difficult.	2.34	0.91

One-way ANOVA test showed a statistically significant difference between the mother's age and breastfeeding barriers score (*F* = 3.67, *p* = 0.03). The post hoc (LSD) test calculated the smallest significance between two means as if a test had been run on those two means (as opposed to all of the groups together in the case of Tukey's test). This enabled us to make direct comparisons between two means from two individual groups. The post hoc (LSD) test revealed that the mothers who less than 25 years old and from 25 to 35 years old had higher breastfeeding barrier scores than those who greater than 35 years old (Table 3).

Table 3 The difference in breastfeeding barriers scores and mothers' characteristics (*N* =246)

Variable	*n*	Breastfeeding barriers		Post hoc
		M±SD	*t/F*	*p*
Mother's age			3.67	0.03*
< 25 years old	46	53.30±15.31		(1), (2) > (3)
25 – 35 years old	151	49.28±13.92		
> 35 years old	49	45.29±15.03		
Mother's education			0.81	0.45
Less than high school	62	51.13±15.17		
High school or diploma	128	48.94±14.44		
Bachelor or higher	56	47.84±14.57		
Delivery method			-0.90	0.37
Normal delivery	132	48.46±14.86		
Cesarean section	114	50.14±14.23		
Parity			0.68	0.50
Primiparous	128	49.84±14.29		
Multiparous	118	48.58±14.90		

*p <0.05, t = t-test, F = ANOVA, post hoc (LSD)

Discussion

The mothers in the current study were young adults, and the majority of them were in the appropriate range of childbearing ages between 25 to 35 years old. Slightly more than half of them were new mothers. The mothers' perception of breastfeeding barriers was at a moderate level. According to Health Promotion Model, perceived barriers mean the perception of an individual about the inconveniences or difficulties of an action (Pender et al., 2011). In a breastfeeding context, perceived barriers represent the perception of mothers about the difficulties, the inconveniences, the challenges that the mothers face during the breastfeeding period; the more perceived barriers to breastfeeding, the less breastfeeding for the babies (Al-Darweesh et al., 2016).

The top barrier by the perception of Vietnamese mothers in the current study with the highest score (*M* = 2.93, *SD* = 0.92) was "breastfeeding in public places was uncomfortable to the mothers". It seems to be a common barrier from the perceptions of Vietnamese mothers and mothers from other countries. Coomson and Aryeetey (2018) conducted mixed methods research to describe the breastfeeding experience in public among 300 women in Accra, Ghana; these women reported difficulties in breastfeeding baby in public places due to the feelings of shyness, embarrassment, discomfort to expose the breasts (Coomson & Aryeetey, 2018). According to the literature review, there are controversial views of breastfeeding in public places; some support this practice while others do not. The rejection or acceptance of breastfeeding in public places depends on the requisite social norms. For example, a study by Morris et al. (2016) in the United Kingdom revealed that breastfeeding in public places was inappropriate because breasts were viewed as sexual objects. Whereas people in China claimed to breastfeed in public was appropriate and did not violate social morality (Zhao et al., 2017). In Vietnamese culture, it is acceptable for mothers to breastfeed in public places with covered-up breasts to avoid the exposure of their breasts. Vietnamese mothers would find a discreet place to feed their baby to prevent discomforting others, guard against judgment, and protect themselves from males' unwanted gaze. Once a mother feels inconvenient or uncomfortable about breastfeeding in public, she is less likely to breastfeed her baby in public, which, in turn, more likely to stop exclusive breastfeeding before six months. Similarly, a study by Scott et al. (2015) indicated that mothers in European countries who had a negative attitude toward breastfeeding in public places were nearly never breastfed their babies in public (AOR = 0.05, 95% CI [0.12, 0.50]). Those mothers were also more likely to cease breastfeeding earlier compared to the others.

The second highest score was baby's illness and irritating mood (*M* = 2.74, *SD* = 0.99). These Vietnamese mothers identified this barrier as one of the most common. One can theorize that when a baby becomes ill, mothers feel uncertain about caring for him, including feeding. Simultaneously, the baby's mood and appetite are likely to be altered, and the common baby/mother interactions towards feeding (Paintal & Aguayo, 2016). The best thing as we know that she should continue breastfeeding a sick baby to help the baby shorten the length of the illness and quickly recovery because breast milk contains antibodies (Manning et al., 2013). However, it is not easy to breastfeed an ill, irritated baby. To illustrate, the baby has a cold and stuffy nose; when he suckles the breast, it can be frustrating the baby, and he is fussier at the breast since he cannot breathe during suckling. Sharmin et al. (2016) reported that 64.8% of mothers in Bangladesh did not give exclusive breastfeeding during the baby's illness time. In the belief of Vietnamese people, breastfeeding is unnecessary for the sick baby since it is difficult to feed the baby during the baby's illness. Not surprisingly, the infant's illness is highly correlated to the inadequate practice of exclusive breastfeeding in Vietnam.

The third-highest score of barriers of exclusive breastfeeding from Vietnamese mothers' perception was the insufficient breast milk (*M* = 2.70, *SD* = 0.99). Interestingly, perception about insufficient milk seems to be a global barrier for exclusive breastfeeding among mothers worldwide. In a study by Osman et al. (2009), mothers in Lebanon perceived that they had insufficient breast milk because their babies still felt hunger and cried after feeding. Similarly, a study by Nasser et al. (2018) reported that 78% of the mothers in Qatar stopped giving exclusive breastfeeding for babies because they thought they did not have enough breast milk. A study in Vietnam reported that 60.9% of the mothers felt that their breast milk was not enough for the child and the child would be hungry; consequently, they considered stopping exclusive breastfeeding during the first six months (Nguyen et al., 2018). There are various reasons for insufficient milk supply, such as poor nutrition due to poor appetite of the mothers (Lou et al., 2014), poor sucking (Sharmin et al., 2016), not breastfeeding often enough, over anxiety, excessive fatigue, and lack of support and guidance from nurse-midwives (Sultana et al., 2013). However, insufficient milk is preventable; the finding implied the importance of educating, supporting, and coaching the mothers to overcome this barrier and successfully exclusive breastfeed for the first six months. A previous study confirmed that mothers having sufficient breast milk for the baby in the first six months were 24.89 times more likely to give exclusive breastfeeding than mothers with the perception of insufficient breast milk (Kim & Chapman, 2013).

Next, lack of knowledge about breastfeeding techniques resulting in unsuccessful practice was a barrier by the view of Vietnamese mothers in the current study (*M* = 2.69, *SD* = 0.99). A study by Nasser et al. (2018) revealed that approximately 53% of the mothers stopped exclusive breastfeeding their babies between zero and six months due to not knowing how to breastfeed the babies appropriately. Likewise, Sharmin et al. (2016) reported that 92.3% of mothers in Bangladesh who were in the non-

exclusive breastfeeding group using faulty breastfeeding techniques led to poor suckling and attachment. In Vietnam, the mothers with normal delivery will be discharged from the hospital after two to three days; with the short period, the mothers might not learn and absorb the breastfeeding techniques provided by the hospital. In fact, breastfeeding is a "learned skill", more than instincts. Thus, it is difficult to be successful in the breastfeeding practice if the mothers have less knowledge and fewer skills about breastfeeding techniques. Mothers in the current study were new mothers who had no breastfeeding experience before, and that is why lack of techniques in breastfeeding was their concern as a barrier of breastfeeding. Therefore, the teaching about breastfeeding techniques for mothers during antennal care visits is suggested for the hospital policy.

Last but not least, the fifth-highest score was the lack of support from family (M = 2.45, SD = .89). The Vietnamese mothers exposed this barrier as one of the most common. Researches have proved that family support played an essential role in the exclusive breastfeeding practice of mothers. For instance, a study by Yenti et al. (2018) revealed that mothers in Indonesia who got family support for breastfeeding were 2.67 times (95%CI [1.1, 6.4]) more likely to give exclusive breastfeeding than those who did not have. Likewise, another study in Yogyakarta, Indonesia, found that mothers who received family support were 2.86 times (95%CI [1.25, 6.58]) more likely to practice exclusive breastfeeding compared to those who did not (Ratnasari et al., 2017). Similarly, a study in Ethiopia reported that mothers who were supported by their husbands were 2.67 times (95%CI [1.04, 6.95]) more likely to breastfeed exclusively (Tewabe et al., 2016). Family plays a crucial role in breastfeeding practice; thus, receiving support from family was important during the breastfeeding period for the mothers. Not surprisingly, lack of support from family was perceived as one of the barriers of exclusive breastfeeding practice.

The current study provides the picture of perceived barriers to breastfeeding among mothers in Ho Chi Minh City, Vietnam; it is a piece of the puzzle to complete the picture of breastfeeding in Vietnam. In addition, it gives some implications for nursing and midwifery practice as mothers perceived they had insufficient milk and breastfeeding techniques to feed their babies. Therefore, nurses and midwives need to be with them in the first hours and days after birth to build their confidence when breastfeeding the babies. Also, nurses and midwives can develop the nursing interventions, such as the enhancement breastfeeding self-efficacy programs for mothers and students to build and boost self-efficacy so that the mothers or future mothers can confidently practice reaching the six-month exclusive breastfeeding. The top barrier perceived by mothers in this study was uncomfortable when breastfeeding in public places. It implies that the policy needs to have room for breastfeeding in public places, such as hospitals, restaurants, parks, cinemas, etc.

The data from this study were drawn from convenience sampling; thus, the representativeness of this study was limited. It evokes a recommendation for further research. A cluster random sampling method should be used to obtain a sample with the best representativeness for the entire population in Vietnam. Besides, for comparison with the current study, further research should be conducted with the mothers in rural areas or other regions of the country to capture a broader picture of perceived barriers to breastfeeding practice in Vietnam.

Conclusion

The failure of exclusive breastfeeding practice in the first six months was derived from the mothers' perception of different barriers. These barriers come from the three main factors, including maternal, infant, and socio-environment factors. The embarrassment, insufficient milk, baby's illness and irritating mood, lack of knowledge about breastfeeding techniques, and lack of support from family were the most perceived barriers. The investigations in this study help nurses, midwives, and healthcare providers identify the barriers that obstruct the exclusive breastfeeding practice; hence, the breastfeeding promotion program could be proposed and implemented to improve the exclusive breastfeeding practice.

Declaration of Conflicting Interests
The authors declare that there is no conflict of interest in this study.

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Authors' Contribution
NTN made significant contributions to the literature review (review of theory which can be applied in the study, recommendation from WHO, policies of Vietnamese government about exclusive breastfeeding, current situation of exclusive breastfeeding in Vietnam), design of the study, data acquisition, analysis/interpretation of the study. HTD and NTVP made significant contributions to the literature review (review the benefits of exclusive breastfeeding, the barriers of breastfeeding in other countries and Vietnam), study design, data acquisition, interpretation of the study findings. All authors drafted the manuscript, revised it critically for important intellectual content, approved the final version of the paper, and agreed to its submission for publication.

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Data Availability Statement

The datasets generated during and/or analyzed during the current study are available from the corresponding author on reasonable request.

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