

ANTIPSYCHOTICS USE IN NURSING HOMES

A LITERATURE REVIEW

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Degree Thesis
Degree Programme in Nursing
2017.

Förnamn Efternamn

DEGREE THESIS	
ARCADA.	
Degree Programme:	NS -17
Identification number:	21573
Writer:	Blessing Odion Jones
Title:	Antipsychotic Use in Nursing Homes
Supervisor (Arcada):	Pauleen Mannevaara/Gun-Britt Lejonqvist
Commission by:	
<p>Abstract:</p> <p>This literature study reveals the use of antipsychotics in nursing home, deprescribing of inappropriate use, reduction interventions and nursing interventions. The background entails clinical knowledge about antipsychotic drugs, types, classification and mode of action and its prevalence in nursing homes. It elaborates on reason for use, off-label use, sedative and hypnotics usage. Human errors model by James Reason was chosen for the theoretical framework. This model is frequently applicable to health care settings for analysing medical errors and patient safety incidents which is harmful to patient, family, and can decrease public health organizations confidences. The aim was to investigate different reduction interventions and benefit in reducing the use of antipsychotic medications thereby leading to improvement of nursing practices in mental health. Research questions were as follows: 1. What interventions are used to reduce the use of antipsychotic in nursing homes? 2.What are the benefits (effect) of reducing the use of antipsychotic medication in nursing homes? Methodology applied was qualitative inductive content analysis to review literatures. Data were collected from 12 different articles searched in academic database to answer the research questions. Findings shows effective interventions which include; Educating and training nurses and healthcare practitioners with personal centered care. Medication reviews by deprescribing and use of different non-pharmacology programs to reduce the excess or wrong use of antipsychotic medication to prevent adverse outcomes such as falls, hospitalization, cognitive decline and prevent medical errors and Nursing intervention which include psycho-educative interventions or behavioral therapy may limit the use of antipsychotic in elderly. Nurses and Patient receive benefits such as quality of life, increase in family satisfaction and increase in nursing management and skills.</p> <p>In conclusion, From the above results it's valid to state that the results obtained are necessary for the improvement of nursing practice. Reduction of antipsychotic drugs has tremendous effect, if only it can be practice by multi-professionals in collaboration to improve quality of life, prevention and management of dementia patients in nursing home. Current research should be done and implemented however, cost and time of providing study, use of PCC and non-pharmacological method is a limitation in further research.</p>	
Keywords:	Antipsychotics, reduction, intervention, nursing home.
Number of pages:	45
Language:	English
Date of acceptance:	

Table of Content.

Contents

1	INTRODUCTION	1
2	BACKGROUND	3
2.1	Antipsychotic as Psychopharmacological Drugs.....	3
2.2	Prevalence of Antipsychotic Medications use in Caring Homes.	5
2.3	Why and Causes of Antipsychotics use in Nursing Homes	6
2.4	Sedative and Hypnotics Usage in Nursing Home.	7
2.5	Reasons Off-label / Inappropriate are Use in Elderly Facility.	9
3	THEORETICAL FRAMEWORK	10
3.1	Human errors Models by James Reason	10
3.2	What can we learn from Errors?.....	11
3.3	Management of Errors.....	13
4	AIM AND RESEARCH QUESTIONS	14
5	METHODOLOGY	15
5.1	Data collection.	15
5.1.1	<i>Selection of Eligible Article.</i>	16
5.1.2	<i>List of selected articles for this study.</i>	17
5.2	Data analysis.	18
5.3	Coding Schematic	19
5.4	Ethical values in research study.....	21
6	FINDINGS	22
6.1	Intervention Use in Reducing Antipsychotic Drugs.	22
6.1.1	<i>Educating and Training.</i>	22
6.1.2	<i>Medication Review:</i>	24
6.1.3	<i>Nursing Intervention.</i>	26
6.2	Benefits in Reducing Antipsychotic	28
6.2.1	<i>Benefit to Nurses.</i>	28
6.2.2	<i>Benefit to Elderly Patient.</i>	29
7	DISCUSSION	30
7.1	Findings Relating to Theoretical Framework.....	32
8	CONCLUSION	34

8.1	Strength, Limitations and Recommendation	35
	Reference	37
	Appendices	43

List of Figures

Figure 1: The Swiss cheese model of how defenses, barriers, and safeguards may be penetrated by an accident trajectory.....	12
Figure 2: Process of content analysis.....	18

List of Tables

Table 1 1: selection of eligibility articles.....	16
Table 2 1: Categorization of Data Analysis	20
Table 3 1: General Information extracted from articles regarding incidence of Antipsychotics use in Nursing Homes.....	43

1 INTRODUCTION

Antipsychotics are psychiatric drugs also known as tranquilizers or neuroleptics which are available on prescription and are a class of medication licensed to primarily treat types of mental health problems with symptoms that include psychotic experiences like paranoia, delusions, disordered thought, disruptive behavior or hallucinations predominantly in schizoaffective disorder, schizophrenia, bipolar disorder, severe depression and dementia (Neil, et al 2003). Antipsychotic drugs are usually more effectual in relieving symptoms in short term of psychotic experiences. However long-term use of antipsychotic drugs is associated with numerous adverse effects such as involuntary movement disorders (Tardive dyskinesia), gynecomastia, blurred vision, impotence, weight gain, metabolic syndrome and muscle tremors. Hence, the need to reduce antipsychotics use for long term medication especially in nursing homes (Ballard 2018).

The use of antipsychotics varies across different countries (Feng et al., 2009). According to Gellad, et al. (2012), the use of antipsychotic medications is prescribed to approximately 20% to 35% of patients and residents in nursing care homes. While Maguire, et al. (2013) stated that the rates of antipsychotic prescriptions for individuals with dementia and other mental health challenges, who live in a long-term care facility, remains high: 28% in Australia, 22% in the USA and just over 20% in the UK. Generally, with a high rate of antipsychotic use, there is bound to be a high rate of occurrence of mistakes in dose by health care staff which eventually results in a lot of adverse effects which have led to numerous responses from a significant number of health-related organization. Kamer, et al. (2013), explained that unsuitable and misuse of antipsychotic medications in care home facilities has been known for nearly three decades by federal regulators. Generally, medications are considered inappropriate when the risks outweigh the benefits, especially when safer alternatives exist. This has resulted in initiation of various trial intervention programs aimed at reducing the use of antipsychotic medications especially in nursing care homes. (Gellad, et al 2012).

Study conducted by Briesacher (2017) on “Antipsychotic use among nursing home Residents”, From 1,402,039 residents receiving antipsychotics under 90 days observation. 186,076 residents received one or more prescriptions of antipsychotics. Results

showed that numerous side-effects resulted from inappropriate prescription of antipsychotics. From studies listed above, it is proven that there should be needed to promote reduction of antipsychotic medications and the use of alternative pharmaceutical options and psychosocial recommendations.

With the aid of appropriate related literature and a concise content analysis, the author was able to answer the research question; what are the intervention to reduce antipsychotic in nursing home? And what are the benefit? the major aim of the study is to acquire effective intervention and benefit on reducing antipsychotic use in nursing homes and to recommend suitable responses to results derived there improving nursing practice. Educating health care worker such as nurses, pharmacist and general practitioners through different programmed and Personal centered care were the most effective way to reduces antipsychotic. However, Medication review were also very effective intervention.

The author found interest in writing about the topics during training in nursing homes and psychiatric hospital. During the beginning of this research studies. Working with others student was a great challenge for the author, which took a lot of hard work and time. Restarting all over again was a great limitation. Secondly finding recent articles which have effective way to answer research questions were challenging. This study has developed the authors research ability, method, strengthened scientific writing also create awareness to nurses in healthcare settings.

The thesis comprises of 8 major chapters. Reasons for topic and aim of study were explain in the introduction page. Background provide the information and basic knowledge needed to understand the context of topic. Human errors Model and management of errors by James reason were use as the theoretical framework to suppose findings in the literature context, Chapter 4 represent the aim and 2 research questions. Data collection, selective eligibility method, List of chosen articles, data analysis and ethical values is demonstrated in chapter 5. Findings in relative to research questions and discussion in reflection to theoretical framework is seen in Chapter 6 and 7. Conclusion and suggestions on further study were represented in chapter 8. References and Appendixes are found at the end of the thesis.

2 BACKGROUND

This chapter entails clinical knowledge about antipsychotic drugs, types, classification and mode of action also its prevalence in nursing homes. It elaborates on the reasons for use and inappropriate use. According to Gustafsson et al., (2013), most nursing home resident who had no diagnosis of psychosis baseline receive antipsychotic medication. This drug has major mental and physical effect, they decreased alertness, may increase confusion, and can cause toxic psychosis which lead to increase in mortality rate by 100%. They further study that the rate of antipsychotic drugs used was high and the inappropriate. Long-term use was very common in dementia clients. Management of psychotic and behavioral symptoms by nurses must be taking into serious consideration in nursing homes to reduce the overuse of Antipsychotic Medications (Ellis et al.,2013).

2.1 Antipsychotic as Psychopharmacological Drugs

Over 50 years, the use of antipsychotic medications has contributed tremendously to the management of mentally ill people. Psychosis can cause numerous illness that affect the brain such as losing contact with reality, example are schizophrenia and bipolar mood disorder (Neil et al., 2003). Both Typical and Atypical drugs have being evidently proven to treat different physical illness and behavioral excesses seen in conditions such as mania, schizophrenia, dementia, Parkinson`s disease so as related conditions. More-so, Neil et al. (2003) believed that they are effectively and generally use to manage other disorders including dementia, psychotic depression and delirium. However, they do not cure psychotic illness (Igoni, 2014).

Their mode of action is not that clear, but it is believed to exert their effect at subcortical levels and dopaminergic receptors. (neurotransmitter naturally found in the brain) to influence cognitive functions and behaviors associated with increased level of dopamine or noradrenaline such as restlessness, hyperactivity, aggression and the positive symptoms of schizophrenia. (Igoni, 2014).

Antipsychotic are historically classified as major tranquillizers and neuroleptics. More classifications are being used today based on the chemical structure, neuropharmacology and clinical actions. Atypical antipsychotics have a broader side of action than Typical antipsychotics. Typical antipsychotics block only dopamine and adrenergic receptors

while the atypical antipsychotics block receptors sensitive not only to dopamine and noradrenaline but also those sensitive to serotonin and other neurotransmitters. For this reason, they have been less likely to produce extra-pyramidal side effect (EPSEs), tardive dyskinesia or to raise prolactin levels (Neil et al., 2003).

All antipsychotic drugs have been shown to cause a metabolic effect. Atypical and typical antipsychotics have been shown to increase mortality rate and have a cerebrovascular effect (Gustafsson et al., 2013.)

It has been studied that older people tend to experience side effect frequently with high severity compared with younger people. The use of atypical antipsychotics in diagnosed elderly with psychosis is recommendable because it keeps prolactin levels normal, spares cognitive function and obviates extra-pyramidal side effect. (Gerari et al., 2003). However, antipsychotic medication may cause several side-effects, especially in elderly people.

Long term use is associated with increased risk of stroke and sudden death, increased risk in falls and injury, reduction in cognitive function, extra pyramidal symptoms which include acute dyskinesias, dystonic reactions, tardive dyskinesia, Parkinsonism, akinesia, akathisia, and neuroleptic malignant syndrome (Gareri, et al 2003). The dopamine blockade or depletion in the basal ganglia are triggered by extrapyramidal symptoms. This lack of dopamine often mimics idiopathic pathologies of the extrapyramidal system, explained Blair & Dauner (1992).

2.2 Prevalence of Antipsychotic Medications use in Caring Homes

Antipsychotic medications used is a globally concern topic all over the world not just in U.S. In the United Kingdom, a study was carried out By Cioltan (2017) and found that 48% of dementia patient living in 12 nursing homes were prescribed antipsychotic medications. In western Europe from 12-59% antipsychotic medications are commonly prescribed in nursing homes for treatment of dementia. However, guideline from clinical agencies and warnings from European and national drug agencies propose reducing uses in this population. (Cioltan, 2017).

Regardless of the unsafe use, most authorities declared that these drugs should be reserved for acute conditions and discontinued as soon as possible, explaining that the risk of long-term therapy out-weights the benefits for elderly patients (Ray et al.,1980).

There is evidence to support modest benefits of antipsychotic treatment, particularly risperidone, olanzapine, and aripiprazole, for some neuropsychiatric symptoms for the short-term management of severe aggression but benefits with longer-term treatment are less clear. (Ballard, 2018).

Comparing eight European countries in a study of some countries by Karlsson (2017) high rate of antipsychotic medication in nursing homes were found and differences in treatment of psychosis with antipsychotic medication were highly great. It was also found that in Swedish sample, antipsychotic were administered to 11.9% of residents, had lowest rate than Spain with 50.4%. However, other countries which had higher increase of antipsychotic use include France 26,5%, Germany 47% Finland 29.5% U.K 32.9%, Estonia 47.8% and Nether land 35.4% Karlsson et al., (2017).

The Center for Medicare and Medicaid (CMS), which is a government-funded organization that is part of the Department of Health and Human Services (HHS) in America has had a long journey to regulate and improve the quality of care in nursing homes. Since the mid-1980s, to improve dementia care and decrease use of antipsychotic use, several programmes were discovered and developed. (Cms.gov. 2019), Yet, research suggest that these medications are still used inappropriately. (Ellis et al., 2015).

Psychotropic drugs are generally used in psychiatric hospitals. Psychotropic drug is defined in the Psychotropic Medication Policy and Procedure Checklist regulations at 483.45(c)(3), as *“any drug that affects brain activities associated with mental processes*

and behavior.” Psychotropic drugs include but are not limited to the following categories: anti-psychotics, anti-depressants, anti-anxiety, and hypnotics” (Davis, 2017).

In the United Kingdom, the National Institute for Health and Care (NICE) permitted antipsychotic medications to be prescribed for BPSD (Behavioral Psychological Symptoms of Dementia), only if patient is severely distressed or there is an immediate risk of harm to them or other and only after a range of conditions have been met. (Almutairi et al., 2018).

2.3 Why Antipsychotics is use in Nursing Homes

When monitored and used with care and at the right doses, antipsychotics can be well tolerated, especially Atypical antipsychotics can be beneficial for the patient. According to (Igoni, 2014) psychotropic drugs can produce calmness without necessarily making the patient sleep or cloudy in his consciousness.

People with dementia living in care homes often experience agitation and other symptoms such as in Behavioral Psychological Symptoms of Dementia (BPSD) that are difficult to treat and distressing for the individual. Nurses commonly use chemical restraints mostly such as antipsychotic drugs for patients suffering from Dementia. Gustafsson et al., (2013) defined dementia as a disorder that causes permanent and progressive impairment of cognitive functions resulting in hallucinations, delusions, anxiety. Dementia also influences other cognitive abilities. The powerful tranquilizing effect of antipsychotics has led to their use especially dementia patients, to control behaviors and nighttime restlessness such as agitation, aggressive behavior, hoarding, sexual disinhibition, vocal disruption, wandering, and screaming. Medications such as antipsychotics are prescribed in such situations without a proper supporting diagnosis.

People often have very rational reasons for using medicines not in accordance with clinical guidelines. These reasons need to be taken into consideration so that appropriate, effective and feasible strategies can be chosen to help the issue of inappropriate drug use. In general, causes of inappropriate drug use may include lack of knowledge, skills or independent information, unrestricted availability of medicines, overwork or

lack of health personnel, inappropriate promotion of medicines and profit motives from selling medicines. (WHO: 2002)

Nursing homes often place an extremely high workload on staff members, especially if there are many residents with resource-intensive needs, such as demented patients that are needing one-to-one care. There may be a reluctance to adhere to prescribing guidelines, a lack of proper routine management of residents with BPSD may be considered acceptable. There may be a problem with misinformation for prescribing medications and the intended reasons for treatment may be unknown. (Almutairi, 2018).

When patients are prescribed antipsychotics, Almutairi (2018), explained that they are obviously seen to be better managed by others which is not true, and antipsychotics are seen to provide immediate and effective remedy. The patient becomes less interactive with others and their surroundings, a reduction in cognitive speed and processing leading to decrease in the quality of life for the patient. From his interview study with 28 professionals participate explained that antipsychotics can bring a sense of balance to the workplace, improvements in indicators of BPSD, and a relatively tolerant attitude to side-effects, result in a perception that the benefits of antipsychotics outweigh any risks. Almutairi (2018), went further to explain that the believe reinforcing the idea that antipsychotic drugs ought to be prescribe for BPSD patient is resulting to “*A self-fulfilling prophecy*” which is at play. It defined as “*a false definition of situation evokes a new behavior which makes the originally false conception true*”. The situation being made here is that because a range of health professionals believe that antipsychotic medication must be prescribe in BPSD, these medications are then regularly prescribed and because of this regular routine, it is believing that they ought to prescribe in BPSD. In this sense, the prescribing of antipsychotics in dementia is seen as a principle of a self-fulfilling prophecy. (Almutairi et al., 2018).

2.4 Sedative and Hypnotics Usage in Nursing Home

Drugs that are used with the intention to sedate may include prescribed sedatives, medications with which sedation is a prominent side-effect, or medications which yield sedation as a potential adverse drug effect. Prescribing is one of the most common medical interventions experienced by older people resident in care homes. Elderly people with

cognitive impairment is particularly vulnerable to adverse drug effects associated with sedative and psychotropic drug. (Parsons, 2011).

Hypnotics are often used by the elderly, and their impact on mortality remains unclear. The inconsistent findings could in part be due to lack of control for underlying sleep symptoms or illness associated with hypnotic use, for example, insomnia symptoms and excessive daytime sleepiness, depression and anxiety. Research studies reviewed that age and gender showed a significantly greater risk of all-cause and cardiovascular-related mortality with hypnotics, particularly benzodiazepines, and this increased with the number of hypnotics used. (Jausent, et al.,2013).

Residual daytime sleepiness and diminishing of psychomotor, attention memory performances the day after bedtime administration are produce by hypnotics especially with the increase dose and long half-life intervals. However, the use of hypnotics seems to be related with excess risk of accidents such as falls and car accidents and may increase mortality risk, especially in aging people with increased pharmacodynamic changes. Ultimately, evidence suggesting an association between hypnotics' consumption and mortality in the elderly remains controversial. Hypnotics were classified as: Benzodiazepines compounds such as zolpidem, zopiclone and miscellaneous medication (including barbiturates, antihistamines and other pharmacological groups such as neuroleptic. (Jausent, et al.,2013).

2.5 Reasons Off-label / Inappropriate Use in Elderly Facility

Off-label use means the prescriber takes additional responsibility for any adverse consequence. The only antipsychotic medications licensed for use in dementia is Risperidone, but only for short-term use for up to 6 weeks for persistent aggressiveness in patients with moderate to severe Alzheimer's or dementia unresponsive to nonpharmacological approaches and with high risk of harm to self or others. (Almutairi et al.,2018)

Inappropriate drug prescribing refers to suboptimal over-prescribing practices that introduce a greater risk of drug-related adverse events, particularly in circumstances when a safer equally effective alternative is available (Desveaux,2017).

According Gellad et al. (2012), studies show that in 2006, nearly 30% of nursing home residents received antipsychotic medication, of which 32% had no acknowledged suggestion for use. Lately, Department of health and human Services addressed this potential off-label use, writing that 22% of Medicare Part D claims for atypical antipsychotics in nursing homes were not directed in compliance with Centers for Medicare and Medicaid Services (CMS) ideals for proper drug use. (Gellad et al.,2012). It has been publicly known that most of these drugs are misuse in most nursing home to keep the patient quiet and make it easier for their work to be done. There has being a regulatory warning universally against the increase use of antipsychotic medications in dementia bearing that the usage was too high, and the associated risk overweight the benefits in most patient. Neil et al. (2003), stated that new designed receptor group medication will be developed, since psychiatric disorder are more evidently precise. it is hope that in the future new drugs with effective mechanism of actions with improved efficacy of reducing side-effect will be developed.

3 THEORETICAL FRAMEWORK

The chosen framework suitable for this research studies are the Human error model by James Reason. This model is frequently referred and applicable to health care settings. Medication error are mostly the cause of patient morbidity and mortality. Nurse should not ignore errors. It harmful to patient, family, and public health organizations confidence explained Moyen et al., (2008).

3.1 Human errors Models by James Reason

A well-known system for human error was classified by James Reason, based on observations from industries in aviation and nuclear power which have being greatly dependable. Reason, (2000) explained the problem of human errors arise for two reasons the person approach and the system approach. Understanding the different approaches in clinical practice will lead to a significant practical implication for coping with the present risk of medical errors.

Person approach

This approach focuses on unsafe acts, error, and practical abuse of practitioner on the front line. It sights these unsafe acts as arising basically from mental process such as forgetfulness, inattentiveness, low motivation, carelessness, negligence and recklessness. In other words, people who are in direct contact with patient commit this unsafe act. According to World health organization (2002) in the improvement of patient safety, they see this people approach whereby staff are trained and then threatened to make them act safely hence those that fail to carry out the right procedures will be punished. These methods are focused mainly at reducing unwanted inconsistency error in human behaviors to improve patient safety and quality of life. It includes writing new procedures, disciplinary measures, naming, blaming and shaming. Reason went further to say that followers of this approach treats errors as moral issues. this approach has restrictions. People are free to choose between safe and unsafe mode of behavior. If there are mistakes a person or group must be accountable, this depend clearly on the healthcare interest indeed. Continue practice of this approach is likely to frustrate the development of health care centers.

System approach

This system believes that humans are fallible, and errors are expected. Errors are an implication rather than causes. These include reoccurring errors made in workplace and organization that allow them. WHO (2002) stated that, they use this approach which rather than blame each other ask questions “why do we need to do this?” “how do we make the process less error prone?”. They focus opinion on system approach which assumed that human condition cannot be change but conditions in which humans work. When adverse event occurs, it focuses on how and why defenses occurred and not who made error.

3.2 What can we learn from Errors?

Inattentiveness, low motivation, carelessness, irresponsible nurses or health care providers do causes advert events. James Reason research on the system approach and explain errors proposing the swiss cheese model see (Figure 1). Swiss cheese model has become dominant paradigm for analyzing medical errors and patient safety incidents. (Perneger, 2005).

James Reason research on the system approach and explain errors proposing the “Swiss Cheese Model”. Showing a model of defense, barriers and safety that can be penetrated through errors or accidents. Preventing systemic barriers failures, Reason proposed two factors; Active Failure and latent conditions. James believed that, our protection in contact with adverse event are like pieces of cheese. having many holes. Unlike in the cheese, these holes continue to change position by closing and opening thereby leading to advert events as a result of occurrence of multiple holes allowing a route of accident opening thereby bringing hazards into damaging contact with victims.

In most nursing homes, inappropriate use of antipsychotic are errors made commonly by nurse which are close to patient. Ignoring the risk of this advert events which can lead to death with aged people, interventions must be done. Creating awareness of misuse by nurses must be done to produce quality of life and improve patient safety. Preventing systemic barriers failures, 2 factors was developed by Reason proposed: (Reason 1997)

Active failure: People with close contact with patient such as nurse often cause this unsafe act. They take different in forms: slips, lapses, and mistakes. Slides and lapses are

skill-behaviors errors, when routine behaviors are misdirected or omitted. The individual has the right ideas but perform wrong executions for examples. Most patient are sedated with chemical restrain in nursing homes. The powerful tranquilizing effect of antipsychotics has led to their use among elderly people, especially dementia patients, which is unsafe act knowing the correct use is a slip. They have the right drugs but execute it in a wrong way. Mistakes are knowledge - based errors (judgement, perception, interpretation and inference) this happen due to incorrect thought process or analyzes (Moyen et al.,2008). Drugs that are used with the intention to sedate are misuse y nurses in most nursing home to keep the patient quiet and make it easier for their work to be done resulting to active failure enlargement.

The latent condition is pathogenic to resident in the system. It can reduce the risk and effectiveness of active failure executed by nurses. When nurses make decisions which accidentally have future consequence it can result to latent conditions Reason (1990). Advert event occurs if nurses work under intense time pressure with work equipment or perhaps unworkable procedures. Inadequate and inexperience trained nurse is another latent condition for failures. According to Improving Patient safety (2002) reported that patient safety are vital roles played by nurses in health care system. Nurse spend most of their working time and keep close contact with the patient.

In the viewpoint of Moyen et al., (2008), one of the factors leading to increase in medication error is decreasing nurse-to patient staffing ratios which may not give good impression to be safe in the health care centers. Secondly, administration of patient safety to prevent adverse errors can be prevented easily by experiences nurse compared with unexperienced nurses.

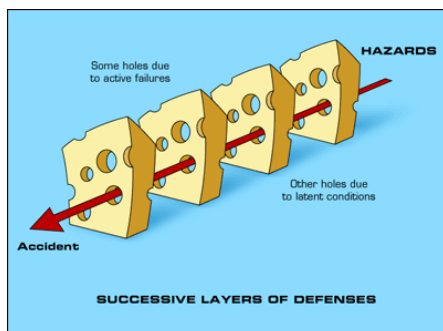


Figure 1: Reason J. 2000, Research on the system approach and explain errors proposing the swiss cheese model of how defenses, barriers, and safeguards may be penetrated by an accident trajectory

Source: Duke university 2002; patient safety module

online: http://josieking.org/patientsafety/module_e/swiss_cheese.html

3.3 Management of Errors

Human factors researchers have been concerning with developing tools for managing unsafe acts. There are two components: limiting the occurring of dangerous errors which not mostly effective and creating that which can tolerate the occurrence of errors and contain their preventive effect. High-reliability organization operate system in hazardous conditions have fewer advert events-offer important model which is called the resilient system. Such system has essential safety health. It can withstand its operational dangers and still achieve its objectives. (Reasons,1997)

Medication error are mostly the cause of patient morbidity and mortality. Nurse should not ignore errors. It harmful to patient, family, and public health organizations confidence explained Moyen et al., (2008).

Moyen et al, (2008), define medication errors: As process of making error during drug administration with or without advert consequences. He explained that errors can be as omission, it seen as failures to perform an appropriate action. In the sense that most patient receive less quality care while commission errors are seems as implementing wrongful actions. Errors of commission and Inappropriate dose or drug are focuses by patient safety researchers.

On the study of Hoffmann et al., (2010), they explain safety management system involve error reporting, learning from errors and the fair exchange of information should be establish in healthcare centers, strategies management should be implemented critical errors are identified, reported and analyzed so that similar event can be prevented. Whenever adverse evert occur the person and organization involved should act to prevent further harm to the patient and other individual involve.

4 AIM AND RESEARCH QUESTIONS

The aim was to create awareness and educate nurses about inappropriate use of antipsychotic drugs, reduction intervention which include nurses to improve nursing practices in nursing home. The author gained interest during internship training in nursing home, and found out that antipsychotic drugs are often giving to aged people especially dementia residents living in care homes for long term, the reactions and effect of medication continuously used without regular medical review by a doctor or pharmacist and the insufficient knowledge of cares and nurses reduces quality of lives of residents. The author also found interest in antipsychotic drugs during nursing practice psychiatric hospital in Nigeria. It is significant to know that antipsychotic medications are appropriate to treat symptoms of psychotic patient such as schizophrenia disorder, bipolar disorder, delusional disorders and major depressive disorders. Most caring staffs employed in elderly patient home have less knowledge of antipsychotic drugs use in nursing home to treat dementia and manage behaviors. (Lindsey, 2009).

Having this in mind bring the author to the following research questions;

1. What interventions could reduce the use of antipsychotic in nursing homes?
2. What is the benefit (effect) of reducing the use of antipsychotic medication in Nursing Homes?

During this study the author find out that a lot of studies have been done on how antipsychotic drugs can be reduce, most healthcare organization are busy talking about the problems, but less solution is provided.

5 METHODOLOGY

The process of conducting research was related in this chapter with qualitative inductive approach which means that the process starts with specific data, and end with generalization. The researcher uses qualitative methodology to review 12 articles literatures. This means that it describes and defines the approach to research questions. Data were collected from mostly Google scholar and Arcada database. A search method was done according to the Arcada Thesis Guard. Inclusion and exclusions criteria were implemented. In this study, Graneheim & Lundman (2004), were used to explain the process of data analysis which is one of the qualitative approaches often used in nursing research. Elo & Kyngäs (2007) explained inductive content analysis as when the structure of analysis is operationalized based on previous knowledge. In the coding scheme, 12 articles were divided into meaningful theme, sub-themes, categories and sub-categories, coded with number of the articles which hopefully answered the research questions.

5.1 Data collection.

Articles were collected scientifically from Sources such as CINAHL, Research Gate, PubMed, Google Scholar, ProQuest, Ebsco Host Academic search complete were use as they have a function for finding Academic scholarly articles related to antipsychotic drugs. A search method was done according to the Arcada Thesis Guard, 12 academic articles related to the research topic were selected in April 2019. The articles were selected based on its relevance to this study, articles aimed at reducing, deprescribing antipsychotic medication in nursing home were included in the criteria. Search were limited by Peer-reviewed, full text and free accessed, not less than 10 years. In this search engines article related to study were selected.

In Google scholar, data search was performed by using keyword such as “random controlled trail to reduce antipsychotic in nursing homes”. “interventions in reducing antipsychotic” thousands of articles were found 17,700 hits in 0.04secs, which was narrowed down. Filters were applied by custom range 2008-2019, articles were not older than 10 years. Sort by relevance, English language pages, patented were included.

Excluded criteria include: Systematic reviewed article were not eligible, not English, not peer reviewed, older than 10years, not nursing related, not full-free access, there were irrelevant articles related to antipsychotic drugs, therefore, it was necessary to first look and scanned at the articles titles before deciding which one was suitable for the research questions.

In Arcada database: CINAHL Ebscohost was used to perform the search words “interventions in reducing antipsychotic AND nursing homes” filters were applied such as linked Full text, publish 2008-2019. The search resulted in 4 articles. 2 articles relevance to the research questions were selected.

5.1.1 Selection of Eligible Article

The following inclusion and exclusion criteria were applied and used in selecting the 12 articles. The articles were selected and included when.

Table 1 1: selection of eligibility articles.

Inclusion	Exclusion
<ul style="list-style-type: none"> ➤ It is relevant to the research topics and aims, such as intervention reduction, Benefit and nursing perspective. ➤ Relevant to use and misuse of antipsychotics drugs either in nursing homes and to nursing staff. ➤ Not less than 10years and random controlled studies 	<ul style="list-style-type: none"> ➤ Antipsychotics drugs were used outside nursing homes. ➤ Articles on systematic reviews and not focusing on nursing homes. ➤ Other than 10year not peered reviewed, full free text and not relevant to the research questions. ➤ Other languages were excluded except English

5.1.2 List of selected articles for this study

1. Brodaty, et al. (2018) Antipsychotic Deprescription for Older Adults in Long-term Care: The HALT Study. *JAMDA*. Vol.19: pp-592-600.
2. Carnahan. et al, & Alzheimer`s & Dementia (2017) Impact of programs to reduce antipsychotic and anticholinergic use in nursing homes. *Translational Research & clinical intervention: vol.3 pp.553-561*
3. Lenander, et al. (2018). Effects of medication reviews on use of potentially inappropriate medications in elderly patients; a cross-sectional study in Swedish primary care. *BMC Health services Research*. Vol.18(6): 616.
4. Dawn, et al. (2016). FITS into practice: translating research into practice in reducing the use of anti-psychotic medication for people with dementia living in care homes. *Aging & Mental Health: 20(7)*, pp- 709- 718.
5. Jessop, et al. (2017). Halting Antipsychotic Use in Long-Term care (HALT): a single-arm longitudinal study aiming to reduce inappropriate antipsychotic use in long-term care residents with behavioral and psychological symptoms of dementia. *International Psychogeriatrics* Vol.29(8) pp-1391-1403.
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5.2 Data analysis

In this study, Graneheim & Lundman (2004), were used to explain the process of data analysis which is one of the qualitative approaches often used in nursing research. Content analysis may include either an inductive or a deductive approach, of which this thesis used inductive content analysis. Elo & Kyngäs (2007) explained inductive content analysis is used when the structure of analysis is operationalized based on previous knowledge. Content analysis focuses on emphasizing differences and similarities via codes and categories. (Graneheim & Lundman, 2004).

This method of inductive data analysis approach has been selected because of its usefulness for identifying core consistencies and meanings from a large quantity of qualitative data. The process of qualitative content analysis took place in the following sequence:

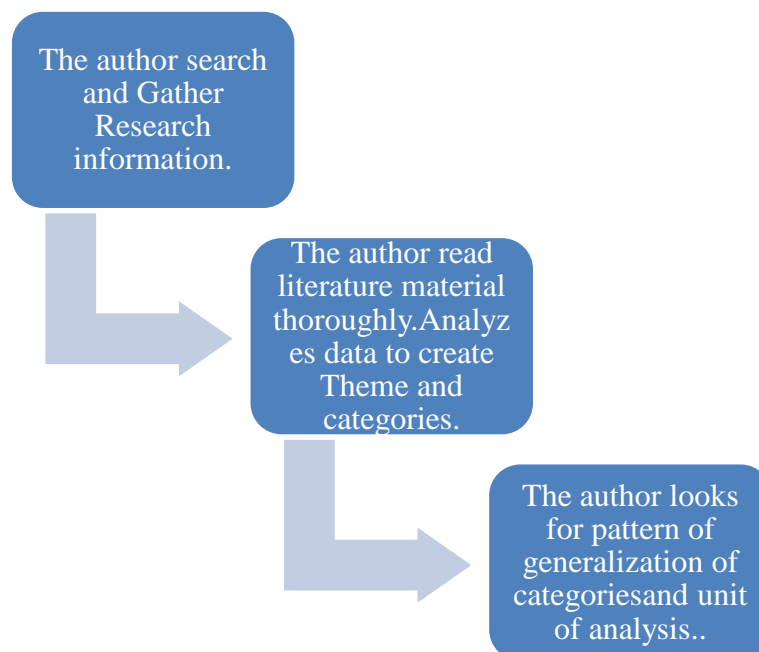


Figure 2: Process of content analysis.

5.3 Coding Schematic

In this study, Graneheim and Lundman (2004), model of categorization and coding in nursing research was used. The label of a meaning unit (unit of analysis), is referred to as a code. Since labelling a unit with a code allows the data to be thought or seem about in new and different ways. A code can be assigned to for example, discrete objects, events and other phenomena, and should be understood in relation to the context. In this study, 12 articles were divided into meaningful categories and sub-themes and coded with number of the articles which hopefully answered the research questions. Creating categories is the core feature of qualitative content analysis. A category is a group of content that shares a commonality. One characteristic of qualitative content analysis is that the method, to a great extent, focuses on the subject and context, and emphasizes differences between and similarities within codes and categories. A theme can be explained as an expression of the latent content of the text. Since all data have multiple meanings. The concept of theme has multiple meanings and creating themes is a way to link the underlying meanings together in categories. The condensed meaning units were abstracted and labelled with a code. (Graneheim and Lundman 2004). The various codes were compared based on differences and similarities and sorted with analysis units, sub-categories, category, sub-themes and themes to answer the research questions.

From the above, the articles were carefully reviewed with time, and data was collected calmly read through thoroughly and presented. During reading, the author wrote out and highlighted important note and point with a pen and paper. Similarities and differences were stated through information about incidence of Antipsychotics use in nursing homes as derived from the articles and categorized.

The theme, reduction of antipsychotics use in nursing homes were gotten from the research questions and aim of this study. The theme was used to generate concepts and categories which were utilized to extract the research findings. Theme were further broken down into Subtheme: Intervention use in reducing antipsychotic drugs and the benefit in reducing antipsychotics drugs in nursing homes. These further create three Major categories which include: Education and Training, Medication Review and Nursing perspective, benefit to Nurse and benefit to patient. These categories were coded in Units.

Table 2 1: Categorization of Data Analysis

Theme	Reducing antipsychotic drugs use in Nursing Homes.				
Sub-theme	Intervention Use in reducing Antipsychotic drugs.			Benefit in reducing Antipsychotic drugs.	
Categories	Education and Training	Medication Review	Nursing Intervention	Benefit to Nurses	Benefit to elderly Patient
Sub-categories	<p>Educational training of health care professionals</p> <p>Modified Version Intervention programs.</p> <p>The use of PCC approach</p>	<p>Deprescribed irrelevant anti-psychotic Medication.</p> <p>Reduction with substitutional medication.</p>	<p>Nurse identified</p> <p>Primary reason for use.</p> <p>Behavior change</p> <p>Management</p> <p>Reduction of antipsychotic drugs is complex and challenging.</p> <p>Lack of willingness of nurse.</p>	<p>Increase in nursing competence.</p> <p>Ability to management psychological behaviors</p> <p>Nursing staff implement psychosocial approach.</p>	<p>Improvement in quality of life.</p> <p>Decrease in dosage intake.</p>
Units	1,2,4,5,6,7,9,11.	1,2,3,4,5,7,8,12.	3,5,6,7,8,9,10.	4,7,8,10,11.	2,3,4,5,6, 10.

5.4 Ethical values in research study

During the process of writing this thesis, Arcade's guidelines on good scientific practices in studies was read, followed and understood. The guideline helped the author to provide truth, information, knowledge and to prevent falsification, plagiarism and misrepresentation of data not failing to acknowledge others work and to contribute innovative ideas to the body of nursing science. The works and writing of authors and student were respected, given reference and appropriate due credits. According to The Finnish Advisory Board on Research Integrity. TENK, (2012), Recognitions and respect were given to other researcher publications cited appropriately in this research. Rightly credits were given to their work and achievements. The objective of these guidelines is to promote the responsible conduct of research and to prevent misconduct in research in all organizations involved in research work, such as universities, research institutes and universities of applied sciences (Tenk.fi 2012 p.30).

Before this study. Lectured were properly received and taught by thesis supervisors, on ethics consideration and research methodology. This ethical rule was put into the study to meet all required criteria and standard set for scientific knowledge. Author planned, conducted and reported in detail the research process. Every ethically sustainable data-collections, research and evaluation methods. In this research the name of the writers was given, who had a role to play.

6 FINDINGS

This chapter contains final outcomes acquired based on the findings collected from the 12 articles to answer the research questions and focus on the aim of research. The findings were categorized into Theme: Reducing antipsychotic drugs use with dementia and Behavioral and psychological symptoms of dementias (BPSD) in nursing homes which was sub-theme into Interventions used in reductions and benefit in reduction. These were categorized into: Education and training, Medication review, Nursing intervention, and Benefits. Subcategories: Educational training of health care professionals, Modified version Intervention programs, The use of Personal centered Care (PCC) approach, Deprescribed irrelevant antipsychotic medication, reduction with substitutional medication. Nurses identified primary reason for use, reduction of antipsychotic drugs is complex and challenging, Lack of willingness of nurses, increase in nursing competence, agitated behavioral management, nursing staff implement psychosocial approach. Improvement in quality of life, Decrease in dosage intake.

Below the researchers try to simplify the various concepts based on similarities and frequency to be able to identify the major factors needed to validate each category. The emerging common concepts are as follows:

6.1 Intervention Use in Reducing Antipsychotic Drugs

6.1.1 Educating and Training.

Despite limited efficacy and significant safety concerns, antipsychotic medications are frequently used to treat behavioral and psychological symptoms of dementia (BPSD) in long term residential home. Successful reductions were implemented by following interventional training of health care staff: Nurses, basic care staff, General practitioners, and pharmacists. Educating and training combined with other approach were found to be the most effective way to reduce use of antipsychotics in nursing home.

Educational Training of Health Care Professionals: Providing series of personal centered care training to nurses, staff and general practitioners have great influence in reducing antipsychotics use in nursing home. The Halting Antipsychotic use in Long

Term care (HALT) Brodaty, et al (2018)., strongly investigated that providing best practice by multiple disciplinary intervention, knowledge and approach component in educating other health care staff and providing additional skills by nurse to nurse, and general practitioner to G.P produce clear understanding of pharmacology and non-pharm approach. To manage and prevent agitation and aggressiveness leading to the inappropriate use of antipsychotic and also educating others through implementation strategy. Academic detailing, following-up educational seminar and reading recent material on antipsychotic can contribute to reduction. Nurse and pharmacist should be encouraging by awarding professional credits and develop professional module (Jessop, et al 2017). In Finland study (Juola et al 2015) attached great importance to learning and educating nurses about harmful drugs used to decrease the incidences of falls and hospitalizations and also reveal that antipsychotics increase the risk of falls which can lead to injuries, fracture, incident disability, permanent institutional care and increase mortality.

Modified Version of Intervention Programs: According to Carnahan et al (2017), An internet-based toolkit guide in mobile app program may helped nursing staff to convey and retrieve knowledge and information acquired during (IA-ADAP) and (CMS Partnership) program for managing BPSD care leading to reduction in antipsychotic use. In Norway, Testad, et al (2015) showed that use of programmed Modeling and evaluated evidence based continuous education program in nursing home dementia care (MedCed) and 7months training of intervention “Trust before restrain” can be used to reduce restrain, agitation and antipsychotic with dementia.

Dawn, et al (2016) studied two university-based educators designated dementia practice development (DPDCs) in U.K. An intensive nine-month education and supervision program to Dementia Care Coaches (DCCs) were presented by employed coaches to enable them to safely reduce antipsychotic medication and to put in place evidence-based best practice to reduce BPSD using Focused Intervention Training FIT. Primary health care staff received a session of modified training in promoting personal centered care training. Involved education and coaching to support four teams of facilitators consisting of eight clinical research nurses, standardizing and adjustment of the Taught Field Therapy intervention through discussions in groups, and role playing the seven-step guidance group. Nursing staff working in the intervention wards received 2-4hours interactive

training sessions based on constructive learning theory to recognize harmful medications and adverse drug events. Training entailed educational Model VIPS which represent V-valuing, personhood, I-individual needs, P- personal perspective S-social environment (7).

The use of Personal Centered Care Approach (PCC): Combination of training on PCC and non-pharm approach which include workshop on dementia care, BPSD prevention, reduction and management of care. (Brodaty, et al 2018, Carnahan, et al 2017). Providing education on PCC, discussion by nurses on patient situations and case based on problem from ward using learning learner approach can reduce the prevalence of psychotic medication (Juola, et al. 2015. Maidment, et al. 2018). In Germany Richter, et al.2019 investigated PCC approach in which was successfully evaluated in UK. Using EPCentCare intervention (Effective of personal center care programmed) was received individually from patient for 2hours in continuous supervision programme, however reduction was insignificant unsuccessful in German (Richter, et al.2019).

6.1.2 Medication Review

General practitioner suggested withdrawal drug therapy as one of the most effective method to reduce drug used, and dosage reduction specialized in an interactive discussion about list of harmful drugs and suitable alternative psychotropic drug treatment for older people in deprescribing antipsychotic medication (Lenander et al; 2018) Contacting prescribers regarding resident drugs use. Planning care generally and focusing on patient behavioral condition can lead to reduction of excess drugs use. (Dawn et al;2016) recent updated educational material and current best practice by prescriber (Carnahan et al;2017, Jessop et al;2015).

Deprescribing irrelevant antipsychotic medications: Residents with an ongoing antipsychotic prescription received a medication review by experienced Pharmacist (Jessop et al;2015). Focus was being made primarily on psychotropic drugs used to treat behaviors that challenges and other routine drugs. Reducing Use of Sedatives (RedUSE), Westbury et al;(2012) a controlled trial conducted in 25 Tasmanian nursing homes over a period of six months in 2008–9, with 13 intervention and 12 control homes aimed at

reducing antipsychotic and benzodiazepine use in nursing homes supported strategy to alternative reduction was being advocated. Risperidone was the only antipsychotic licensed for use at six weeks interval with regular review (Mavrodaris, et al:2018). Through exposure to IA-ADAPT and Center for Medicare and Medicaid Services developed initiative in improvement of Behavioral health and antipsychotic reduction with 15% in nursing home intervention was successful. Interventions were used to improve medication intake without advert effect. Greater reduction was found in facilities expose to more than one intervention (Carnahan et al:2017). Dawn, et al;(2016) suggested that educational intervention using Focused Intervention Training Support FIT and training staff in non-pharm management strategies can reduce prescribing of drugs and review antipsychotic use with general practitioner and other professional in healthcare. Useful information may be adequate to stimulate change in care. Feedbacks and assessment of nurse's knowledge about medications before and after trainings were restrained from participate evaluation. In Sweden, interventions were conducted with health professional in elderly care. Analysis of patient with high dosage, wrong dose, and unnecessary drug therapy were withdrawn, more than one psychotic drug was significantly reduced (Lenander et al;2018).

Reduction with Substitutional Better Medication: A study was carried by The Halt intervention (Jessop et al:2017) to deprescribe regular medication without the use of substitute psychotropic medications measuring Neuropsychiatric Inventory (NPI), Cohen Mansfield Agitation Inventory Scores and Advert event such as hospitalization and falls and improved non-pharmacological behavioral management. Most doses of antipsychotic use were converted into olanzapine and risperidone allowing for standardized measure of primary outcome across all participants. These changes were monitored and followed up. Brodaty et al.(2018) reported that withdrawal was not successful following Australian guideline on 50% prescriptive protocol dose reduction in selected people living in long term care on regular antipsychotic drug, substantiable reduction is feasible without increase in BPSD however, involvement of all active health care staff will lead to greater success of description. (Brodaty et al:2018, Maidment et al:2018). In view of Mavrodaris et al; (2013) resistance of reduction from health care management attribute to low number of reluctances among general practitioners.

6.1.3 Nursing Intervention

In view of Juola et al. (2015), in Finland, nurses have a central role in providing comprehensive care for resident in assisted living facilities. Main areas of concern are deprescribing of inappropriate drugs use. Most resident taking potential harmful drug or experiencing possible adverse drug event are recognised by nurses and referred to physician acting as consultant. Management of medications is the responsibility of the nurse. Nurses identify and follow patient on more than one antipsychotic drug and management their side effect and or reactions. When there is improvement or advert effect.

Nurse identified primary reason for Antipsychotic use: A model was reviewed in Simmons et al; (2018) study to reveals nurses' challenges from nursing perspectives. Three Pathways were founded which lead to Management strategies to identify factors to medication reduction in nursing homes. Prescribing pathway reflect residents who may be prescribed antipsychotic medications inappropriately. The second represent those who had history of serious mental illness with antipsychotic management. The third represent unsafe, disruptive aggressive resident behavioral management which brings challenge to nursing staff leading to implementation of treatment plan without antipsychotic medication.

Nursing intervention prescribing practices include; admission of patient with validation of need and right drug prescriptions into health care facilities by nursing staff as a new procedure of dose withdrawal from antipsychotic practices which include; chronic sickness, several mental disorder management, physical health condition such as pain, infection and socially isolated behavior displayed by patient and isolation from inadequate social activities.

Behavior change management: Behavior change intervention (Maidment et al;2018) provide staff the knowledge to understand that challenges maybe expression of unmet need, to know the patient as an individual, to also understand that challenges are not bad behaviors or bad behaviors are not equal to bad person. Factors such as low level of commitment, and engagement from nursing management have attempt to disable effective intervention. Presence of frequent symptoms should be reported by nurses (Jessop et al;2017).

Reductions of Antipsychotic medication is challenging and complex

Barriers recognized by nursing Staff such as Potentiality for negative drug withdrawal effect such as agitation and anxiety, several symptoms such as delusions, hallucinations, aggressive behavior disorders. Family reluctance, deficiency of effectiveness or insufficiency resources of staff to implement non- pharm scheme, insufficient staff level and safety environment (Simmons et al;2018). Depending on the patient in nursing homes, nurses time and skilled needed to provide clinical evaluation and monitoring, behavioral management and family education should be thoughtfully addressed to achieve sustainable improvements use in routine care practices (Mavrodaris et al;2013). During decision making process of antipsychotic used by resident, their family member should be involved. Concern maybe relatively difference in prevalence of antipsychotic used from others encountered in facility with fewer or higher use (Lenander et al:2018).

Lack of willingness of nurses: In view of Richter et al; (2019) lack of willingness of nurses to regard use of personal centered care for care support. Lack of corporation with physician decrease the effect of evaluation implementation process of intervention. Cultural blaming was expressed in Mavrodaris et al: (2013) study, general practitioners reported that there are always pressure of antipsychotic use from nursing staff whereas nurses reported continue maintaining use by general practitioners. Strictly official policy making, and clinical initiatives would lead to more evidence-based culture of minimizing use of antipsychotic continue to be investigated in Germany. Barriers limiting nurses to good practices include resistance to develop practices, bad attitude to dementia patient and pressure from families (Jessop et al: 2015). Lack of time, illness, and resignation by nurses (Dawn et al:2016).

6.2 Benefits in Reducing Antipsychotic

6.2.1 Benefit to Nurses.

Increase in Nursing Competence: Testad et al;(2015) reported that continues educational program in nursing homes using “Trust Before Restraint” Model for dementia care to evaluate, implement the effective of training producing reduction in agitation and use of antipsychotic medications. There was great increase in staff ability. Knowledge, confident and attitude grew highly in management of behavioral challenges instead of using medication (Simmons et al,2018). Nurses shared positively intervention experience on self-care, communication and adopting a holistic personalized care centered approach (Maidment et al, 2018).

Ability to manage Psychological behavior: This strategy is more viewed by nursing staff as more befitting for resident to increase nonpharmacological activities and increase social activities engage such as listening to music, increased in physical activities in behavior monitoring which include social engagements, better way to monitor the severity of occurrence and potential triggers of symptoms. (Dawn 2016, Maidment 2018, Simmons et al; 2018) family and staff collaboration and individual behavioral intervention can be used to understand the patient better by gathering relevant information from family which may help in implemented care planning of patient and every day tracking tools for monitoring destructive, dangerous behaviors or symptoms over time (Simmons et al: 2018). Care staff benefitted from PCC and supervision Participants 69% of licensed staff nurses expressed four primary potential benefits of antipsychotic medication reduction such as: Improvement in quality of life, Improvement in family satisfaction, reduction in falls, and improvement in the facility quality indicator score regulatory compliance (Simmons et al: 2018).

Nursing staff implementing psychosocial approach: This help patient with dementia to connect with others and have good qualified life, (Mavrodaris et al:2013). Primary healthcare staff specifically stated many potential benefits of antipsychotic medication reduction in implementing and practicing psychosocial approach to contribute increase in capacity to manage behaviors that are challenging without administration of medica-

tion (Maidment et al: 2018) such as understanding work-life history of resident, monitoring preferred care plan for patient, creating supportive environment to live, creating activities such as games, personalized musical list, visiting music concept, theater, elderly historical event and celebrating birthdays for patient as a result of promoting care practices, reducing distress and disabilities(Dawn et al: 2016).

6.2.2 Benefit to Elderly Patient.

Improvement in Quality of life: Medication review improved drug use among elderly patient and great development in daily functioning. Patient level of alertness improved as a result of increase in quality of life thereby paving way for them to be more engage in everyday activities resulting to better sleep pattern, good appetite and better communication ability with this outcome, families have been satisfied (Simmons et al;2018). There was reduction in adverse outcomes, such as withdrawn behaviors, falls, hospitalizations, and cognitive decline (Dawn et al: 2016) Modified version of intervention trainings decreased the prevalence of harmful medications (Juola et al: 2015).

Decrease in Dosage intake: Relevant outcome in Carnahan et al: (2017) shows significant reduction in use of antipsychotic and anticholinergic drugs in nursing homes over time, longer stay of resident in nursing home increase the odds for antipsychotic drugs. In view of Lenander 2018 and Jessop et al :2017. The proportion of patients with more than one potentially inappropriate medication was significantly reduced. The most common drug related problem was unnecessary drug therapy (39%), followed by high dosage (21%) and wrong drug (20%). Decreased dose change or withdrawal of drug therapy of antipsychotic medication intake by dementia patients was common result. Daily review of psychotropic drug treatment for older people performed by specialist pharmacist and experienced physicians with patient admitted with prescription and valid need to healthcare facility is one way of improving drugs use. (Lenander 2018, Jessop et al :20175)

7 DISSCUSSION

From the articles reviewed, effects and impacts of antipsychotic use in nursing homes were of focus but they are all geared towards the reduction of antipsychotic medication in nursing homes because, the prevailing harm often outweighs the intended aim. The contents of the twelve 12 articles coincide with the aims of the study. According to the articles antipsychotic use in nursing homes were prevalent as well as its harmful side-effects therefore, the need for intervention approaches in a bid to reduce antipsychotic medication. These approaches range from reduction and possibly withdrawal of antipsychotic medication to medication review by experienced and specialist medical personnel. However, health care staff educational trainings were significant and seem to yield more benefits as an intervention approach. From the articles, benefits in reducing antipsychotic use was significant as there was a continuous increase in the reduction of antipsychotic medication over time as well as positive adjustments of the elderly to medication change and withdrawal in nursing homes. Findings of the study will be further discussed below.

From the research question one, various interventions were adopted in each of the articles to reduce antipsychotic use in nursing homes. In the course of inductive content analysis, a lot of similarities were found. A decreased or change of dose were recommended or even a withdrawal of drug therapy in some incidence. From some of the articles, a modified version of intervention training on behavior change for Primary healthcare staff was adopted through trial programs. Education/training of nurses and health care providers had a significant effect on the reduction of antipsychotic use in nursing homes (article 2, 4, 7, 9, and 12).

De-prescribing antipsychotic medication was adopted by experienced physicians as an intervention approach as well as review of medication by specialist pharmacist. It was recommended for the elderly with prescription and validity of need to be accepted into health facilities especially in psychotropic drug treatment for older people (article 1, 7, 9, 10 and 11).

Regarding research question two (2): "What are the benefits in reducing antipsychotic in Nursing Homes?", numerous benefits were stated in each of the articles as derived

from an attempt to reduce antipsychotic use in nursing homes. It was observed that a review of medication improved drug use among elderly patients. There was no significant increase in adverse outcomes, such as withdrawn behaviors, falls, hospitalizations, and cognitive decline. These adverse effects declined because various trainings increased the ability and confidence of care staff to manage behavior. Modified versions of intervention trainings decreased the prevalence of harmful medications (article 1, 3, 5, 8, 10 and 12). Due to a significant reduction in use of antipsychotic and anticholinergic drugs in nursing homes over time, primary healthcare staff specifically stated a lot of potential befitting antipsychotic benefit such as enhancement in quality of health and sanctification from resident family.(article 4, 5, 7, 9, 11 and 12).

From the study, the background states that antipsychotic are psychopharmacological drugs that have tremendously contribution to the care of mentally ill people. In nursing care homes, antipsychotic medication is commonly prescribed to control various forms of behavioral and psychological symptoms of dementia, schizophrenia, mania, Parkinson`s disease and other related conditions. However, results from the twelve articles acknowledge the prevalence of numerous adverse effects such as agitation, aggression, or restlessness as well as stroke or sudden death on the long run. The powerful tranquilizing effect of antipsychotics has led to their consistent use for elderly groups, especially Dementia and schizophrenic patients, to adjust abnormal behaviors. With the numerous adverse effects such as sedation, falls, and cardiovascular symptoms, questions rose thereby questioning whether antipsychotic medication is effective and safe. With such adverse effects, the researcher is motivated to ask: what are the interventions in reducing antipsychotics? As well as what are the benefits derived in reducing antipsychotics use in nursing homes? From the findings of the study, the researcher has been able to successfully sort out from the selected articles, the interventions employed as well as the benefits derived in reducing antipsychotics in nursing homes.

7.1 Findings Relating to Theoretical Framework

The study on “Antipsychotics use in nursing homes”, is a corollary of the theoretical truth in Human errors: Models and Management by James Reason. Discussions will be made here on how the ideology of Human errors: Models and Management by James Reason illustrates similarities in the aspect of antipsychotics use in nursing homes, especially what it seeks to unveil theoretically.

From the concept of James Reason’s model, the dilemma of human error can be viewed from two standpoints which are the person approach and the system approach. Both approaches have its model of error causation, and each model promotes different philosophies of error management. Understanding the concept behind the two approaches has important practical implications for coping with the ever-present risk of errors and mishaps in clinical practice.

Person approach concentrates on the errors of people which involve unsafe acts that arise primarily from aberrant mental processes forgetfulness, inattention, or moral weakness, recklessness, poor motivation, carelessness and negligence. The long-standing and widespread tradition of the person approach focuses on them unsafe acts, errors and procedural violations of people on the front line such as nurses.

From the articles, with reference to contents on incidences of antipsychotic use in nursing homes, some nurses are observed to carelessly make mistakes that did result in adverse effects. Such mistakes include administering wrong dose of antipsychotic drugs, unnecessary drug therapy and lack of additional therapy and more. These reckless acts are tagged by James Reason as error which needs to be managed to avert adverse effects. In nursing homes such adverse effects may include increased risks of cognitive decline, cerebrovascular adverse effects, and even death. Here counter measures adopted are geared towards adjusting human behavior to meet acceptable standards basically through deterrence and re-education.

System approach majorly rest on the idea that the circumstances under which individuals work and tries to construct defenses to prevent errors or mitigate their effects. Here, such errors are expected because individuals in a system are prone to make mistakes and these collective errors make the system faulty. The system approach hails from an organizational point of view and tries to display how organizational decisions could result to unexpected adverse outcomes. When such adverse outcomes occur issues arising are

on how and why the system failed unlike the person approach where individuals in the system are blamed for their errors. This shows how easy it is to blame care staff like nurses than to lay blames on the system that creates most of the faulty decisions. In nursing homes counter measures have resulted in review and de-prescribing of antipsychotic medications and in some instances, total change or withdrawal of antipsychotic dose.

8 CONCLUSION

The use of antipsychotic medications in nursing home, of no doubt is necessary and increasingly prevalent. But its use has revealed lots of adverse effect on its consumers and its administrators such as nurses and general practitioners have created rooms for numerous errors in administering medication dose. The findings have also revealed answers to the research questions initially proposed for this study. The first research question: what are the interventions in reducing antipsychotic? the result derived revealed that; a decreased or change of dose was adopted or even a withdrawal of drug therapy. Education/training of nurses and health care providers on alternative medication use was also one of the most effective intervention strategies in reducing antipsychotic use. Also, the aged residents with Psychotropic drug treatment and rightly diagnosed prescription and accredited cares are admitted into health care facilities.

The review of antipsychotic medications improved drug use among elderly patients and there was no significant increase in adverse outcomes, such as withdrawn behaviors, falls, hospitalizations, and cognitive decline because various trainings increased the ability and confidence of care staff like nurses to manage patient's behavior.

From the above results it's valid to state that the results obtained are necessary for the improvement of nursing practice. Nurses are second to doctors in caring for the aged and mentally disordered patients but majorly are responsible for administering prescribed medications. During such administrations, medication errors are sometimes encountered which result to adverse effects especially in nursing homes where there may be less monitoring. Furthermore, this study needs more future studies with larger sample setting in possible effective outcome in medication review and advance recent knowledge gain by nursing staff.

8.1 Strength, Limitations and Recommendation

Strengths of this study attribute to the countries of the findings in the selected articles which were included the small sample size of study in developed countries such as Finland, Norway, Sweden, UK, Australian and America which gave way for the researcher to gain more information that in turn helped in the writing of this thesis. In addition, this study has developed the authors research ability and method. It strengthens scientific writing as well as create awareness to nurses in healthcare settings. Most of the study reveal limitation with time of nurses and cost of implementation of study. It thereby stated that further study of reduction of antipsychotic can be quite complex and expensive. Getting current materials strictly on the reduction of Antipsychotic medication was a challenge. Most materials relevant to the research questions was old and outdated. Considering the summarized conclusion in the study, hereby proffer subsequent recommendation. Nursing homes should promote the use of psychosocial intervention in treatment. A psychosocial intervention must comprise an interpersonal dialogue including components of psychological therapies and health education, as well as interventions with a focus on social aspects, such as social support and networking. Interventions combining psychosocial elements with biological components will also be beneficial in reducing antipsychotic medication in nursing homes. Psychosocial interventions as well as their mode of operation will be differentiated depending on the target group: Interventions directly targeting patients/residents: Psycho-educative interventions or behavioral therapy may result in expected adjustments that may affect the behavior of the nursing homes residents, thereby making the use of antipsychotic unnecessary. There should be regularized medication review and psychosocial monitoring of nursing home residents for effective intervention implementation.

Interventions targeting nursing staff: Structural design and inclusion of educational sessions and skilled trainings aimed at changing nurses' attitudes to giving of antipsychotic as well as implementation of alternatives to antipsychotics in managing dementia, schizophrenia, and more health challenges in most nursing homes. Nursing homes should continuously educate nurses by using recent materials on updated antipsychotic drugs. Encourage nurses to promote a framework that adopts a gradual reduction and withdrawal of antipsychotic medication and promotion psychosocial therapies and in-

terventions. However, more studies and research should be done concerning antipsychotic drugs use in nursing home.

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APPENDICES

Table 3 1: General Information extracted from articles regarding incidence of Antipsychotics use in Nursing Homes

Articles Country/year	Participate Method	Interventions.	Outcome Result.
Richter, C et al 2019 Germany.	36NHs. cRCT. 2 days training- for I.G on PCC.and programs. Both group received usual care. Medical review by psychai/geriatricproviding feedback to physicians.	Aimed to investigate whether the PCC approache, successfully evaluated in NHs in Uk can be Implemented in German Nhs. If comparison group can clinically relevant reduction of proportion of resident with AP precriptions.	A reduction of residents receiving at least one AP after 12months. Resident Qol,agitated behaviorand safety parameters. A health economic evaluation and process was performed.
Brody.H, etal,2018. Australia.	Nursing staff from 23 NHs recruited 139resident taking regular Ap for >3months without primary psychotic illness. Longitudinal,single- LTC. Halting study.	Aimed at evaluating the substained reduction of inappropriate Ap use for BPSD through desprescribing and education of health care professionals.	12months follow up adverse outcome decline in fall, hospitalization and cognitive functions.
Carnahan,R.M et al./Alzheimeria &Dementia 2017.Iowa USA	Quasi-experimental longitudinal stuy used medicare and assessment data for iowa 426Nhs. 114 were exposed to IA-ADAPT. Form April 2011-dec 2012.	Aimed at evaluating the impact of these programmes on medication use and BPsD among nhs residents AP used was evaluated monthly basis. Changes in BPSD was tracked using assessment data.	NHs expose to IA_ADAPT was associated with AP use. Start of cms partnership decrease. Documentation of verbal aggression, BPSD as well as delirium, medication use ans symptoms.
Dawn J.B et al,2016 UK.	The use of FIT into practices programes. 10days course in PCC was delivered over 3weeks 6 supervision sessions .participate wre care home staff designated as DCC- responsible for interventions in 1 or 2 Nhs. Course provided by DpCC 67 out of 106 completed the study	Aimed at reducing inappropriate prescription and used of AP med. By providing pcc approach and evidence based on psycho-social intervention to support people with bpsd.	Reduction of prescription by 31%,improved personalgoalattainment, increase in qol and improvement in staff skill and knowledge.
Maidment I,D et al 2018. UK. Westmid- land.	3hrs session of intervention to promote pcc. 34 out of 106 were recruited for 12months. Care home staff received an educationa behavioural change	Aimed at implementation of medication change ,recommendation and expectation of care staff to reduce use of psychotropic med.	NPI Nhs version at 3months. Qol.cognition function,health economic and prescribed med.quality.evaluationof care staff experience and expectation.care staff gave goog reporting on

			experience intervention- and adopting holistic PCC.
Lenande et al 2018. skåne Sweden.	Cross sectional study on medication review conducted by clinical pharmacists team general practitioner and nurse the use of 3 psychotropic were study.	Aimed at to evaluate the effective of medication reviews on total drugs used and potentially inappropriate drugs use in elderly patient. and discuss the occurrence drugs related problems.	The percentage of inappropriate drug use reduced by 1%. Drug related problem were unnecessary drug therapy followed by high dose and wrong dose
Westbury, J et al 2011. Australia.	RedUSE programme 6 months controlled trial conducted in 25 Tasmania NHs in 2008-9 leading to reduction in Benzodiazepane and AP use and doubling dose. 1 year collection of data of final Reduce Drug were converted to chlorpromazine and diazepam. 6 months were compared to 18 months followed up.	Aimed at to assess the long term impact of Reducing Use of Sedative (RedUSE) reducing the use of AP and BEZ. dosages and prevalence in NHs.	BEZ prevalence falls by 25% in 18 months in intervention group. And in AP drugs. the effect was not sustained in AP prevalence and dosage.
Simmon, F S, et al 2018. USA.	29 staff from 3 community NHs serves both long and short stay resident (license nurses.)	Aimed at qualitative methods to explore nursing home staff perception at ap medication use and identify benefit and barriers to reducing inappropriate use from their perceptions.	Potential benefit were expressed with AP reduction in 4 themes Potential barriers they face when attempt to reduce or withdraw AP drugs from resident.
Testad. I, et al 2015 Norway.	Single blind cluster randomised controlled trial in Norway regional health Authority 2011-2013. "care homes, 274 resident 118 in intervention group and 156 in controlled group.	Aimed at evaluating the effective of 7 months training intervention "Trusting before Restraint" in reducing restraint, agitation and AP medication in care homes resident with dementias.	Initiative, educational training program of PCC for care staff contributed significantly in the reduction use of restraint both in control group and intervention group.
Mavrodaris A, et al 2013 England	2 surveys comprising questions on prescribing practices were developed and distributed electronically to Gp practices and care homes. all Gp and care homes participated in question regarding Antipsychotics, 60 Gp and 29 care homes 28 completed the questionnaire. The use of Risperidone at 6 weeks interval by Gp.	Aimed to investigate AP prescribing practices and patient review in care homes. Due to low number of reluctances among Gp, poor reduction were reported. only 40% practice risperidone use. With very few conducting review. These include collection of information regarding current PP patient review, alternative management to	The practice of non pharmacological alternatives was emphasized. The study reveals the perceptions of staff delivering healthcare for dementia patient and BPSD. Inappropriate drugs were reported. a lack

		explore GP and care homes perception associated with current PP (prescribing practices).	of communication and uncertainty of roles was evident.
Jessop et al 2017 Sydney Australia	Focus on 60years Resident on regular Ap without primary mental psychotic illness or severe BPSD using NPI de-prescribing commence 3,6,and12 months. Training was provided for care staff on how to reduce and manage BPSD using PCC . GP providing academic detailing.	Aimed at the use of HALT antipsychotic Use in Long Term Care (HALT). Projected to identify resident of LTC facilities on AP med and I under taken intervention to deprescribe or decreases these med and improve NON-Pharm behaviours management Intervention-training and Education Of clinical staff.	Reduction of regular AP med. Without use of substitute Psychotropic med. Secondary outcome will measured the NPI total and domain score Cohen-Mansfield Agitation inventory and adverse event including fall and hospitals.
Juola et al 2015Helsinki Finland	Cluster randomised controlled trial 227 resident 65years in 20wards in assisted living facilities, training of staff 4hrs sessions to recognise potentially harmful med. Cognition verbal fluency clock-drawing test was assessed at baseline 6 and 12months. and over 12months.numbers of fall per resident was recorded.	Aimed at investigating whether educating nursing staff in NH about harmful med use has effects on the incidence of falls and cognition, the intervention demonstrated training for nursing staff to reduce prevalence of psychotropic med to maintain quality of life and reduce hospitalization among resident.	The number of harmful drugs used declined in the intervention group but remain constant in control group. Resident has less fall in IG no significantly change in verbal fluency or clock drawing test were not significantly different between group.