

**Nursing Interventions for adolescents
with drug abuse**
A literature review

Rashidat George

Bachelor's thesis
June 2020
Health care
Degree Programme in Nursing

Author George Rashidat	Type of publication Bachelor's thesis	Date June 2020 Language of publication: English
	Number of pages 44	Permission for web publication: x
Title of publication Nursing Interventions for adolescents with drug abuse A literature review		
Degree programme Degree programme in Nursing		
Supervisor(s) Luotojoki, Tiia & Sinivuo, Riikka		
Assigned by -		
Abstract <p>Drug abuse continues to be a major health problem among adolescents around the globe. Adolescents are vulnerable at this stage due to different factors of their developmental phase posing serious consequences to their health overtime. This includes social norms, behavioural changes, and expectancy to life situations. This study is aimed at focusing on nursing interventions for adolescents with drug abuse. The purpose of the study was to help nurses use comprehensive interventions and care for adolescents with drug abuse using evidence-based nursing practice.</p> <p>Four databases (CINAHL, EBM guidelines, PUBMED, and google scholar) was used to obtain all relevant studies meeting the inclusion criteria. The literature search yielded 8 peer-review studies published from 2006 – 2019. The chosen articles were analysed using content analysis.</p> <p>The results of this literature review show nurses' interventions and care for adolescents with drug abuse using evidence-based nursing practice. Measures used by nurses include general assessment and evaluations routine, education, counselling, therapies, harm reduction measures, vaccinations, and multi- professional collaboration.</p> <p>Recommendation for future research should feature more digital platforms, nursing interventions in underdeveloped countries and their impact, evidence-based guidelines, and policies that are of equal standards in all countries.</p>		
Keywords(subjects) Drug abuse, adolescents, nursing interventions, substance abuse		
Miscellaneous: Thesis data sheet as an appendix from page 34 to 41		

Contents

1	Introduction.....	3
2	Drug abuse in adolescents: definition and prevalence.....	4
2.1	Defining adolescence and drug abuse	4
2.2	Prevalence of drug use in adolescents.....	5
3	Risks, health effects and social consequences of drug abuse in adolescents ...	6
3.1	Risk factors and protective factors of drug abuse in adolescence.....	6
3.2	Health effects and social consequences	10
4	Common interventions used for drug abusers	12
5	Aim, Purpose and Research Questions.....	15
6	Methodology	15
6.1	Literature review	15
6.2	Scientific article selection process	16
6.3	Analysis and synthesis of data.....	17
7	Results	18
7.1	Pedagogy	19
7.2	Holistic care and nursing implementation	22
7.3	Multi-professional health care approach.....	23
8	Discussion and findings	25
8.1	Discussion	25
8.2	Conclusion and recommendations.....	26
9	Ethical Considerations.....	27
9.1	Ethics within the Research Process	27
9.2	Credibility, validity, and reliability.....	28

	2
9.3 Limitations	29
References.....	30
Appendices.....	34
Appendix 1. Articles search process	34
Appendix 2. Quality of the articles	41

Figures

Figure 1. Protective factors and risk factors for substance use in adolescence (UNODC 2018).....	7
Figure 2. Components of Comprehensive Drug Abuse Treatment (National Institute on drug abuse 2014).	13
Figure 3. Data analysis.....	18

Tables

Table 1.Risk factors in substance use and harmful use of substances (UNODC 2018)..	8
Table 2.Commonly abused drugs and their physiologic effects (National Institute on Drug Abuse 2014).....	11
Table 3. Inclusion criteria for selected article	16
Table 4. Articles search process	17
Table 5. Results from article selection and analysis	19

ABBREVIATIONS

WHO- World Health Organization

UNODC – United Nations Office on Drugs and Crime

1 Introduction

A prevailing problem is substance abuse, which has a major impact on families, relatives, the individual, and society. The impact has contributed to challenges such as physical, behavioural, social, and mental health problems. According to WHO (2018), 31million people have drug use problems and among 11 million people who inject drugs, 1.3 million live with HIV, 5.5 million have hepatitis C and 1 million live with both HIV and hepatitis. A survey by UNODC (2018), indicates that the use of drugs in general remains lower in older people compared to the young ones, with age groups of 18 –25 in all countries and based on most drugs used.(UNODC 2018)

Unhealthy behaviour arises during adolescent phase which pose a great threat to the health sector. In most cases, the path of harmful substance abuse in adolescents is influenced by factors that are quite complex leading to conforming actions, attitudes, and behaviour. Overall, the use of these substances has its effect on adolescents which include suicidal trends, mental illness, reduced life expectancy and socio-economic problems. (UNODC World Drug Report; WHO 2018; Bartlett, Brown, Shattell, Wright, & Lewallen 2013; National Institute on drug abuse 2014.)

Drug abuse varies among adolescents with respect to methods used, professional expertise, treatments and strategies adopted. As adolescents, the vulnerability of drug usage is at its peak based on factors such as peer pressure, adjusting and conforming to societal pressures, youthful exorbitance, family issues, environmental factors and much more which is detrimental to their health and well-being. (UNODC World Drug Report 2018; WHO 2018.)

The nurses play a vital role in ensuring that necessary interventions are adopted to help patients by delivering enhanced clinical assessment, evaluate, manage infections, educate, and provide care. Hence, the need for this literature review to identify nursing interventions for adolescents with drug abuse. The aim of the literature review was to use existing studies to explore nursing interventions for adolescents

with drug abuse. The purpose of the present study was to help nurses use comprehensive interventions and care for adolescents with drug abuse using evidence-based nursing practice.

2 Drug abuse in adolescents: definition and prevalence

2.1 Defining adolescence and drug abuse

According to WHO (2018), adolescence ranges between ages 10 and 19, this also falls into young people of ages 10 and 24. Adolescence explains the intermediate phase from childhood to adulthood with attributes to physical changes, developmental and social changes. Globally, adolescents are at the vulnerable stage of trying new things. At this stage they experience physical and psychological development, ready to explore and identify with norms and values. Some factors contribute to their drug usage such as micro and macro factors. Examples include peer pressure, family problems, stress, emotional problems, and the environment. The roles of nurses as regards drug abuse plays a major role in acting as an agent in providing optimal care at an earlier stage of adolescent drug abuse. (UNODC World Drug Report 2018; WHO 2018.)

World Health Organisation (WHO 2018), refers to drug abuse as the illicit use of a psychoactive substance. It refers to the unsafe use of chemically active substances that are harmful to the body such substances include opioids, cocaine, alcohol, heroin, and other addictive substances. In most research ages 12–14 years old and late 15–17 years old adolescence is at a critical risk period for the initiation of substance use (UNODC 2018). Substance use and abuse are preventable by intervening earlier before complications might arise causing physiological alterations (Bartlett, Brown, Shattell, Wright, & Lewallen, 2013).

2.2 Prevalence of drug use in adolescents

The use of substance abuse has seen an increase and drastic rise in its usage over the years WHO & UNODC (2018). It can be simply put that different factors are attributed to the use of these substances. However, substance users usually have a strong desire in taking drugs concurrently if there are not many interventions during the adolescent phase. The illicit use of drugs in adolescents leads to various behavioural, cognitive, and physiological problems that reoccurs over time, leading to tolerance and dependence. The trend in the age group according to UNODC (2018), demographics states that more than 4 out of 10 persons were using harmful substances with the age range 15- 24 years.

UNODC (2018), highlights that 3.9% of people 15 years & above and 2.7% of the total global population had used cannabis at least once between 2000 and 2001. It states that early (12–14 years old) to late (15–17 years old) adolescence is a crucial period for substance use and may later rise in young people aged 18–25 years. Parrish (2017) emphasises that the Centre for Disease Control in 2014 reported 10.2%, of which 12 years old and over had used an illicit substance and the numbers are constantly on the rise with related deaths.

According to Substance Abuse and Mental Health Services Administration (SAMHSA), an example of a national survey conducted in the U.S, 2008 shows that over 22.2 million people, 8.6% of which are nationals in the U.S depend on alcohol and drugs, which makes most substance users misuse drug on regular bases and are at risk of different health issues such as liver damage, high blood pressure, heart failure and depression. (Davoudi & Rawson 2018).

3 Risks, health effects and social consequences of drug abuse in adolescents

3.1 Risk factors and protective factors of drug abuse in adolescence

Risk and protective factors are factors that influence an adolescent at different stages of their lives. The protective factors influence positive behaviour that helps strengthen the adolescent from drug use related problems. If the protective factors are not addressed, it may lead to negative behaviour and consequences that put the adolescent at risk of further drug use. Assessing the risk and protective factors help to influence and alleviate substance use disorders. This helps with effective, preventive treatments and interventions where necessary. It is essential that risks are identified with probable interventions to alleviate substance use disorders. (UNODC 2018.)

The risk factors of drug use in adolescents can be attributed to problems illustrated below, UNODC (2018) gives a description of protective and risk factors for drug use in figure 1. The protective factors describe the positive aspects of physical, social, and mental health well-being which is threatened by the risk factors leading to substance use initiation and harmful use of substances that proceed to a substance use disorder.

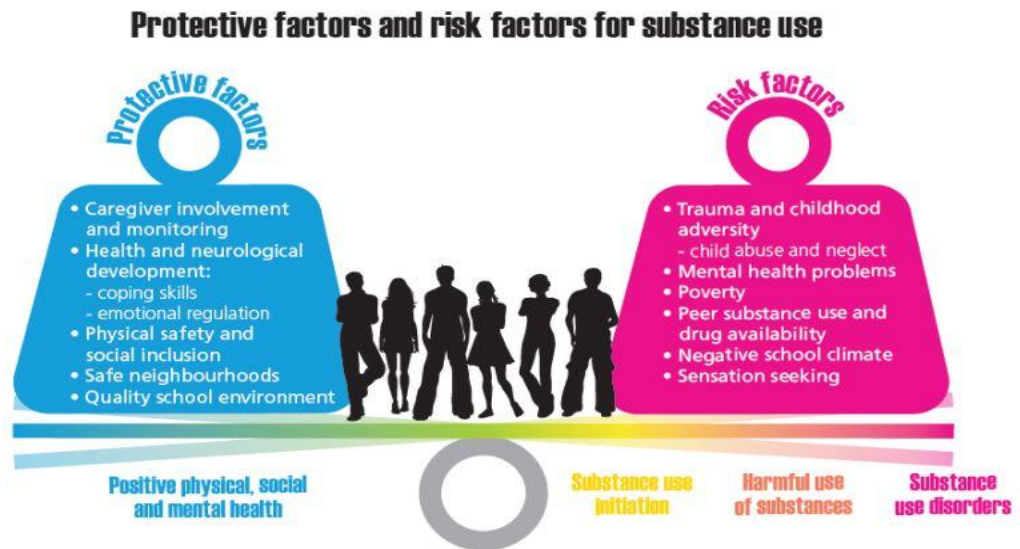


Figure 1. Protective factors and risk factors for substance use in adolescence (UNODC 2018).

Table 1, describes what influences the macro-level ,micro-level factors, individual characteristics, and their primary outcome .The macro-level factors consists of income or resources, social, and physical environment, the micro-level factors consist of the family, school, and peer influences. The individual characteristics are composed of genetic susceptibility, mental health, personal traits, neurological development, and stress reactivity. All factors are classified with varying examples. The primary outcome leads to substance use and other related problems. (UNODC 2018.)

Table 1. Risk factors in substance use and harmful use of substances (UNODC 2018)

macro-level factors	micro-level factors	individual characteristics	primary outcome
<p>Income and resource</p> <ul style="list-style-type: none"> • Poverty • Homeless, refugee status • Child labour • inadequate access to health care <p>Social environment</p> <ul style="list-style-type: none"> • Antisocial norms, poor informal social controls • inadequate social bonds, disconnectedness, inadequate social capital • Conflict/war • Social exclusion, inequality, discrimination <p>Physical environment</p> <ul style="list-style-type: none"> • Decay: abandoned buildings, substandard housing • Neighbourhood disorder <ul style="list-style-type: none"> • Access to alcohol, tobacco, other drugs, firearms • inadequate access to nutritious foods. • Exposure to toxins • Media 	<p>Family influences</p> <ul style="list-style-type: none"> • inadequate involvement and monitoring • Harsh, abusive, or neglectful parenting • Negative role modelling <ul style="list-style-type: none"> • Neglect for physical condition • Stressful, chaotic environment • Parental substance use <p>School influences</p> <ul style="list-style-type: none"> • Poor-quality early education • Negative school ambience • Poor school attendance • inadequate health education and prevention programmes • inadequate after-school activities <p>Peer influence</p> <ul style="list-style-type: none"> • Antisocial peers, role models • Exposure to alcohol, tobacco, illicit drug use, violence, crime <ul style="list-style-type: none"> • inadequate parental monitoring of peer relationships • Social networking technology 	<p>Genetic susceptibilities</p> <p>Mental health and personality traits</p> <ul style="list-style-type: none"> • Sensation-seeking • Aggressive • Inattentive • Impulsive • Mental health problems <p>Neurological development</p> <ul style="list-style-type: none"> • Language delays • Cognitive deficiency • Poor decision making and problem solving <p>Stress reactivity</p> <ul style="list-style-type: none"> • Deficits in emotion regulation and perception • Dysregulated physiological responses • Poor coping 	<p>Substance use and related problems</p> <ul style="list-style-type: none"> • Academic failure • Poor social competency skills • Poor self-regulation • Mental health problems

World drug report research (UNODC 2018) for adolescence shows that environmental influences are predisposing factors for drug abuse. There are personal traits and other factors that interact to determine the outcomes of drug usage. Hence it is important to adopt strategies that identify these interactions and its prevention. Depressed adolescents often use illicit drugs and alcohol which causes a depressive state. This depressive state is a psychiatric disorder that needs appropriate measures. (Laukkanen 2018.)

Depression is a leading attribute of mental disorder that affects over 300 million globally, this ranges from all age types. Depression arises as an outcome from complex social, psychological, and biological factors posing severe health complications and even suicide among various people. A vast majority of adolescents with depression often wants to commit suicide. An example is a suicidal rate among adolescents which is the second leading cause of death in 15-29-year-olds. (WHO 2018.)

WHO 2018, suggests that mental health conditions in adolescents account for about 16% of the global disease in people aged 10–19 years. Mental health encompasses all forms of life, it can be defined as a person's condition with regards to their psychological and emotional well-being. It is the state of well-being where everyone aligns with his or her own functioning and performance required for daily activities. It allows every individual to adhere with the daily stress of life, knowing how they can manage and cope with changing situations. It is essential that every individual stay fit and healthy to function and participate actively in society. Mental health is an interwoven process aligned with substance use that can lead to problems such as anxiety, depression, and trauma. Inversely mental disorders and substance abuse often occur progressively, the continuous use of illicit drugs worsens mental health and people with serious mental disorders generally die 10 -20 years earlier (WHO 2018).

3.2 Health effects and social consequences

Drug abuse affects all levels of one's social life, be it relationships, employment, educational opportunities, status in the society, and the general health of the individual (Gregg 2012). Respiratory depression occurs when opioid medications are taken for non-medical purposes and the route of administration is not right, this may lead to coma or even death (Fedicilda- Reynaldo 2014). These drug substances interfere with the normal functioning of the central nervous system by processing it over time and disrupting the pathways in the body system which leads to dependence (ibid. 2014). Some physiological effects occur with the use of drugs such as neurological, memory impairment, increased heart rate, anxiety, depression, cardiovascular disease, increased heart rate and blood pressure, various cancers, weight loss, seizures, stroke, and nausea among others (Steele, Bolostotsky & Lau; 2012, UNODC 2018). People abusing drugs are at risk of developing HIV/AIDS and other possible blood borne infections. Another example of a survey conducted from Bangladesh, states that there's an increase in HIV due to sharing of drug injecting needles and syringes as the HIV infection rate among drug users has increased from 1.4% to 4% to 8.9% from 2002 -2004 (Kamruzzaman & Ghulam Rasool 2017).

Drug abuse among adolescents decreases their motivation, brings about high school dropouts, poor academic performance (Gauffin, Vinnerljung, Fridell, Hesse, & Hjern 2013) mental health problems, cognitive imbalances, accidents, and injuries. (O'Leary, Mâsse, Pihl, Stewart, Séguin, & Conrod 2017). An example of research conducted in Bangladesh by Kamruzzaman & Ghulam Rasool (2017), suggested that drug abuse was common in the urban areas in the last decade, but apparently, it is expanding to the rural areas as well. It was also common among the youths, but it is commonly found among teenagers, adolescents, and street children now. Commonly abused drugs and their effects are described in table 2 below. (National Institute on Drug Abuse 2014.)

Table 2. Commonly abused drugs and their physiologic effects (National Institute on Drug Abuse 2014).

Table 2. commonly abused drugs and their physiologic effects	
Drugs	Physiologic Effects
Cannabinoids	Euphoria; memory and learning impairment; delayed reactions; increased heart rate; increased appetite; anxiety.
Opioids	Sedation; nausea; confusion; constipation; respiratory depression; infectious disease.
Stimulants	Energetic; sleeping difficulties; increased body temperature, blood pressure and heart rate; weight loss; paranoia; tremors; cardiovascular complications; seizures; stroke.
Dissociative drugs	Feelings of isolation; memory impairment; nausea; tremors; hallucinations; violent behaviours; psychosis.
Hallucinogen	Increased blood pressure, heart rate and body temperature; distorted perception; insomnia; tremor; dizziness.
Inhalants	Varies depending on the specific chemicals, possible effects include headache; impaired memory; nausea and vomiting; depression; cardiovascular effects; neurologic effects.
Ethanol	Euphoria; nausea; decreased level of consciousness; memory impairment; liver damage; cardiovascular disease; hypertension.
Tobacco (nicotine)	Respiratory and cardiovascular disease; CVA; increased heart rate and blood pressure; various cancers.

4 Common interventions used for drug abusers

The most common treatment in general for drug users is a continuous approach used in research development to address problems associated with drug abuse. This simply allows all forms of health care professionals to identify and follow ethical guidelines using this method. This brings about the efficacy of a treatment method, its pros and cons on the individual, family, and the community. In most cases, a trained personnel in the field of health care should be skilled to deliver the suitable evidence-based treatment, it could take most of these tested treatments over short periods of 12–16 weeks or longer depending on the care path. Examples of this treatment include behavioural approaches, family-based approaches, addiction medications, recovery Support Services. (Bartlett, Brown, Shattell, Wright, & Lewallen 2013; National Institute on drug abuse 2014.)

The Behavioural interventions intend to help individuals recover from substance use by actively participating in therapies and improving resistance to drug use, these therapy act as mediators to modify their behaviour and attitudes. They also play a role in interacting and communicating with the family. Some examples include group therapies such as cognitive behavioural therapy and motivational enhancement therapy. (Kiernan, Ni Fhearail, & Coyne 2012; Bartlett et al. 2013; Becker 2013; National Institute on drug abuse 2014.)

The Family-based intervention intends to involve the family in the treatment process. It is essential that the family is incorporated into this treatment method because of the bonds attributed to the family. This enhances support and addresses problems that arise within the family. In some research, the family treatment has been a method used because of its efficacy. (National Institute on drug abuse 2014.)

Recovery Support Services, these services improve the quality of reinforcement made in treatment by engaging them in recovery programs such as peer recovery support, mutual help groups where they can share their experiences on their struggles and problems (Bartlett et al. Brown 2013; National Institute on drug abuse 2014).

The Multimodal approach of treatment is an effective and essential method that combines treatment with a range of services. This helps with the reduction of drug use by infusing recreational, educational, and vocational activities into treatment, personal counselling, family counselling, and adolescent group therapy (McWhirter 2008). The study examined by Liddle, Dakof, Turner, Henderson, & Greenbaum (2008) shows the efficacy of therapies used for drug abuse, using a comparison of the manual, theoretical and operational clinically based method. The multidimensional family therapy, family-based therapy, and cognitive behaviour therapy indicate good results for individuals with drug abuse. In some cases, a combination of therapies could also be applied in treatment by clinicians. (Liddle et al. 2008). Figure 2 gives an illustration of a multimodal approach treatment below.

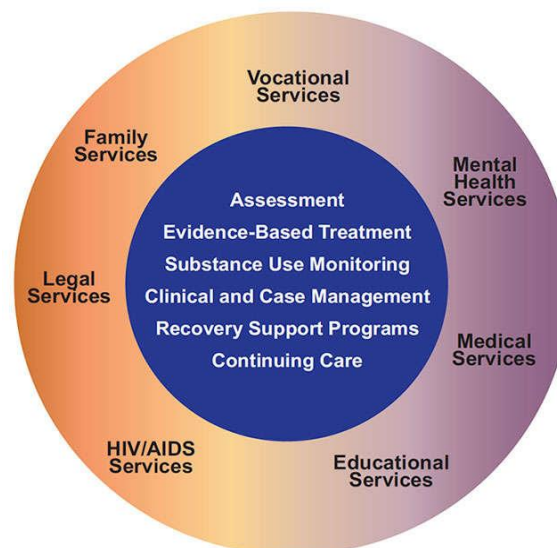


Figure 2. Components of Comprehensive Drug Abuse Treatment (National Institute on drug abuse 2014).

According to the American Academy of Pediatrics (AAP 2011), there is a policy statement that encourages screening and substance education as a routine, due to the susceptibility to drugs and the health risks associated. This helps nurses with guidance for the prevention and management of substance abuse (American Academy of Pediatrics 2011).

It is also essential for primary care practitioners to be well suited for managing other cognitive problems by screening, offering referrals to appropriate professionals for treatment, evaluating, and discussing extensively on the situation. Examples of such screening as (SBIRT) screening, brief intervention, referral to treatment or recommendation (American Academy of Pediatrics 2011; Wilson 2013), and (AUDIT) the alcohol use disorders identification test (Kiernan et al. 2012). Motivational interviews are recommended, it enhances and helps in developing professional relationships during treatment. (American Academy of Pediatrics 2011.)

Medication, psychotherapy, and non-pharmacological methods are interventions used to alleviate substance use. Aarninsalo (2019) indicated that medications can be used if there are other mental problems such as anxiety, depression, and disorders. Mostly, these should be issued in small doses. Some treatment options have been identified amounting to a combination of treatment methods, this includes rehabilitation programs, peer programs, behavioural therapy and pharmacotherapy, and a combination of the two to name a few (Aarninsalo 2019). Medications are also part of the treatment for substance use disorders called medication-assisted treatment (MAT). They are used in conjunction with psychotherapy and therapies. (Parrish 2017.)

5 Aim, Purpose and Research Questions

The aim of the literature review was to use existing studies to explore nursing interventions for adolescents with drug abuse. The purpose of the study was to help nurses use comprehensive interventions and care for adolescents with drug abuse using evidence-based nursing practice. The information provided could enhance further improvement and research with nurse's intervention on adolescent substance use.

Research questions

What are the nursing interventions for adolescents with drug abuse problems?

6 Methodology

6.1 Literature review

In this study, a review of the literature was used as the methodology. A review of literature means a planned, critical collection and evaluation of significant published literature that supports a study. The main purpose of a literature review is to form a general, systematic, and critical review of the most important scholarly published literature of a topic. (LoBiondo Wood & Haber 2018.)

A literature review process involves first identifying the problem which involves the description, summary, and synthesis of published data about specific problems and devising questions useful in providing solutions. Other aspects required include data search, data extraction, and analysis which is followed by reviewing the quality of the studies, recognizing the limitations and biases. Finally, the research can be published, and the result can be used in practice (Rew 2010.). The aim of the literature review was to use existing studies to explore nursing interventions for adolescents with substance abuse using existing literature. A literature review was used to establish the

rationale for the study focusing on new insights and nursing interventions. The literature review provides the reader with the identification of key research from evidence-based practices and an array of experts on the analysed research. (Rew 2010.)

6.2 Scientific article selection process

For the selection process, the literature was gathered from different databases, including CINAHL, EBM guidelines, PUBMED and google scholar. The selection process follows evidence-based research to formulate and answer questions in clinical and health settings thereby establishing literature search procedures (Aromataris & Riitano 2014, CRD 2009). The data search used in this study was done with a combination of keywords such as nurses' intervention, substance abuse, drug abuse, nursing interventions for drug abuse, adolescents, treatments, and Interventions to find the relevant articles for the thesis. Different options of search terms were used and based on the options duplicates were excluded at the end of the search. Publications selected includes peer-reviewed, scientific articles written in English, study years between 2006 and 2019. Table 3 illustrates the Inclusion criteria of the literature research and a total of eight articles were reviewed as shown in Table 4. All the reviewed articles can be found in Appendix 1.

Table 3. Inclusion criteria for the selected articles

Inclusion criteria
Publications in English
Nurses
Publication is a science-based study
Articles available in full text to JAMK students
Age groups 10-24yrs.
Publication is peer reviewed
Qualitative and quantitative articles

Table 4. Articles search process

Database	Results	Search terms	Chosen based on title and abstract	Relevant studies based on full text
CINAHL	527	nursing interventions for drug abuse AND adolescents	26	7
CINAHL	7	adolescent drug use	3	1
Google scholar	10	nursing interventions for drug abuse AND adolescents	2	0
PUBMED	8	nursing interventions for drug abuse AND adolescents	3	0
Ebm guidelines	4	Substance abuse of adolescents	4	0
Total	556		38	8

6.3 Analysis and synthesis of data

Overall, eight articles were included in this study, the data synthesis comprised of data comparison, reduction, and drawing conclusions. This includes reading reviewing through different articles and selecting the most relevant data. The data extracted were further divided into categories and subcategories.

According to Elo & Kyngäs (2008), content analysis is a technique used to analyse the document and evaluate data. This method allows researchers to analyse words by testing and improving the data using categories. The goal of content analysis is to identify and explain important parts of the content, reduce disorganized content, and examine the relationships of concepts. Content analyses consist of three stages. These stages are the preparation phase, the organizing phase, and the reporting phase. The relevant articles used in this study were carefully read, selected, and high-

lighted into categories. This was done by summarising and understanding the findings of each article with their main findings reviewed and coded according to the contents and contexts. Then, the list was transferred to Microsoft Excel sheet. The data were further clustered into three main categories and other subcategories according to their context, content, and given names. In the end, a comprehensive summary was done by establishing an important component of the data (Elo & kyngäs 2008; Ingham-Broomfield 2015.). Figure 3 gives an example of data analysis during the research process.

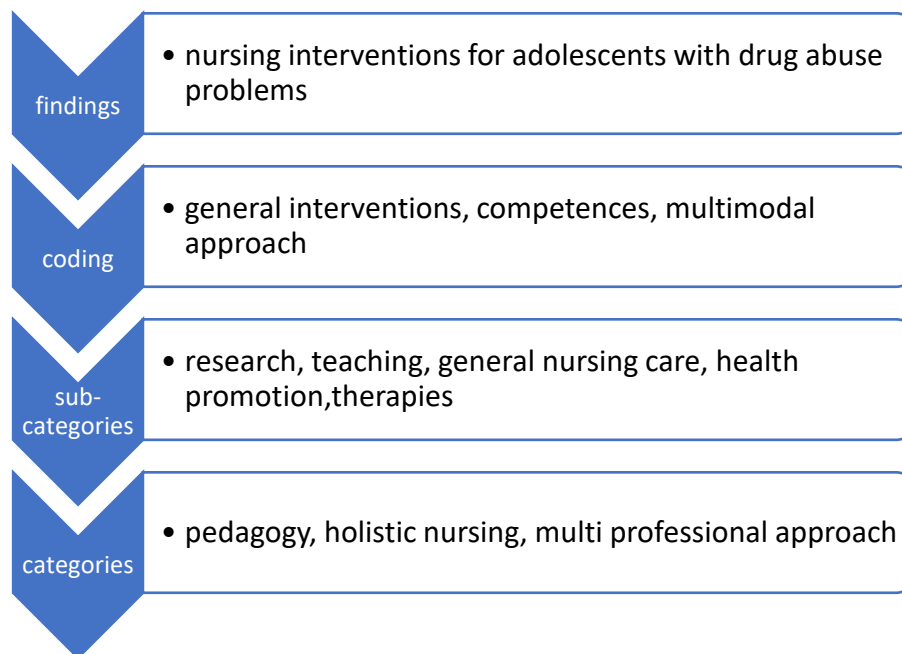


Figure 3. Data analysis

7 Results

The research results attributed to nurses' interventions for adolescent drug abuse further presents three main categories and other subcategories. Below is an illustration of the result.

Table 5. Results from article selection and analysis

Nursing interventions for adolescent drug abuse	
Main categories	Subcategories
Pedagogy	<ul style="list-style-type: none"> - Education - Research - Competence - Counselling - Abstinence-based and harm reduction measures - Rehabilitation health promotion education
Holistic care and nursing implementation	<ul style="list-style-type: none"> - General nursing care - Harm reduction measures - Screening substance use and brief Intervention - Health promotion and wellbeing
Multi-professional health care approach	<ul style="list-style-type: none"> - Cognitive behavioural therapies - Family psychosocial therapies - Family-based treatments - Multidimensional Family therapy - Referral to treatment

7.1 Pedagogy

Pedagogy encompasses all forms of teaching; the different pedagogical approaches could enhance nursing competencies and their interventions in helping adolescents with drug abuse problems. There has been stigmatization, judgemental tendencies with patients of drug abuse and substance use, and over the year's nurses' attitudes have been conceived and reviewed as negative in some cases (Edwards 2006; Johansson & Wiklund 2016).

It is however, important to provide guidelines on attitude, behaviour and ethics in providing care to affected adolescents through updates in education such as schools, organisations, research, counselling methods and approaches, harm reduction measures, abstinence-based measures, and rehabilitation health promotion education (Edwards 2006; Johansson & Wiklund 2016).

Nurses usually have means of interacting with adolescents in treatment settings and are able to influence the health of people with substance use disorder. Competencies are essential aspects of measuring acquired skills, values, and knowledge needed to be effectively used in a specified role. Hence, the need to have different competencies which follow a standard guideline and framework in treating substance abuse-related cases in adolescents. The information provided by nurses can help with harm reduction (Ford 2010) such include wound care, sexual health and overdose complications, education on phlebotomy, syringe use, and disposal. Lack of information not only puts these adolescents at risk but also others. (Ayres, Pontes, & Pontes 2017.)

Nurses of different specialities can enhance their knowledge and competence by seeking relevant information on modern evidence-based procedures from research. These can be used in addressing adolescents' drug harmful effects either by educating, administering medications, evaluating, and assessing their withdrawal symptoms to help alleviate the problems associated with drug use. Nurses with their speciality in substance abuse and addiction ranging from mental health nurses, paediatricians, addiction nurses and general nursing practitioners have more expanded working opportunities with other health care providers, related sectors and organisations dealing with adolescent drug abuse to help prevent, educate and create awareness on its use. (Myllymäki, Ruotsalainen, & Kääriäinen 2017.)

Ayres, Pontes, & Pontes (2017) examined the use of nonmedical prescription medications in high school students and their relationship to sleeping patterns, depressive episodes, and other factors. The findings will help health care professionals to address adolescents at risk of prescription medication conduct in schools. School nurses have a significant role in the early intervention and prevention of illicit drug use during adolescence by promoting the health and well-being of these individuals. School

nurses help initiate both primary and secondary measures in their nursing activities such as health education and awareness to the adolescents and their parents or families. They help provide guidelines about the consequences of substance misuse and its implications. School nurses also engage in screenings, assessments, and evaluations of adolescents to ascertain and treat health-related problems. (Ayres et al. 2017.)

Research by Edwards (2006), suggested evidence-based health promotion education for teaching adolescents with drug abuse. A method such as potential low rehabilitation on equipment sterilization for the prevention of diseases such as hepatitis C and HIV. Techniques used in preventing drug use would be through demonstration facility courses where the adolescents are taught on the modes of disease transmission, its risks, and complication. Assessment and evaluation of their progress in the course is used as a measure to track their level of understanding and participation. (Edwards 2006.)

Ford's (2010) study, states that nurses have their preferences on the best method to help reduce illicit drug use, the evident results established from the study include the use of medication, needle, and syringe program. Nurses had preferences mostly for abstinence-based method, harm reduction, and use of medication. Harm reduction measures would aim to minimise the use of adolescent drug-related issues thereby improving the well-being of the patients with drug abuse. Using evidence-based methods will improve further awareness and better understanding to drug-related issues through harm reduction and abstinence methods. It is however efficient and effective if nurses had adequate education on these evidence-based measures and how to implement them for optimal care. (Ford 2010.)

7.2 Holistic care and nursing implementation

Nursing implementation is an approach that is well suited for adolescents at risk of substance disorders, injury, or further harm, this helps identify and give probable interventions (McKenna, Gaines, Hatfield, Helman, Meyer, Rennick, Schenkel, and Zaremski 2013). Harm reduction (Ford 2010) measures are strategic interventions implemented during the nursing process; it is aimed at reducing problems associated with drug use. It puts into perspective safety, abstinence, and patient education. An example is the known harm reduction strategy used in Australia and other countries globally, the needle and syringe program. The program provides drug users with free sterile needles and syringes, educate about safe sexual and injection techniques. The program helps reduce disease transmission, drug overdose, and disposal management. (Ford 2010.)

In Finland, the use of rehabilitative facilities, clinics, self -help programmes, therapies with either the individual or with their families are various ways to help in substance-related problems (Myllymäki, Ruotsalainen & Kääriäinen 2017).

McKenna et al. (2013) in their research, suggested that over the years the SBIRT method has been effective. It requires first screening to identify the patient's risk of drug abuse which follows a motivational interview by a professional. Applying principles to drug abuse prevention programs such as screening for alcohol and illicit drug abuse to give immediate treatment to adolescents reduces the possible risk of developing mental illness and or medical illness due to drug abuse (McKenna et.al 2013.). Nurses are opportune to be part of health initiatives, it is therefore ideal that they integrate nursing SBIRT (screening, brief intervention, and referral) and AUDIT (the Alcohol Use Disorders Identification Test) to treatment. Nurses can contribute to the initiative using additional expertise and training acquired to give a positive outcome for these adolescents with drug use. (McKenna et.al 2013.)

Abramoski, Pierce, Hauck, & Stoddard (2018), suggest in their study about one's purpose in life; stating that focus and breadth are probably an important aspect. Their results suggest broad other-promoting, narrow self-promoting, and broad self-promoting in one's purpose of life. Adolescents may want to enhance their own wellbeing without considering the impact. It is critical that school nurses in conjunction with other personnel in the school identify students at risk for substance use and its possible prevention strategies. The adolescents' purpose in life may protect against substance use behaviour which would help deter risk behaviours and holistically influence positive youth development. The nurse could implement care coordination, including motivational interviewing and counselling to school-based nursing practices. (Abramoski et al. 2018.)

7.3 Multi-professional health care approach

Nurses with their expertise in mental health respond to people by providing treatment services and mental health services. They help in providing advice, support, other relevant information, and improving mental health. They develop further plans on how to deal with crisis, screenings, and assessment for other related illnesses and symptoms, making referrals to other multi professional personnel and more. The nurse's contribution to adolescent drug abuse includes general nursing examinations, screening, health care assessment, evaluation and improvement, comprehensive clinical guide, teaching, and counselling. (Johansson & Wiklund 2016; McKenna et al. 2013.)

Johansson & Wiklund (2016), suggests nursing care with substance abuse can be characterized by a multifaceted approach in which nurses acknowledge their own actions, reactions to routines, and cultural patterns in caring for individuals. Holistic care and general nursing interventions are to be considered in enhancing optimal health for these adolescents (Johansson & Wiklund 2016).

McKenna et al. (2013) in their research, suggested a referral to treatment. This is aimed at conducting a motivational interview and other clinical assessment by a professional to reduce the risky situations in illicit drug use. Referral to treatment is offered where necessary for the family and the patient. Nurses are at the position of facilitating interventions and referrals, thereby reducing possible risks for adolescents. The adolescents' follow up should be assessed and documented by nurses to prevent further complications. (McKenna et.al 2013.)

According to Mulia, Keliat, & Wardani (2017), nurses have major roles in the optimal care of families, individuals, communities, and other people with various drug-related problems. They help to deliver special care appropriate for alleviating illnesses, such as general nursing interventions, cognitive behavioural therapies, family psychosocial therapies, adequate support for adolescents and their respective families. Some examples of family-based treatments in treating adolescent substance abuse include family behaviour therapy and brief strategic family therapy. (Mulia et al. 2017.)

Myllymäki et al. (2017), states that school nurses in Finland are in a suitable position to promote adolescents' health due to the interactive sessions that occur because of Finnish statutory for regular check-ups and continuous health promotion. They help to provide counselling, work with other multi professionals, and use an evidence-based process. It is suggested from the study that the implementation of lifestyle counselling for adolescents will be effective in their lifestyles, nutrition, physical activity, and substance use. Lifestyle counselling is an ideal method for adolescents because of the level of trust, open-mindedness, and the ability to care without prejudice. (Myllymäki et al. 2017.)

Nurses' impact makes a positive contribution to the prevention, reduction, and resistance of drug-related mishap in adolescents by delivering an array of approaches to intervene in cases such as family relationship, mental, physical, social, and psychological comorbidities. They help to enhance drug abuse awareness by educating and disseminating information about drug use its problems, and prevention. (Mulia et al. 2017.)

8 Discussion and findings

8.1 Discussion

The thesis findings suggest that nurses have combined the use of pedagogy, multiple based approach, and holistic care in alleviating substance use among adolescents. Adolescents are at a vulnerable stage of their lives due to the social standards, hence the need for preventing harmful and unhealthy use of substances during the later stages of life (WHO; UNODC 2018). However, it is evident to suggest that there is still a gap in research for nurse's intervention in adolescent drug abuse. The rate of adolescent substance abuse should aim more at critical prevention and intervention measures. In general the information gathered has been the usual approach with nurses intervention, such as clinical and school-based interventions (Aarninsalo 2019) which have been effective in alleviating substance use among adolescents. Working with families and multi professionals in the health care field has also been a measure used in reducing substance use. Nurses have major roles in health care making them have significant impact on the reduction of substance use in adolescents. Implementing the continuous use of more evidence-based guidelines, education, holistic and screening measures would also have a significant impact. (Bartlett et al., Johansson & Wiklund 2016; Ayres et al. 2017; Denis 2019)

However, there needs to be emphasised nursing interventions suggesting more competences, research, and strategies to be used for adolescent drug use. It should be noted that this study has examined only pedagogy, holistic nursing care, nursing implantation, and multi-professional health care approach. It is therefore recommended that an extensive and strategic measure is in place for other countries adopting different health care systems and policies. This will help reduce the problem attributed to drug abuse in adolescents. Also considering that some underdeveloped countries are not privileged to have access to good health care systems, policies, evidence-based guidelines, teaching methods, technology, and nursing care meaning those interventions have either not been implemented or unknown.

8.2 Conclusion and recommendations

The thesis research highlights the nursing interventions applied to adolescents with drug abuse. It is, however, important to create areas of development to help enhance other evidence-based guidelines used. Further research is encouraged on nursing interventions for adolescents with drug misuse, from the research much is not known about evidence-based nursing interventions for adolescents with drug use. Most interventions were more of clinicians and general health care professional's perspective for other age range such as the youths and older groups. Suggestions for further improvement include a universal approach such as having standards and guidelines in legislative and health care systems for nurses caring for adolescents with drug abuse; by providing continuing education for nurses in schools, health care field, and utilising other multi-professional teams to help enhance working with patients. Another approach is the use of theory and clinical practices for undergraduate students to prepare them for conditions and situations in drug abuse disorder.

The use of evidence-based universal digital platforms to create, teach, and disseminate information from research, seminars, and updates on clinical techniques and methods would enhance safety procedures and implementation. The Collaboration of nurses and organizations addressing drug-related disorders would integrate components of social factors and harm reduction. Recommendation for future research should feature more digital platforms, nursing interventions in underdeveloped countries, their impact and solutions, evidence-based guidelines, and policies that are of the same standards for the nursing process.

It would be interesting to expand the measures or strategies to these countries that are not privileged to have access to effective health care systems, nursing care, teaching methods or education, income, hygiene, sanitation, and health care policy. Also, the use of modern technology to enhance the pace of defects in the health sector would enhance the declining state of health care systems. Different countries adopt varying systems in terms of policies, structure, and penalizing reforms as resti-

tution for an offence. It is, however, important to create standards where all countries can act on stipulated guidelines and sources which serve as evidence-based practice. This will help create a platform for countries that have fewer skills and technical inputs on addressing the problem since health care systems, policies, and strategies are different.

9 Ethical Considerations

9.1 Ethics within the Research Process

Resnik (2015) defines ethics as “*norms for conduct*” that differentiate between acceptable and unacceptable behaviour. It is described as norms of conduct that serve as methods, guides, or viewpoints when investigating a complex problem. The main principles include privacy, autonomy, dignity, honesty in data reporting, results, and procedures, preventing misrepresentation, and falsification of data (Resnik 2015).

The research is based on literature search from different existing sources, therefore there was no means of gaining consent from authors of the published journals and articles. Hence the informed consent to authors does not exist in the research. However, it is important to understand that the articles used in the research are based on consent from the authors to use their work. Ethical considerations in this study put into perspective consent and respect to the participant, since the age group is vulnerable. In cases where the adolescents could not give consents, parents or guardians have consented with the same consideration. All articles reviewed were considered based on its confidentiality, plagiarism, bias, anonymity, fairness, participant’s consent, privacy, and safety. (Gerrish & Lacey 2010.)

The articles followed permission and approval from either the organisation, management, or participants involved in the study for each article. Clarity was part of the process in selecting articles with all articles been cited. Participants in the articles were given detailed information on what the research entailed, their privacy, and when to withdraw from the research. Also, this research has been done using the JAMK reporting guidelines followed (JAMK Thesis report template Nd) by further examination by the assigned thesis supervisors. Appendix and references have been used for intending readers.

9.2 Credibility, validity, and reliability

The study is conducted to clarify nursing principles and trust. The literature research on the thesis was based on qualitative and quantitative studies, all considered on their credibility, conciseness, authenticity, and preciseness. In perspective to every database used for the research, data must be valid, clear, and conform to several databases by different authors. This means the literature were critically read and understood using summary and synthesis to get results. (Kremenak 2010.)

The research articles for this study were obtained from three databases: CINAHL (EBSCO), EBM guidelines, and google scholar. All databases are chosen for their reliability, scientific, and evidence-based approach. These articles are available to the student of JAMK University of Applied Sciences. It provides a large database for article search and information that is reliable (JAMK Nd.) Assessment of the quality of data with ratings on a scale of 0 to 5 can be found in Appendix 2.

The countries mainly used for the research are Finland, United States, Bangladesh, India, the UK, Australia, Indonesia, Sweden, Norway, and Canada. However, the information gathered from each country does not necessarily apply to other countries, it could be based on race, gender, or population. The literature search had language restrictions on English only. The results were based on professional health care and nursing interventions for adolescents with drug abuse.

9.3 Limitations

Highlighting the limitation in this research, a combination of two to three databases was used to obtain the articles. The limits extend to articles that could not be purchased from the school database. Some research articles could not be used due to the exclusion criteria of language. There exist contrasting definitions of age groups as either teens or adolescents from the databases. It was difficult to classify the age groups from the databases. The research was also based on existing literature from around the globe which gives a different perspective on race, ethnic group, and location.

Another limitation can be ascribed to articles that were related only to general subject terms or missing one or more keywords without giving preference to the main research context. There were not many related articles based on nursing interventions for adolescent drug abuse, it was more of a general, clinical, and professional research findings of adolescent drug abuse and its intervention, hence the need to use articles from 2006 till date. Therefore, considering that articles with relevant information were over 10yrs was a limitation to the study. The age groups 10-24 years by WHO (2018) were ascribed as teens in some articles used which were considered during article search.

References

- Aarninsalo, P. 2019. *EBM Guidelines: Substance abuse of adolescents*. Accessed October 10, 2019. Retrieved from: <https://www-terveysporttifi.ezproxy.jamk.fi:2443/dtk/ebmg/koti>.
- Aap Recommends Routine Substance Abuse Screening for Adolescents*. (2011). *Contemporary Pediatrics*, 28(11), 14–16.
- Abramoski, Kathryn, Jennifer Pierce, Corinne Hauck, and Sarah Stoddard. 2018. "Variations in Adolescent Purpose in Life and Their Association With Lifetime Substance Use." *Journal of School Nursing* 34 (2): 114–20.
- Alcohol, Substance Abuse and Depression* 2018. Mental Health America. Accessed November 27, 2018. Retrieved from <https://www.samhsa.gov/find-help/disorders>
- Aromataris, E. & Riitano, D. 2014. *Constructing a Search Strategy and Searching for Evidence*. *American Journal of Nursing* 114(5), 49- 56.
- Ayres, C. G., Pontes, N. M., & Pontes, M. C. F. 2017. *Understanding the Nonmedical Use of Prescription Medications in the U.S. High School Adolescents*. *Journal of School Nursing*, 33(4), 269–276.
- Bartlett, R., Brown, L., Shattell, M., Wright, T., & Lewallen, L. 2013. *Harm Reduction: Compassionate Care of Persons with Addictions*. *Medical Surgical Nursing*, 22(6), 349–358.
- Becker, S. J. 2013. *Adolescent substance abuse: National trends, consequences, and promising treatments*. *Brown University Child & Adolescent Behavior Letter*, 29(5), 1–7.
- Centre for Reviews and Dissemination (CRD). 2009. *Systematic Reviews: CRD's guidance for undertaking reviews in health care*. University of York: CRD. Assessed on 24th sept, 2019 from http://www.york.ac.uk/media/crd/Systematic_Reviews.pdf
- Davoudi, M. and Rawson, R. 2010. *Screening, Brief Intervention, and Referral to Treatment (SBIRT) Initiatives in California: Notable Trends, Challenges, and Recommendations*. *Journal of Psychoactive Drugs*, 42(sup6), pp.239-248.
- Denis, A. M. 2019. *Managing Opioid Use Disorder: The Nurse Practitioner Addressing the Challenge*. *Medical Surgical Nursing*, 28(5), 281–316.

Edwards K. 2006. *Pediatric ethics, issues, & commentary. A new role for pediatric nurses: teaching teen drug users how to sterilize their equipment for prevention of infectious disease; a course outline*. *Pediatric Nursing*, 32(3), 257–262.

Elo, S., & Kyngäs, H. 2008. *The qualitative content analysis process*. *Journal of Advanced Nursing*, 62(1), 107-115.

Ford, R. 2010. *An analysis of nurses' views of harm reduction measures and other treatments for the problems associated with illicit drug use*. *Australian Journal of Advanced Nursing*, 28(1), 14–24.

Felicilda Reynaldo R. 2014. *Recognizing Signs of Prescription Drug Abuse and Addiction*, Part 1. *Medical Surgical Nursing*. 2014; 23(6):396.

Gauffin, K., Vinnerljung, B., Fridell, M., Hesse, M., & Hjern, A. 2013. *Childhood socioeconomic status, school failure and drug abuse: a Swedish national cohort study*. *Addiction*, 108(8), 1441–1449.

Gerrish, K. & Lacey, A. 2010. *The Research Process in Nursing*. 6th ed. 24. – 432. p. Blackwell Publishing Ltd.

Gregg, J. A. 2012. *Rural Adolescent Substance Abuse: Prevention Implications from the Evidence*. *Online Journal of Rural Nursing & Health Care*, 12(2), 41–50.

Ingham-Broomfield, R. (Becky). 2015. *A nurses' guide to Qualitative Research*. *Australian Journal of Advanced Nursing*, 32(3), 34–40.

JAMK Thesis report template nd. JAMK University of Applied sciences. Accessed October 10, 2019. Retrieved from : <https://intra.jamk.fi/opiskelijat/student/thesis/Pages/default.aspx>

Johansson, L., & Wiklund, G. L. 2016. *The multifaceted vigilance - nurses' experiences of caring encounters with patients suffering from substance use disorder*. PP.307-309

Kamruzzaman, S. M., & Ghulam Rasool, A. H. 2017. *A Review on Illegal Drug Abuse in Bangladesh*. *International Medical Journal*, 24(3), 253–255.

Kiernan, C., Ni Fhearail, A., & Coyne, I. 2012. *Nurses' role in managing alcohol misuse among adolescents*. *British Journal of Nursing*, 21(8), 474–478.

Knudsen, HK. 2009. *Addiction nursing and the quality of adolescent substance abuse treatment*. *Journal of Addictions Nursing*, 20(4), 169–171.

Kremenak, N. 2010. *Why the Literature Review is Important*. *Journal of Prosthodontics*, 19(8), pp.656-656.

Laukkanen, E., 2018. *EBM Guidelines, Depression of adolescents*. Accessed October 10, 2019. Retrieved from: <https://www-terveysportti.fi.ezproxy.jamk.fi:2443/dtk/ebmg/koti>

Liddle HA, Dakof GA, Turner RM, Henderson CE, & Greenbaum PE. (2008). *Treating adolescent drug abuse: a randomized trial comparing multidimensional family therapy and cognitive behaviour therapy*. *Addiction*, 103(10), 1660–1670.

LoBiondo Wood, G. & Haber, J. 2018. *Nursing research: Methods and critical Appraisal for Evidence Based Practise*. St. Lovis: Mosby Elsevier. 559-575.

McWhirter PT. 2008. *Enhancing adolescent substance abuse treatment engagement*. *Journal of Psychoactive Drugs*, 40(2), 173–182.

McKenna, C., Gaines, B., Hatfield, C., Helman, S., Meyer, L., Rennick, C., Schenkel, K., and Zaremski, J. 2013. *Implementation of a Screening, Brief Intervention, and Referral to Treatment Program Using the Electronic Medical Record in a Pediatric Trauma Centre*. *Journal of Trauma Nursing*, 20(1), 16–23.

Mulia, M., Keliat, B. A., & Wardani, I. Y. 2017. *Cognitive Behavioral and Family Psychoeducational Therapies for Adolescent Inmates Experiencing Anxiety in a Narcotics Correctional Facility*. *Comprehensive Child & Adolescent Nursing*, 40, 152–160.

Myllymäki, L., Ruotsalainen, H., & Kääriäinen, M. 2017. *Adolescents' evaluations of the quality of lifestyle counselling in school-based health care*. *Scandinavian Journal of Caring Sciences*, 31(4), 965–973.

National Institute on drug abuse, 2014. *Principles of Adolescent Substance Use Disorder Treatment: A Research-Based Guide*. Accessed October 10, 2019. Retrieved from <https://www.drugabuse.gov/publications/principles-adolescent-substance-use-disorder-treatment>.

National Institute on drug abuse, 2014. *Principles of Adolescent Substance Use Disorder Treatment: A Research-Based Guide*. Accessed October 10, 2019. Retrieved from <https://www.drugabuse.gov/publications/principles-adolescent-substance-use-disorder-treatment-research-based-guide/evidence-based-approaches-to-treating-adolescent-substance-use-disorders>.

O'Leary, B. M., Mâsse, B., Pihl, R. O., Stewart, S. H., Séguin, J. R., & Conrod, P. J. 2017. *A cluster-randomized controlled trial evaluating the effects of delaying onset of adolescent substance abuse on cognitive development and addiction following a selective, personality-targeted intervention programme: the Co-Venture trial*. *Addiction*, 112(10), 1871–1881.

Parrish, E. 2017. *Substance Use Disorders and Addiction is on the rise: What can we do?* *Perspectives in Psychiatric Care*, 53(1), 3–4.

Resnik, D.B. 2015. *What is ethics in Research & why is it important?* National Institute of environmental health sciences. Accessed on 8 March 2020. Retrieved from <https://www.niehs.nih.gov/research/resources/bioethics/whatis/index.cfm>

Rew, L. 2011. *The systematic review of literature: Synthesizing evidence for practice*. Journal for Specialists in Pediatric Nursing. Number 16. Pages 64-69.

Steele, M. R., Bolostotsky, V., & Lau, K. K. 2012. *The dangers of substance abuse in adolescents with chronic kidney disease: A review of the literature*. CANNT Journal, 22(1), 15–24.

Substance Abuse and Depression 2018: *A Dangerous Downward-Spiral*. PsyCom.net - Mental Health Treatment Resource since 1986. Accessed November 27, 2018. Retrieved from: <https://www.psycom.net/depression-substance-abuse>.

UNODC, World Drug Report 2018. *Drugs and Age: Drugs and associated issues among young people and older people*. Accessed Nov. 5, 2018. Retrieved from https://www.unodc.org/wdr2018/prelaunch/WDR18_Booklet_4_YOUTH.pdf 2018.

Wilson, K. M. 2013. *Integrating Procedural Care with Addiction Support: An Example from a PICC Nurse*. Medical Surgical Nursing, 22(2), 128–135.

WHO, 2018. *Adolescent mental health*. Accessed October 10th, 2019. Retrieved from <https://www.who.int/news-room/fact-sheets/detail/adolescent-mental-health>

WHO, 2018. *Alcohol*. Accessed November 25, 2018. Retrieved from <http://www.who.int/news-room/fact-sheets/detail/alcohol>

WHO, 2018. *Depression*. Accessed November 25, 2018. Retrieved from <http://www.who.int/en/news-room/fact-sheets/detail/depression>

WHO, 2018. *Mental health*. Accessed November 25, 2018. Retrieved from http://www.who.int/mental_health/en/

WHO, 2018. *Substance abuse*. World Health Organization. Accessed November 27, 2018. Retrieved from https://www.who.int/topics/substance_abuse/en/

Appendices

Appendix 1. Articles search process

no.	Author(s) (year), Country	Title	Purpose of study	Participants and sample	Data analysis	Key findings
1	Abramoski, Kathryn, Jen- nifer Pierce, Corinne Hauck, and Sarah Stoddard. 2018, U.S.A	Variations in Adoles- cent Purpose in Life and Their Association with Lifetime Sub- stance Use	To explore the categories of PIL in a sample of adolescents and to explore whether these categories are differen- tially related to substance use fre- quency and their implication s to nurs- ing.	(n =408, M _{age} = 15.36, SD = 1.21; 50% fe- male; 72% White)	Data were collected from stu- dents in 9th to 12th grade at a single high school in a suburban Midwest community. Approxi- mately 86% of the student pop- ulation participated in the study.	Purpose in life would promote positive devel- opment, and act as a tool for school nurses in care coordination, counselling, and nursing practice.

					Analyses were conducted using IBM SPSS Statistics version 22.	
2	Ayres, C. G., Pontes, N. M., & Pontes, M. C. F. 2017, U.S.A	Understanding the Nonmedical Use of Prescription Medications in the U.S. High School Adolescents.	study was to examine relationships between sleep insufficiency, depressive symptoms, demographic factors, and the nonmedical use of prescription medications (NMUPMs) in the U.S. high school students.	n=148	YRBSS data were prepared for analysis by converting the CDC data file to an IBM SPSS file.	Emphasising the potential impact of preventing NMUPMs in high school adolescents by improving their sleep behaviours and assessing adolescents for depressive symptoms.

3	Edwards K. 2006. U.S.A	A New Role for Pediatric Nurses: Teaching Teen Drug Users How to Sterilize Their Equipment for Prevention of Infectious Disease; A Course Outline	introduce a nursing action that may seem unusual or controversial – that of teaching low-rehabilitation potential teen drug users how to clean their drug paraphernalia “works” for the prevention of Hepatitis C and HIV. Included will be a short history of intravenous drug use in teens, a review of the infectious disease, a report on a teen focus group, and a complete teaching plan for sterilization of needles and syringes with the underlying message of health and the invitation for rehabilitation.	n=5	interviews and teaching with WHO guidelines.	a review of the infectious disease, health promotion, complete teaching plan for sterilization of needles and syringes and the invitation for rehabilitation was implemented to teach teens on sterilization.
---	-------------------------------	---	---	-----	--	---

4	Ford, R. (2010), Australia	An analysis of nurses' views of harm reduction measures and other treatments for the problems associated with illicit drug use	to analyse nurses' views on harm reduction measures and other treatments for problems associated with illicit drug use.	registered nurses (n = 1,605: 50% response rate)	The statistical analysis was performed using STATA software (version intercooled (8.2) (STATA Corp 2003). Parametric statistics (t-test, Spearman rank order correlation, Chi-square test and ANOVA) were used for descriptive and inferential purposes.	Nurses attribute the views of the Australian population, being strongly supportive of two abstinence-based measures (naltrexone for the maintenance of abstinence and rapid detoxification therapy) and one harm reduction measure (the needle and syringe program).
5	Johansson, L., & Wiklund, G. L. 2016.	The multifaceted vigilance – nurses' experiences of caring encounters with patients suffering from	study aimed to describe how nurses' working in inpatient psychiatric care experience caring encounters with patients suffering	n=6	transcribed dialogues were subjected to latent qualitative content analysis	A conceptualised theme 'the multifaceted vigilance', describes how nurses deliver good care, while at the same time being vigilant towards patients' behaviour as well as their own reactions to it. Within that theme, four categories

	Sweden, Norway	substance use disorder	from substance use disorder (SUD).			described experiences related to different challenges nurses face in caring encounters.
6	McKenna, C., Gaines, B., Hatfield, C., Helman, S., Meyer, L., Rennick, C., ... Zaremski, J. 2013.U.S.A	Implementation of a Screening, Brief Intervention, and Referral to Treatment Program Using the Electronic Medical Record in a Pédiatrie Trauma Center	The purpose of this project was to develop and implement a consistent process for (1) screening adolescents by history for alcohol and substance abuse and (2) providing a motivational interview for change and appropriate referrals as needed.	n=534	Data were analysed using screening methods, brief intervention, and referral to further treatment.	SBIRT was implemented for patients and referral for further treatment if needed. The Use of the electronic medical record was key to the implementation and sustainability of the project.

7	Mulia, M., Keliat, B. A., & Wardani, I. Y. 2017.Indonesia	Cognitive Behavioral and Family Psychoeducational Therapies for Adolescent Inmates Experiencing Anxiety in a Narcotics Correctional Facility	study was conducted aiming to examine the effects of cognitive behavioral and family psychoeducational therapies on inmates' anxiety.	n=62	data were collected using random sample methods. A quantitative study with quasi-experimental pre-test and post-test with control group design was used.	The study suggested combination of three therapies to address the anxiety problems experienced by adolescent inmates suffering from illicit substance dependences compared to those who received general nursing intervention alone was different. General nursing intervention, cognitive behavioral and family psychoeducational therapies helped to reduce anxiety. This study also indicated the crucial need of mental health nurse specialists in the Narcotics clinics at any correctional facilities. continuous professional development regarding the therapies for nurses in the correctional facilities to alleviate anxiety problems among inmates in Indonesia.
---	--	---	---	------	--	---

8	Myllymäki, L., Ruotsalainen, H., & Kääriäinen, M. 2017.Finland	Adolescents' evaluations of the quality of lifestyle counselling in school-based health care	study describes adolescents' evaluations of the quality of lifestyle counselling and factors related to it in school-based health care.	adolescents (n = 846)	Data were analysed using SPSS STATISTICS 22.0 (IBM, Chicago, IL, USA). Descriptive statistics, such as frequencies, percentages, means and standard deviations, were used	Most adolescents (84%) reported that the counselling resources related to school-based health care are quite good. Most of them reported that nutrition and physical activity related to lifestyle counselling were effective.

Johansson, L., & Wiklund, G. L. 2016.Sweden, Norway	3	4	4	3	5	5	4	3	4	35
McKenna, C., Gaines, B., Hatfield, C., Helman, S., Meyer, L., Rennick, C... Zaremski, J. 2013.U.S. A	4	5	4	4	3	3	4	4	3	34
Mulia, M., Keliat, B. A., & Wardani, I. Y. 2017.Indonesia	4	5	5	4	3	5	4	4	4	38
Myllymäki, L., Ruotsalainen, H., & Kääriäinen, M. 2017. Finland	4	5	5	4	4	5	5	5	5	42