

Risk Factors of Suicidal Behaviour in Children & Adolescents

A Literature Review

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<p>Abstract</p> <p>Background: In the field of nursing, various patients with unique needs are faced. It is likely that problems regarding mental health, including suicidal behaviour, are encountered at some point of a nurse's career. Suicide is a remarkable problem globally and it affects people of all ages. Particularly young people are at high risk, since suicide is the second leading cause of death among 15-29 year-olds and the third leading cause of death in 15-19-year-olds. Suicidal behaviour merges suicidal ideation, such as suicidal thoughts and plans, suicidal gestures like self-harm, suicide attempts as well as completed suicides.</p> <p>Aim & Purpose: The aim of this literature review is to collect data about the risk factors of suicidal behaviour in children and adolescents, under the age of eighteen. It is crucial that health care professionals, including nurses, are aware of the risk factors regarding suicidal behaviour in young individuals, in order to be able to effectively identify, assess and handle suicidal tendencies. The purpose of this literature review is to support suicide prevention, by promoting awareness of the risk factors of suicidal behaviour in youth, among nurses.</p> <p>Methods: The current bachelor thesis is conducted as a literature review. Databases researched were: CINAHL Full Text, Medline and PubMed. A total of 15 articles, published in 2015-2019, were included in the text. Inductive thematic analysis was used as a content analysis method. Findings from the included studies were categorized into three main themes including personal, psychological and environmental/social factors.</p> <p>Results: Risk factors contributing to suicidal behaviour in youth combine personal factors including gender, health risk behaviours like smoking, excessive alcohol use, substance and drug abuse, fighting, self-harm and personality traits like impulsivity and irritability. Psychological risk factors consist of mental disorders including depression and anxiety, attention deficit hyperactivity disorder (ADHD), as well as feelings of hopelessness, worthlessness and low self-esteem. Environmental/social factors include history of sexual abuse, bullying and social isolation in addition to family factors, like parental neglect and family conflicts.</p> <p>Conclusion: Suicide death could be interpreted as the escalation of other, previously unidentified or/and untreated suicidal behaviour. Youth in risk of suicidal behaviour demands more attention in healthcare, in order for suicide deaths to be diminished. Finally, there is little data about the risk factors of suicidal behaviour in young children, indicating a clear need for further research.</p>		
Keywords (subjects) suicide; suicidal behaviour; suicidality; children; adolescents; risk factors		
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<p>Tiivistelmä</p> <p>Tausta: Hoitotyössä sairaanhoitajat kohtaavat erilaisia potilaita, mukaan lukien itsetuhoisia potilaita. Itsemurha on merkittävä ongelma maailmanlaajuisesti ja se koskee kaikenikäisiä ihmisiä. Erityisesti nuoret ovat suuressa riskissä, sillä itsemurha on toiseksi yleisin 15–29-vuotiaiden kuolinsyy ja kolmanneksi yleisin kuolinsyy 15–19-vuotiailla. Itsemurhakäyttäytyminen tai itsetuhoisen käyttäytyminen yhdistää itsemurha-ajatukset ja suunnitelmat, itsensä vahingoittamisen, itsemurhayritykset sekä itsemurhakuolemat.</p> <p>Tavoite ja tarkoitus: Tämän kirjallisuuskatsauksen tarkoitus on kerätä tietoa alle 18-vuotiaiden lasten ja nuorten itsetuhoisen käyttäytymisen riskitekijöistä. On tärkeää, että terveydenhuollon ammattilaiset, sairaanhoitajat mukaan lukien, ovat tietoisia nuorten itsetuhoisen käyttäytymisen liittyvistä riskitekijöistä voidakseen tunnistaa, arvioida ja käsitellä tällaisia tilanteita tehokkaasti. Täten, tämän kirjallisuuskatsauksen tarkoituksena on tukea itsemurhien ehkäisyä lisäämällä tietoisuutta itsetuhoisen käyttäytymisen riskitekijöistä, sairaanhoitajien keskuudessa.</p> <p>Menetelmät: Tämä opinäyttetyö on tehty kirjallisuuskatsauksen muodossa. Tutkittuja tietokantoja olivat: CINAHL Full Text, Medline ja PubMed. Yhteensä 15 artikkelia, jotka on julkaistu vuosina 2015-2019, sisällytettiin tekstiin. Induktiivista temaattista analyysiä on käytetty sisältöanalyysimenetelmänä. Sisältyneiden tutkimusten tulokset on luokiteltu kolmeen pääaiheeseen: henkilökohtaisiin tekijöihin, psykologisiin sekä ympäristö- ja sosiaalisiin tekijöihin.</p> <p>Tulokset: Nuorten itsetuhoisen käyttäytymisen vaikuttaviin riskitekijöihin yhdistyvät henkilökohtaiset tekijät: sukupuoli, terveysriskikäyttäytyminen kuten tupakointi, alkoholin liiallinen käyttö, päihteiden väärinkäyttö, tappelut, itsensä vahingoittaminen sekä impulsiivisuuden ja ärtyneisyyden luonteenpiirteet. Psykologiset riskitekijät koostuvat mielenterveyshäiriöistä, mukaan lukien masennuksen ja ahdistuneisuuden ja tarkkaavaisuus- ja ylivilkkaushäiriön, toivottomuuden, arvottomuuden sekä heikon itsetunnon lisäksi. Ympäristö- ja sosiaalisiin tekijöihin kuuluvat seksuaalinen hyväksikäyttö ja kiusaaminen, sosiaalinen eristyneisyys sekä perhetekijät, kuten vanhempien laiminlyönti ja perhekonfliktit.</p> <p>Päätelmä: Itsemurhakuoleman voi tulkita muun aiemmin tunnistamattoman tai käsittelemättömän itsetuhoisen käyttäytymisen eskaloitumisena. Riskiryhmään kuuluvat nuoret vaativat enemmän terveydenhuollon huomiota, jotta itsemurhakuolemat vähentyisivät. Lopuksi, pienten lasten itsetuhoisen käyttäytymisen riskitekijöistä on vähän tietoa, mikä osoittaa selvän tarpeen lisätutkimuksille.</p>		
Avainsanat (asiasanat) itsemurha; itsemurhakäyttäytyminen; lapset; nuoret; riskitekijät		
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1. Introduction

According to the World's Health Organization (2019), up to 800,000 deaths occur every year due to suicide, making suicide a remarkable problem globally. People of young age are particularly vulnerable, since suicide is the second leading cause of death among 15-29-year-olds and the third leading cause of death in 15-19-year-olds (WHO 2019). Concurrently, suicidal behaviour merges suicidal ideation, such as suicidal thoughts and plans, suicidal gestures, threats, attempts as well as completed suicides or actual suicide deaths (Korpi-Hyövähti 2018, 8). The final outcome of unaddressed suicidal behaviours is likely to be fatal.

Each suicide remains a tragedy that greatly impacts individuals, families and entire societies (WHO 2019). The commonness of suicidality among youth, in addition to the fact that children as young as six years old have been reported to commit suicide (Lindeque 2019), is absolutely devastating. It is difficult to accept that individuals of such young age are completely capable and occasionally eager to take their own lives. At the same time, the complex causes of suicide are perhaps poorly understood (Cerel, Jordan, & Duberstein 2008, 39), especially in young victims. It is essential to note that suicidal behaviour is not a disease itself but rather a symptom (Uusitalo 2007, 4) caused by other factors, and is thereby largely preventable. In other words, suicidal behaviour is rather an outcome, instead of the initial cause.

Several risk factors contribute to the onset of suicidal behaviour in children and adolescents. In the light of the current review, lots of research has been conducted on the topic. However a large amount of studies overlook young children (Korpi-Hyövähti 2018, 61), seem to rely on former data, or only study pre-determined potential risk factors. The current literature review aims to present reliable data, based on recent research, about the risk factors of suicidal behaviour in children and adolescents under the age of eighteen. Health care professionals are in a unique position to assess for alarming behaviour in youth. It is of great importance that health care professionals, including nurses, are aware of the risk factors connected to suicidal behaviour, in order to effectively identify, assess, and manage suicidal tendencies. The

purpose of the current review, thus, is to support suicide prevention via spreading awareness of the risk factors of suicidal behaviour in youth, among nurses.

2. Suicide and Suicidal Behavior in Children and Adolescents

2.1 Definition

Suicide, or completed suicide, is defined as the act of killing one's self intentionally (American Psychological Association). Yet, according to Kauffman (2001, 481) it may be challenging to determine which death can be classified as suicide and not an accident, for example death due to substance overdose. Suicidal behaviour or suicidality, though is a concept characterized by great complexity in regards of definition. According to Castle and Kreipe (2007), suicidal behaviour can be defined as the combination of suicidal ideation (thoughts of harming one's self or/and ending one's life), suicide attempts (engaging in harmful behaviour with the intention of death) and completed suicides (actual deaths due to suicide). On the other hand, Nock, Borges, Bromet, Cha, Kessler and Lee (2008), claim that suicidal behaviour refers to suicide ideation, suicide plans and attempts, but not completed suicide. In proportion to more recent publications, suicidal behaviour is defined as a complex of suicidal thoughts, ideation, plans, attempts, as well as actual suicide deaths. In some sources, suicidal behaviour also includes suicidal gestures, such as self-inflicted injuries (self-harm), with or without the intention of death. (Korpi-Hyövälti 2018, 8-9.) To conclude, suicidal behaviours range from suicide ideation to suicide attempts, and often escalate to completed suicides (Zalsman, Shoval, Mansbach-Kleinfeld, Farbstein, Kanaaneh, Lubin, & Apter 2016, 1349).

Furthermore, self-harm or self-destructive behaviour, includes acts intended to result in death, as well as those with unclear or mixed motivations. It has been claimed that self-harm may be practised as a coping mechanism, in order to relieve emotional stress or deal with overwhelming feelings (Yle 2019). Self-injurious behavior combines acts like cutting, hitting and any other methods that cause damage to the body. Non-

suicidal self-injury can be defined as any intentional, self-inflicted body injury without suicidal intent (Brown & Plener 2017). On that account, it is important to note that the term 'deliberate self-harm' is sometimes used to describe self-injurious acts without suicidal intent, although significant associations have been detected between non-suicidal and suicidal thoughts and behaviours (Kiekens, Hasking, Boyes, Claes, Mortier, Auerbach, Cuijpers, Demyttenaere, Green, Kessler, Myin-Germeys, Nock, & Bruffaerts 2018).

2.2 Prevalence

Suicide deaths in children under the age of fifteen are generally uncommon, while most cases concern suicides of 13-14-year olds. Even rarer is suicide in children under the age of ten, though individual cases have been documented. The death of a child under the age of four is never reported as a suicide death, due of developmental reasons. Therefore, the youngest victim of suicide can be as young as five years old. (Korpi-Hyövälti 2018, 13-19.) Exceptionally, Russia and Lithuania have strikingly high suicide rates in adolescents and children aged 5 to 14 years old (Korpi-Hyövälti 2018, 15). The challenges in classification and recording (Kauffman 2001, 481), in addition to the fact that the topic has not been much studied (Korpi-Hyövälti 2018, 13), ought to be kept in mind.

Youth in Finland has been among the most self-destructive in the world, and suicides are a considerable cause of death. According to population researches, up to 10–15% of young people in Finland have suffered from suicidal thoughts, while 3-5% have attempted suicide during adolescence (Uusitalo 2007, 5.) Although suicide rates have been falling steadily since 1990, the decrease has not been as obvious in people ≤ 25 years old. More than a third of deaths among young people aged 15 to 24, occur due to suicide. Slightly more than one in ten of those who committed suicide, were under the age of 25. Suicide mortality among young people in Finland is high compared to other Europeans, since only five other EU countries exceed Finland's suicide rates of people aged 15 to 24. There has been a slight increase in suicides altogether after 2017 in Finland. (Official Statistics of Finland 2017, 6.) In 2017, 107 people aged ≤ 24

years old committed suicide in Finland, of which 3 females and 2 males were under 14 years old, as well as 8 females and 24 males aged 15-19 (Statistics of Finland 2019).

To conclude, Uusitalo (2007, 5) from the Social and health Ministry of Finland, has suggested that there is an evident need to direct more resources into suicide prevention. Both parents and professionals working with children and adolescents, must be aware of the risk factors of suicidal behaviour among youth, in order to be able to diminish suicide deaths.

2.3 Impacts on Families and Society

Each suicide death is a tragedy that greatly impacts families and entire societies. They leave long-lasting effects on the people left behind, such as challenges with family functioning. These may combine difficulties in family cohesion or emotional bonding, issues of blame and family adaptation in response to the perceived loss. The ones left behind are burdened with the idea that they could have prevented the death of their loved one. This is particularly true for parents who have lost a child to suicide. Moreover, suicide attempters tend to be stigmatized by the society, as well as their family members may receive more negative criticism in comparison to those of other types of loss or crisis. Secrecy around the causes of suicide may also cause distress within families. (Cerel et al. 2008, 38-39.)

Meanwhile, the economic costs of suicide attempts and suicide deaths, are considerable. Although, the value of human life cannot be measured in money, one may wonder the financial losses of a society, if its member dies prematurely. According to Uusitalo (2007, 30), WHO has estimated the losses of a premature death to reach 28,000 euros yearly, in regards of the victim's absence from the labor market. Fatal and non-fatal self-inflicted injuries in 5-14-year olds have been estimated to cost 1.795,378 dollars (=1.598 378,35 euros) in the United States. The costs are comprised of direct medical care costs, such as emergency department care, inpatient hospitalization, ambulance transports, follow-up care and more. (Shepard, Gurewich, Lwin, Reed, & Silverman 2015.) Furthermore, according to Uusitalo (2007, 30), NCO (2004, 7) studied that in Sweden each suicide attempt has been estimated to

cost around 330,000 euros, whilst suicide respectively about two million euros. Finland bears around 7.1 billion-euro losses a year, due to the self-destructive tendencies of Finnish citizens. Of these costs, young people account for about a tenth. (Uusitalo 2007, 30.)

3. Challenges to Suicide Prevention

Although suicide and suicidal behaviour are a well-recognised problem worldwide, there are some challenges to suicide prevention. One of these challenges, also among young victims, is that suicides may be misclassified or underreported (Kauffman 2001, 481; Korpi-Hyövähti 2018, 57), leading to inaccurate statistics.

Additionally, misconceptions or 'myths' around suicide and suicidal behaviour, complicate preventive work. False perceptions about suicidal behaviour in youth may be due to the fact that the topic has not yet been much researched, especially in regards of young children. Examples of such 'myths', include the view that a young individual, who has already attempted suicide, will not do so again. It is also incorrect to claim that a young person who threatens to commit suicide, is not serious about doing so, or that suicide happens unexpectedly, without any warning signs. Other misperceptions around the topic, suggest that addressing suicidal behaviour directly would encourage suicide, and that it is impossible to convince a determined person not to end his/her own life. (Uusitalo 2007, 12.)

In conclusion, these and other misconceptions around suicidal behaviour, play a crucial role in the early detection of suicidality among youth, and are therefore a substantial challenge to suicide prevention. A young individual's interest in suicide is a sign that should always receive immediate attention, and shall not be overlooked.

4. Nursing Perspective in Regards of Suicidal Behaviour

Holistic care takes into consideration an individual's psychological, sociological and mental views and needs, since all these elements affect one's overall well-being (Papathanasiou, Sklavou & Kourkouta 2013, 4). Nurses, as health care professionals, seek to provide holistic nursing care, so that favourable care results can be reached. Meanwhile, in the field of nursing, patients of varying ages and needs are encountered, including patients with mental health issues. According to WHO (Developing Nursing Resources for Mental Health 2020), in several countries nursing professionals have the main responsibility of providing mental health care, in both primary and specialist health services. Thus, problems regarding mental health, including self-destructive behaviours, are likely to be faced at some point of a nurse's career.

Previous studies show mixed findings, regarding nurses' attitudes towards suicidal patients. Nurses' perspectives of suicidal patients seem to be influenced by many factors such as age, clinical working experience, religious views as well as their own perceptions, emotions and attitudes towards suicide and suicidal patient care. For example, more experienced nurses with non-discriminatory views, were studied to have a more positive attitude towards suicidal patients (Yang, Tzeng & Wu 2017, 60.) On the other hand, the results of a meta-analysis study demonstrated that nursing staff owns little empathy towards self-destructive patients (Rayner, Blackburn, Edward, Stephenson, & Ousey, 2018). Negative approaches, combined with the fact that help-seeking is often poor, particularly in adolescents with severe suicidal or depressive symptoms, make suicide prevention even more challenging. Also, negative experiences connected to help-seeking, may discourage suicidal individuals to seek help again in the future. (Klineberg, Kelly, Stansfeld, & Bhui, 2013.) While some studies support that nurses' attitudes towards suicidal patients can only change as time progresses, and experience grows, other research suggests that there is an urgent need for further education among nurses about suicidal behaviour (Yang et al. 2017, 68; Rayner et al. 2018).

To conclude, health care professionals are in a unique position to assess for alarming signs and behaviour in youth. Thus, it is of vital importance that health care professionals, including nurses, possess awareness of the risk factors regarding suicidal behaviour. This is essential in order to effectively identify, assess and handle suicidal tendencies in youth and prevent suicide deaths. In the current literature review, the risk factors [attributes, characteristics or exposure that increases likelihood of disease, injury or condition (WHO 2019)] of suicidal behaviour in children and adolescents (≤ 18 years old), are thoroughly analysed.

5. Purpose, Aims and Research Question

The aim of this literature review is to collect data about the risk factors of suicidal behaviour, in children and adolescents under the age of eighteen. The purpose of this literature review is to support suicide prevention, by promoting awareness of the risk factors of suicidal behaviour in youth, among nurses. The research question of the current review is the following: "What are the risks factors of suicidal behaviour in children and adolescents under the age of eighteen?"

6. Methodology

6.1 Literature Review

A literature review is defined as a systematic way of gathering, critically appraising, integrating, and presenting findings from numerous researches, on a particular topic of interest (Pati & Lorusso 2018). Literature reviews are useful because they analyse large amounts of information, thus the results of different studies can be compared. A literature review may also provide a new insight regarding a certain topic. (Pekkola 2018, 14.) Consequently, the conclusions of literature reviews, particularly systematic reviews, are considered to be more reliable and accurate, compared to a single study (Booth, Rees, & Beecroft 2017, 287). A literature review was perceived as an appropriate method to conduct the current bachelor thesis, since that way the study data was easily accessible albeit reliable.

The process of conducting a literature review can be described in five steps (see in more detail Figure 1). Firstly, a clear research question was set, after which the search for relevant scientific articles began. The search was extensive, and several sources were used to verify reliability of the results. Quality assessment of the scientific studies should be emphasized during the selection process, to ensure validity. It is also advisable that the scientific articles are critically assessed by using critical appraisal guides or quality checklists. (Khan, Kunz, Kleijnen, & Antes, 2003.) In the current review, all the included articles were critically appraised (see more in section 8.4). The selected data was then thoroughly analysed, organized and reported. Literature reviews should interpret the findings' validity and reliability, ponder potential biases and ethical aspects of the research. Also, recommendations for further study ought to be stated. (Khan et al. 2003.) In the current review, the main findings are discussed, while ethical considerations, including aspects affecting validity and reliability, are pondered. Finally, potential limitations and indications for further research are mentioned.

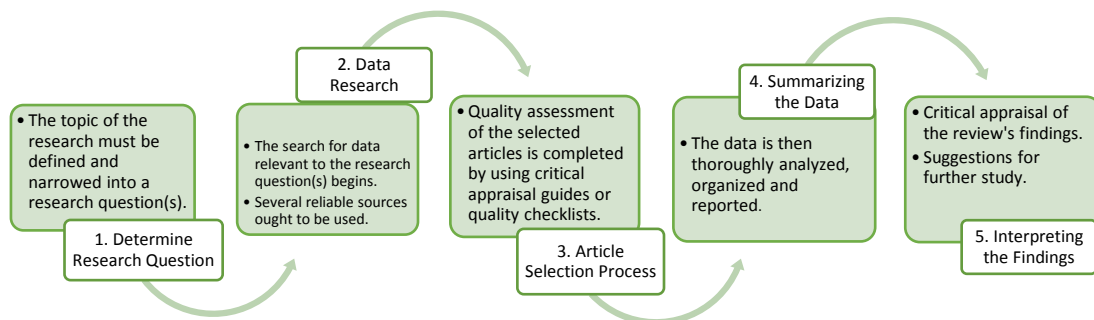


Figure 1: Conducting a Literature Review

6.2 Scientific Article Selection Process

Preliminary literature searches were conducted to determine that there was an adequate number of publications related to the research question. Three databases were used namely: CINAHL Plus Full Text (Ebsco), Medline (Ebsco) and PubMed. These databases are all recognized as reliable sources of nursing research. The search terms were defined by using the P.I.C.O model for clinical questions (see Table 1).

Table 1: Search Terms (according to PICO)

Population (P):	children "OR" adolescents "OR" youth "OR" child "OR" teenager
"AND"	
Interest (I):	suicide "OR" suicidal behaviour "OR" suicidal ideation "OR" suicidality "OR" suicide attempts
Comparison (C):	Not appropriate in the current research
"AND"	
Outcome (O):	risk factors "OR" contributing factors "OR" predisposing factors

Publications used for this study must follow the inclusion criteria (see Figure 2). The process of the scientific article selection can also be seen in Figure 2. For the purposes of this literature review, self-injurious acts with the absence of suicidal intent were excluded (e.g. articles which deal solely with non-suicidal self-injury). The present literature review aims to include recently researched and published data alone. Thence, the included articles' reference lists were manually analysed. Literature reviews that only included articles older than five years old (\neq 2015-2020) were excluded. Articles concerning researches which were conducted more than ten years ago (\neq \geq 2010) were also excluded.

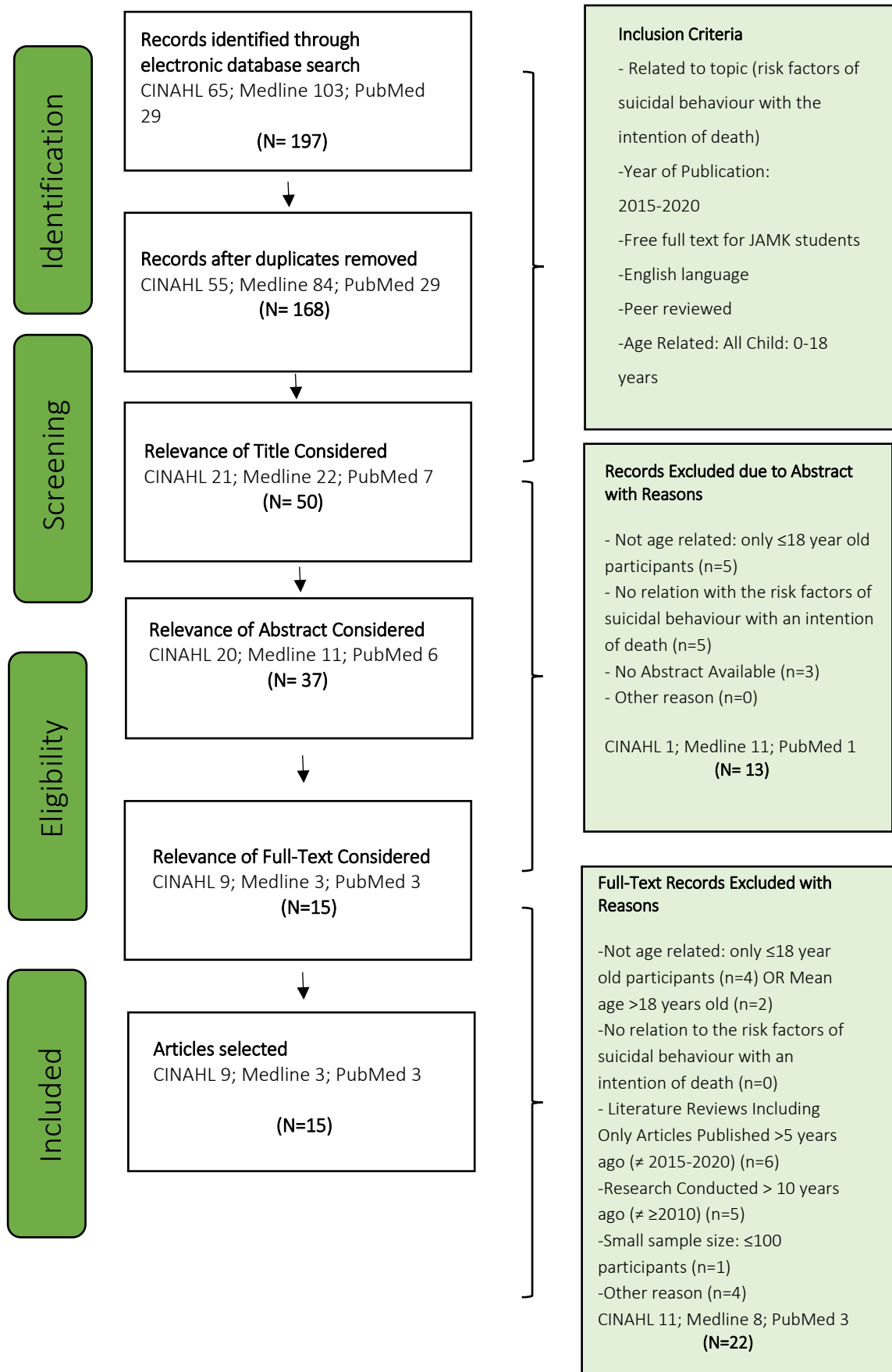


Figure 2: Scientific Article Selection Process

6.3 Description of Included Data

The fifteen (N=15) studies included in the current review were conducted in Canada (n=2), South Korea (n=3), USA (n=2), Italy (n=1), Australia (n=1), Germany (n=1), France (n=1), Brazil (n=1), Thailand (n=1), Sweden (n=1) and China (n=1). One of the studies conducted in Canada, used data from 32 countries, of which 29 were low-and middle-income countries and three were high-income countries. The study conducted in Sweden used data from ten EU-countries including Austria, Estonia, France, Germany, Hungary, Ireland, Italy, Romania, Slovenia and Spain. The articles were published in 2015 (n=2), 2016 (n=3), 2017 (n=5), 2018 (n=4) and 2019 (n=1) (in more detail see Appendix 1).

Three of the included articles are primarily concerned with abuse as a risk factor of suicidal behaviour [N=3 (Sexual Abuse: n=1; Bullying: n=2), four with psychological conditions related to suicidal behaviour [N=4 (Mental Disorders: n=2; Self-Harm: n=2), while seven articles describe multiple risk factors (N=7) and one study other risk factors [N=1 (Irritability: n=1)]. The data collection methods in the selected articles were literature review (N= 5), of which three are systematic reviews (n=3), and quantitative research (N=10).

6.4 Data Extraction and Synthesis of Included Data

Although quantitative research is concerned with numerical data, characteristics of a non-numeric nature can also be assessed by using quantitative analytic methods. In such cases, the issues of interest are assigned with numeric values (e.g. male=1; female=2). (Statistics Solutions.) The analytic strategy in question, was used in many of the included studies in the current review. Most of the included studies were classified as quantitative, by the reviewer, due to the fact that the studies were solely conducted by using surveys, questionnaires or self-reports of a close-ended design with 'yes' or 'no' answers, numerical ranges or pre-determined answers/multiple choice (QuestionPro). Some of the included studies also mentioned a pre-determined hypothesis, thus confirming their quantitative nature.

Despite the included reviews, it is necessary to note that the findings of the current bachelor thesis are primarily based upon the written interpretations of the included quantitative studies. This could be referred to as the ‘qualitizing’ of findings, meaning the process of somewhat converting quantitative data into qualitative data. According to Nzabonimpa (2018, 3), Tashakkori and Teddlie (1998) explained that “the qualitizing process is not about turning numbers into words, but rather finding an underlying conceptual qualitative representation” of the quantitative items researched. In other words, main emphasis is put on the ‘meaning’ behind the numerical data of quantitative research. Thus, the data of the current review is analysed by using a qualitative analytic method, despite the fact that most of the included studies are of quantitative nature. The data retrieved from the included articles was analysed (see illustrative example in Figure 3), and structured (see Figure 4) by following inductive thematic analysis. Thematic analysis is a widely used, although deficiently delimited, qualitative analytic method, particularly within the field of psychology. It is a flexible method of content analysis, used to identify, analyse and report patterns or themes within data. (Braun & Clarke 2006, 5.) Themes or patterns emerging from the data can be identified in two ways: in an inductive or in a theoretical/deductive way. Inductive analysis is a data-driven process of coding· not guided by any preconceptions and not trying to fit into a pre-existing frame. In contrast, a theoretical/deductive thematic analysis tends to be driven by the researcher’s analytic interest, focused on finding specific answers to specific questions. (2006, 12.)

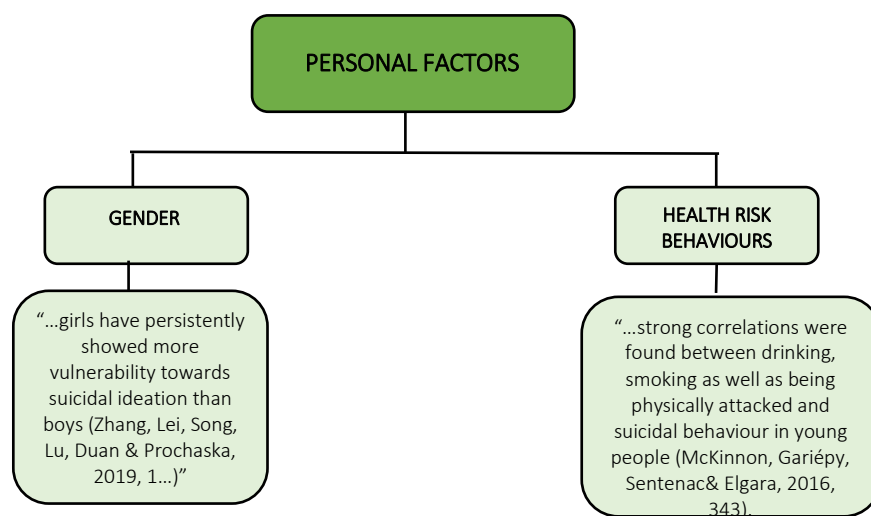


Figure 3: Example of Data Analysis Process

Firstly, the data was repeatedly read through, so that remarkable features, potentially related to the research question, could be recognised. These features were organized into initial themes by using a “color-coding” technique (same colour used for similar themes). Later, the initial themes were carefully analysed, in order to configure completed themes, which are relevant and answer the research question. Finally, the defined themes and subcategories were named and reported in the Findings section.

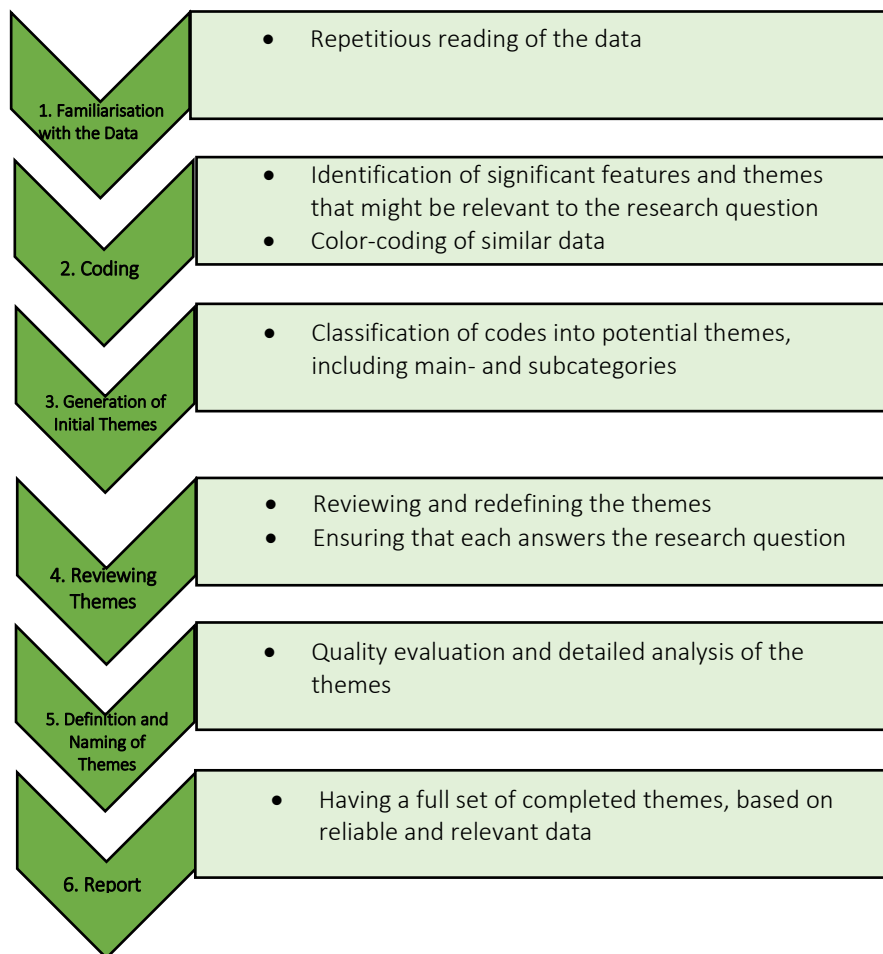


Figure 4: Content Analysis Process (Braun & Clarke 2006, 15-23)

7. Findings

Findings from the included studies revealed three main themes of suicidal behaviour risk factors in children and adolescents, including personal, psychological and environmental/social factors. The main themes consist of subcategories. Personal factors combine gender, health risk behaviours such as smoking, excessive alcohol use, drug/substance abuse, fighting, self-harm, and personality traits like impulsivity or irritability. Psychological factors include mental disorders like depression, anxiety and attention deficit hyperactivity disorder (ADHD), as well as negative emotions of hopelessness, worthlessness and low self-esteem. Environmental/social factors describe abuse, such as sexual abuse and bullying in addition to social isolation and family factors. The main themes and their subcategories are illustrated in Figure 5, and are discussed in more detail in the following sections.

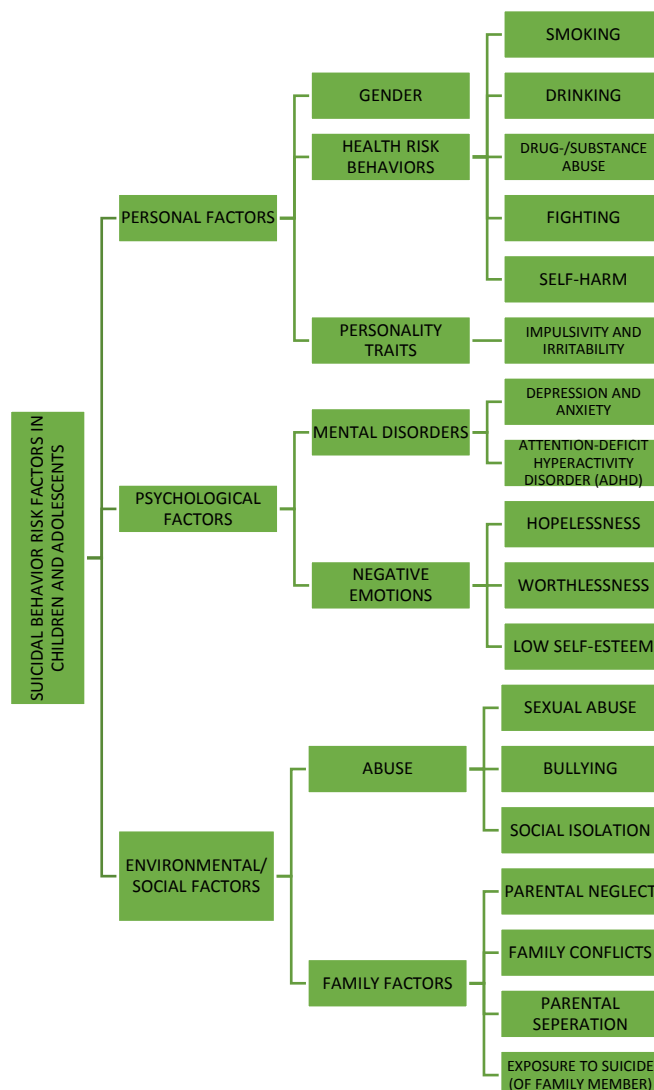


Figure 5: Findings: Main Themes and Subcategories

7.1 Personal Factors

Gender. McKinnon, Gariépy, Sentenac & Elgar (2016, 343), studied adolescence suicidal behaviour in 32 low- and middle-income countries, of which nearly half reported female gender to be a significant risk factor of suicidality. Several studies, claim that particularly suicidal ideation is considerably more widespread among female youth, since girls have persistently showed more vulnerability towards suicidal ideation than boys (Zhang, Lei, Song, Lu, Duan & Prochaska, 2019, 1; Lee, Jung, Park & Hong, 2018, 1363; Chin & Choi, 2015, 864). Sohn, Oh, Lee & Potenza (2017, 313), were in fact able to prove that girls were more prone to suicidal ideation by almost 10%. Additionally, females were studied to be more prone to other forms of suicidal behaviour, such as making a suicide plan (Chin & Choi, 2015, 864). Girls were also reported to experience more psychological difficulties, such as depression and impulsiveness (Sohn et al. 2017, 315), which may trigger suicidal behaviour.

Health Risk Behaviours. Based on plenty of research, risky behaviours such as **smoking**, **drinking** (McKinnon, Gariépy, Sentenac & Elgar 2016, 343; Zhang, Lei, Song, Lu, Duan & Prochaska 2019, 1), **drug-/substance abuse** (Beck-Cross & Cooper 2015, 235; Chin & Choi, 2015, 862) and **fighting** (Zhang et al 2019, 1), are all related to suicidality in youth. In a wide research, strong correlations were found between drinking, smoking as well as being physically attacked and suicidal behaviour in young people (McKinnon, Gariépy, Sentenac & Elgar 2016, 343). In fact, McKinnon et al. (2016, 344) reported that in 25 out of 32 studied countries, alcohol use was a remarkable risk factor of suicidality in youth. Zhang et al. (2019, 5), claim that smoking is primarily associated with suicidal ideation in girls. According to the certain study, girls who have ever smoked were at a 52% higher risk of suicidal ideation, than those who had not (2019, 5). Binge drinking and experience(s) of fighting were also more strongly associated with suicidal ideation in girls than in boys. (Zhang et al. 2019, 6.) On the contrary, Sohn et al.'s (2017, 315) study indicated that drinking and smoking were not statistically significant contributors to suicidal ideation, after adjusting for other potential confounds. Substance abuse has also been related to suicide attempt's (Beck-Cross & Cooper, 2015, 235), in both males and females (Chin & Choi 2015, 862).

Finally, alcohol and drug consumption were studied to be independent risk factors of direct self-injurious behaviour (Klomek, Snir, Apter, Carli, Wasserman, Hadlaczky, Hoven, Sarchiapone, Balazs, Bobes, Brunner, Corcoran, Cosman, Haring, Kahn, Kaess, Postuvan, Sisask, Tubiana, Varnik, Žiberna & Wasserman 2016, 1183-1186).

Self-Harm, including direct self-injurious behaviour, has been associated with suicidal behaviour and suicide risk in adolescence (Koenig, Brunner, Fischer-Waldschmidt, Parzer, Plener, Park, Wasserman, Carli, Hoven, Sarchiapone, Wasserman, Resch & Kaess, 2016, 345). Correlations between youth suicidal ideation and national mortality rates due to self-harm, have been studied to range from weak to moderate, whilst being stronger among males than females (McKinnon et al. 2016, 343). Having no history of attempted suicide has been associated with a reduced risk of repetitive self-injurious behaviour (Witt, Milner, Spittal, Hetrick, Robinson, Pirkis & Carter 2018, 12). In particular, the maintenance and late onset of self-harm have been found to be associated with the greatest risk (Koenig et al. 2016, 345-350.) Whereas direct self-injurious behavior in adolescents is usually temporary, the maintenance of such tendencies is strongly related with future suicidal behaviour. Also, the onset of direct self-injurious behavior in late adolescence (ages 15–16) greatly increases suicidal behaviour risk, despite previous history of self-harm. (2016, 351.) Meanwhile, direct self-injurious behavior cessation was proved to reduce later risk for suicidal behaviour in adolescence. In fact, adolescents who reported cessation, were as likely to plan or attempt suicide as those with no life-time history of direct self-injurious behavior. Exceptionally, suicidal thoughts maintained similar with those who kept practising direct self-injurious behavior. (2016, 351.)

Personality Traits. Impulsivity and irritability have been associated with suicidal behaviour in children and adolescents in several studies (Benarous et al. 2018, 667-669; Lee et al. 2018, 1369; Sohn et al. 2017, 310-313; Sousa et al. 2017, 3107). According to Sousa et al.'s (2017, 3107) review, it has been studied that children who have died by suicide were more impulsive compared to those who died due to other causes. Meanwhile, Lee et al. (2018, 1369) suggest that some adolescents exhibit impulsive suicidal ideation or behaviour when confronted with stressful events. Irritability is recognised as a symptom of numerous psychological disorders. Irritable

individuals are characterized by an increased sensitivity to perceived stimuli, and a decreased threshold for experiencing and expressing feelings of agitation, aggressiveness or/and anger. (Benarous et al. 2018, 667-669.) Although the association between irritability and suicidal behaviour is reduced after adjusting for comorbid psychopathology, irritability still persists as an independent risk factor (2018, 667). Irritable youth are at high risk for attempting suicide due to the intensified tendencies of engaging in suicidal behaviour, while experiencing suicidal ideation (2018, 680). Also, irritability in childhood often predicts psychological problems, such as anxiety and depression in adolescents and young adults (2018, 678).

7.2 Psychological Factors

Mental disorders. Mental health disorders appear to be widely represented in scientific research, and are therefore of the most well recognised risk factors of suicidal behaviour in childhood and adolescence. Mental disorders act as independent risk factors of suicidal behaviour, while increasing the risk of suicidality as comorbid factors. Psychopathology perhaps promotes the capability of engaging in suicidal behaviour (Koenig et al. 2016, 352). Psychological problems, such as depression and anxiety are significantly more common in suicidal individuals than in non-suicidal individuals (Lee et al. 2018, 1363). Multiple studies show that mental disorders are also strongly associated with suicide in children (Sousa, Santos, Silva, Perrelli & Sougey, 2017, 3107).

Depression is among the most studied risk factors for suicide, and has extensively been related to suicidal behaviour. Depressive symptoms are a significant predictor of suicidal ideation (Alix, Cossette, Hébert, Cyr & Frappier, 2017, 165; Sohn et al. 2017, 310-315; Lee et al. 2018, 1363-1367), suicide attempts (Chin & Choi 2015, 862) and direct self-injurious behaviour. (Klomek et al. 2016, 1186.) In proportion to Giupponi, Giordano, Maniscalco, Erbuto, Berardelli, Conca, Lester, & Pompili's literature review (2018, 4-5), suicidal behaviour has been researched in 1,706 children and adolescents

with psychiatric disorders, and major depression or **anxiety** disorder was found in 34% of them. Furthermore, Lee et al. (2018, 1263-1367) found in their study that 'Mood', describing depressive symptoms and instability of mood, was the most significant risk factor of suicidal ideation in both, younger and older adolescents. Also, Witt et al. (2018, 14) reported that having any mood disorder was associated with one of the largest contributions to self-harm repetition. Research has demonstrated that adolescents who experience high overall distress have an increased risk for suicidal ideation (Rungsang, Chaimongkol, Deoisres & Wongnam 2017, 103-104). 'Disturbing thoughts and anxiety' were studied to be remarkable risk factors of suicidal ideation in both genders as well as in both, younger and older adolescents (Lee et al. 2018, 1364-1367). Anxiety caused by academic pressure (Zhang et al. 2019, 4-6) and poor academic achievements (Chin & Choi 2015, 862-865) has been found to increase suicidality in youth. Finally, according to Koenig et al. (2016, 351), depressive symptoms in adolescents were found to be the strongest predictor of direct self-injurious behavior. Suicidal behaviour in those with direct self-injurious behavior maintenance is primarily driven by overall distress, while the risk for continuation is further intensified in adolescents with depressive symptoms (Koenig et al. 2016, 350-352).

Many studies indicate an association between **attention deficit hyperactivity disorder (ADHD)** and suicidal behaviour, although it is debatable whether the relationship is direct or dependable on other pre-existing factors (Giupponi et al. 2018, 4-6). According to Giupponi et al.'s (2018, 4-5) review, it has been suggested that undiagnosed ADHD may be a potential cause for suicidal behaviour in subjects of very early age. Meanwhile, Sousa et al. (2017, 3107) reported in their review that half of the children who had engaged in suicidal activity, were diagnosed with ADHD. In a large study conducted in South Korea, traits such as poor concentration, impatience, and hyperactivity were found to directly affect suicidal behaviour in younger adolescents, though other comorbid symptoms had a greater impact (Lee et al. 2018, 1369). On the other hand, Benarous, Consoli, Cohen, Renaud, Lahaye & Guilé (2018, 680) studied that "the relation between ADHD and suicidality would mainly be indirect and mediated by the onset of psychiatric comorbidities."

Negative Emotions. Hopelessness is a risk factor of suicidal behaviour in youth, since among both genders feeling hopeless has been linked to suicidal ideation (Zhang et al. 2019, 4-5). According to Cha, Franz, Guzmán, Glenn, Kleiman & Nock's (2017, 466) review, it has been suggested that hopelessness characterizes adolescents with elevated suicidal ideation over longer periods of time. Also, higher hopelessness levels have been associated with an increased risk of repetitive self-destructive behaviour (Witt, Milner, Spittal, Hetrick, Robinson, Pirkis & Carter, 2018, 12). Moreover, feelings of **worthlessness** and self-esteem issues have been related to suicidal behaviour in young individuals. In proportion to Cha et al.'s (2017, 466) review, it has been supported that self-reported worthlessness and **low self-esteem**, as well as negative self-referential thinking, predict future suicidal ideation and suicide attempts. On the contrary, other evidence suggests that self-esteem has no effect on suicidal ideation (Rungsang et al. 2017, 103-104).

7.3 Environmental/Social Factors

Abuse. Young victims of violence such as physical, emotional or sexual abuse (Cha et al. 2017, 464) and bullying, are in great risk of developing self-injurious behaviour (Klomek et al. 2016, 1188) and suicidal tendencies. McKinnon et al. (2016, 344) reported that in 26 out of 32 studied countries, being physically attacked was a remarkable risk factor of suicidality in youth. For instance, in a large Korean study of over 1.200,000 participants, 63% and almost 54% of seventh grader boys and girls with suicidal ideation, had experienced some sort of abuse. Meanwhile, 47–57% of tenth graders with suicidal ideation had experienced family conflict and physical, verbal or sexual violence. (Lee et al. 2018, 1364.)

According to strong evidence, **sexual abuse** is among the most powerful risk factors of suicidal behaviour in children (Sousa et al. 2017, 3106) and adolescents (Cha et al. 2017, 464; Lee et al. 2018, 1368; Alix et al. 2017, 165). For instance, in a study sample of 147 sexually abused adolescent girls, close to half reported having suicidal ideation during the past three months (Alix et al. 2017, 169). Factors of shame, self-blame and

depressive symptoms were found to be remarkable predictors of suicidal ideation, in young victims of sexual abuse. In fact, close to 42% of suicidal ideation cases were explained by self-blame, shame and depressive symptoms. Self-blame was found to well predict suicidal ideation and shame. Additionally, shame was found to be associated with depressive symptoms, while depressive symptoms are a significant predictor of suicidal ideation. (2017, 165.) In this regard, Alix et al. (2017, 167) suggested in their study that post-traumatic stress disorder (PTSD) did not predict suicidal ideation up to the same extent that self-blame and shame did. The findings regarding sensitive periods of exposure to violence are controversial. According to Cha et al.'s (2017, 464) review, some research highlights the impact of exposure during mid-adolescence, while other studies report no association between exposure age and the effects of abuse. Finally, a history of sexual abuse was linked to increased self-injurious behaviour. For example, experience of sexual violence has been strongly associated with self-harm repetition. (Witt et al. 2018, 12-15.)

Bullying victimization has been proved as an important, independent predictor of suicidal behaviour among youth (Sousa et al. 2017, 3106; Lee et al. 2018, 1368; Sohn et al. 2017, 313; Zhang et al 2019, 4) in many low-, middle- and high income countries (McKinnon et al. 2016, 340-344). McKinnon et al. (2016, 344) reported that in 28 out of 32 studied countries, bullying was a remarkable risk factor of suicidality in youth. According to Sohn et al. (2017, 313), young individuals with experiences of bullying were up to 10.8 times more likely to suffer from suicidal ideation. Lee et al. (2018, 1364) reported that up to 47.5 and 45.5% suicidal boys and girls had been bullied by peers, in their study of more than 1.200,000 participants. Meanwhile, a Chinese study (n: >33.000 participants) indicated that among suicidal students, over 25% had been victimized by bullying (Zhang et al. 2019, 4). Additionally, in proportion to Cha et al.'s (2017, 465) review, it has been stated that longer durations of exposure to bullying have been correlated with an increased likelihood of suicidal ideation and suicide attempts. It is notable, that both perpetrators and victims of bullying reported a high risk for suicidal ideation (Sohn et al. 2017, 313-315). Klomek et al. (2016, 1186-1189) studied that different types of bullying, including physical, verbal and relational bullying, were all associated with an increased risk for depression and self-injurious

behaviour in youth. Such behaviour combines occasional, repetitive and life-time direct self-injurious behavior, as well as suicidal ideation.

In proportion to Cha et al.'s (2017, 465) review, the impact of **social exclusion**, or **isolation**, during childhood and early adolescence have been demonstrated to affect later suicidal ideation, suicide attempt and suicide death. Particularly in young females, feelings of belongingness have been shown to affect suicidal behaviour and perhaps predict suicide attempts (2017, 467). Antisocial choices were also proved to be a significant risk factor of suicide attempts in male adolescents (Beck-Cross, & Cooper 2015, 235). Suicidal ideation is more common among suicidal individuals who have reported feeling lonely (Zhang et al. 2019, 4-5). Like bullying, loneliness seems to be a consistent risk factor of suicidal behaviour, specifically suicidal ideation, across several geographic regions (McKinnon et al. 2016, 344). McKinnon et al. (2016, 344) reported that in 28 out of 32 studied countries, loneliness was a remarkable risk factor of suicidality in youth. In fact, loneliness has been studied to be the strongest risk factor of suicidal ideation for countries in the Region of the Americas, Eastern Mediterranean, South-East Asia and Western Pacific Regions (2016, 345-346). Loneliness has been positively associated with repetitive direct self-injurious behavior, however, not with occasional self-harm (Klomet et al. 2016, 1189).

Family Factors. Factors related to family dynamics, structure and history play a role in the development of suicidal tendencies in children and adolescents. **Parental neglect** or lacking parental support (McKinnon et al. 2016, 345-346), family conflicts, parents' separation and exposure to suicide of a family member seem to influence suicidal behaviour in youth (Sousa et al. 2017, 3105-3106). McKinnon et al. (2016, 344) reported that in 25 out of 32 studied countries, lacking parental understanding was a remarkable risk factor of suicidality in youth. Beck-Cross & Cooper (2015, 234+237) studied that family engagement, including parental support and close relations to at least one parent/guardian, was a significant variable of suicide intent and attempt in male adolescents. In a Korean study, 49.6% and almost 48% of seventh grader boys and girls with suicidal ideation had experienced **family conflicts** (Lee et al. 2018, 1364). Particularly in suicide victims under the age of fourteen, family conflicts have been reported as intense, by psychological autopsies (Sousa et al 2017, 3106). Additionally,

suicide ideation is more common among youth living without both parents and among those adolescents who have considered or attempted running away from home (Zhang et al. 2019, 4-5). According to Cha et al.'s (2017, 467) review, it has been suggested that self-perceived burdensomeness might predict suicide attempts in male adolescents. The association between **parental separation** and child suicide may, however, be primarily mediated by psychosocial factors (Sousa et al. 2017, 3106.) **Exposure to suicidal behaviour of family members** is also a considerable risk factor of suicide attempts in children and adolescents (Sousa et al. 2017, 3105). In proportion to Sousa et al.'s review (2017, 3105), children whose parent, or other relative, had successfully committed suicide were significantly more likely to attempt suicide themselves, while it has studied that 43% of children who died of suicide had been exposed to the phenomenon before.

8. Discussion

8.1 Discussion of Main Findings

The main risk factors of suicidal behaviour in youth that emerged from the fifteen included studies, were sorted into three main categories: personal risk factors, psychological risk factors and environmental/social risk factors. Female gender, as a personal risk factor, was repeatedly linked to suicidal ideation (McKinnon et al. 2016, 343; Zhang et al. 2019, 1; Lee et al. 2018, 1363; Chin & Choi, 2015, 864; Sohn et al. 2017, 313). Interestingly though, death due to suicide seems to be substantially more common among young males than females (Zhang et al. 2019, 2). Health risk behaviours, such as smoking, excessive alcohol use, substance and drug abuse as well as fighting were found to be important risk factors of suicidal behaviour in youth (McKinnon, et al. 2016, 343; Zhang et al. 2019, 1; Beck-Cross & Cooper 2015, 235; Chin & Choi 2015, 862; Zhang et al. 2019, 1). These findings correlate with previous research which indicates the need for drug, tobacco and alcohol misuse assessment, when detecting suicidal behaviour in young people (Carballo, Llorente, Kehrmann, Flamarique, Zuddas, Purper-Ouakil,

Hoekstra, Coghill, Schulze, Dittmann, Buitelaar, Castro-Fornieles, Lievesley, Santosh & Arango 2019). These factors seem to apply in several geographical regions (McKinnon et al. 2016, 343). The results are however controversial, since some research indicates that smoking and drinking are not as remarkable risk factors of suicidality in youth, after adjusting for other comorbidities (Sohn et al. 2017, 315).

Moreover, irritability and impulsivity, as personality traits, have been acknowledged as risk factors of suicidality either via stressful life events, or the onset of psychopathology (Lee et al. 2018, 1369; Benarous et al. 2018, 667). These results are in line with previous research, since Carballo et al. (2019) found that many impulsive adolescents tend to engage in self-injurious behaviour within an hour after self-injurious ideation or thoughts. Self-harm, including direct self-injurious behaviour, seems to be associated with suicidal behaviour and suicide risk in youth (Koenig et al. 2016, 345). Self-injurious behaviour, despite the intention of death, was strongly linked to depression and anxiety or distress, feelings of hopelessness, history of sexual abuse and bullying (Witt et al. 2018, 12-15; Koenig et al. 2016, 345-352). Thus, it can be assumed that previous suicidal behaviour of any sort, acts as an independent risk factor for further suicidal behaviour in the future.

Several psychological factors were found to be significant predictors of suicidality in youth. Mental disorders act as independent risk factors of suicidality, while increasing the risk of suicidal tendencies as comorbid factors (Koenig et al. 2016, 352; Lee et al. 2018, 1363; Alix et al. 2017, 165; Sohn et al. 2017, 310-315; Chin & Choi 2015, 862; Klomek et al. 2016, 1186). In line with former research, depression and anxiety have undoubtable correlations with suicidality in youth. For instance, major depressive disorder has been linked to a fivefold higher risk for suicide attempts in youth, despite other comorbidities. Also, in compliance with earlier studies, the results of the current review indicate that students who experience stress due to academic performances are more likely to report suicidal behaviours (Carballo et al. 2019.) Furthermore, feelings of hopelessness, worthlessness and low self-esteem have been researched to increase the likelihood of suicidal ideation in youth (Zhang et al. 2019, 4-5; Witt, et al. 2018, 12; Cha et al. 2017, 466). On the contrary, some research indicated no association between self-esteem and suicidality (Rungsang et al. 2017, 103-104). As it

comes to attention deficit hyperactive disorder (ADHD), it is still debatable whether the association with suicidal behaviour is direct or regulated by other comorbid factors. Careful assumptions claim that particularly ADHD accompanied by other risk factors, has a stronger positive correlation with suicidal behaviour in youth (Giupponi et al. 2018, 4-6; Lee et al. 2018, 1369; Benarous et al. 2018, 680). Finally, it is important to note that other unmentioned psychiatric diagnoses affect suicidality in youth, such as eating disorders, bipolar disorder, sleep disturbances and others (Carballo et al. 2019; Giupponi et al. 2018, 4-5).

In compliance with other studies, the current review emphasizes the importance of sexual abuse history and bullying as risk factors of suicidal behaviour in children and adolescents (Sousa et al. 2017, 3106; Cha et al. 2017, 464; Lee et al. 2018, 1368; Alix et al. 2017, 165). Carballo et al. (2019) stated that experience of childhood sexual abuse is associated with a “10.9-fold increase in the odds of a suicide attempt between the ages of 4 and 12 years and a 6.1-fold increase in the odds of an attempt between the ages of 13 and 19 years”. Factors such as shame, self-blame and depressive symptoms were studied to predict suicidal ideation, in sexually abused adolescents (Alix et al. 2017, 165).

Meanwhile, both perpetrators and victims of any type of bullying, were studied to be in elevated risk for suicidal ideation (Sousa et al. 2017, 3106; Lee et al. 2018, 1368; Sohn et al. 2017, 313-315; Zhang et al. 2019, 4; Klomek et al. 2016, 1186-1189). Bullying is a consistent risk factor of suicidal behaviour across various cultural backgrounds, in addition to loneliness (McKinnon et al. 2016, 340). Social exclusion has been studied to increase suicidality in youth (Zhang et al. 2019, 4-5; Cha et al. 2017, 465; Beck-Cross & Cooper 2015, 235; Klomet et al. 2016, 1189).

In correlation with previous studies, family factors including the lack of parental support, family conflicts, parental separation, and exposure to suicide of a family member seem to affect suicidal behaviour in children and adolescents (McKinnon et al. 2016, 345-346; Sousa et al. 2017, 3105-3106; Beck-Cross & Cooper 2015, 234+237; Lee et al. 2018, 1364; Zhang et al. 2019, 4-5; Cha et al. 2017, 467; Carballo et al. 2019). Interestingly, there was little data about previous suicide attempts being a risk

for suicidality in the included articles, though Sousa et al. (2017, 3105) did mention that suicide attempt is among the most important risk factors for suicide. Additionally, Carballo et al. (2019) stated in their review that previous suicide attempt is an essential predictor of future suicide attempt.

Overall, the current literature review demonstrates the multi-dimensional influencing factors behind youth suicidality. It can be assumed that suicidal behavior is a complex issue, which is rarely accompanied by an unambiguous explanation. Addressing resources into suicide prevention and suicidal behavior management is certainly justified, since suicidality is a major problem worldwide. Health care professionals, including nurses, ought to possess enough knowledge and competence regarding suicidal behaviour recognition and management, in order to effectively handle suicidal tendencies in youth, and therefore prevent suicide deaths.

8.2 Ethical Considerations

Authors of reviews ought to perform an ethical assessment of the included studies, since the methodological quality of scientific studies is based upon proper consideration of the ethical factors (Vergnes, Marchal-Sixou, Nabet, Maret & Hamel 2010, 771-773). The writer of the current literature review possesses an understanding, regarding the sensitivity of the research topic. Thus, while conducting the current review, it was strived to express appreciation towards the ethical principles of scientific research. That was achieved by following the instructions of the Finnish Advisory Board on Research Integrity (2012, 4-5). Also, the present literature review was conducted by following the research reporting instructions, provided by JAMK University of Applied Sciences. The researcher aimed to avoid plagiarism through proper referencing practices, since the current literature review was conducted with respect towards the original researchers and their accomplishments. The review was verified against plagiarism by using Turnitin Similarity. All the included scientific articles were manually assessed in regards of ethical consideration, validity, and reliability. All of the included studies (N=15) include at least some referral to ethics or/and the validity and reliability of the results (Compliance with Ethical Standards/Approved by Ethics Committee n=11; Consent from Participant n=7;

Consent from Parent n=5; Referral to Limitations of Study n=14; Mention Conflict of Interest n=11).

8.3 Validity and Reliability

Validity and reliability issues within scientific research, are concerned with how 'valid' and 'consistent' the results of a certain study are (Middleton 2019). An objective of the current literature review was to provide reliable data, based on valid findings. In consequence, the researcher strived to practise elimination of fabrication and falsification, as the findings were reported without making any modifications or additions to the perceived data.

The included studies were retrieved from three databases: CINAHL Plus Full-Text (Ebsco), Medline (Ebsco) and PubMed. The databases were chosen due to their reliability and accessibility. The named databases are accessible for all JAMK students, and are acknowledged as reliable sources of nursing data. To further ensure the validity and reliability of the current review, only recently published studies were included (published in 2015-2019). All of the included studies were peer reviewed. Also, pre-determined inclusion criteria were used during the scientific article selection process, to avoid biases.

The data used in the current literature review was obtained from several studies, leading to a large total number of participants. The studies were executed in numerous different countries worldwide, thus the participants' diverse cultural backgrounds are rich in variety. Meanwhile, the study results resemble each other, despite them being executed in culturally differing countries. Consequently, the current review is culturally diverse, supporting the generalization of the findings.

8.4 Critical Appraisal of Included Data

The fifteen included studies were critically appraised by using the Critical Appraisal Skills Program (CASP) for systematic reviews and quantitative research (see in more

detail Appendix 2). The CASP tool's questions are concerned with the aims, methodology, validity/reliability, ethics, findings and applicability of the studies. The CASP tool for systematic review evaluation consists of ten questions, of which eight can be answered with an "Yes", "No", or "Can't Tell", while two questions (questions 6 and 7) require written answers (see in more detail Table 2) (Critical Appraisal Skills Programme.) Question 6 is not addressed at the current section of the review, because the overall results of the included articles can be found at the "Appendices" section (see in more detail Appendix 1). Question 7 is answered by the researcher either with "Precise", "Quite Precise" or "Not Precise". It ought to be noted that the same CASP tool was used for both systematic and, as perceived by the reviewer, non-systematic reviews leading to differences in scores. The Critical Appraisal Skills Programme from the Public Care Health Unit did not currently provide an appropriate critical appraisal tool for all the types of quantitative research included in the present review. Perhaps an older version of quantitative research CASP tool was, however, found online and used for the purposes of the present review. It consists of ten questions, of which eight can be answered with an "Yes", "No", or "Can't Tell", while two questions (questions 8 and 9) require written answers (see in more detail Table 2). (UKEssays 2018.) Question 8 is not addressed at the current section of the review, because the overall results of the included articles can be found at the "Appendices" section (see in more detail Appendix 1). Question 9 is answered by the researcher either with "Precise", "Quite Precise" or "Not Precise."

Table 2: CASP Questions for Systematic Reviews and Quantitative Research

CASP Questions (Appraisal of Systematic Reviews) * ¹		CASP Questions (Appraisal of Quantitative Research) * ²
1.	Did the review address a clearly focused question?	Did the study ask a clearly focused question?
2.	Did the authors look for the right type of papers?	Was this a randomized controlled trial (RCT) and was it appropriately so?
3.	Do you think all the important, relevant studies were included?	Were participants appropriately allocated to interventions and control groups?
4.	Did the review's authors do enough to assess the quality of the included studies?	Were participants, staff and study personnel 'blind' to participants study group?
5.	If the results of the study were combined, was it reasonable to do so?	Were all of the participants who entered the trial accounted for at its conclusion?
6.	What are the overall results of the review?	Were the participants in all groups followed up and data collected in the same way?

7.	How precise are the results?	Did the study have enough participants to minimize the play of chance?
8.	Can the results be applied to the local population?	How are the results presented and what is the main results?
9.	Were all important outcomes considered?	How precise are the results?
10.	Are the benefits worth the harms and costs?	Were all important outcomes considered so that results can be applied?

*¹ Critical Appraisal Skills Programme (CASP) (n.d.). *CASP Checklist: 10 questions to help you make sense of a Systematic Review*. Accessed on 28th December 2020. Retrieved from: https://casp-uk.net/wp-content/uploads/2018/03/CASP-Systematic-Review-Checklist-2018_fillable-form.pdf.

*² UKEssays 2018. *Examining Qualitative and Quantitative studies with CASP*. Accessed on 19th October 2020. Retrieved from: <https://www.ukessays.com/essays/nursing/examining-qualitative-and-quantitative-studies-with-casp-nursing-essay.php?vref=1>.

8.5 Limitations

The possibility of biases in the current literature review is acknowledged, since the study has been conducted under several limitative circumstances. Firstly, the review has been carried out by a single, unexperienced author. Further limitations include using only published data, and articles published in English language. Some limitations regarding the literature material were also faced, since some chargeable articles were excluded from the study, although most of the data is free of charge for JAMK students. Additionally, the findings of the current literature review focus on recently published data, within the narrow period of four years (2015-2019). This limitation was due to the overwhelming amount of available data on the topic of interest, when searched for longer time periods. Therefore, many meaningful studies have inevitably been excluded from the current literature review.

All the included quantitative research data was of a cross-sectional design, thus the findings of the current review lack the longitudinal prospective related to suicidal behaviour risk factors in young people. Furthermore, differences in the research types of the included studies, made the results difficult to compare and interpret. Despite the current review's strength of being culturally versatile, the research findings may, however, highlight or underrate the importance of certain factors depending on where and how the included study has been conducted.

8.6 Indications for Further Research

The data retrieved from the fifteen included studies (N=15) primarily dealt with the risk factors of suicidal behaviour in adolescents. Thus, little data was found regarding the risk factors of suicidal behaviour in children, indicating a clear need for further research. Moreover, much of the included research focuses on the risk factors of suicidal ideation, while less data was retrieved about the risk factors of other forms of suicidal behaviour. This may be because 'suicidal-behaviour' does not possess a singular interpretation. A question of interest for further research could be the following: "How do different forms of suicidal behaviour (e.g. suicidal ideation) correlate with actual suicide deaths?"

9. Conclusion

Suicide is a remarkable problem worldwide, and youth is particularly vulnerable. Each suicide is a tragedy that has great effects on families and whole societies. Suicidal behaviour, merges self-injurious behaviour, suicidal ideation and plans, suicide attempts as well as completed suicides. It is important to note that suicidal behaviour, including suicide deaths, are rather an outcome of other factors instead of the initial cause of the problem. In other words, suicide death could be interpreted as the escalation of other, previously unidentified or/and untreated suicidal behaviour. Unaddressed suicidal behaviour is likely to be fatal, although it is widely preventable.

In the field of nursing, various patients with unique needs are faced. It is likely that problems regarding mental health, including suicidal behaviour, are encountered at some point of a nurse's career. Therefore, it is essential that health care professionals, including nurses, are aware of the risk factors of suicidal behaviour in youth, in order to effectively identify and handle suicidal tendencies. Although the findings of the present review primarily target professionals in the field of nursing, they can also be directed to parents as well as all professionals who deal with children and adolescents

in their work. Youth in risk of suicidal behaviour demands more attention in healthcare, in order for suicide deaths to be diminished.

Risk factors contributing to suicidal behaviour in youth combine personal factors, including gender and health risk behaviours like smoking, excessive alcohol use, substance and drug abuse, fighting, self-harm and personality traits like impulsivity or irritability. Psychological risk factors consist of mental disorders, including depression and anxiety, ADHD as well as feelings of hopelessness, worthlessness and low self-esteem. Finally, environmental/social factors include history of sexual-abuse and bullying, social isolation as well as family factors, such as parental neglect and family conflicts. Primarily, the findings were concerned with the risk factors of suicidal ideation in adolescents. Less data was retrieved about the risk factors of other forms of suicidal behaviour. Little information was also retrieved regarding the risk factors in younger children. These facts indicate a clear need for further research.

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Appendix 1: Description of Data

No.	Author(s); Year; Country	Title	Aim(s) and Purpose	Participants, Sample Size	Data Collection and Analysis	Main Findings
1.	Alix, Cossette, Hébert, Cyr & Frappier; 2017; Canada	Posttraumatic Stress Disorder and Suicidal Ideation Among Sexually Abused Adolescent Girls: The Mediating Role of Shame	To research the relationship among self- blame, shame, coping strategies, post- traumatic stress disorder, depressive symptoms and suicidal ideation.	N= 147 Age: 14-18 Gender: Female (Sexually Abused)	Questionnaires were completed -The Abuse Specific Shame Questionnaire (ASSQ) -The Abuse Attribution Inventory (AAI) -Ways of Coping Questionnaire (WCQ) - The Children’s Impact of Traumatic Events Scale II (CITES II)	Almost half of the participants reported suicidal thoughts in the past 3 months. Shame and depressive symptoms were found to be key factors that mediate the relationship between self- blame and suicidal ideation. The results suggest that shame is a crucial factor that ought to

					-The Affective Problems Scale from the Youth Self Report (YSR) - History of Victimization Form (HVF)	be included in interventions designed for sexually abused adolescent girls.
2.	Sohn, Oh, Lee & Potenza; 2017; South-Korea	Suicidal Ideation and Related Factors Among Korean High School Students: A Focus on Cyber Addiction and School Bullying	To explore the association among suicidal ideation, cyber addiction, and school bullying of Korean high school students.	N= 416 Age: late adolescence (17.9 + 0.8) Gender: Male (55.3%)	-Descriptive Cross-Sectional Study - The data were collected using structured questionnaires Data analysis was performed using SPSS Version 21.0 (IBM Corp., Armonk, NY).	Students with experiences of bullying and more depression were more likely to report high scores for suicidal ideation. Female gender and addiction to smartphones were also statistically significant contributors, among Korean adolescents.
3.	Klomek, Snir, Apter, Carli, Wasserman, Hadlaczky, Hoven, Sarchiapone, Balazs, Bobes, Brunner, Corcoran, Cosman, Haring, Kahn, Kaess,	Association between victimization by bullying and direct self-injurious behaviour among adolescence in Europe: a ten-country study	To examine the association between victimization by bullying and direct self-injurious behaviour adolescents in Europe.	N= 11,110; Age: M=14.9	- Data was collected as part of the Saving and Empowering Young Lives in Europe (SEYLE) study. - Participants were administered a self-report survey	All three types of victimization were associated with life-time direct self-injurious behavior. Victimization by bullying and most of the risk factors were positively

	Postuvan, Sisask, Tubiana, Varnik, Žiberna & Wasserman; 2016; Austria, Estonia, France, Germany, Hungary, Ireland, Italy, Romania, Slovenia & Spain (conducted in Sweden)				Three types of victimization by bullying (physical, verbal and relational) were examined and associated with D-SIB.	associated with both occasional and repetitive direct self-injurious behavior. Anxiety and loneliness, however, were positively associated only with occasional direct self-injurious behavior.
4.	Lee, Jung, Park & Hong; 2018; South Korea	The impact of psychological problems and adverse life events on suicidal ideation among adolescents using nationwide data of a school-based mental health screening test in Korea	To investigate the risk factors of suicidal ideation in adolescents in South Korea.	N= 1.203,574 middle- and high school students	The AMPQ self-report questionnaire was used. -t test -Chi-square test	Mood had the greatest impact on the risk for suicidal ideation. All factors except 'Distractibility' increased the risk of severe suicidal ideation. Distractibility was positively related to suicidal ideation only in seventh grade students. The risk factors

						for suicidal ideation in adolescents differed by gender and age.
5.	Giupponi, Giordano, Maniscalco, Erbuto, Berardelli, Conca, Lester, & Pompili; 2018; Italy, (USA)	Suicide Risk in Attention-Deficit/Hyperactivity Disorder	To explore the factors related to suicidal behaviour and ADHD.	Literature Review	A search was conducted using PubMed/MEDLINE, Scopus, PsycLit and PsycINFO.	Studies indicate an association between ADHD and suicidal behaviour. However, it remains controversial whether the relationship is direct or the association depends on pre-existing comorbid factors.
6.	Witt, Milner, Spittal, Hetrick, Robinson, Pirkis & Carter; 2018; Australia	Population attributable risk of factors associated with the repetition of self-harm behaviour in young people presenting to clinical services: a systematic review and meta-analysis	To identify all observational studies of factors connected to repetitive self-harm or suicide reattempts in youth.	Systematic Review and Metal Analysis 17 studies included 10,726 participants	Four databases reviewed: EMBASE, Medline, PubMed and PsycINFO until April 2016.	Any personality or mood disorder is an important risk factor of repetitious self harm. Also, hopelessness, suicidal ideation and previous sexual abuse are associated with repetition of self-harm.

7.	Koenig, Brunner, Fischer-Waldschmidt, Parzer, Plener, Park, Wasserman, Carli, Hoven, Sarchiapone, Wasserman, Resch & Kaess; 2016; Germany	Prospective risk for suicidal thoughts and behaviour in adolescents with onset, maintenance or cessation of direct self-injurious behaviour	To explore direct self-injurious behaviour and its influence on suicidal behaviour during adolescence.	N = 506 Age: 13-17 (M=14.53 years) Gender: Female (62.06%)	Data from the Saving and Empowering Young Lives in Europe study were analysed. D-SIB and suicidal thoughts and behaviour were assessed at baseline (T0), 1- (T1) and 2-year follow-up (T2).	Late onset and maintenance of direct self-injurious behavior indicated an increased risk for suicidal behaviour. The current study exceptionally showed that direct self-injurious behavior cessation reduces later risk for suicidal behaviour in adolescence. Thus, suicide prevention efforts should focus on reducing adolescent direct self-injurious behavior.
8.	Benarous, Consoli, Cohen, Renaud, Lahaye & Guilé; 2018; France, (Canada)	Suicidal behaviours and irritability in children and adolescents: a systematic review of the nature and mechanisms of the association	To determine if irritability can predict suicidal behaviour in youth and how.	Systematic Review 27 studies included	Relevant articles were obtained through PubMed, Medline, PsychINFO, PsychINDEXplus and Dissertation Abstracts.	Irritability has been associated with suicidality. The association is reduced but persists after adjusting for psychiatric disorders. Irritability constitutes a risk factor for suicidal ideation

						via the onset of psychopathology. Irritable youth may also be more prone to suicide attempts, when experiencing suicidal ideation.
9.	Sousa, Santos, Silva, Perrelli & Sougey; 2017; Brazil	Suicide in childhood: a literatura review	To define the main factors associated to suicidal behaviour in children under the age of fourteen.	Literature Review 29 studies included	Data was retrieved from PubMed and PsycInfo databases.	Family conflicts, school-related problems, bullying, impulsivity and depression are some of the factors linked with childhood suicide.
10.	McKinnon, Gariépy, Sentenac & Elgar; 2016; Canada	Adolescent suicidal behaviours in 32 low- and middle-income countries	To estimate prevalence of suicidal ideation (with a plan) in 32 countries and examine differences in associated risk factors.	N= 164 770 across 32 countries (29 low- and middle income and 3 high-income countries). Age: 13-17	2003–2012 Global School-based Health Surveys Random effects meta-analysis was used to generate regional and overall pooled estimates. Multivariable logistic regression was used to estimate risk	Across all countries, the pooled 12-month prevalence of suicide ideation were 16.2% among females and 12.2% among males and ideation with a plan were 8.3% among females and 5.8% among males. Factors associated with suicidal

					ratios for the associated risk factors.	ideation in most countries included experiences of bullying and physical violence, loneliness, limited parental support, as well as smoking and alcohol use.
11.	Cha, Franz, Guzmán, Glenn, Kleiman & Nock; 2017; USA	Annual Research Review: Suicide among youth – epidemiology, (potential) etiology, and treatment	To summarize the current state of research regarding suicidal thoughts and behaviours in youth.	Literature Review	Data from the World Health Organization (WHO) and cross-national studies are featured. Particular attention is given to longitudinal studies.	Environmental risk factors such as childhood maltreatment, bullying, peer and media influence, as well as psychological and biological correlates are linked to suicidal behaviour in youth.
12.	Beck-Cross, & Cooper; 2015; USA	Micro- and Macrosystem Predictors of High School Male Suicidal Behaviours	To examine predictors of suicidal behaviours of male adolescents.	N = 9,910 Age: 16-18 Gender: Male	Data were obtained from the Iowa Youth Survey (IYS), self-report surveys in use. Bronfenbrenner's bioecological model	Findings show that race and ethnicity, risky behaviours, family, school, and community factors were significant predictors of suicide intent or/and suicide attempt, in male adolescents.

13.	Rungsang, Chaimongkol, Deoisres & Wongnam; 2017; Thailand	Suicidal Ideation among Thai Adolescents: An Empirical Test of a Causal Model	To test the Rungsang-Chaimongkol Model of Suicidal Ideation among Thai Adolescents.	N=437 Age: 15-19 (Mean age: 15.35) Gender: Male (42.8%)	-Cross-Sectional Study -Self-report questionnaires, including the Scale for Suicidal Ideation, the General Health Questionnaire, the Strengths and Difficulties Questionnaire, the Rosenberg Self-Esteem Scale, and the Negative Event Scale. Descriptive statistics and structural equation modeling were used to explore the magnitude of direct and indirect effects on the suicidal ideation of the sample.	Negative psychological attributes in addition to stressful events had a direct positive effect on suicidal ideation. Overall distress was found to be a mediator between negative psychological attributes, stressful events, and suicidal ideation.
14.	Chin & Choi; 2015, South Korea	Suicide Attempts and Associated Factors in Male and Female Korean	To investigate associations between suicide attempts and	N=74,936 Age: 12-18	-Cross-Sectional Study -Using data from the Korea Youth Risk	Among both genders, not living with both parents, depression, drug abuse,

		Adolescents A Population-Based Cross-Sectional Survey	family-related factors, behavioural risk factors and gender.	Gender: Male (49.9 %)	Behaviour Web-based Survey.	sexual coitus, suicidal ideation and plans were found to be remarkable risk factors. Among male adolescents, poor academic achievement and smoking increased the risk of suicide attempt. Among female adolescents, low self-rated health and unhappiness increased the risk of suicide attempt.
15.	Zhang, Lei, Song, Lu, Duan & Prochaska; 2019; China	Gender differences in suicidal ideation and health-risk behaviours among high school students in Beijing, China	To identify gender differences in suicidal ideation and health-risk behaviours among high school students in Beijing.	N= 33 635 students in grades 7-12	Participation in the 2014 Chinese Youth Risk Behaviour Surveillance. Data were stratified by gender and associations with suicidal ideation were analysed using χ^2 test and multivariate regression analyses.	Girls showed more vulnerability to suicidal ideation. Particularly among girls in junior school, reporting high academic pressure, smoking, binge drinking and fighting, an increased risk for suicidal ideation was found.

Appendix 2: Critical Appraisal of Data (according to CASP)

No.	Article Title; Author(s); Year	Type of Research	CASP Points / Comments
1.	"Suicide Risk in Attention-Deficit/Hyperactivity Disorder"; Giupponi, Giordano, Maniscalco, Erbuto, Berardelli, Conca, Lester, & Pompili; 2018	Systematic Review <ul style="list-style-type: none"> All relevant databases in use Explanation of methodology included, though not in detail 	"Yes": 6/8 "No": 0/8 "Can't Tell": 2/8 (Questions 4 + 9) Question 7: Quite Precise
2.	"Population attributable risk of factors associated with the repetition of self-harm behaviour in young people presenting to clinical services: a systematic review and meta-analysis"; Witt, Milner, Spittal, Hetrick, Robinson, Pirkis & Carter; 2018	Systematic Review and Meta-Analysis <ul style="list-style-type: none"> All relevant databases in use Comprehensive explanation of methodology Quality assessment of findings 	"Yes": 8/8 "No": 0/8 "Can't Tell": 0/8 Question 7: Precise
3.	"Suicidal behaviours and irritability in children and adolescents: a systematic review of the nature and mechanisms of the association"; Benarous, Consoli, Cohen, Renaud, Lahaye & Guilé; 2018	Systematic Review <ul style="list-style-type: none"> All relevant databases in use Comprehensive explanation of methodology Quality assessment of findings 	"Yes": 8/8 "No": 0/10 "Can't Tell": 0/10 Question 7: Precise
4.	"Suicide in childhood: a literatura review"; Sousa, Santos, Silva, Perrelli & Sougey; 2017	Literature Review <ul style="list-style-type: none"> Not all relevant databases in use 	"Yes": 6/8 "No": 1/8 [Question 3: Only 2 databases used, although timeframe of research is wide and studies of other

			languages, despite English, were also included (Spanish and Portuguese)] “Can’t Tell”: 1/8 Question 7: Quite Precise
5.	“Annual Research Review: Suicide among youth – epidemiology, (potential) etiology, and treatment”; Cha, Franz, Guzmán, Glenn, Kleiman & Nock; 2017	Literature Review <ul style="list-style-type: none"> • Explanation of study methodology excluded • General description of topic, rather than a focused research question 	“Yes”: 4/8 “No”: 1/8 [Question 9: The study analyses the findings comprehensively but there is little to no referral of methodology (description of the article selection process or data analysis methods)]. “Can’t Tell”: 3/8 (Questions 3,4 +8: There is little to no information about the article selection process and data analysis methods. Thus, it is challenging to tell whether all important studies were included, in order assess the quality of the included studies and to determine whether the findings can be applied locally. Question 7: Precise
6.	“Posttraumatic Stress Disorder and Suicidal Ideation Among Sexually Abused Adolescent Girls: The Mediating Role of Shame”; Alix, Cossette, Hébert, Cyr & Frappier; 2017	Quantitative Research: Correlational; Cross-Sectional Study <ul style="list-style-type: none"> • Correlation between variables studied • Hypothesis made • Close-ended questions used 	“Yes”: 6/8 (Question 6: Yes, only to data collection) “No”: 2/8 (Question 2: Not a RCT ; Question 4: Informed Consent received from participants) “Can’t Tell”: 0/8 Question 9: Precise

7.	<p>“Suicidal Ideation and Related Factors Among Korean High School Students: A Focus on Cyber Addiction and School Bullying”; Sohn, Oh, Lee & Potenza; 2017</p>	<p>Quantitative Research: Descriptive; Cross-Sectional Study</p>	<p>“Yes”: 6/8 “No”: 1/8 (Question 4: Informed consent was received from participants) “Can’t Tell”: 1/8 (Question 2) Question 9: Quite Precise</p>
8.	<p>“Association between victimization by bullying and direct self injurious behaviour among adolescence in Europe: a ten-country study”; Klomek, Snir, Apter, Carli, Wasserman, Hadlaczky, Hoven, Sarchiapone, Balazs, Bobes, Brunner, Corcoran, Cosman, Haring, Kahn, Kaess, Postuvan, Sisask, Tubiana, Varnik, Žibera & Wasserman; 2016</p>	<p>Quantitative Research: Cluster Randomized Controlled Trial; Cross-Sectional Study</p> <ul style="list-style-type: none"> • Part of SEYLE study (Group of students randomly selected) • Hypothesis made • Close-ended questions used 	<p>“Yes”: 6/8 (Question 6: Yes, only to data collection) “No”: 0/8 “Can’t Tell”: 2/8 (Question 4+5: Although it is written in the text that the schools agreed to participate in the study, there is no mention about informed consent from the students) Question 9: Precise</p>
9.	<p>“The impact of psychological problems and adverse life events on suicidal ideation among adolescents using nationwide data of a school-based mental health screening test in Korea”; Lee, Jung, Park & Hong; 2018</p>	<p>Quantitative Research: Descriptive; Cross-Sectional Study</p> <ul style="list-style-type: none"> • Close-ended questions used • Hypothesis made 	<p>“Yes”: 4/8 “No”: 1/8 (Question 2) “Can’t Tell”: 3/8 (Question 3,4 + 5: The study is based upon a mandatory mental health screening test for schools, directed to all first graders of middle- and high-schools. Thus, it may be assumed that there is no informed consent received from the participants. However, the data</p>

			collected cannot reveal identifiable information about the participants) Question 9: Precise
10.	“Prospective risk for suicidal thoughts and behaviour in adolescents with onset, maintenance or cessation of direct self-injurious behaviour”; Koenig, Brunner, Fischer-Waldschmidt, Parzer, Plener, Park, Wasserman, Carli, Hoven, Sarchiapone, Wasserman, Resch & Kaess; 2016	Quantitative Research: Cluster Randomized Controlled Trial; Cross-Sectional Study <ul style="list-style-type: none"> • Part of SEYLE study (Group of students randomly selected) • Hypothesis made • Close-ended questions used 	“Yes”: 6/8 “No”: 2/8 (Question 4: Informed consent retrieved from participants and caregivers + Question 6: Participants were followed up, but many participants had left the study and the data collection methods were modified in some cases) “Can’t Tell”: 0/8 Question 9: Precise
11.	“Adolescent suicidal behaviours in 32 low- and middle-income countries”; McKinnon, Gariépy, Sentenac & Elgar; 2016	Quantitative Research: Descriptive; Randomized Controlled Trial; Cross-Sectional Study <ul style="list-style-type: none"> • Close-ended questions used 	“Yes”: 4/8 “No”: 1/8 (Question 6: Most of the countries did only one survey and some questionnaires included country specific examples) “Can’t Tell”: 3/8 (Question 4,5: No mention of informed consent or other ethical aspects + Question 10: “There is limited evidence of the validity and reliability of the survey’s measures across culturally diverse settings”, so it is unclear whether the results can be applied elsewhere. Question 9: Quite Precise

12.	"Micro- and Macrosystem Predictors of High School Male Suicidal Behaviours"; Beck-Cross & Cooper; 2015	<p>Quantitative Research: Descriptive; Cluster-Randomized Controlled Trial; Cross-Sectional Study</p> <ul style="list-style-type: none"> • Close-ended questions used • Group of 6,8 and 11 graders randomly selected 	<p>"Yes": 6/8</p> <p>"No": 2/8 (Question 4: Informed consent received from participants and their parents + Question 10: Due to the limitations of the study ("...responses only of male 11th graders in Iowa, and may not generalize to female students or to male students in other grades or in other U.S. locales") the findings cannot be generalized</p> <p>"Can't Tell": 0/10</p> <p>Question 9: Quite Precise</p>
13.	"Suicidal Ideation among Thai Adolescents: An Empirical Test of a Causal Model"; Rungsang, Chaimongkol, Deoisres & Wongnam; 2017	<p>Quantitative Research: Randomized Control Trial; Descriptive; Cross-Sectional; Correlational Study</p> <ul style="list-style-type: none"> • Close-ended questions used • Hypothesis made • Random sampling technique 	<p>"Yes": 7/8</p> <p>"No": 1/8 (Question 4: Informed consent was received by the participants)</p> <p>"Can't Tell": 0/8</p> <p>Question 9: Quite Precise</p>
14.	"Suicide Attempts and Associated Factors in Male and Female Korean Adolescents A Population-Based Cross-Sectional Survey"; Chin & Choi; 2015	<p>Quantitative Research: Descriptive; Cross-Sectional Study</p> <ul style="list-style-type: none"> • Close-ended questions used • Cluster Stratified + random sampling 	<p>"Yes": 7/8 (Question 6: Yes, only to data collection)</p> <p>"No": 1/8 (Question 4: Informed consent received from participants and their parents)</p> <p>"Can't Tell": 0/8</p> <p>Question 9: Quite Precise</p>

15.	<p>“Gender differences in suicidal ideation and health-risk behaviours among high school students in Beijing, China”; Zhang, Lei, Song, Lu, Duan & Prochaska; 2019</p>	<p>Quantitative Research: Descriptive; Cross-Sectional Study</p> <ul style="list-style-type: none"> • Close-ended questions used • Stratified + random sampling 	<p>“Yes”: 7/8 (Question 6: Yes, only to data collection) “No”: 1/8 (Question 4: Informed consent received from participants and their parents) “Can’t Tell”: 0/8 Question 9: Precise</p>
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