## Papers

**I** Tofthagen, R. & Fagerström, L (2010). Clarifying self-harm through evolutionary concept analysis. Scandinavian Journal of Caring Sciences, V 24, 3, pp 610-619

Scandinavian Journal of Caring Sciences
THEORETICAL STUDIES
doi: 10.1111/j.1471-6712.2009.00749.x

# Clarifying self-harm through evolutionary concept analysis

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*Scand J Caring Sci; 2010; 24; 610–619*

**Clarifying self-harm through evolutionary concept analysis**

Clarification of the concept *self-harm* is needed in order to enable research and theory development and facilitate the development and evaluation of medical interventions and nursing care for individuals who self-harm. This study presents such a conceptual analysis. Articles from 1997 to 2007 were sought from the Medline, PubMed, Cinahl, and PsychINFO search engines by entering the search words 'self-harm', 'self-harming', and 'psychiatric care'. 25 medicine and 23 nursing science articles were chosen for inclusion and analysed. Rodgers' evolutionary concept analysis process was used to delineate and clarify the concept's context, surrogate terms, antecedents, attributes, and consequences, as well as to determine implications for further research. Attributes of self-harm may include repetitive injury of mouth or exterior body, that is to say the infliction of physical pain to alleviate mental pain, and time spent self-harming. Antecedents may be gender, mental pain, substance abuse and relational problems. Consequences often include the need for medication and help with altering coping behaviour. Some self-harm patients met with negative attitudes from nurses. Individualized care and treatment is recommended. Accordingly, inter-professional collaboration and postgraduate education is needed in order to provide better care and treatment for self-harm patients. Furthermore, better understanding is needed to help enable health care personnel understand why individuals self-harm. The conceptual analysis presented in this study may be helpful as regards theory development within this still rather unexplored field.

**Keywords:** self-harm, self-harming, psychiatric care, nursing science, medicine, literature review, evolutionary concept analysis.

*Submitted 11 July 2009, Accepted 11 August 2009*

## Introduction

In the United Kingdom, self-harm is a common cause for admission into mental health care facilities and is also one of the five most common acute medical care diagnoses (1–5). A similar trend is also discernable in the United States (6). A study of Norwegian junior high school students (7) showed that more than 10% of the girls in the student population in Norway commit self-harming acts at least once, and that many of these students are never given a psychiatric diagnosis.

In literature and research, self-harm is a relatively new concept. The concept was first referred to as the 'wrist cutting syndrome' by Karl Menninger in the late 1930s and thereafter as 'attempted suicide' by Erwin Stengel in 1952, with Stengel interpreting such behaviour as a cry for help (8). In the late 1960s, the term 'para-suicide' was used to refer to self-harm associated with suicide (9). While 'self-injury', 'self-mutilation', 'self-cutting', 'self-poisoning', and 'attempted suicide' are all surrogate terms currently in use, 'self-harm' and 'para-suicide', nonetheless, appear to be the terms most frequently used in modern clinical praxis and research (9, 10).

In order to describe how concept categories are interrelated, it is essential to define the meaning and scope of the concepts involved: for instance, should the concept self-harm include suicidal attempts and suicide? Anderson (3) discusses whether self-harm in the form of overdose, skin cuts, or drowning indicates a conscious death wish. Yet, according to Warm et al. (11), no correlation between suicide and self-harm exists: at least no clear-cut pattern between self-harm and suicide has been found to exist in the United Kingdom (12). Isacsson et al. (13) claim that 10% of those who self-harm subsequently commit suicide within 10 years of the initial self-harming act. However,

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according to Abba et al. (5), nearly 40–50% of those who commit suicide have a history of self-harm. At present, the number of suicides subsequent to self-harm is unknown.

In that an examination of the concept self-harm as used in medicine and nursing science research literature indicates that the concept is not as yet unambiguously defined and that theoretical models relating to the concept are currently missing from nursing science, this concept should be further analysed.

## Aims

Concept analysis plays an important role in the development of the knowledge base of nursing science (14). Polit and Hungler (15) recommend carrying out a conceptual analysis as a first step in the development of theories and theoretical models; the objective is to produce results that can be applied and tested during a further phase in the continuing cycle of concept development (14). Accordingly, the aim of this study's conceptual analysis is to generate a first draft of a theoretical model which can be used as the basis for further investigation and development of the self-harm concept (14).

## Methods

For this study, Rodgers' (14) systematic and inductive evolutionary concept analysis was used. Through analysis, a researcher can identify the current consensus or state of the art regarding a concept, which then provides a foundation for further development (14). Here the focus lies on identification, that is to say an inductive approach to analysis, as the researcher seeks to identify that which is common in the use of the concept and so as not to impose any strict criteria or expectations on the analysis (14). Consequently, analysis focuses on the collection and analysis of raw data while not seeking to provide a final solution (14).

Concept analysis is a dynamic process independent of professional perspectives or discipline. In order to enable description, analysis, and discussion of the concept, perspectives on self-harm were identified in medicine and nursing science research literature for this study.

One must remember that concepts are not merely words, they are ideas formulated into words. Different concepts may express identical ideas while different sets of words may express identical concepts. Moreover, concepts change over time and are influenced by the contexts in which they are used (14). In Rodgers' evolutionary concept analysis (14), focus lies on analysing context, surrogate terms, antecedents, attributes, and the consequences of the actual concept. In her analysis, Rodgers (14) includes different data sources as printed data: for example, newspapers or professional literature, interviews or other spoken language, and the performing arts. Professional literature is the most common source of data used (14). Cowles's (16) study on the cultural perspectives of grief, Schilling et al.'s (17) study on the concept of self-management of type 1 diabetes in children and adolescents, and Wilde et al.'s (18) conceptual analysis of self-monitoring are some examples of nursing science research studies where this method has been favourably used.

### *Material*

For this study, a systematic search for articles published from 1997 to 2007 in international English language journals was carried out by entering the search words 'self-harm', 'self-harming', and 'psychiatric care' into the Medline, PubMed, Cinahl, and PsychINFO search engines. A total of 298 hits were garnered, with PubMed accounting for 144, Cinahl 94, Medline 30, and PsychINFO 30. All texts were thereafter evaluated based on the clarity of their presentation of research method with 21 medicine and 18 nursing science papers being chosen for inclusion in this study. Rodgers (14) recommends that each discipline included in a study should be represented by approximately 30 papers and suggests supplementing a database search with a manual search if necessary in order to obtain this number. Consequently, 9 additional papers, 4 within medicine and 5 within nursing science, were manually chosen via a systematic search of the references of the articles selected from the database search. This resulted in the inclusion of 25 medicine and 23 nursing science studies.

### *Data analysis*

Data analysis began with a reading of all the articles chosen for inclusion. Due to the fact that internet bases overlap as regards medicine and nursing science references, it was important to decide which discipline each article belonged to. For the purposes of this study, articles whose first listed author is a physician were considered to be medicine articles while studies whose first listed author is a nurse were considered to be nursing science articles. The articles were then coded according to name of first author, category of context/sample, and research method.

To begin, each article was read in its entirety. After that, the concept's context, surrogate terms, antecedents, attributes, and consequences, as specified in Rodgers' evolutionary method (a structure for the inductive analysis of articles as themes) were identified and written down on separate papers (14).

Upon examining the articles, the first step was to pose the question: is the concept self-harm used by physicians and nurses in different contexts? The second step was to thereafter identify self-harm and its five main clusters of surrogate terms (concepts which express the same or

similar ideas as the original term) and sub-terms by noting the frequency of their occurrence in the literature. The third step was to analyse what had occurred prior to the act of self-harm, in other words to uncover the antecedents (associated variables) that are related to self-harm. The fourth step was to investigate the attributes of the concept: for the purposes of this study the various ways in which the concept self-harm can be expressed. During the fifth and last step, the consequences of self-harm were analysed.

The data for each dimension were examined for agreement and disagreement across disciplines and for change over time. After initial analysis by first author, key ideas were discussed in relation to co-author until agreement was reached and themes were identified: at this point the data appeared to be saturated**.** Together this study's researchers came to the conclusion that the 48 articles provided a comprehensive view of all the themes (the concept's context, surrogate terms, antecedents, attributes and consequences).

Lastly, the findings were further interpreted and combined into a model presenting the concept of self-harm as a pattern of expression of mental pain. Again, in this study, the focus lies on creating a basis for further investigation and development (14).

## Results

### *Description of the material*

In Tables 1 (medicine context) and 2 (nursing science context), articles are listed according to first author, year published, context/sample, and research method. In the medicine articles, the contexts in which self-harm has been studied comprise children, boys, youths, women, and older people (Table 1). Although there is only slight distinction between youths and adults in the medicine articles, with young people aged 12–13 being categorized as adults, these articles provide a greater variety of contexts than the nursing science ones do in that the nursing science articles do not include boys nor older people.

In the two disciplines, different research methods tend to be used. Questionnaires are more common in medicine, while in nursing science different forms of qualitative interviewing such as semi-structured interviews, focus group interviews, *et cetera* are used. Case studies are equally common in the two disciplines but literary and observational studies are rare. Two randomized-controlled studies were found in the medicine studies, yet this method was not found in the nursing science studies. The majority of the medicine studies were conducted between 2002 and

**Table 1** Medicine references used in the concept analysis

| *Author(s)* | *Published* | *Context/sample* | *Research method* |
|---|---|---|---|
| Grøholt et al. (30) | 2000 | Children/youths (age 13–19) | Semi-structured interview |
| Olofson et al. (25) | 2005 | Children/youths/adults (age 7–24) | Retrospective case study |
| Hjelmeland et al. (60) | 2005 | Children/youths | Semi-structured interview and questionnaire |
| Haavisto et al. (36) | 2005 | Children/youths (age 8–18) | Qualitative questionnaire |
| Hawton et al. (26) | 2002 | Youths (age 15–16) | Questionnaire |
| Hickey el al. (42) | 2001 | Youths/adults (age 15 and older) | Quantitative comparative case study |
| Haw et al. (27) | 2001 | Youths/adults (age 15 and older) | Structured clinical interview |
| Haw et al. (45) | 2003 | Youths/adults (age 15–81) | Interview study |
| Hawton (47) | 2003 | Youths/adults (age 15 and older) | Quantitative study of patient records |
| Crowder et al. (39) | 2004 | Youths/adults | Quantitative case study |
| Hallahan et al. (34) | 2007 | Youths/adults (age 16–64) | Double-blind randomized-controlled study |
| Crawford (38) | 1998 | Adults | Cohort study |
| Evans et al. (54) | 1999 | Adults | Evaluation study |
| Isacsson and Rich (13) | 2001 | Adults | Literature research |
| Clarke et al. (24) | 2002 | Adults (age 19 and older) | Randomized-controlled study |
| Owens et al. (12) | 2002 | Adults | Systematic literature research |
| Sansone et al. (53) | 2005 | Adults | Quantitative case study |
| Kapur et al. (4) | 2005 | Adults (age 16 and older) | Cohort study |
| Campell et al. (31) | 2007 | Girls/women (age 14–75) | Retrospective case study |
| Sansone et al. (48) | 2000 | Women (age 18–45) | Quantitative questionnaire |
| Lamprecht et al. (41) | 2005 | Older people (age 65 and older) | Retrospective observation study |
| Ruths et al. (50) | 2005 | Older people (age 65–95) | Retrospective case study |
| Slaven and Kisely (55) | 2002 | Nurses | Semi-structured interview |
| Crawford and Wessely (56) | 1998 | Nurses | Nonrandomized intervention study |
| Bennewith et al. (57) | 2004 | Nurses | Observation study, interview |

**Table 2** Nursing science references used in the concept analysis

| *Author(s)* | *Published* | *Context/sample* | *Research method* |
|---|---|---|---|
| McAlaney et al. (46) | 2004 | Children/youths | Retrospective case |
| Anderson (3) | 1999 | Youths (age 12–18) | Literature research |
| Webb (40) | 2002 | Youths | Literature research |
| Greenwood and Bradley (44) | 1997 | Adults | Retrospective case study |
| Beasley (43) | 1999 | Adults (average age: 29,07) | Retrospective case study |
| Kinmond and Bent (51) | 2000 | Adults | Literature research |
| Bowers et al. (32) | 2000 | Adults | Quantitative questionnaire |
| Gournay and Bowers (20) | 2000 | Adults | Case study |
| Drew (33) | 2001 | Adults | Retrospective study of patient situations |
| McAllister (8) | 2003 | Adults | Literature study |
| Barr et al. (21) | 2004 | Adults (age 16 and older) | Interview, data from patients' medical records |
| Philips (35) | 2004 | Adults | Patient data statistics |
| Corser and Ebanks (2) | 2004 | Adults (age 23) | Case study |
| Patterson et al. (59) | 2007 | Adults | Quasi-experimental design |
| Lindgren et al. (19) | 2004 | Women (age 19–35) | Narratives |
| McAndrew et al. (29) | 2005 | Women | Case study, semi-structured interview |
| McElroy et al. (23) | 1999 | Nurses | Interview |
| Perseius et al. (37) | 2003 | Women | Qualitative individual interview, questionnaire, group interview |
| McAllister (52) | 2002 | Nurses | Questionnaire/focus group interview |
| Poustie and Neville (22) | 2004 | Nurses | Interview, observation |
| O'Donovan and Gijbels (9) | 2006 | Nurses | Semi-structured interview |
| Wilstrand et al. (49) | 2007 | Nurses | Qualitative interview |
| Holdsworth et al. (1) | 2001 | Nurses | Evaluation study |

2005 (n = 18) while the majority of the nursing science studies were conducted between 1997 and 2001 (n = 9), with six studies being conducted in 2004.

### *Surrogate terms for self-harm*

Five surrogate terms for self-harm were found, including 'self-injury', 'self-mutilation', 'para-suicide', 'suicide attempts' and 'suicide' (Table 3) and various sub-terms were also found. These terms illustrate a mounting risk for self-harm, such as mild/low risk of death (1, 4, 19), moderate risk of death (1, 4, 19), and serious injury with risk for suicide (8, 20, 21, 22).

There lies an inherent risk in the differentiation between self-harm and suicide: even though a person harbours suicidal thoughts he/she may be ambivalent to actually committing suicide (1). McElroy and Sheppard (23) maintain that personnel should be able to evaluate the risk of self-harm versus suicide even when an overlapping tendency is evident. Some authors claim that the risk of suicide increases with time (13, 24).

Surrogate terms point to attributes of self-harm, such as self-poisoning (9, 25, 26, 27) for instance, and contain overlapping characteristics. Self-injury is harm directly inflicted on the body through cuts, burns, and/or head banging (8). The purpose of self-mutilation is not suicide; it is instead a repetitive form of self-harm. Some authors categorize self-injury as a sub-category of self-harm (28). 'Para-suicide' entails both nonaddictive self-harm and nonaddictive suicide attempts. Lastly, while the terms 'suicide attempt' and 'suicide' overlap to a certain degree, some authors distinguish between intended suicide, attempted suicide, and actual suicide.

### *Antecedents to self-harm*

Variables associated with self-harm may include: gender, mental pain, substance abuse, and relational problems (Fig. 1). There is consensus amongst medicine and nursing science researchers that during the last 10 years, as regards self-harmers, females have been overrepresented (1, 8, 19, 29). A correlation between mental illness and self-harm exists (21, 25, 30, 31, 32) and the authors of the articles looked at in this study agree that depression (2, 3, 20, 29, 30, 33) and borderline personality disorder (8, 29, 33, 34) are associated variables. It is interesting to note that diagnoses such as personality disorder (27, 35), schizophrenia (20, 33), schizoaffective disorder (24, 29, 33), psychosis (3, 8, 19, 27), and anxiety (2, 24, 36, 37) were more commonly suggested in the nursing science articles than in the medicine ones.

Some researchers also perceive self-harm as a flight from stress and mental pain (22, 38) or an absence of illness (21, 39). According to Isacsson and Rich (13), self-harm is a behaviour rather than an illness. McAllister (8) also

**Table 3** Surrogate terms for self-harm

| *Main terms* | *Sub-terms* | *References* |
|---|---|---|
| Self-harm | Deliberate self-harm (DSH) syndrome | (1, 3, 8, 11, 19, 30, 41, 43, 52) |
| | Intentional self-harm | (1, 32) |
| | Actual self-harm | (32) |
| | Potential self-harm | (32) |
| | Nonlethal DSH | (46) |
| | Fatal and nonfatal self-harm | (12, 13, 51) |
| Self-injury | | (1, 3, 8, 9, 21, 26, 27, 33, 41, 42, 43, 47, 51) |
| | Self-injurious behaviour | (3, 11) |
| | Self-inflicted injury | (1, 46) |
| | Self-inflicted cutting | (9, 35) |
| | Injuries | (25, 35, 43) |
| Self-mutilation | | (3, 8, 9, 11, 19, 32, 51) |
| Para-suicide | | (3, 9, 13, 24, 25, 30, 41) |
| Attempted suicide | | (1–3, 8, 9, 13, 47, 51) |
| | Suicidal ideation | (3, 33) |
| | Suicide attempts | (37) |
| | Injurious suicide attempts | (25) |
| Suicide | Suicidal intent | (20, 21, 22, 30, 41, 60) |
| | Suicide | (1, 12, 20, 21, 22, 25, 30, 32, 35, 46, 53, 54, 59) |

maintains that self-harm is a learned coping behaviour related to mental pain rather than a diagnosis. Phenomena such as hopelessness (3, 30, 40, 41) and loneliness (2, 29, 42) may also lead to self-harm.

Even though substance abuse may lead to self-harm (26, 30, 34), medicine researchers most commonly discuss self-harm in relation to alcohol (3, 11, 20, 27, 30, 43). It is additionally generally felt that drug abuse may cause self-harm (11, 27, 43).

Regardless of discipline, researchers agree that relational problems may lead to self-harming behaviour (2, 3, 8, 41). The majority of articles mentioning relational problems are medicine articles (3, 22, 29, 30). One in three adolescents who self-harm live with one or both parents (30) while one in four live without parents (30, 43). It appears that well-educated parents may provide a protective barrier against self-harm (36).

Child abuse may also be another variable associated with self-harm (8, 22, 26, 44). Individuals who self-harm seem to be more exposed to violence (29, 43, 45), sexual abuse by family members or others (2, 3, 11, 29), and bullying/victimization (3, 8, 30) and appear to have problems at school (3, 24, 40, 46). In this study, it was found that medicine articles tended to discuss whether suicides in an individual's group of friends and/or family may provide a model for youths in the danger zone (26, 40). It was also found that self-harming individuals may lead a chaotic and unstable life even outside the work place (22, 47), that they may have economic problems (22, 47), and that marriage is no longer a defense against serious self-harm in older men (41).

### *Attributes of self-harm*

In this study, self-harm is shown to have five characteristics: repetitive patterns, harm by mouth, harm to exterior body, physical pain to relieve mental pain, and time (Fig. 1). All but one article unambiguously describe self-harm as physical pain. The one exception is a description of tortured thoughts of self-harm (48). The authors of both the medicine and nursing science articles agree that self-harm is a pattern repeated over time (1, 4, 12, 19, 22, 49). Only three articles focus on first-time self-harmers (19, 42, 50). There is also interdisciplinary agreement regarding categorizing substance overdose/poisoning as a sub-category of self-harm (1, 3, 8, 29, 51, 52). Some articles specifically relate harm by mouth to paracetamol (3, 24, 47, 51), antidepressants (51), alcohol (51), and narcotic drugs (8, 22, 51). Nursing science researchers define eating disorders as harm by mouth (8, 11, 27, 43); yet, while medicine researchers focus on patients who starve themselves (48, 50, 53), nursing science researchers tend to focus on bulimia (22). Other forms of harm by mouth are the abuse of laxatives (21, 22), gassing (21, 47, 50), and drowning (3, 20, 39).

There is agreement that self-cutting (1, 2, 22, 29), self-hanging (2, 8, 11, 20, 21, 22) and banging one's head/hitting one's self (8, 43, 53) are self-harming acts. Additional forms of harm to exterior body mentioned in the nursing science articles are as follows: pulling out hair (8, 22), skin scratching (22), piercing (22, 25), bone breaking/amputation (8, 44), purposefully being harmed by vehicles

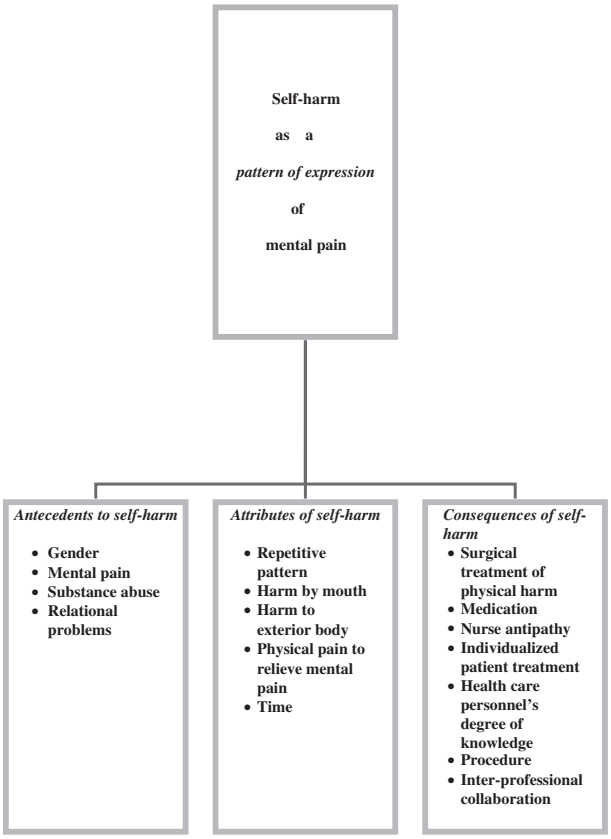


**Figure 1** A theoretical model of the concept 'self-harm'.

(8, 20), promiscuity (8, 48), jumping off high places (20, 47), self-biting (9, 21), self-scalding (2), provoking violence to cause harm to self (8, 48), and the tying together of body parts (3, 43, 54). The medicine articles looked at in this study also mention shooting one's self (30) and aggravating medical conditions (48).

Physical self-harm is perceived as an action taken to alleviate mental pain (2), easier to handle for self-harmers than mental pain (2, 44), and a way to express and control mental pain (11). Physical pain is also thought to provide an individual with the ability to create a feeling of unity between body and psyche (8), create a feeling of reality (2), and reduce aggressive feelings (2, 11). Rather than being a manipulative behaviour, self-harm is a coping strategy (11, 51) that creates the feeling of bodily control (2). It is a way to communicate with others (2, 13, 44) and to convey a message of pain and crisis (8). As regards time, self-harm often seems to occur most often between afternoon and midnight (43, 46).

### *Consequences of self-harm for treatment and care*

The consequences of self-harm are comprised of the effects of the self-harming act as well as the self-harmer's reactions to treatments and care and include: surgical corrections of physical harm, medications, nurses' antipathy; and the need for individualized treatment, more knowledge, interventions, and inter-professional collaboration (Fig. 1).

Nursing science researchers tend to focus on surgical corrections after self-harm (32, 44) used to avoid disability and vulnerability (20, 22). Medicine researchers tend to be more hands-on, discussing issues such as cosmetic surgery (20, 22), treatment of wounds (25), stomach pumping, vaccination against tetanus, and antidotes (25).

In the medicine articles chosen for inclusion in this study, the need for medical treatment is emphasized. Medication is deemed necessary in cases of psychosis (25), depression (13, 25, 41), anxiety (34), and so on. The medicine researchers also discuss whether medical treatment should be more recognized in cases of self-harm in that these patients are felt to be under-medicated (13, 29, 35), if self-harmers are correctly medicated, and if self-harmers should have their medical regimen re-evaluated.

In the nursing science articles, nurses appear to be frustrated with and express antipathy towards self-harming individuals and many patients experience that health care personnel express dislike (1, 49, 52). In Lindgren et al.'s (19) study, self-harming patients tend to wish that health care personnel would provide communion in their search for acceptance and nonstigmatization. Patients desire empathy (29, 51) rather than a judgmental attitude from nurses (2, 4, 9). Self-harming patients benefit from relationships with health care personnel who promote hope of recovery (9), boost self-esteem, and understand them (19).

According to past research, self-harming patients appear to not be accepted as 'real' patients and are consequently ignored on wards (9, 22). Although self-harm is experienced by patients, patients' families, and health care personnel alike as being stressful, patients find themselves being misunderstood (22). Some health care personnel not only do not understand self-harming patients' pain, they even act punitively towards them.

Health care services provide self-harming patients with inadequate follow-up care (9, 22, 32). Above all, patients need individually adapted care (1, 13), including an individualized care plan (13, 24). Furthermore, a large number of patients discharge themselves without follow-up appointments (4, 13, 55), and discharge before end of treatment may push patients into a cycle of readmissions (24). Consequently, it is imperative that health care personnel be able to cope with protracted therapeutic relationships (29).

Lack of collegial support is not unusual for professionals working with self-harming patients (49), and high staff turnover makes continuity a problem (9, 32, 37, 55). Furthermore, the heterogeneous mixture of patient groups on wards may also constitute a problem (9) while some health care personnel claim that self-harming patients are a waste of their time (23, 52). Nurses may find it difficult to verbalize their nursing care actions towards self-harming

patients (9) and nursing care actions may be based on personal experience rather than professional knowledge (23). Nurses often feel that a medical perspective governs ward policies and that they have little professional say in treatment and care (1).

Postbachelor training programs for nurses may instill greater awareness of why people harm themselves and increase knowledge of clinical interventions (1, 20, 56). Such programs may help nurses understand that first-time self-harmers are at an equally high risk for suicide as repeat self-harmers (38). Nurses' competency in this field is imperative (19, 49, 52).

In both the medicine and nursing science articles, an apparent lack of clinical procedures in the follow-up care provided patients is found (9, 29, 53, 55). At present, the two main care and treatment perspectives are *control* and *autonomy*. As regards control, safety is an important issue (1, 9, 20) and safety procedures such as locking in patients, housing patients in facilities with bulletproof glass (20), and seclusion (35, 37) are often implemented. Restricting patients' freedom (49) and removing objects (9) are some of the control measures used in order to prevent patients from running away, *et cetera*. (32). Nurses favour verbal agreements with patients regarding abstaining from self-harm (9, 33), yet these can be difficult to realize in clinical settings (32).

The autonomy perspective entails teaching patients alternative strategies to cope with their self-harming urges (1). It also entails perceiving the patients as responsible human beings and being solution-oriented in their treatment (37). Health care personnel must trust patients (19) and some researchers even maintain that patients should be free to harm themselves while on a ward (11).

As seen in the literature chosen for this study, it would appear that when an individual self-harms for the first time he/she tends to be admitted to a medical emergency room (21, 24) where he/she merely has his/her wounds dressed and is thereafter sent home (44). This occurs even though many hospitals have liaison units (57). The fastest discharge is provided patients admitted for self-harm for the first time and with whom health care personnel are not acquainted (39). Bennewith (57) claims that inter-professional collaboration does not often happen and both Holdsworth et al. (1) and Kinmond and Bent (51) found that cooperation between different levels of clinicians and a shared understanding of central concepts between professions is undeniably needed. In several of the articles looked at in this study, different organizational levels of treatment provided after self-harm were discussed, including hospital care (1, 4, 22, 26), primary health care (21), at-home follow-up (46), and anti-alcohol abuse teams (21). Several authors consider an open telephone service where patients are free to call whenever they feel the need to talk to someone a treatment alternative (37, 45, 54). Evans et al. (54) found that emergency hotlines are rather ineffective (54) whereas other researchers found that hotline users were happy with such service and felt themselves to be understood (45). Clients offered a hotline service may not feel abandoned by the health care system (37).

### *Theoretical model of the concept self-harm*

The antecedents, attributes, and consequences of self-harm were further interpreted and summarized in order to provide the first draft of a theoretical model for the concept. Self-harm can be understood as a pattern of expression of mental pain. Analysis of the antecedents and attributes of self-harm show that mental pain, substance abuse, and relational problems are expressed through repetitive injury of the mouth or exterior body, that is to say the infliction of physical pain in order to alleviate mental pain. Nonetheless, this study's results, including its model of self-harm, does not attempt to uncover exactly what the concept is or is not but instead create a basis for further investigation and development (14).

## Discussion

As seen in this study's concept analysis, a variety of *surrogate terms* are used to describe and explain the phenomenon of self-harm. This multitude of terms entails that therapeutic measures and research on self-harm are unsystematic and ambiguous. One explanation of why such occurs may be that the concept self-harm is relatively new in clinical praxis. Lastly, no particular change in how the concept is used was found during the period of time addressed in this study.

All of the articles chosen for inclusion in this study indicated that self-harm is most prevalent amongst Caucasian women (2, 31, 48). Additionally, both disciplines *characterize* girls/women as the largest group of self-harmers in recent years (1, 8, 19, 29). Yet, why self-harm is most prevalent amongst Caucasian women is left unanswered in the articles studied. This study's systematic database search resulted in only one article that discussed self-harm amongst men (36), leading one to assume that many unrecorded cases of self-harm amongst men exist. In Norway, statistics show that suicide is more common for men (58), and, in the literature studied here, a correlation between self-harm and suicide exists (13). Thus one must question, given that some researchers define suicide as part of self-harm, whether this attribute should be more closely looked at from the perspective of both the male and female genders rather than merely the female.

In the articles included here, most authors describe self-harm as being characterized by physical harm which causes bodily pain. Only Sansone et al. (48) define torturing oneself with negative thoughts as constituting self-harm. In the references analysed, mental self-harm was not discussed while isolation, rejection in social contexts,

stressful situations that cause anxiety, confusion, and loneliness (amongst others) were; these behaviours tend to be seen as *antecedents* to self-harm.

Other *associated variables* for self-harm were mental pain and relational problems. Given that most researchers agree that relational problems can lead to mental pain, preventive measures should, for instance, be aimed at young people with relational problems at school: bullying and victimization are growing problems in modern society. Moreover, drug abuse, which can cause self-harm, is also a growing problem. Thus one should ask whether self-harm will become even more common in the future.

Disagreement exists regarding whether self-harm is a mental ailment that warrants a separate diagnosis or whether it is merely destructive behaviour that needs to be altered by providing a different set of coping mechanisms. Furthermore, researchers have still not conclusively decided whether self-harm, which increases the risk for suicide, is a conscious coping strategy or not and whether it is misleading to categorize self-harm as being deliberate and intentional. Studies point to relationships between intentional self-harm and bullying and victimization, traumatic childhood experiences, and emotional neglect (8, 19, 26). McAllister (8) perceives self-harmers as individuals who fail to control their emotions. Some researchers also describe self-harm as being closely related to mental illnesses such as posttraumatic stress syndrome and psychosis, implying that self-harm happens impulsively rather than intentionally. The theoretical model of the concept self-harm as a pattern of expression of mental pain presented in this study could provide an alternative to traditional diagnostic explanations. Accordingly, this model should be further explored. However, indications already exist that the key question in this matter is closely related to how health care personnel understand self-harm patients' expressions of mental pain and suffering.

Mental pain appears to be the primary expression and first stage of self-harm, that is to say a symptom. In the articles chosen for inclusion in this study, the competencies that health care personnel need to help self-harming individuals verbalize their mental pain as part of an early intervention measure in order to prevent the development of a self-harming pattern are not discussed *as a consequence*. Yet, preventive health measures are essential in the deterrence of such pattern development. Why, then, is prevention not of greater concern in health care research?

Disassociation during self-harming episodes may make it difficult for an individual to verbalize emotions. Self-harm may occur due to mental illness and mental illness may lead individuals to self-harm. Even so, self-harm as a primary diagnosis is absent from the list of diagnoses in diagnostic systems such as ICD-10 and DSM-IV, a fact which indicates that the phenomenon is merely perceived as a symptom. One can conclude then that, in medicine, self-harm is a symptom of mental pain rather than a diagnosis or cause of illness. Is this, perhaps, the reason why self-harmers do not receive the nursing care and treatment they need? Such a lack of proper care and treatment results in many individuals developing a pattern of self-harm, thereby increasing their risk for suicide and invalidity.

In the articles included here, the authors disagree whether self-harm is an absence of illness, a coping mechanism, or a poor way of solving problems. Is self-harm a coping mechanism (51) which creates unity between body and psyche (8), which creates a feeling of reality (2) and reduces aggressive feelings (2, 11), or is it a poor way of solving problems (3, 47) in a communicate message of pain and crisis (8) with others (2, 13, 44)? For some researchers, self-harm is the communicating of mental pain from one individual to others (2, 13, 44), yet there is a difference in whether self-harm occurs as an impulse due to mental illness and drug abuse or not. Irrespective of such semantics, patients point out that for them it is essential that health care personnel recognize their suffering. Consequently, a functional relationship with health care personnel characterized by individuality, acceptance, empathy, and care is fundamental to self-harm patients' healing process. Such patients need help learning alternative means for expressing their pain. It is essential that patients' attempts to verbalize their emotions and pain be supported. Verbalization appears to be a first step in the healing process. Therefore, in order to genuinely help self-harm patients, postgraduate courses for health care personnel centred on the characteristics and mechanisms of self-harm and its treatment are needed (59).

## Conclusion

This study sought to produce results that can be applied and tested as part of a further phase in the continuing cycle of concept development (14). The definition of a concept may change over time and is not static or timeless, nor does it have identifiable boundaries (14). This study shows that self-harming individuals express mental pain, which should accordingly be further explored. Self-harmers' repeated infliction of physical pain appears to alleviate their various forms of inner pain. Being female, a substance abuser, or having relational problems seem to increase the urge amongst individuals for self-harm many times over. Those health care personnel treating such patients must create trusting, accepting, and caring relationships with their patients. Postgraduate education is essential if the care and treatment of self-harm patients is to improve.

In future research, some viable questions that should be addressed include: which factors may prevent the development of mental pain into a repetitive pattern of physical self-harm or even suicide; what role do nurses play in preventive care; and what is the real benefit of medical treatment. Lastly, research on relational patterns indicates

that the verbalization of mental pain should be developed as a preventive measure against self-harm.

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