

The feasibility of non-suicidal self-injury (NSSI) prevention programs

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Abstract

Many adolescents indulge in self-harming behaviour as a maladaptive coping mechanism, often described as non-suicidal self-injury (NSSI). NSSI often goes undetected as self-harmers can become socially isolated. This paper aims to investigate the feasibility of NSSI prevention programs. In order to test this feasibility, a closer look is taken at existing school-based NSSI prevention programs. Furthermore, online prevention strategies are considered to investigate whether offline prevention programs can be improved upon. Results indicate that the Signs of Self-Injury (SOSI) program, where students are trained and educated to be gatekeepers, is promising due to its effectiveness and low intensity. Online environments prove to be effective in providing support and promoting help seeking behaviour, although this effect varies for each website and there might be unforeseen negative side-effects attached to self-harm websites. The SOSI program might be improved with an online message board where self-harmers can disclose and seek help anonymously in a safe environment. Before implementation, more research should be conducted on the potential harms and benefits of such online environments. Furthermore, replication studies on the effectiveness of SOSI are needed to ultimately assess the effectiveness of a blended NSSI school-based prevention method.

Keywords : NSSI, school based community prevention, online prevention,

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The Feasibility of Non-Suicidal Self-Injury Prevention Programs

Adolescence is a turbulent time in life for most, and is characterised by often demanding developmental tasks, such as the search for one's identity and learning how to regulate one's emotions. Sadly, this process does not go smoothly for most, and many adolescents indulge in self-harming behaviour as a coping mechanism, often described as non-suicidal self-injury (NSSI), with numbers ranging from 14% to 40% (Muehlenkamp & Gutierrez (2007). Disturbingly, most of these cases go unnoticed. Whitlock et al., (2008) found that 36% of the self-harmers indicate that nobody knew about their behaviour, and only 3.29% indicate that a physician knew. It thus seems that most people who indulge in NSSI do so in secrecy, which poses problems for detecting and reducing this problematic behaviour.

NSSI is commonly described as deliberate and direct destruction or alteration of body tissue without conscious suicidal intent (Lloyd-Richardson et al., 2007). Although the definition clearly states non suicidal self-injury, NSSI has been found to have a strong correlation with future suicide attempts and successful suicides (Nock et al., 2006). The correlation seems to increase for duration and frequency of self-harm, defined in the *interpersonal-psychological theory of suicidal behaviour* by Van Orden et al., (2005) and is further elaborated on by Hamza, Stewart & Willoughby (2012). The onset of NSSI is difficult to prevent, as most cases of initial self-harm go unnoticed since help seeking behaviour is absent (Whitlock et al., 2008). Detecting self-harm in youths, and reducing repetition of self-harm could therefore subsequently be seen as a strong prevention tool for actual suicide, which is currently the leading cause of death for adolescents in most Western societies (WHO, 2014). Since NSSI is often a symptom of underlying psychopathology, such as depression or borderline personality disorder (Nitkowski & Petermann, 2011), detecting and preventing further NSSI in adolescents might have broader effects than the eye can tell. This also means that NSSI could be detected by specifically targeting 'at risk' students.

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Research that focusses on adolescents knowledge on how to prevent NSSI provides come clues on what is important in detecting NSSI. It showed that the primacy of informal social networks over professional organisations, the need for structured group activities, and the key role that schools play in young people's lives are important factors (Fortune et al. 2008). The adolescents in this study considered family, friends and school as the main sources of support in preventing suicidal behaviour, and more pertinent than external helping agencies.

Surprisingly, few prevention programs that aim to detect and prevent NSSI exist to date, and no real consensus exists on how to successfully tackle this problem (Burns et al., 2005). The programs that exist often target high schools as their place of intervention. Although a school has a typical community based environment with school counsellors or psychologists, and could thus provide certain beneficial effects for planning interventions, it also comes with downsides. Adolescents often feel scared to speak out openly about their self-harming behaviour, as they face stigma from their peers and generally feel guilt and shame with regards to their behaviour. Besides, counsellors often feel like they do not have adequate tools to work with, as they lack training, cooperation with school personnel and notice a lack of policy on self-injury in their schools (Roberts-Dobie & Donatelle, 2007, Duggan et al., 2011).

Interestingly, with the rise of the internet, adolescents have created own environments where they benefit both from anonymity and having adequate advice and support from peers through so called internet forums, reducing the threshold for help seeking behaviour. Until now, many researchers and psychologists did not hold a positive view about such self-harm and suicide websites, as they were not thought to decrease, but rather stimulate undesired self-harming behaviour.

Recent findings however, paint a more nuanced role for such websites, and they could

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be seen as tools to prevent further escalation of NSSI and aversive outcomes such as actual suicides (Daine et al., 2013). It could provide adolescents with coping mechanisms and a sense of belonging and connection, which could elevate underlying symptoms that cause self-harm, and prevent further self-harm in the process. Fortune et al., (2008) found that some adolescents suggested they were deterred from seeking help by the concern that it would actually make things worse or that they would hurt people they loved. Internet, for the obvious reasons, does not have the same barriers.

In this review, the feasibility of non-suicidal self-injury will be investigated. First, existing school based prevention methods will be evaluated on their efficacy. Secondly, the mechanisms of online self-harm and suicide environments will be evaluated in order to investigate it's possible beneficial effects on existing programs. Lastly, the findings will be discussed to facilitate future research that could combine multiple aspects of both offline and online prevention methods.

The efficacy of existing school-based NSSI prevention methods

To investigate the feasibility of existing offline prevention programs, two school-based programs are considered. One of the prominent aspects in both of the described preventions, is gatekeeping. Gatekeeping implies the training of students to become gatekeepers, meaning that they are more aware of NSSI and its symptoms, and are more comfortable with confronting peers with regards to possible signs of NSSI, opening the 'gate' for further help.

Klingman and Hochdorf (1993) investigated the effectiveness of a school-based self-harm prevention program based on CBT techniques. The goal of the prevention program was to improve distress-coping, to increase gatekeeping by peers and to assess the programs face validity. The group that received the preventive program consisted of 116 students and the

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control group, who received only psychological education on self-harm, consisted of 121 students. The prevention program consists of 12 weekly one-hour sessions divided in 3 phases. The first phase is purely educational, the second trains students in stress coping skills and the last is used to rehearse and apply the skills learned earlier. Outcomes were measured with the Israeli Index of Potential Suicide (IIPS), the UCLA Loneliness Scale, the Index of Empathy for Children and Adolescents and a knowledge assessment instrument on NSSI. Results show that the preventive program had a positive effect on attitudes, emotions, knowledge and awareness of distress coping skills. The students involved in the program described it very positively. The researchers state that this shows the feasibility of a CBT based prevention program in school for reducing NSSI.

This pilot study did not investigate how the frequency of self-injury is influenced by such a prevention program. This made it impossible to clearly answer the question whether this intensive CBT based program is effective in preventing NSSI. Although the following study's main goal is to create gatekeepers, similar to the previous study, it doesn't implement CBT techniques.

Muehlenkamp, Walsch and McDade (2010) investigates the effectiveness of the signs of self-injury program (SOSI). The aim of the program was to increase NSSI knowledge, improve help-seeking attitudes and behaviour and to decrease actual acts of NSSI. 274 'at risk' students from 7 schools participated in the study. SOSI consists of an educational DVD, an in class discussion, a NSSI self-assessment form and an opportunity to call out for help, which can be completed within an hour. Knowledge on NSSI was determined through 11 true/false questions. The Self-Injurious Thoughts and Behaviours Inventory was used to assess actual NSSI. Attitude towards NSSI was measured with agreement or disagreement on 11 statements about NSSI. The results from the pre and post surveys show that NSSI knowledge increased. Furthermore, attitudes and intentions towards help-seeking improved,

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although actual help-seeking did not increase. Actual NSSI did decrease, but not significantly. SOSI thus seems to be a very promising, low cost, prevention program.

The SOSI seems more promising than the CBT based program due to its effectiveness, low costs and time required. Targeting 'at risk' students seems to be fairly effective in preventing, or at least reducing the amount of NSSI. But how do we define 'at risk' students? They are usually labelled 'at risk' by a school clinician. Since self-harmers have such troubles reaching out, 'at risk' students might be completely missed. The following study considers the possibilities of school based screening to identify more 'at risk' students.

Scott, Wilcox, Schonfeld, Davies, Hicks, Turner and Schaffer (2009) investigated the differences between students identified through school-based screening and those identified as 'at risk' by clinical professionals of the schools. Screening was done for suicidal behaviour and other mental disorders, often found to be co-morbid with NSSI. the schools. 1729 students were screened with the Columbia Suicide Screen (CSS). 356 students who scored positively on the CSS and 285 students who scored negatively, were administered the mood, anxiety and substance use subdomains of the Diagnostic Interview Schedule for Children (DISC 2.3). Afterwards, school psychologists were given a list of all the students who received the CSS screening for them to identify which ones were at risk. The results indicate that more students with significant mental health problems were accurately identified through screening than by the school psychologist, though both were able to identify at risk students that the other couldn't. The authors conclude that screening can greatly improve the targeting of at risk students.

Gatekeeping and educational programs like SOSI seem to be effective in the prevention of NSSI. Peers of self-harmers have troubles offering help and are usually avoidant. Targeting 'at risk' students seems effective in reducing acts of self-harm, however, a lot of 'at risk' students might be missed without proper screening. When the low amount of

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costs and time of SOSI is considered, it might prove more feasible and preferable to target the entire school as opposed to ‘at risk’ students, which could enhance the gatekeeping effect. On top of that, supposed ‘at risk’ students could feel uncomfortable or distressed by being singled out, which could prove to be a downside of the used method.

Suggestions for prevention based on self-injury and suicide Internet websites

The SOSI program is especially worthwhile as an education and gatekeeper training program, and is able to decrease acts of NSSI to a certain extent. Conversely, whenever a self-harmer decides to leave the ‘I need to talk to somebody’ option from the program unchecked, they can still remain without help. Luckily, besides schools, there are other places, such as the internet, where adolescents gather in great numbers. A study that focused on suicide instead of NSSI, showed that it was possible to create online communities where suicidal people who received help eventually became ‘therapists’ on the site as well. This snowball effect leads to many ‘suicide experts’ on such websites (Greidanus & Everall, 2010). Likewise effects may exist for NSSI online communities. The following paragraph investigates what we can learn about self-harmers from self-injury websites to see if such information may be used to improve or build on the SOSI program.

Baker and Fortune (2008) interviewed 10 self-harmers through e-mail contact. The aim was to obtain a more detailed view of why self-harmers visit NSSI and suicide websites, which could lead to a better understanding of self-harmers and their needs. The interview was semi-structured and covered the usage of self-harm websites and their knowledge and understanding of self-harm and suicide. The participants were directly recruited from NSSI websites and were all very frequent visitors. Three different main ways of writing about the nature of such sites were found. The sites were viewed as a source of empathy, as a community that accepts them and as a coping strategy for the distress caused by self-harm. None of the participants mentioned the site as an inspiration for future self-harm. The authors

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conclude that the focus on the risks of NSSI websites are exaggerated and should not deter researchers and clinicians from using such websites as a possible benefit.

Most of the interviewed self-harmers focused on the beneficial aspects of such sites. They mentioned very little about the risks involved, which can partly be explained by the few amount of interviews. The following study offers more insight in whether benefits of self-injury and suicide websites are truly more prevalent than the risks. Furthermore, it considers different types of self-injury message boards that might relate to the risks and benefits of usage.

Whitlock, Powers and Eckenrode (2006) gathered data from NSSI message boards to investigate how adolescents use the internet with regards to self-harm. The nature of the message boards, their users and the most common topics were considered. Ultimately, ten message boards were selected for analysis. The boards all had low to middle moderation, so that no censorship was present and graphic and triggering content is allowed. Results show that the most prominent topics in events/experiences that trigger self-harm are depression and conflict with important others. A large part of topics covers the distress and anxiety associated with NSSI. Almost a tenth of all the posts were about the addictive elements of self-harm.. An important finding is the informal support that constitutes most posts on the websites. Furthermore, more topics towards help-seeking show a positive attitude than a negative or neutral attitude. However, help-seeking is discouraged on some sites, encouraging and normalising self-harm. Some sites also show more graphic and triggering content. The authors conclude that NSSI sites can be very beneficial, but that they can also normalize and encourage NSSI. This seems dependent on the type of users and the (informal) rules of the lowly moderated message boards.

The benefits that NSSI websites give now seem clear. The risks that are involved are possibly related to informal rules of the message board and the amount of triggering and

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graphic content. How risky online NSSI behaviour can be may thus be related to the type of site the user visits. So far, only dedicated NSSI have been considered, but NSSI behaviour on the internet is more widespread.

Lewis, Rosenrot and Messner (2012) investigated what type of questions people query on NSSI on the general site Yahoo! Answers. 108 different questions and their answers were included in the analysis. Results show that the most frequently asked questions were seeking validation for NSSI experiences. Other questions related to general knowledge on NSSI and scar concealment. Although validation was often sought, it was rarely received in the comments. The user voted 'best answers' were quite validating, but a large portion of other comments and answers were not. The authors claim that this can be quite dangerous. The self-harmer can feel more rejection and isolation by invalidating comments on the internet. They propose more efforts are needed to provide online NSSI support. This support needs to be moderated to create a safe place, so that hurtful and potentially harmful comments are minimized.

In conclusion, it seems that self-injury websites can be very beneficial to self-harmers. They can alleviate stress and help self-harmers cope with life. Conversely, they can increase recurring NSSI as well. This risk should not be underestimated, nor should it be exaggerated. Topics on help-seeking, how to deal with anxiety and the addiction of self-harming and disclosing about issues and mental problems are much more prevalent than topics that discourage help seeking and encourage NSSI. Although the amount of moderation is presumably related to how beneficial or risky a website can be, it could not be shown due to the small number of sites with high moderation that were analysed. The type of website where advise or help on NSSI is sought seems of great importance. Some places are much more accepting, helpful and validating than others, which relates to how beneficial a site can be.

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Discussion

The aim of this literature research was to investigate the feasibility of NSSI prevention programs. Based on the literature, it has become clear that there is a scarcity with regards to the programs. Although school based community interventions seem to address multiple components of preventing further NSSI successfully, they lack in offering support and in increasing help seeking behaviour. The internet could provide a larger window for help-seeking and support by peers. Unfortunately, online evidence based prevention methods are non-existent, and our literature could only show how online environments could add value to existing offline programs. Based on these findings, it can be stated that NSSI prevention programs are feasible in reducing NSSI but still leave room for improvement,

This literature research succeeds in painfully exposing the absence of evidence based policy with regards to NSSI in adolescence. In hindsight, this research suffers from several limitations as well. The exploratory nature of this research poses some problems with regards to its validity. Firstly, studies that focus on the role of the internet were not very structured. Therefore, it is tricky to state a final conclusion with regard to the possible efficacy of internet preventions. Based on the literature, it is also unclear how exactly such online environments would function optimally. Further research has to investigate how one would put these insights into practice. This should be done in a very accessible way, as Fortune et al. (2008) showed that adolescents more easily find support with friends, family and the school than with external helping agencies. Secondly, more replication studies are necessary to show the effectiveness of the SOSI program. Furthermore, the program has only been investigated when targeted at 'at risk' students, future research should focus on the program as a school wide implementation.

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Although there has been a tendency by health care professionals towards scrutinizing online environments for suicidal behaviour (and their possible power in prevention of the same behaviour), this paper shows that this is probably unjust. If we truly wish to reduce this troublesome behaviour in adolescents, we need not fear the internet, but embrace it as a new tool that the target group is familiar with. We should not forget that analysing self-generated content of our target group might lead to more insights than a couple of carefully executed RCTs. Designing these online environments in such a way as to optimize their benefits and minimize their potential harm, might prove to be an essential step in reducing NSSI. This might be realised through high moderation so that potential harmful content can be censored. Together with more accurate and consequent screening at schools, reduced stigma and an increase in help-seeking behaviour due to the universal implementation of the SOSI program, this could lead to a severe reduction in NSSI, less troubled youths and a brighter future humanity. A blended care approach, where the positive aspects of both online and offline methods are utilized, whilst minimizing their possible hazards, seems to be the desired direction for NSSI prevention.

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