Seeking help for non-suicidal self-injury: A social network analysis approach

By: Kelly L. Wester, Elysia Clemens, and Bradley McKibben

*Wester, K.L., Clemmons, E., & McKibben, B. (2015). Seeking help for non-suicidal self-injury: A social network analysis approach. *Counselling Psychology Quarterly*, 28(4), 372-385.

This is an Accepted Manuscript of an article published by Taylor & Francis in Counselling Psychology Quarterly on December 1, 2015, available online: http://www.tandfonline.com/10.1080/09515070.2015.1074543.

Abstract:

Individuals who self-injure have consistently reported less perceived social support; yet, little is actually known about the support they seek out from others specifically for non-suicidal self-injury. The goal of this study was to explore characteristics of support networks of those who self-injure. Twenty-three percent reported not seeking support for self-injury, while the remaining reported smaller social networks than typical. Most participants sought help infrequently, and when they did, found supporters to be only moderately helpful. Network characteristics were found to relate to self-injury behavior and patterns emerged regarding supporters in the networks. Implications for advocacy and education are provided.

Keywords: non-suicidal self-injury | self-harm | help seeking | social network analysis | outreach

Article:

The prevalence of non-suicidal self-injury (NSSI) is well documented in the literature (e.g. Nock, 2009; Walsh, 2012) and is suggested to be mainstream in today's culture (Adler & Adler, 2005; Chandler, 2013). These behaviors are present in a variety of populations such as college students (e.g. Andover, Primack, Gibb, & Pepper, 2010), adolescents, the general public (e.g. Lloyd-Richardson, Perrine, Dierker, & Kelley, 2007), and inpatient clients (e.g. Nock, Joiner, Gordon, Lloyd-Richardson, & Prinstein, 2006), as well as across racial and ethnic groups (Wester & Trepal, 2015).

The understanding of the functions of and settings in which NSSI occurs improved markedly during the last decade. For example, most individuals have multiple social (e.g. avoid others, get out of tasks, and stop relational conflict) and affective (e.g. emotion regulation and ground dissociative state) reasons for engaging in NSSI (e.g. Lloyd-Richardson et al., 2007; Nock, Prinstein, & Sterba, 2010; Turner, Chapman, & Layden, 2012), while also utilizing significantly greater maladaptive forms of coping behaviors (Wester & Trepal, 2010). Additionally, most individuals engage in NSSI in isolation, increasing their risk of suicidal behaviors (Glenn & Klonsky, 2009). The social component of NSSI has been researched primarily through the lens of settings and functions in which behavior occurs. These findings substantively inform treatment; however, they do not speak of entry points to receive care.

The literature base describing networks of support for individuals who engage in NSSI is less developed than the research on functions and settings. What little is known is that individuals who self-injure report less social support from peers, family, and significant others than the general population (Rotolone & Martin, 2012; Wichstrom, 2009). The majority of individuals (79–88%) who engage in NSSI do not receive mental health (Wester & Trepal, 2010) or medical services (Tyler, Whitbeck, Hoyt, & Johnson, 2003). Some individuals who self-injure may not reach out for help, may not want help, or may feel the situation is helpless (Berger, Hasking, & Martin, 2013). It is still unknown who is being sought out for help regarding NSSI and how helpful these individuals are perceived to be. Heath, Ross, Toste, Charlebois, and Nedecheva (2009) stated "… no one has actually examined perceptions of family and peer support directly" (p. 181). Yet, researchers have found that social support is one of the most important factors extinguishing NSSI behaviors (e.g. Buser, Pitchko, & Buser, 2014; Whisenhunt et al., 2014).

The purpose of this study is to provide an initial description of the social networks that individuals who self-injure access for help. Advancing the understanding of the social networks can inform how treatment is accessed and implemented. Specifically, describing the composition and characteristics of the social networks that individuals access in times of need can provide information as to which individuals (e.g. teachers, parents, and/or friends) might be the best to seek out and educate regarding NSSI. The specific research questions being explored are: (1) Do those who engage in NSSI seek help from others about their self-injuring behaviors, and if so, from whom specifically? (2) What are the relationships between supporters in the networks (i.e. is reaching out for a friend related to reaching out to therapists)? (3) What, if any, are the differences in NSSI behaviors from those who seek help versus those who do not? (4) Do NSSI behaviors differ based on the supporters in the network? (5) For individuals who reach out for help, how frequently do they reach out and how helpful do they perceive others to be regarding NSSI? Finally, (6) Do NSSI behaviors relate to the frequency of reaching out, perceived helpfulness of supporters, or size of the network? These questions are answered utilizing social network analysis (SNA), more specifically, an egocentric network that reflects the relationships of a person.

Methods

SNA is a methodology that has been used in the social and behavioral sciences since the mid-1930s (Carrington, Scott, & Wasserman, 2005). In recent years, this methodology has been applied to advance understanding of health behaviors such as alcohol use (e.g. Ali & Dwyer, 2010) and sexual behavior (e.g. Tyler, 2008). The analytical approach is grounded in the assumptions that relationships among interacting units (e.g. people) are important and that people and their actions are interdependent, with network environments providing "opportunities for or constraints on individual action" (Wasserman & Faust, 1994, p. 4). Thus, the SNA approach differs substantially from traditional probability-based statistics. Rather than basing analysis on the assumption that the data are independent, SNA is used to understand how the dependencies in the data can and do impact behavior (Wasserman & Faust, 1994).

Egocentric networks, used to study how social support and social relationships support healthand wellness-related behaviors of individuals (Wasserman & Faust, 1994), are comprised of an actor (i.e. in this case the person who self-injures), and his or her alters or those persons to whom they have ties (i.e. supporters). For the sake of this study, and ease of reading, the words of participants and supporters will be used throughout instead of the SNA language of actors and alters. Ties are the connections or relationships among participants and their supporters. The relationship ties within one's social network may vary in strength and frequency (Wasserman & Faust, 1994). For example, consider that an individual's network may be made up of four supporters whom she seeks out for help with NSSI. The relationships between the person who self-injures and these four supporters might be the same; that is, she seeks out each individual (e.g. mom, dad, counselor, and friend) equally to seek help and deems their assistance to be equally helpful. The relationships, however, may vary, and the individual who self-injures might seek out only one of the four supporters frequently, while the other three are sought out less frequently. In addition, some supporters may be perceived to be more helpful than others. Examination of egocentric networks using SNA allowed us to investigate to whom people reach out, how often they do so, and helpful they perceive the support to be.

Procedure

Purposeful and snowball sampling were used to recruit potential participants. Two criteria were required to participate: (a) 18 years old or older and (b) current or previous engagement in NSSI. Upon IRB approval, the authors posted a request for anonymous participation on three websites: two NSSI Facebook support groups, as well as on the Self-Injury Foundation research website. The invitation to the study, as well as the thank you page at the completion of the survey, asked participants to forward the survey link to anyone they knew that met the participation criteria. A total of 141 individuals entered the survey link; however, 53 individuals did not complete the entire survey and were excluded from analyses.

Instrument NSSI behavior

NSSI behavior was assessed using the adapted version of the Deliberate Self-Harm Inventory (ADSHI; original DSHI was developed by Gratz, 2001; the ADSHI has been used in multiple other studies; Wester, Ivers, Villalba, & Trepal, in press; Murray et al., 2008; Wester & Trepal, 2010). The ADSHI asks participants if they have "ever intentionally (on purpose) hurt yourself (e.g. cut, burn self)?" Participants who answer affirmatively were asked to respond to 12 other questions pertaining to NSSI to assess for (a) number and type of NSSI methods used in lifetime, (b) number and type of current NSSI methods used, and (c) frequency (number of events) of current NSSI engagement. The number of NSSI methods used is calculated by summing the number of methods participants indicated "yes." NSSI frequency was calculated by summing the total number of times they indicated they self-injured in the past 90 days. The scores for the adapted version of the DSHI have adequate reliability (Cronbach's $\alpha = .70-.90$; Wester et al., in press) with correlations, with other measures of violence victimization being appropriately low (r = .13; Murray et al., 2008). The internal consistency from scores from the current study was adequate (Cronbach $\alpha = .77$).

NSSI support

Participants were first asked to respond yes or no to whether they have ever reached out to others when they needed support due to self-injury. If participants indicated "yes," they were provided a

name generator survey design (Burt, 1984). The name generator consists of open-ended questions that define the boundaries of the participant's social network. Rather than reporting names (e.g. "Jane, John"), participants were prompted to list their supporters by attribute or role (e.g. mom and/or therapist). Instructions indicated that multiple persons with the same role could be listed (e.g. friend 1 and friend 2). This is a common approach to designing egocentric surveys as the goal is to understand qualities of individuals' networks rather than connect alters to a larger complete network (Carrington et al., 2005). During this portion of the survey, participants were prompted to recall up to 10 people they reached out to due to self-injury. This process of specifying the context of reaching out specific to NSSI is intended to elicit a sub-set of the respondents' social support (Carrington et al.). The number of options (10) was guided by mean network size elicited through name generators that specify an intimate context range from three to seven (Campbell & Lee, 1991; Milardo, 1992). The number of options was set above the average range for intimate contexts to prevent constraining the network by the research design. The research team categorized supporters into 10 categories: friend, mom, dad, significant other, sibling-family member, therapist, teacher-professor, religious affiliate (e.g. priest/pastor), medical professional, and other. While most participants only listed these specific roles, some roles were combined into one overarching role (e.g. nurse, gynecologist, and family physician were combined into "medical professional;" therapist, counselor, school counselor, and psychologist were combined into "therapist").

Once participants indicated the supporter role, they were instructed to rate each supporter in regard to frequency and helpfulness on a three-point Likert-type scale. Specific questions and loadings of the scales included: "How frequently have you reached out to this person? 1 = rarely when I have needed to, 2 = frequently when I have needed to, and 3 = every time I have needed to" and "How helpful has this person been, when you've reached out? 1 = not helpful at all, 2 = somewhat helpful, 3 = very helpful." These are the ties, or relationships, that are the focus of the analysis. A three-point scale for these two items was selected as relatively few response choices, and even dichotomous options, are typical in the social network data collections aimed at quantifying relational aspects of the network (Wasserman & Faust, 1994). The goal is to simply capture directionality (e.g. helpful vs. not helpful) and a high-level picture of the long-range social structure (e.g. rarely, frequently, and every-time).

Participants

Of the 88 respondents, 92% were female and 8% male. Participant age ranged from 18 to 62 years (M = 27.18, Mdn = 24, SD = 9.71, 3 individuals did not report age). The majority of the sample was identified as White/European American (83%, n = 73), 7% Multiracial, 3% Hispanic/Latino/a, 2% Asian, and 1% Black/African-American (three participants did not indicate their race/ethnicity; numbers were rounded to the nearest full number). A sample size of 88 was deemed appropriate, given that previous researchers have used samples of less than 100 for SNA (e.g. McCarty, 2002), and a priori power analysis for independent t-test and correlations, with a moderate effect and α = .05, suggested a sample size of 64 and 67, respectively, for a power of .808.

Analysis

Descriptive analyses were used to explore the network characteristics. χ^2 , correlations, and *t*-tests were used to gain insight into the relationship among network characteristics and NSSI behaviors.

Results

All 88 participants indicated engaging in NSSI in their lifetime, with 79% (n = 70) engaging in NSSI in the past 90 days (i.e. current NSSI). One participant was removed from the remainder of analyses being an outlier (reported engaging in NSSI 10,006 times in the past 90 days). The average number of methods used across a lifetime was 6.40 (Mdn = 7.0, SD = 2.12) and used currently was 3.06 (Mdn = 3.06, SD = 1.74). The most frequent method reported was cutting (71.6%). Frequency of current engagement ranged from 1 to 542 events (M = 65.58, Mdn = 33.0, Mode = 6.0, SD = 98.55, range 1–542). The age of onset for NSSI ranged from 4 to 39 years old (M = 13.26, SD = 5.05, Mdn = 13.00), with the length of time engaging in NSSI (since age of onset) being 0–46 years (M = 14.15, SD = 11.23, Mdn = 12.00). The majority of these findings are similar to other findings regarding NSSI, specifically the age of onset and average number and type of methods used to self-injure (see Nock, 2009 for summary of studies). The prevalence of current NSSI engagement (79%) in the current sample is higher than other samples; however, this may be due to only recruiting individuals for this study who have at some point engaged in NSSI behaviors. Prevalence of NSSI has been found to range from 35% in adolescent and undergraduate college populations to 80% in clinical inpatient populations (Nock, 2009).

Of the 88 individuals, 77% reached out to others for support and 23% did not. The 20 participants who did not reach out to others were compared on NSSI behaviors to those who did reach out. No statistically significant differences were found on current NSSI engagement ($\chi = .36$, p > .05), current methods used to self-injure (t = -.70, p > .05), and frequency of current NSSI engagement (t = -.40, p > .05). However, a significant difference was found on lifetime NSSI methods used (t = 2.16, p < .05). Specifically, individuals who reached out for support reported engaging in a greater number of NSSI methods in their lifetime (M = 6.57, SD = 1.96) than individuals who did not reach out for support (M = 5.47, SD = 1.98). Current age did not significantly relate to any NSSI behaviors (r = -.04, p > .05 lifetime methods; r = -.17, p > .05 current frequency); however, a relationship was found between age of NSSI onset and number of lifetime (r = -.45, p < .001) and current number of methods used (r = -.34, p < .01), suggesting that the younger the person started to self-harm, the more methods he or she used in his/her lifetime as well as use currently.

Network characteristics

The 68 participants who sought help identified a total of 212 persons to whom they reached out for support specific to NSSI. The mean network size was 3.16 supporters (SD = 1.55), with a mode network size of 2 supporters (n = 18 networks/participants; 29% of those who reached out). Eleven percent (11%) reported having 1 supporter in their network; 14% reported having 3 supporters; 22% reported having 4 supporters; 18% reported having 5 supporters; 5% reported having 6 supporters; and 1.6% reported having 7 supporters. These network sizes are smaller than what previous studies have reported as mean sizes for "core ties" or intimate relationships

(e.g. Campbell & Lee, 1991; Milardo, 1992). Thus, there are relatively few people to whom participants reported reaching out for support specific to their NSSI.

The frequency of supporter attributes provides insight into patterns of support relationships. Friends were listed most often as a supporter in the network (Table 1), while supporters external to friends, significant others, and family members were less frequently reported, with the exception of a therapist (reported in 34 networks; represented 45 supporters). More specifically, the number of friends represented in the support networks was almost double the second most frequent support (i.e. therapist). The majority (94%) of the networks that contained one or more friends also included at least one other role (e.g. friend and therapist; friend and mom). The disproportionately high prevalence of friends may be in part because individuals are more likely to have multiple friends than multiple therapists, guardians, or significant others. Twenty-four networks included multiple friends; whereas only nine included multiple therapists and two networks had multiple significant others. Significant other was listed frequently as a source of support (n = 23 networks; represented 25 supporters). Mom (n = 16 networks and supporters) was listed more often than other family members as someone to whom individuals reach out in times of need related to NSSI, with dad being listed least frequently (n = 3 networks/supporters). The frequency of therapists included in networks is notable compared to other professionals. Therapist was listed 45 times in 34 networks, while medical professional was only represented 9 times in 7 networks, teacher/professor was listed 5 times in 5 networks, and religious affiliate was only mentioned 4 times in 4 networks.

Supporter role	u	u		Frequency		Helpfulness
	Networks	Supporters	Mean	Std deviation	Mean	Std deviation
Friend	46	62	1.55	0.61	2.05	0.64
Therapist	34	45	1.72	0.44	2.09	0.65
Significant other	23	25	1.45	0.49	2.06	0.60
Other	19	25	1.70	0.66	1.94	0.66
Mem	16	16	1.06	0.25	1.73	0.88
Medical professional	7	6	1.61	.49	1.83	.75
Family member	3	4	1.16	.28	1.50	.50
Teacher/Professor	5	5	1.80	.44	2.60	.54
Religious affiliate	4	4	1.33	.57	2.00	00.
Dad	3	3	1.33	.57	1.66	1.15

Note: Some networks contain a role (e.g. friend) more than once.

Table 1: Frequency and helpfulness by supporter

Although the number of networks that consisted of only one supporter was small (n = 8), therapist was listed as the supporter in 25% of those networks. Four of the seven networks that contained medical professionals also contained therapist. However, while therapist was listed more than other professionals, it should still be noted that therapist was absent in 34 of the 68 networks, and 30 networks did not seek help from any professional.

To determine if a relationship existed between supporters in the network, Phi coefficients were calculated. Phi coefficients are Pearson correlations were conducted with dichotomous data. In this case, it would be "supporter in network" vs. "not in network" (e.g. 1 = therapist in network; 0 = therapist not in network). Statistically significant, positive relationships were found between friend, immediate family member (i.e. mom, dad, and sibling), and therapist supporters in the networks. Specifically, individuals who had immediate family members in their network were more likely to have friends (r = .23, p < .05) and therapists in the network (r = .28, p < .01). Additionally, having a friend in the network was positively related to having a therapist in the network (r = .29, p < .01). These relationships suggest that reaching out to a family member occurs in combination with reaching out to friends or a therapist for support. Similarly, reaching out and having a friend as a supporter is associated with having a therapist as a supporter in their network. These relationships had a moderate effect size. No other relationships between supporters were found; thus, medical professional, significant other, religious affiliate, and teacher/professor were not significantly related to any other supporter in the network.

Supporter differences and NSSI behaviors

When exploring whether NSSI behaviors differed dependent upon specific supporters being in the network, two statistically significant relationships emerged. First, individuals with a medical professional in their network engaged in less current NSSI methods than those without a medical provider (t = -2.78, p < .01, d = .59). Second, individuals who reported a friend in their network also reported significantly greater lifetime NSSI methods used than those whose networks did not include a friend (t = -2.78, p < .01, d = .05). No other statistically significant differences were found between specific supporters and NSSI behaviors.

Frequency and helpfulness of support, and NSSI behavior

On average, individuals rarely (M = 1.54, SD = .54) reached out for help. When averaging the degree to which individuals reached out to anyone in their network, most average total scores were ranged from 1.00 to 1.83 on a three-point Likert-type scale, with 14 individuals reaching out frequently (mean scores between 2.00 and 2.25) and one individual reporting they reached out to supporters in their network almost every time (mean total for network 3.00). When they did reach out, individuals found supporters to be "somewhat helpful" (M = 2.07, SD = .52), but typically not "very helpful." The average helpfulness of supporters was found to negatively relate to the number of people reached out to (r = -.37, p < .01), suggesting the more helpful they perceived supporters to be, the less likely they would be to reach out to another person. Some supporters were reported to be more helpful than others (Figure 1, Table 1), with teacher/professor being the most helpful (M = 2.60, SD = .54), followed by therapist (M = 2.09, SD = .65), significant other (M = 2.06, SD = .60), and friend (M = 2.05, SD = .50), followed

by parents (dad, M = 1.66, SD = 1.15), mom (M = 1.73, SD = .88), and medical professional (M = 1.83, SD = .75).



Figure 1. Average frequency reached out and perceived helpfulness by supporter.

Exploring the relationship between supporter and perceived helpfulness and frequency, the only statistically significant relationship found was between immediate family member and perceived helpfulness (t = 2.15, p < .05). Individuals with an immediate family member in their network perceived less overall helpfulness (M = 1.88, SD = .50) compared to no immediate family member in their network (M = 2.17, SD = .51).

The total number of supporters reached out to was positively related to the number of methods a person utilized in his or her lifetime (r = .35, p < .01, $r^2 = .12$); therefore, those who used more lifetime methods reached out to more individuals for support. However, total number of supporters was not related to the current number of methods or current frequency of engagement. For individuals who did reach out, the average frequency of reaching out for help was not related to lifetime methods, but was negatively related to the current number of methods (r = -.31, p < .01, $r^2 = .10$), indicating the more methods a person currently used to self-injure, the less often they reached out for support. Average helpfulness was not related to NSSI methods or frequency.

Discussion

Nearly one-quarter of the individuals who self-injured did not reach out to others for support, and of those who did seek help, only half sought help from a medical or mental health professional. This is similar to findings of other researchers who found that 50% of individuals with suicidal intent felt that they needed help but did not reach out to anyone, with only 20% reaching out for help (Evans, Hawton, & Rodham, 2005). More specific to self-injury, 80% of college students who self-injured were not seeking mental health services (Wester & Trepal, 2010), and 88% of homeless youth who self-injured did not seek help from a medical professional (Tyler et al.,

2003). This suggests a considerable population of individuals who are not accessing help for their NSSI.

Interestingly, participants who did not reach out to anyone reported significantly fewer methods used to engage in NSSI across their lifetime than did individuals who did reach out. It may be that individuals who used more methods recognized a need to reach out for support, versus those who were utilizing only a few methods to self-injure did not consider the need for support so high. It may also be that those who reached out were faced with criticism instead of support, based on their lower scores of perceived helpfulness. When faced with harsh critique by others, NSSI behavior tends to increase (Moyer & Nelson, 2007). What is not known in the current study is whether the NSSI methods used increased after individuals reached out for help or if NSSI methods used were already high and the need for help was perceived. More longitudinal work and inquiry into this is needed. However, it should be noted that while researchers have indicated the need for social support (e.g. Turner et al., 2012; Whisenhunt et al., 2014), Buser et al. (2014), discovered through participant interviews that, at times, NSSI behaviors were extinguished due to disapproval of the behavior from others. Therefore, it may be that differentiating the harsh critique and judgment from supportive disapproval is necessary.

Family members were perceived as significantly less helpful than other supporters when they were in the network of supporters. This significant difference was not found among any other supporter in the networks. Family members may have many reactions to a loved one harming oneself. Specifically in regard to NSSI, parents of youth were found to feel guilt and shame, wondering how they had failed their child, but also question their efficacy in being able to respond to the self-injurious behaviors as well as to parent at all (Byrne et al., 2008), thereby calling into question one's own identity as a parent when NSSI emerged in the family. However, it may also be due to an already existing family dynamic of criticism and hostility that led to NSSI (Yates, Tracy, & Luthar, 2008).

Friends were represented in the majority of networks, and having friends in the network was positively related to having family or a therapist in the network as well. Given the cross-sectional nature of this study, it is difficult to interpret the direction or causality of this relationship. It could be that friends encourage the individual to seek help from family or from therapists; however, it may also be that after informing family (and potentially being disappointed in the lack of help they received from family), they reach out to friends either to complain about their family's reaction or to gain support for NSSI elsewhere. The direction of this relationship is needed, as family or friends may be a possible referral source to therapists, indicating the need to educate family and friends regarding NSSI as well as mental health referral sources.

Though it may seem like seeking out more individuals for support may be important, what is noted in the current study is that more supporters were positively related to number of lifetime NSSI methods used and negatively related to perceived helpfulness. Thus, while social support is imperative in decreasing NSSI behaviors (e.g. Whisenhunt et al., 2014), it is not the number of supporters, but the perceived helpfulness of the supporters that is important. In the current study, when individuals perceived supporters to be helpful, they did not continually seek out additional supporters. This finding suggests that one person who is perceived as helpful may be perceived as enough.

The individual supporters are also important. NSSI behaviors did not typically alter based on the specific supporter in the network. Thus, having a therapist, family member, significant other, or teacher/professor in the network did not relate to number of methods used or to current engagement in NSSI. However, having a friend as a supporter in one's network did relate to more NSSI methods used in one's lifetime. This may be due to the degree in which individuals engage in NSSI behaviors due to peer influence and social learning (Adler & Adler, 2007; Heath et al., 2009). It may also be related to social contagion and the spread of NSSI among peers (Jarvi, Jackson, Swenson, & Crawford, 2013). Adler and Adler (2007) suggested NSSI should be considered amore social deviant behavior rather than pathological behavior. This is due to the increase in prevalence of the behavior, with more and more individuals learning the behavior from peers in health classes, as well as from social media, news channels, television shows, and movies (Adler & Adler, 2007). Heath et al. (2009) found that 43% of individuals reported they learned NSSI socially from others, 22% knew someone who engaged in NSSI, and 21% reported they learned it through media. Individuals engage in NSSI at times in order to fit within social peer groups in middle and high schools. This idea fits in one of the four functions of NSSI proposed by Nock and Prinstein (2004). More information is needed on peer supporters to determine true effectiveness.

On the other end of the spectrum, from friend, participants reported fewer current NSSI methods if they had a medical professional in the network. While not many individuals sought out support from medical professionals, those that did utilized less NSSI methods. The question remains whether seeking out a medical professional was intentional and voluntary, required (e.g. NSSI resulted in severe physical harm, taken by a family member or significant other, sent by a mental health professional), or by accident (e.g. medical professional saw scars or wounds when performing another routine checkup). More information is needed to determine how or why having a medical professional in one's support network for NSSI is related to utilizing fewer NSSI methods. For example, is the reason for the relationship between support from medical professionals and fewer NSSI methods due to voluntarily seeking help for a behavior that is viewed as problematic by the individual him/herself? Or is it that a more severe wound from NSSI resulted in an emergency room visit or admittance to inpatient behavioral health treatment? In these moments, are the fewer methods used due to the actual relationship with the medical professional, the severity of the wound which may frighten the individual who self-harms, or the approach that medical professionals may take. For example, the medical professional may be less emotionally reactive and, unlike therapists, may not seek to resolve the underlying social and affective difficulties that led a person to engage in NSSI. Instead, they may solely seek to educate on the physical consequences of engaging in NSSI behaviors, which could lead to a clear understanding of the consequences of NSSI behaviors, therefore decreasing the number of methods used to self-harm. However, it may also be that individuals who seek help from medical professionals could engage in more severe forms of NSSI, resulting in greater physical damage and deeper wounds. Therefore, they may not need to engage in multiple methods to NSSI, but only use a few that are more severe in nature, resulting in the need or requirement for medical attention. The specific reasons behind this difference between number of methods used and seeking support from a medical professional were not be explored in the current study. More information is needed on the reasons why medical professionals are in the support networks, the approaches of medical professionals use when speaking to individuals who self-injure, and the perception of this interaction by the person who self-injures.

Limitations

There are limitations worth noting. First, while relationships between supporters were explored through correlations, the actual alliances and communication between supporters are not known. It is unknown how the relationships among participants and supporters contribute to the social support network or the density of networks. This unknown limits the ability to see the entire network, including referral processes, as well as how supporters may communicate with one another. The decision to not explore alliances and communication patterns between supporters is typical in SNA studies where the ties (or relationships) are evaluations that the participant cannot directly assess (e.g. frequency of communication between supporters; McCarty, 2002). Additionally, although efforts were made to contextualize the construct in the survey instructions, it is possible that some constructs (e.g. "helpful") may have been defined differently among participants. The "help" for some may have been to reduce NSSI behaviors, but for others may be defined by the NSSI promotion.

This study highlighted important elements within the social networks of those who reach out for help with NSSI. In light of the present findings, research is needed to further investigate the dynamics occurring within these social networks. For example, uncovering what responses are helpful versus not can assist families, friends, medical providers, and others to provide optimal help when called upon. Research also is needed to explore what prevents many people who self-injure from reaching out for help when needed and to examine efforts that may increase help-seeking behavior, particularly from professionals. Researchers need to focus on efforts to increase the frequency and helpfulness of therapists within these social networks. Designing, implementing, and evaluating advocacy efforts are one way to do this. NSSI participants and supporters interact to form complex social networks, and research on these dynamics can help advance our understanding of NSSI and improve prevention and intervention efforts.

Implications

Given that this is an initial, exploratory study examining support networks of those who selfinjure, this study provided a first look at the support-seeking social networks of those who engage in NSSI. As can be seen from the findings, multiple individuals need to be targeted for outreach and education and advocacy. Based on the findings, individuals to start with would be friends, family members, and mental health professionals; albeit, all individuals would benefit from education and information related to NSSI behaviors. Outreach to each of these groups is briefly described. As mentioned, friends were in the support networks more than any other individuals. Therefore, they are the most frequently sought for help for NSSI. Despite individuals describing friends as relatively helpful, having a friend in the support network was associated with higher rates of lifetime methods used to self-injure. NSSI education may assist in leveraging the perceived helpfulness to actions that may result in accessing the professional services necessary to decrease the number and frequency of NSSI methods used. While more research needs to be conducted to explore these connections in a larger sample, it seems important to focus on outreach, more specifically on what effective outreach may look like.

Given the perception of less helpfulness from family members in comparison to other supporters, involving family members in counseling, or, at minimum, providing them with information

(Trepal, Wester, & MacDonald, 2006), may help decrease negative reactions. Reactions such as guilt, shame, and anger may get in the way of providing support to an individual engaging in NSSI behaviors. Prevention and intervention efforts aimed at NSSI may be optimized by educating parents, families, and friends about NSSI, including how to respond empathically and openly, while also taking care of their own needs and reactions. Parents have expressed a need for support and advice to determine how to respond and work through feelings toward self-injury (Byrne et al., 2008).

Though it was promising to see that therapists were most often reached out to, among professionals, half of the networks excluded therapists (or any professional for that matter). Thus, future efforts are needed to increase therapist presence in the networks of those who self-injure. Advocacy is a prime way that therapists can increase the frequency for those who self-injure to reach out for mental health assistance (e.g. Lewis, House, Arnold, & Toporek, 2002). Therapists can advocate in their communities to raise awareness of NSSI and to decrease stigma. Increasing community awareness of mental health counseling services may increase familiarity with therapists and increase the frequency that people reach out, or refer, to therapists.

Notes on contributors

Kelly L. Wester is an associate professor in Counselor Education at the University of North Carolina at Greensboro. She is the author of many articles on a wide range of topics, but mostly in the area of non-suicidal self-injury, research integrity, and research training. Her goal is to find evidence-based practices and approaches in both counseling NSSI, as well as training researchers in the field of counseling.

Elysia Clemens is an associate professor of Counselor Education at the University of Northern Colorado. She has many publications and consultations regarding school counseling including school reentry, school transitions, and school success.

Bradley McKibben is an assistant professor of Counselor Education at the University of Alabama. He has conducted some research in the area of NSSI, but his primary focus is on leadership in counseling.

Disclosure statement

No potential conflict of interest was reported by the authors.

References

Adler, P. A., & Adler, P. (2005). Self-injurers as loners: The social organization of solitary deviance. *Deviant Behavior*, 26, 345–378. doi:10.1080/016396290931696

- Adler, P. A., & Adler, P. (2007). The demedicalization of self-injury: From psychopathology to sociological deviance. *Journal of Contemporary Ethnography*, *36*, 537–570.
- Ali, M., & Dwyer, D. (2010). Social network effects in alcohol consumption among adolescents. *Addictive Behaviors*, *35*, 337–342. doi:10.1016/j.addbeh.2009.12.002

- Andover, M. S., Primack, J. M., Gibb, B. E., & Pepper, C. M. (2010). An examination of nonsuicidal self-injury in men: Do men differ from women in basic NSSI characteristics? *Archives of Suicide Research*, 14, 79–88. doi:10.1080/13811110903479086
- Berger, E., Hasking, P., & Martin, G. (2013). 'Listen to them': Adolescents' views on helping young people who self-injure.*Journal of Adolescence*, *36*, 935–945. doi:10.1016/j.adolescence.2013.07.011
- Burt, R. S. (1984). Network items and the general social survey. *Social Networks*, *6*, 293–339. doi:10.1016/0378-8733(84)90007-8
- Buser, T. J., Pitchko, A., & Buser, J. K. (2014). Naturalistic recovery from nonsuicidal selfinjury: A phenomenological inquiry. *Journal of Counseling & Development*, 438–446.
- Byrne, S., Morgan, S., Fitzpatrick, C., Boylan, C., Crowley, S., Gahan, H., ... Guerin, S. (2008). Deliberate self-harm in children and adolescents: A qualitative study exploring the needs of parents and carers. *Clinical Child Psychology and Psychiatry*, 13, 493–504. doi:10.1177/1359104508096765
- Campbell, K., & Lee, B. E. (1991). Name generators in surveys of personal networks. *Social Networks*, 13, 203–221. doi:10.1016/0378-8733(91)90006-F
- Carrington, P., Scott, J., & Wasserman, S. (Eds.). (2005). Models and methods in social network analysis. Cambridge: Cambridge University Press. doi:10.1017/CBO9780511811395
- Chandler, A. (2013). Inviting pain? Pain, dualism and embodiment in narratives of selfinjury. *Sociology of Health & Illness*, *35*, 716–730. doi:10.1111/j.1467-9566.2012.01523.x
- Evans, E., Hawton, K., & Rodham, K. (2005). In what ways are adolescents who engage in selfharm or experience thoughts of self-harm different in terms of help-seeking, communication, and coping strategies? *Journal of Adolescence*, 28, 573–587. doi:10.1016/j.adolescence.2004.11.001
- Glenn, C. R., & Klonsky, E. D. (2009). Social context during non-suicidal self-injury indicates suicide risk. *Personality and Individual Differences*, 46, 25–29. doi:10.1016/j.paid.2008.08.020
- Gratz, K. L. (2001). Measurement of deliberate self-harm: Preliminary data on the deliberate self-harm inventory. *Journal of Psychopathology and Behavioral Assessment, 23*, 253–263. doi:10.1023/A:1012779403943
- Heath, N. L., Ross, S., Toste, J. R., Charlebois, A., & Nedecheva, T. (2009). Retrospective analysis of social factors and nonsuicidal self-injury among young adults. *Canadian Journal of Behavioural Science/Revue canadienne des sciences du comportement, 41*, 180–186. doi:10.1037/a0015732
- Jarvi, S., Jackson, B., Swenson, L., & Crawford, H. (2013). The impact of social contagion on non-suicidal self-injury: A review of the literature. *Archives of Suicide Research*, 17, 1– 19. doi:10.1080/13811118.2013.748404
- Lewis, J. A., House, M. S., Arnold, R., & Toporek, R. L. (2002). ACA advocacy competencies. Retrieved from

http://www.counseling.org/docs/competencies/advocacy_competencies.pdf?sfvrsn=3

Lloyd-Richardson, E. E., Perrine, N., & Dierker, L., & Kelley, M. L. (2007). Characteristics and functions of non-suicidal self-injury in a community sample of adolescents. *Psychological Medicine*, 37, 1183–1192. doi:10.1017/S003329170700027X

- McCarty, C. (2002). Structure in personal networks. *Journal of Social Structure*, *3* (1) Retrieved from https://www.cmu.edu/joss/content/articles/volume3/McCarty.html.
- Milardo, R. (1992). Comparative methods for delineating social networks. *Journal of Social and Personal Relationships*, 9, 447–461. doi:10.1177/0265407592093007
- Moyer, M., & Nelson, K. W. (2007). Investigating and understanding self-mutilation: The student voice. *Professional School Counseling*, *11*, 42–48. doi:10.5330/PSC.n.2010-11.42
- Murray, C., Wester, K. L., & Paladino, D. (2008). Dating violence and self-injury among undergraduate college students: Attitudes and experiences. *Journal of College Counseling*, *11*, 42–57.
- Nock, M. K. (2009). Why do people hurt themselves? New insights into the nature and functions of self-injury. *Current Directions in Psychological Science*, *18*, 78–83. doi:10.1111/j.1467-8721.2009.01613.x
- Nock, M. K., Joiner, T. E., Gordon, K. H., Lloyd-Richardson, E., & Prinstein, M. J. (2006). Nonsuicidal self-injury among adolescents: Diagnostic correlates and relation to suicide attempts. *Psychiatry Research*, 144, 65–72. doi:10.1016/j.psychres.2006.05.010
- Nock, M. K., & Prinstein, M. J. (2004). A functional approach to the assessment of selfmutilative behavior. *Journal of Consulting and Clinical Psychology*, 72, 885–890.
- Nock, M. K., Prinstein, J., & Sterba, S. (2010). Revealing the form and function of self-injurious thoughts and behaviors: A real time ecological assessment study among adolescents and young adults. *Psychology of Violence*, *1*, 36–52.
- Rotolone, C., & Martin, G. (2012). Giving up self-injury: A comparison of everyday social and personal resources in past versus current self-injurers. *Archives of Suicide Research*, 16, 147–158. doi:10.1080/13811118.2012.667333
- Trepal, H. C., Wester, K. L., & MacDonald, C. A. (2006). Self-injury and postvention: Responding to the family in crisis. *The Family Journal*, 14, 342–348. doi:10.1177/1066480706291128
- Turner, B. J., Chapman, A. L., & Layden, B. K. (2012). Intrapersonal and interpersonal functions of non suicidal self-injury: Associations with emotional and social functioning. *Suicide* and Life Threatening Behavior, 42, 36–55. doi:10.1111/j.1943-278X.2011.00069.x
- Tyler, K. (2008). Social network characteristics and risky sexual and drug related behaviors among homeless young adults. *Social Science Research*, *37*, 674–685. doi:10.1016/j.ssresearch.2007.09.004
- Tyler, K., Whitbeck, L. B., Hoyt, D. R., & Johnson, K. D. (2003). Self-mutilation and homeless youth: The role of family abuse, street experiences, and mental disorders. *Journal of Research on Adolescence*, 13, 457–474.
- Walsh, B. (2012). *Treating self-injury: A practical guide* (2nd ed.). New York, NY: Guilford Press.
- Wasserman, S., & Faust, K. (1994). Social network analysis: Methods and application. Cambridge: Cambridge University Press. doi:10.1017/CBO9780511815478
- Wester, K. L., Ivers, N., Villalba, J. A., & Trepal, H. C. (in press). The link between lifetime and current NSSI behaviors, family connectedness, locus of control, and suicidal ideation. *Journal of Counseling & Development*.
- Wester, K. L., & Trepal, H. C. (2010). Coping behaviors, abuse history, and counseling: Differentiating college students who self-injure. *Journal of College Counseling*, *13*, 141–154. doi:10.1002/j.2161-1882.2010.tb00055.x

- Wester, K. L., & Trepal, H. C. (2015). Nonsuicidal self-injury: Exploring the connection among race, ethnic identity, and ethnic belonging. *Journal of College Student Development*, 56, 127–139. doi:10.1353/csd.2015.0013
- Whisenhunt, J. L., Chang, C. Y., Flowers, L. R., Brack, G. L., O'Hara, C., & Raines, T. C. (2014). Working with clients who self-injure: A grounded theory approach. *Journal of Counseling and Educational Development*, 92, 387–397.
- Wichstrom, L. (2009). Predictors of non-suicidal self-injury versus attempted suicide: Similar or different? *Archives of Suicide Research*, *13*, 105–122. doi:10.1080/13811110902834992
- Yates, T., Tracy, A., & Luthar, S. (2008). Nonsuicidal self-injury among "privileged" youths: Longitudinal and cross-sectional approaches to developmental process. *Journal of Consulting and Clinical Psychology*, 76, 52–62. doi:10.1037/0022-006X.76.1.52