Analysis of a social media page used to support individuals who have been affected by

Methamphetamine

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Table of Contents

List of Tables

Abstract

Methamphetamine is an illicit and addictive psychostimulant that remains a significant cause of economic burden in Australia. Social media is increasingly being used by non-government organisations and health services to encourage the growth of social support networks amongst people with health-related issues. Several studies have investigated the utility of social media in providing social support to groups of people with health-related issues. However, limited research exists exploring how people affected by methamphetamine use social media for social support. The present study aimed to determine the types of support being sought by people affected by methamphetamine when accessing a Facebook support page. 2000 unique posts were coded using content analysis. Emotional support was found to be the most offered support type, followed by esteem support, with network support and tangible support being the least offered support types. The present study demonstrates that online social support groups can be effective in challenging stigma by encouraging people affected by methamphetamine to connect with each other and talk about their struggles. This in turn represents an important step towards successful rehabilitation.

Declaration

This thesis contains no material which has been accepted for the award of any other degree of diploma in any University, and, to the best of my knowledge, this thesis contains no material previously published except where due reference is made. I give permission for the digital version of this thesis to be made available on the web, via the University of Adelaide's digital thesis repository, the Library Search and through web search engines, unless permission has been granted by the School to restrict access for a period of time.

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1. Introduction

1.1 Methamphetamine use in Australia

Methamphetamine is an illicit psychostimulant that is available in three distinct forms: powder ('speed'), base methamphetamine ('base'), and crystalline methamphetamine ('ice' or 'crystal meth'), with crystal methamphetamine being the most potent form (Topp, Degenhardt, Kaye & Darke, 2002). Findings of the 2016 National Drug Strategy Household Survey showed that 1.4% of Australians aged 14 or older reported recent use of methamphetamines (Australian Institute of Health and Welfare, 2017). Despite the overall decline in methamphetamine use between 2013 to 2016, the use of crystal methamphetamine in Australia increased from 0.4% to 0.8% between 2010 to 2016 (Australian Institute of Health and Welfare, 2017). Furthermore, findings of the Illicit Drug Reporting System's (IDRS) 2017 National Report show that crystal meth remains the most commonly used form of methamphetamine amongst illicit drug users in Australia (Karlsson & Burns, 2018). The report also indicates that most participants consider all forms of methamphetamine to be easy to obtain (Karlsson & Burns, 2018). Taken together, these findings indicate that methamphetamine use remains a prevalent issue in Australia.

Research has shown that methamphetamine use is associated with higher prevalence of anxiety, major depression, and suicide than the general population (Zweban et al., 2004; Darke et al., 2008). Moreover, unlike opioids such as heroin, methamphetamine can induce psychosis characterised by auditory and/or visual hallucinations and persecutory delusions (McKetin, McLaren, Lubman & Hides, 2006; Darke, Kaye, McKetin & Duflou, 2008). The symptoms of methamphetamine psychosis are typically brief, but severe cases can lead to hospitalisation (Degenhardt, Roxburgh & McKetin, 2007; Darke et al., 2008). Chronic methamphetamine-

induced psychosis is difficult to distinguish from the symptoms of schizophrenia on hospital presentation, and it can take days for clinicians to distinguish a case of methamphetamine-induced psychosis from schizophrenia (Zweban et al., 2004; Fulde & Wodak, 2007). As such, methamphetamine-related hospital presentations require prolonged admissions and substantial resources, placing a significant economic burden on the Australian healthcare system (Fulde & Wodak, 2007).

In addition, psychosis is sometimes accompanied by aggressive behaviour (Sommers, Baskin & Baskin-Sommers, 2006). Psychotic symptoms, particularly persecutory delusions, can make non-threatening situations appear threatening to a methamphetamine user, and can result in violent resolutions (Sommers et al., 2006). The difficulty in dealing with methamphetamine-related violence places a resource burden upon emergency frontline services (Degenhardt et al., 2008). Methamphetamine-related violence is also prevalent in the form of criminal activity (Degenhardt et al., 2008) and domestic violence (Sommers et al., 2006; McKetin et al., 2014). Thus, methamphetamine has negative impacts not only on users but also on family and the people around them.

1.2. Social support & mental health

Social support has been defined as the information that an individual receives from family, friends, peers, or strangers, which makes them feel loved, valued, or part of a wider network (Cobb, 1976). It has also been defined as the network of family, friends, neighbours and community members that is available in times of need to provide psychological, physical, and financial help (Ozbay et al., 2007). Previous research has examined social networks in terms of two main dimensions: a structural dimension, which considers network size and frequency of

social interactions, and a functional dimension, which considers the emotional and practical components of a social interaction (Ozbay et al., 2007). Although the quality and quantity of social networks are both important, most studies have found that quality of relationships are a better predictor of mental health (Ozbay et al., 2007).

The literature indicates that social support is essential to maintaining psychological wellbeing. Increased social support appears to function as a protective buffer against stress from adverse life events, thereby enhancing resilience to stress (Southwick, Vythilingam & Charney, 2005). Social support has also been found to be a key factor in decreased risk of depression (Coursaris & Liu, 2009; Evans, Donelle & Hume-Loveland, 2012). Previous research found that a lack of adequate social support and smaller social networks was linked to higher levels of stress and risk of depressive symptoms (Kawachi & Berkman, 2001; Southwick et al., 2005).

Two main explanations have been put forward to explain how social support enhances resilience to stress. The first explanation is that social support fosters healthier coping strategies and provides the individual with knowledge, improving their self-efficacy and enabling them to deal with stress more effectively (Southwick et al., 2005; Coursaris & Liu, 2009). The second explanation is that social support helps individuals to overcome feelings of loneliness, which enables them to experience hope (Southwick et al., 2005; Naslund, Aschbrenner, Marsch & Bartels, 2016). Whilst the exact neurobiological mechanisms of social support are not completely understood (Ozbay et al., 2007), it is clear from the literature that social support can positively impact mental health.

1.3. Social media & online support groups

Social media can be defined as a group of internet-based applications that allow the creation and exchange of user generated content (Kaplan & Haenlein, 2010). The use of social media has become commonplace in Australia, with 79% of the population maintaining a social media profile (Sensis, 2017). Whilst many people use social media to connect with family and friends, social media has also been used to form communities of specific interest (Colineau & Paris, 2010). Online support groups are one such example of this. With the rise of social media, an increasing number of people have turned to online support groups as an alternative to face-to-face support.

Several studies have shown that online support groups possess many advantages over face-to-face support, which explain its widespread use. Social media is accessible to anyone with an internet connection. This makes online support groups especially useful for people with limited mobility due to disability (Braithwaite, Waldron & Finn, 1999). Online support groups also take place without the constraints of time, distance, and social status (Braithwaite et al., 1999; Coulson, Buchanan & Aubeeluck, 2007). This allows for individuals to reply to messages at their own pace, which is not only convenient but also empowering for people who find face-to-face communication difficult.

Furthermore, online support groups provide individuals with safe, non-judgmental places where they may express negative feelings that may be viewed as objectionable (Evans et al., 2012). The option of anonymity can also facilitate greater self-disclosure due to less fear of stigmatisation (Coulson et al., 2007; Coursaris & Liu, 2009). Finally, social media enables individuals to communicate with a varied range of people offering diverse perspectives and

information (Coulson et al., 2007). In some cases, online support groups may be a more preferable option than family, as they are able to receive support whilst maintaining a comfortable emotional distance (Colineau & Paris, 2010).

1.4. Category systems of social support

A number of studies have developed category systems in order to investigate the types of social support sought by individuals using online support groups. Cobb (1976) constructed a simple system which categorised social support into three main categories: emotional support (information that one is cared for and loved), esteem support (information that one is valued), and network support (information that gives one a sense of belonging). House (1981) created a matrix which defined four broad categories of support; emotional support, appraisal support (affirmations or feedback), informational support (advice or suggestions), and instrumental support (financial or physical aid). Kalichman, Sikkema & Somlai (1996) constructed a similar system which categorised social support into three categories: emotional, informational, and instrumental support.

Cutrona & Suhr's (1992) Social Support Behaviour Code (SSBC) is a widely used category system that was developed to measure the frequency of supportive behaviours. The SSBC consists of 23 supportive behaviours which are encompassed by five broad categories of support: informational, emotional, esteem, network, and tangible support. The items were developed using previous studies of social support and were validated in a study of dyadic interaction among college students (Cutrona & Suhr, 1992). The SSBC has been adapted to studies focusing on people with disabilities (Braithwaite et al., 1999), Huntington's disease (Coulson et al., 2007), HIV/AIDS (Coursaris & Liu, 2009), cancer (Coulson & Greenwood, 2012), autism spectrum

disorder (Mohd Roffeei, Abdullah & Basar, 2015), depression (Beck, Paskewitz, Anderson, Bourdeaux & Currie-Mueller, 2017), and bariatric surgery patients (Atwood, Friedman, Meisner & Cassin, 2018).

1.5. Methamphetamine and social media

Numerous studies have investigated how people use online support groups for social support. A majority of the literature indicates that informational and emotional support tend to be the most frequently offered support types, with tangible support tending to be the least frequently offered type of support (Coulson et al., 2007; Coursaris & Liu, 2009; Mohd Roffeei et al., 2015; Atwood et al., 2018). With regards to drugs, at least one study has examined how individuals use social media to exchange information about novel psychoactive substances (Soussan & Kjellgrem, 2014). However, there appears to be little research focusing on how people affected by methamphetamine use online support groups for social support.

Social media holds much potential for use by healthcare in providing people affected by methamphetamine with access to social support. The first advantage of social media is its ability to reach a specific audience regardless of location. This is especially relevant in the case of methamphetamine addiction, which is notably more prominent amongst Australians living in rural and remote areas. Findings of the 2016 National Drug Strategy Household Survey indicated that people in remote and very remote areas were 2.5 times as likely to use methamphetamines than those living in major cities (Australian Institute of Health and Welfare, 2017). Griffiths & Christensen's (2007) systematic review of two Australian web-based mental health programs (MoodGYM and BluePages) indicated that online mental health interventions are effective in reducing depressive symptoms. One study that was included in the review indicated that 20.5%

of spontaneous MoodGYM users are from rural or remote areas, suggesting that online interventions are relevant to people living in rural and remote areas (Griffiths & Christensen, 2007). Social media may therefore prove useful for people living in rural and remote area in seeking social support for methamphetamine addiction.

The second advantage of social media is its potential to challenge stigmatisation, another issue that is relevant to methamphetamine addiction. Chalmers, Lancaster and Hughes' (2016) study found that increases in stigmatizing media attention towards crystal methamphetamine in Australia were associated with under-reporting of lifetime methamphetamine use in population surveys. Moreover, individuals affected by methamphetamine addiction in Australian Aboriginal communities often experience intense shame, which has prevented some individuals and their families from seeking help (MacLean, Hengsen & Stephens, 2017). In turn, social media could provide these people with access to social support without fear of stigmatisation. Previous research shows that people with diseases that are considered stigmatizing, such as HIV and prostate cancer, were more likely to use online support groups for social support than people with diseases that were not stigmatizing (Davison, Pennebaker & Dickerson, 2000). It is reasonable to believe that people affected by methamphetamine may be willing to engage with online support groups.

Finally, research shows that social media can play an important role in changing health behaviour. In Maher et al.'s (2014) systematic review of studies focusing on health behaviour change interventions using online social networks, nine of the 10 included studies were found to have reported significant improvements in some aspect of health behaviour change. This may be due to the interactive nature of social media. As social media users are required to actively generate content, social media is able to achieve higher rates of user engagement than traditional

websites (Maher et al., 2014). Taken together, these points demonstrate the potential of social media in providing people affected by methamphetamine with access to social support, which represents the first step towards rehabilitation.

1.6. Current study

The objective of the present study is to explore how people affected by methamphetamine use online support groups to provide social support to each other. The present study therefore aims to determine the types and amounts of support exchanged by people affected by methamphetamine in an online support group on Facebook. This will be investigated using a content-analysis approach. Based on previous findings in the literature, it is hypothesised that informational support and emotional support will be the two most frequently offered support types, and that tangible support will be the least frequently offered support type. Exploring the types of support being exchanged online by people affected by methamphetamine may reveal information unique to these people, which could be useful in developing social media resources tailored to these people.

2. Method

2.1. Participants

The participants of this study were members who posted messages on the Facebook page "Never Give up Giving up Ice, Drugs". The page was created by an Aboriginal Australian individual who overcame methamphetamine addiction and was intended to be used as an online space where people affected by methamphetamine could connect with each other. Participants were required to have a Facebook profile to post on the page and were able to request for the page administrator to post their messages anonymously if desired. Online interactions took place in the form of opening posts and responding posts. The page was active between December 2014 to February 2017 and generated a total of 14,777 posts. 5719 unique user names were identified which included individuals' names, organisation names, and posts labeled "Never Give up Giving up', which were made by the administrator of the page, either for himself or on behalf of others. Due to the online nature of the data, sociodemographic characteristics of the participants were unable to be obtained. All posts were collected from the page and placed into an Excel document. Saturation was reached at 2000 posts, which were used for content and thematic analysis.

2.2. Ethical considerations

Research involving social media can be an area of ethical concern due to issues of privacy, consent, and the potential for data to be misused. Researchers who have commented on these issues have acknowledged Facebook groups that require specific registration or passwords as private domains which require individual consent from participants. Conversely, data from Facebook groups that do not require specific registration are considered to be in the public

domain. For the present study, data was collected from a Facebook page that did not require specific registration or a password. The data was available to the public and ethics approval was therefore not required. All data has been de-identified to ensure anonymity of participants and prevent misuse of data.

2.3. Data analysis

Content analysis was used to examine determine the types and amounts of support being exchanged within the posts. Cutrona & Suhr's (1992) Social Support Behaviours Code was adapted for use in this study. This model was chosen as it has been used in several previous studies examining social support exchanges on social media. The five categories of social support and their definitions in the present study were: informational support (i.e. posts that provided advice or knowledge), emotional support (i.e. encouragement or empathy), esteem support (i.e. compliments or validation), network support (i.e. emphasising companionship), and tangible support (i.e. offering physical or financial aid). Each category also contained a number of subcategories. A comprehensive table of all 23 subcategories and their definitions is provided in Appendix A. Posts were coded according to these categories and could be coded into more than one category of support.

3. Results

A total of 2000 posts were coded. Table 1 shows the frequency counts for each support category. As can be seen, majority of the posts offered emotional support (42.1% of total) and esteem support (40.4%), followed by informational support (24.4%), with network support (2.3%), and tangible support (1.7%) being the least offered. A considerable number of posts (27.2%) contained information that did not fit into any of these five categories and were coded as 'other'.

3.1. Informational support

Informational support was separated into five subcategories: (a) advice, (b) referrals, (c) situation appraisals, (d) teaching, and (e) other. Advice included posts that provided guidance in dealing with challenges. A common situation that participants sought advice for in opening posts was dealing with a partner addicted to methamphetamine, which involved issues such as domestic violence and the uncertainty of knowing whether their partners were clean (not using methamphetamine) or not. Some examples of advice that participants provided in responding posts included:

> *"Keep yourself and yr kids safe too..get legal advice and hopefully everything falls into place..good luck"*

> *"Write down all the reasons to stay with him, and all the reasons to leave him. Then make a decision."*

Table 1: Frequencies and percentages of each support category for (n = 2000) posts.

Support Category	Sub-category	Count	% of Total
Informational support		*484*	*24.2*
	Advice	279	14.0
	Referral	29	1.5
	Situation appraisal	43	2.2
	Teaching	37	1.9
	Other (informational)	96	4.8
Emotional support		*841*	*42.1*
	Relationship	30	1.5
	Physical affection	109	5.5
	Confidentiality	0	0
	Sympathy	23	1.2
	Empathy	64	3.2
	Encouragement	360	18.0
	Prayer	18	0.9
	Other (emotional)	237	11.9
Esteem support		*808*	*40.4*
	Compliment	371	18.6
	Validation	429	21.5
	Relief of blame	8	0.4
	Other (esteem)	0	0
Network support		*45*	*2.3*
	Access	7	0.4
	Presence	23	1.2
	Companionship	15	0.8
	Other (network)	0	0
Tangible support		*34*	*1.7*
	Loan	0	0
	Perform direct task	2	0.1
	Perform indirect task	5	0.3
	Active participation	26	1.3
	Express willingness	1	0.1
	Other (tangible)	0	0
Other		*543*	*27.2*
	Anti-ice sentiment	40	2.0
	Congratulations	108	5.4
	Inaccessible	24	1.2
	Shared post	51	2.6
	Situation details	44	2.2
	Thanking	162	8.1
	Unrelated	114	5.7

> *"Contact your local family violence service. You, and your children, are victims. If not for yourself, do it for them."*

> *"Buy a test on the day you think he might be on it and ask him to do it he wouldn't refuse if he has nothing to hide best of luck"*

Advice was also provided for individuals considering rehabilitation. For example, one participant expressed the importance of immediate rehabilitation in their reply below:

> *"Rehab now. It only gets worse. Relapsing is easy, getting clean is hard. The longer the wait, the harder the work. It's going to be hard no matter what. Anything worth having is worth the work."*

Advice was also sought in opening posts for dealing with relapses. Below is a responding post to an individual who felt demotivated after experiencing a relapse of methamphetamine use:

> *"You were and are doing so well. Relapses happen and the worst thing you can do is wallow in your mistake. I often feel the way you do and sometimes only not having the means is the only thing to stop uou so delete numbers and contacts related to it! Block n delete anyone that can/will get it for you if you ask n beg! Get tid off all paraphanalia, anything that remins you or enbles you and keep going! You can do it! Take this time to rest n self care, you'll need it for tomorrow, it's a new day and you've got work and you want to keep that going :)."*

Referrals included posts that directed individuals to a source of expertise. Participants often recommended websites to individuals in their replies:

"We're running a couple of sessions of our free Methamphetamine Family First Aid program later in October. The program has been developed together with affected family members. See our website for details"

"Have a look at the Get Off Drugs Naturally page 'Anonymous'. They appear to have excellent results with a remarkably high success rate. Also read some of the success stories from those who've completed the program. Probably your best bet I reckon."

Participants also recommended professionals and rehabilitation programs to individuals, as seen in the replies below:

"[name de-identified] & the TIMP team plus Transform Your Life! They're wonderful people&may be near you if you are in Victoria. Best wishes,it's tuff stuff but it's worth it!"

"I highly recommend Teen Challenge. I went through the Program there & have been clean for 4 years. I was a Speed Addict for 17 years. There is a Re hab called Cyrenian House in Wa and that has a Mothers Program where u can live with ur Child while u do Re hab. Praying that your daughter get the help she needs"

Situation appraisals included posts that reassessed a situation in a manner that aimed to help the recipient view the situation more positively or reveal new information that could be helpful. This was commonly offered to individuals dealing with relapse, as seen in the replies below:

"It's amazing the love & care that comes from being part of these lovely pages,hey? Relapse-just a learning curve not a life sentence...keep punching mate!!"

> *"It's a lapse only, remember a lapse is part of recovery. Keep going and remember how far you have come already."*

Teaching included posts that provided factual information. Participants offered this in replies to individuals who wanted to know how to determine if their partners were clean or not. For example:

> *"You can tell if an addicts clean by just looking at them;there not twitching;restless;moving or anxious;there skin and eyes come back to life and they just look healthier;most addicts are easily red"*

> *"72 hours for ice rmthats min"*

> *"Urine tests are more accurate than blood tests because the drugs are excreted through the urine thus more concertrated for testing."*

Other (informational) included posts which were categorised as informational support but did not fit into any of the preexisting sub-categories. These posts tended to provide insights based on personal experience. For example, one participant posted in their reply to another individual seeking information about rehabilitation centres:

> *"Rehab is not a magic fix, its a place addicts can go to be supported through a big lifestyle change it all depends on the person if you truely want to be clean you will be, I went to rehab and have been clean almost a year, I've never wanted something so bad, and never been so proud of myself"*

Another participant posted the following reply to an individual seeking help in dealing with a partner who had relapsed:

> *"I only quit when I hit rock bottom and had lost contact with everyone close to me. Up until that point I would dismiss having a problem, and only promised to change- with no intentions. He has to want to quit first."*

3.2. Emotional support

Emotional support was separated into eight subcategories: (a) relationship, (b) physical affection, (c) confidentiality, (d) sympathy, (e) empathy, (f) encouragement, (g) prayer, and (h) other. Posts in the relationship subcategory included messages that emphasized closeness and love with the recipient and were often posted by participants to family members. For example:

> *"My beautiful girl it kills me 2 c u so lost like this. U need 2 fight this battle once and for all. We need our beautiful strong daughter back ur gorgous boys need ther mum back. U can fight this devil. U can get ur life back. We will always hold ur heart with us, and the best of u hasnt gone its just a little lost so please fight this devil dont let it win. We no u r trying i no it will take 1 day at a time, wher not going anywhere we will b rite here with you , for you. Luv u my daughter with al my heart & sole. Please come back 2 us xxx"*

> *"More proud than you will ever know....love you my precious son xxx"*

Physical affection included posts that expressed physical contact verbally. Posts that contained hugs and kisses ('X' and 'O') were included and comprised most of the posts in this

subcategory. To illustrate, one participant provided support to another individual dealing with a partner addicted to methamphetamine by posting the reply below:

> *"Good on you for staying clean even though you are in the middle of it! That proves you have strength.   now you just need to use that strength to do whats best for you and your baby. Big hugs xxx"*

Confidentiality included posts that promised to keep recipients' problems and situations in confidence. In the data, no examples of confidentiality were found.

Sympathy included posts that expressed compassion or sorrow for the recipient. To illustrate, one participant provided sympathy to another participant dealing with domestic violence caused by methamphetamine addiction:

> *"I so feel for you, makes me so so sad. You really need to stay away from him, let him hit rock bottom, because until then he will continue to hurt,lie,steal & all the rest of the heart ache that comes along from this drug, it will be hard for you, tomorrow is a new day"*

Empathy included posts that expressed understanding or emphasised the similarity of the recipient's situation to one's own experience. The post below is a response that was provided by a participant to an individual seeking support for partner undergoing rehabilitation whilst refusing to keep in contact:

> *"I am in the same hell mate. I was kicked to the curb for much the same. My partner will never take me back sometimes things fail for more than one reason. U need to be a bit selfish mate and make yourself happy."*

Encouragement was the most frequently offered subcategory (18% of total) of emotional support and included posts that were intended to instill hope and confidence in the recipient. Encouragement was offered by participants in most situations. For example, one participant encouraged an individual to persevere in looking after their children as a single parent:

"Hang in there mate as long as there dad is there to love them and care for them that's the main thing. Most the time it's around the other way, my kids dad is the same as girlfriend. I hope she wakes up & smells the roses before its to late"

Prayer messages were occasionally offered by some participants to individuals who were undergoing difficult situations. For example:

"Oh you poor darlin some times your heart rules every thing.... keep him at bay honey enough is enough surely you must see the warning signs you sound like a strong loving girl dont change just keep one step ahead, keeping you in my thoughts and praying this man seeks help good luck xxx"

Other (emotional) included posts which did not fit into any of the preexisting sub-categories. These posts mainly included messages that expressed supportive sentiments (i.e. "all the best" and "good luck"), but also included those that expressed concern or used emojis (i.e. smileys). For example:

"Omg your amazing... l hope your life is full to the brim with happiness thk you for sharing xx"

3.3. Esteem support

Esteem support was separated into four subcategories: (a) compliments, (b) validation, (c) relief of blame, and (d) other. Compliments represented the second-most frequently offered subcategory of all support categories (18.6% of all posts) and included posts that conveyed a positive assessment of the recipient's efforts or qualities. Compliments were a common response to individuals posting about their triumphs in overcoming methamphetamine addiction:

> *"Far out the difference you look amazing mate keep it up... I know it hard keep doing what your doing"*

> *"Good job keep it up u look fantastic now :)"*

> *"Well done you...You have great strength & a winning attitude. So lovely to hear positive news. Thankyou"*

Validation posts were the most frequently offered subcategory of all support categories (21.5% of all posts) and included posts that expressed agreement with the recipient's beliefs, actions, thoughts, emotions, or perspectives. As with compliments, validation was commonly offered as a response to individuals posting about overcoming methamphetamine addiction:

> *"Good on you mate"*

> *"Proud of you--looking good --keep it up x"*

> *"Congratulations,,well done ,,keep up every one will be proud of you"*

The relief of blame subcategory included posts intended to alleviate the recipient's feelings of guilt about a particular situation. In comparison to compliments and validation, relief of blame

posts were extremely uncommon and almost exclusively offered to one individual who felt demotivated after experiencing a relapse. For example, one participant posted:

> *"Don't be to hard on yourself honey. Don't give up. Work tmrw, be strong. It will all be good again yl see. Xxxxxx"*

Other (esteem) included posts which did not fit into any of the preexisting sub-categories. Posts that could be coded in this subcategory were not found in the data.

3.4. Network support

Network support was separated into four subcategories: (a) access, (b) presence, (c) companionship, and (d) other. Access included posts that intended to provided recipients with means to new contacts and companions who may share similar interests or concerns. For example, one participant posted:

> *"If you need some support from others in the same position as you msg me :) I run a support group for family members of ice addicts. It's a private group and it's a safe place to get advice :)"*

Presence included posts where participants offered their own presence, in the form of listening for example, to another individual for support. This was occasionally offered by participants in various situations. Several participants offered presence in their replies to an individual who left their partner due to methamphetamine-related violence:

> *"Im in QLD, if you feel like chatting pm me, I'm busy with kids but will msg back when I can :)."*

"Inbox me if u need a talk love"

"Good on you for turning your life around!!!:) you should be really proud of yourself. I'm really sorry though, the group I run is strictly to support family members of addicts. Feel free to msg me privately if you need someone to talk too."

Companionship included posts that emphasised the availability of other people who have similar interests or experiences. This differs from access, which were often written in the form of an invitation. Companionship was often offered by participants in their responses to individuals posting about overcoming methamphetamine addiction. For example:

"we are all here for you guys and gals.........you are absolutely wonderful - get those heads up, smile on your dial and song in your voice x"

Other (network) included posts which did not fit into any of the preexisting sub-categories. Posts that could be coded in this subcategory were not found in the data.

3.5. Tangible support

Tangible support was support was separated into six subcategories: (a) loans, (b) perform direct task, (c) perform indirect task, (d) active participation, (e) express willingness, and (f) other. Loans included messages that offered to lend recipients a material object or money. Examples of loans were not found in the data.

Direct and indirect task messages included posts in which participants offered to handle a task that was either directly or indirectly related to the cause of the recipient's stress. Only two examples of participants offering direct assistance were found. One participant was a

professional offering their services free of charge to any other members who wanted to overcome methamphetamine addiction. The other participant was a member who offered to help an individual find support for domestic violence, as shown in the reply below:

> *"Where in Victoria are your family? I could find a support service that could help get you out of QLD and back to Victoria, back to support and people that can help. Even get the police to help they are really good when you need support.. You've done the right thing I just hope you can find the strength to keep going the way you are!! much love your way xxxooo"*

Five posts that were categorised as indirect task messages. One of these was a request from one participant to a family member to tag another family member to the page. The other four were requests for an individual to present as a guest speaker in a particular area, as seen below:

> *"The Riverland is in need. Are you coming this way"*

> *"Come to Perth"*

> *"Logan needs u we got nothing up here in QLD"*

> *"WA needs you too brother"*

Active participation included posts that contained offers to join an individual in an activity. Majority of posts in this subcategory were requests for other members to share websites, videos, experiences, and requests for petition signatures. For example:

> *"This, is a really hard thing to talk about.... Please share and watch this... The feels are real, the Situation is real... ICE ADDICTION..."*

"Please keep putting your stories out there people, this drug destroys lives! Thankyou"

"I would like to submit my PETITION & put my hat in the ring to be a community member on the QLD TASK FORCE.....would you PLEASE SIGN & SHARE - TIME IS TICKING - Petition for the Qld Premiere for change on how Meth (ICE) addiction is being managed in our State. The Detox/Rehabs, Mental Health Services and Judicial Systems are failing. Families of Addicts have minimal resources or support in our Qld communities. Internally Grateful <3"

Express willingness included posts that expressed readiness to help without specifying the exact nature of help that will be given. Only one post was found for this subcategory, which was an opening post directed to the page administrator:

"hi you are a great man person coming from the darkesnt too the light so proud of you cheers hope I can help you coming too Tasmania in any way"

Other (tangible) included posts which did not fit into any of the preexisting sub-categories. Posts that could be coded in this subcategory were not found in the data.

3.6. Other

Posts which contained information that did not fit into any of the five pre-existing support categories in Cutrona & Suhr's SSBC were coded as 'other'. Most of these categories were not forms of support from one individual to another. Anti-ice sentiment refers to posts which expressed negative views of methamphetamine. These were not directed at any particular individual and expressed opinions that were often shared by other members of the page. Congratulatory posts were posted by participants to individuals who posted about their successes

in overcoming methamphetamine addiction and remaining clean. Inaccessible refers to posts which contained links that were no longer accessible. Shared posts refer to posts in which one participant tagged another individual to direct them to the page. Situation details refers to posts in which a participant provided information on their situation. Thanking refers to posts where participants expressed their gratitude to another individual. Unrelated refers to posts that were not relevant to methamphetamine or the provision of social support.

4. Discussion

4.1. Overview of findings

The findings indicated that emotional and esteem support were the two most frequently provided support types, whilst tangible support was found to be the least frequently provided support type. As such, partial support was found for the hypothesis that informational support and emotional support would be the most frequently offered support types, as only emotional support was found to be one of the two most frequently offered types. The findings provided support for the hypothesis that tangible support would be the least frequently provided support type.

Informational support was noticeably less prominent in the present study compared to previous studies (Coulson et al., 2007; Coursaris & Liu, 2009; Atwood et al., 2018). This may be because the needs of these participants were more emotional in nature, considering the difficult and personal situations that many participants had to face. Informational support appeared to be particularly sought after by and offered to participants experiencing domestic violence and participants who have relapsed into methamphetamine use. Advice may have proved especially useful to these participants in empowering them with the self-efficacy needed to handle their situations. The prominence of posts that were categorised as informational (other) was also notable. These posts often provided insights by disclosing personal experiences. Similar findings were also noted in Evans et al.'s (2012) content analysis study examining post-partum depression in women. In their study, the participants tended to provide informational support in the form of personal accounts, rather than refer to traditional sources of information such as pamphlets or websites (Evans et al., 2012). As suggested by their study, sharing personal stories may be

effective because it establishes commonalities between participants whilst at the same time providing information. This decreases the sense of isolation experienced (Evans et al., 2012).

The prominence of emotional support reflected previous findings in the literature (Coulson et al., 2007; Coursaris & Liu, 2009; Atwood et al., 2018). This may be because the majority of posts on the page were constructed as self-disclosure. In Wang, Kraut & Levine's (2015) study of online social support amongst people with cancer, it was found that self-disclosure led to the perception of emotional needs, which elicited emotional support-type responses. In contrast, asking questions led to the perception of informational needs, eliciting informational support-type responses (Wang et al., 2015). However, it must be noted that the three most prevalent subcategories found in the present study were encouragement, emotional (other), and physical affection. Encouragement was particularly salient and this is likely due to the nature of the page, which was set up for people affected by methamphetamine to connect with and support each other in their efforts to overcome addiction. Emotional (other) was largely represented by messages such as "all the best", and physical affection was similarly expressed through X's and O's. It is more likely that the prominence of emotional support is explained by how ubiquitous these expressions were. Nonetheless, these subcategories were important as they appeared to play an important role in building close relationships online.

The prominence of esteem support was a finding that appeared to be unique to this study. Esteem support was predominantly offered in the form of validation or compliments, both of which were found to be the most frequently offered subcategories of all 22 types established in Cutrona & Suhr's SSBC. It may be that that esteem support was salient in the present study because people affected by methamphetamine are unable to find this type of support easily in their everyday lives due to the stigma of methamphetamine (MacLean, Hengsen & Stephens,

26

2017). As Beck et al. (2017) suggested in their study of online support groups, the increased

need to exchange emotional support could be driven by efforts to challenge stigma. Similarly, the

prominence of esteem support in this study could be the result of the participants' efforts to

challenge stigma through acknowledging and celebrating each other's achievements and personal

victories in overcoming methamphetamine addiction.

In comparison to the three support categories discussed above, network support and tangible

support represented an extremely small amount of the data. Although the lower prominence of

network support was expected, it was surprising to find that network support was significantly

less prominent than esteem support. This finding is inconsistent with the literature (Coulson et

al., 2007; Coursaris & Liu, 2009; Mohd Roffeei et al., 2015). A potential explanation for this is

that participants' need for network support were already addressed by being active on the page.

Coulson et al. (2007) also noted in their study that network support became less salient over time

and suggested that this could have been because participants' network support needs were met

simply by participating in the online support group. The infrequent provision of tangible support

was consistent with the literature and may be explained by the unfeasibility of providing such

support online, particularly in the case of methamphetamine addiction. As noted by Atwood et

al. (2018), this may also reflect the unsuitability of the tangible support category as developed by

Cutrona & Suhr to online support groups.

4.2. Implications

The findings of the present study demonstrate that online social support groups represent

viable opportunities for people affected by methamphetamine to find support and provide insight

into the types of support exchanged online by these individuals. Esteem and emotional support

appear to be the most relevant and valued types of support, and informational support was also an important function of the page. This knowledge could help inform Australian health care providers in developing online resources tailored towards individuals, families, or communities struggling with methamphetamine addiction. A key implication of the findings is that these resources can be effective in challenging the stigma of methamphetamine use by encouraging people to connect with each other and talk about their struggles. In providing people affected by methamphetamine with a platform where they can offer each other esteem and emotional support and share personal experiences, these people can reduce their feelings of isolation and experience hope. These benefits not only help individuals to deal with stress but are also critical factors that represent the first step towards rehabilitation (MacLean et al., 2017).

4.3. Strengths and limitations

A strength of the present study was the sample size. Even though a subset of 2000 posts were used out of the total 14,777 posts, the subset was nonetheless large in quantity and resembled sample sizes used in other content analysis studies examining online social support (Coulson et al., 2007; Atwood et al., 2018). A second strength of the study was the use of a validated theoretical framework of social support with well-defined categories. This ensured that posts were consistently categorised and that results were reliable.

However, there are a number of potential limitations in the present study which must be taken into consideration. Firstly, the data was not always neatly categorisable. The amount of detail in these posts meant that many provided more than one type of support. As such, the majority of posts could not simply be coded into one category, as done in previous studies using Cutrona & Suhr's SSBC framework. Secondly, interrater reliability was unable to be obtained for the data.

This would have considerably increased the reliability of the results. Finally, the nature of the data meant that the author had to make active judgements in deciding which support categories posts were coded into. It is inevitable that the author's personal interpretation of posts will have shaped some coding choices. Nonetheless, all efforts were made to ensure objectivity by referring to the SSBC framework.

4.4. Conclusion and future directions

The present study represents one of the first few studies to examine how people affected by methamphetamine interact with online social support groups. The findings show that people affected by methamphetamine particularly valued and benefitted from esteem and emotional support, as well as informational support. The next step for future research is to determine whether these findings are generalizable by replicating the study, ideally with greater attention paid towards interrater reliability. Future research should also explore these online interactions in greater depth using a thematic analysis. This may reveal further insight that may be useful for Australian health care providers in developing online resources to address families and communities affected by methamphetamine.

References

Atwood, M. E., Friedman, A., Meisner, B. A. & Cassin, S. E. (2018). The exchange of social

   support on online bariatric surgery discussion forums: A mixed-methods content analysis.

   Health Communication, 33, 628-635.

Australian Institute of Health and Welfare 2017. National Drug Strategy Household Survey

   2016: detailed findings. *Drug Statistics series no. 31*. Cat. no. PHE 214. Canberra:

   AIHW. Retrieved from: https://www.aihw.gov.au/reports/illicit-use-of-drugs/2016-ndshs-

   detailed/contents/table-of-contents

Beck, S. J., Paskewitz, E. A., Anderson, W. A., Bourdeaux, R. & Currie-Mueller, J. (2017). The

   task and relational dimensions of online social support. *Health Communication*, 32, 347-

   355.

Braithwaite, D. O., Waldron, V. R. & Finn, J. (1999). Communication of social support in

   computer-mediated groups for people with disabilities. *Health Communication*, 11, 123-

   151.

Chalmers, J., Lancaster, K. & Hughes, C. (2016). The stigmatisation of 'ice' and under-reporting

   of meth/amphetamine use in general population surveys: A case study from Australia.

   International Journal of Drug Policy, 36, 15-24.

Cobb, S. (1976). Social support as a moderator of life stress. *Psychosomatic Medicine*, 38, 300-314.

Colineau, N. & Paris, C. (2010). Talking about your health to strangers: Understanding the use of online social networks by patients. *New Review of Hypermedia and Multimedia*, 16, 141-160.

Coulson, N. S., Buchanan, H. & Aubeeluck, A. (2007). Social support in cyberspace: A content analysis of communication within a Huntington's disease online support group. *Patient Education and Counseling*, 68, 173-178.

Coulson, N. S. & Greenwood, N. (2012). Families affected by childhood cancer: An analysis of the provision of social support within online support groups. *Child: Care, Health and Development*, 38, 870-877.

Coursaris, C. K. & Liu, M. (2009). An analysis of social support exchanges in online HIV/AIDS self-help groups. *Computers in Human Behavior*, 25, 911-918.

Cutrona, C. E. & Suhr, J. A. (1992). Controllability of stressful events and satisfaction with spouse support behaviors. *Communication Research*, 19, 154-174.

Darke, S., Kaye, S., McKetin, R. & Duflou, J. (2008). Major physical and psychological harms of methamphetamine use. *Drug and Alcohol Review*, 27, 253-262.

Davison, K. P., Pennebaker, J. W. & Dickerson, S. S. (2000). Who talks? The social psychology of illness support groups. *American Psychologist*, 55, 205-217.

Degenhardt, L., Roxburgh, A., Black, E., Bruno, R., Campbell, G., Kinner, S. & Fetherston, J. (2008). The epidemiology of methamphetamine use and harm in Australia. *Drug and Alcohol Review*, 27, 243-252.

Degenhardt, L., Roxburgh, A. & McKetin, R. (2007). Hospital separations for cannabis- and methamphetamine-related psychotic episodes in Australia. *Medical Journal of Australia*, 186, 342-345.

Evans, M., Donelle, L. & Hume-Loveland, L. (2012). Social support and online postpartum depression discussion groups: A content analysis. *Patient Education and Counseling*, 87, 405-410.

Fulde, G. W. O. & Wodak, A. (2007). Ice: Cool drug or real problem?. *Medical Journal of Australia*, 186, 334-335.

Griffiths, K. M. & Christensen, H. (2007). Internet-based mental health programs: A powerful tool in the rural medical kit. *Australian Journal of Rural Health*, 15, 81-87.

House, J. S. (1981). *Work stress and social support*. Reading, Massachusetts: Addison-Wesley.

Kalichman, S. C., Sikkema, K. J. & Somlai, A. (1996). People living with HIV infection who

   attend and do not attend support groups: A pilot study of needs, characteristics, and

   experiences. *AIDS Care*, 8, 589-599.

Kaplan, A. M. & Haenlein, M. (2010). Users of the world, unite! The challenges and

   opportunities of Social Media. *Business Horizons*, 53, 59-68.

Karlsson, A. & Burns, L. (2018). Australian Drug Trends 2017. Findings from the Illicit Drug

   Reporting System (IDRS). *Australian Drug Trend Series. No. 181*. Sydney, National

   Drug and Alcohol Research Centre, UNSW Australia. Retrieved from:

   https://ndarc.med.unsw.edu.au/sites/default/files/ndarc/resources/National%20IDRS_201

   7_FINAL.pdf

Kawachi, I. & Berkman, L. F. (2001). Social ties and mental health. *Journal of Urban Health*,

   78, 458-467.

MacLean, S., Hengsen, R. & Stephens, R. (2017). Critical considerations in responding to crystal

   methamphetamine use in Australian Aboriginal communities. *Drug and Alcohol Review*,

   36, 502-508.

Maher, C. A., Lewis, L. K., Ferrar, K., Marshall, S., De Bourdeaudhuij, I. & Vandelanotte, C. (2014). Are health behavior change interventions that use online social networks effective? A systematic review. *Journal of Medical Internet Research*, 16, e40.

McKetin, R., Lubman, D. I., Najman, J. M., Dawe, S., Butterworth, P. & Baker, A. L. (2014). Does methamphetamine use increase violent behaviour? Evidence from a prospective longitudinal study. *Addiction*, 109, 798-806.

McKetin, R., McLaren, J., Lubman, D. I. & Hides, L. (2006). The prevalence of psychotic symptoms among methamphetamine users. *Addiction*, 101, 1473-1478.

Mohd Roffeei, S. H., Abdullah, N. & Basar, S. K. R. (2015). Seeking social support on Facebook for children with autism spectrum disorders. *International Journal of Medical Informatics*, 84, 375-385.

Naslund, J. A., Aschbrenner, K. A., Marsch, L. A. & Bartels, S. J. (2016). The future of mental health care: Peer-to-peer support and social media. *Epidemiology and Psychiatric Sciences*, 25, 113-122.

Ozbay, F., Johnson, D. C., Dimoulas, E., Morgan, C. A., Charney, D. & Southwick, S. (2007). Social support and resilience to stress: From neurobiology to clinical practice. *Psychiatry*, 4, 35-40.

Sensis (2017). *Sensis Social Media Report 2017.* Retrieved from

    https://www.sensis.com.au/asset/PDFdirectory/Sensis-Social-Media-Report-2017.pdf

Sommers, I., Baskin, D. & Baskin-Sommers, A. (2006). Methamphetamine use among young

    adults: Health and social consequences. *Addictive Behaviors*, 31, 1469-1476.

Soussan, C. & Kjellgren, A. (2014). Harm reduction and knowledge exchange - a qualitative

    analysis of drug-related internet discussion forums. *Harm Reduction Journal*, 11, 25.

Southwick, S. M., Vythilingam, M. & Charney, D. S. (2005). The psychobiology of depression

    and resilience to stress: Implications for prevention and treatment. *Annual Review of*

    Clinical Psychology, 1, 255-291.

Topp, L., Degenhardt, L., Kaye, S. & Darke, S. (2002). The emergence of potent forms of

    methamphetamine in Sydney, Australia: A case study of the IDRS as a strategic early

    warning system. *Drug and Alcohol Review*, 21, 341-348.

Wang, Y-.C., Kraut, R. E. & Levine, J. M. (2015). Eliciting and receiving online support: Using

    computer-aided content analysis to examine the dynamics of online support. *Journal of*

    Medical Internet Research, 17, e99.

Zweben, J. E, Cohen, J. B., Christian, D., Galloway, G. P., Salinardi, M., Parent, D. & Iguchi, M.

  (2004). Psychiatric symptoms in methamphetamine users. *American Journal on*

  Addictions, 13, 181-190.

Appendix A: Definitions of social support typology classifications

Support Type		Definition
Informational Support		
	Advice	Messages that suggest courses of action or guidance for coping with methamphetamine challenges and other difficulties
	Referral	Messages that provide a source of expertise or information
	Situation Appraisal	Messages that help to reassess or redefine circumstances, often in a manner that helps make them more positive or reveal new information that could be helpful
	Teaching	Messages that provide factual information about the challenge the recipient is facing, or about the skills needed to deal with the situation
	Other	
Emotional Support		
	Relationship	Messages that emphasise closeness and love in the relationship with the message recipient
	Physical Affection	Messages that express physical contact verbally
	Confidentiality	Messages that promise to keep the recipient's problem in confidence
	Sympathy	Messages that express compassion or sorrow for the recipient
	Empathy	Messages that express understanding or emphasise the similarity of one's own experiences to that of the recipient
	Encouragement	Messages meant to provide the recipient with hope and confidence
	Prayer	Messages that offer to pray for someone who is suffering or needs help

	Other	
Esteem Support		
	Compliment	Messages that convey a positive assessment of the recipient and/or his or her abilities
	Validation	Messages that express agreement with the recipient's beliefs, actions, thoughts, emotions or perspective on a situation and messages that acknowledge agreement or common ground with the message sender
	Relief of Blame	Messages that aim to alleviate another's feelings of guilt or absolve them of responsibility for a situation
	Other	
Network Support		
	Access	Messages that provide the recipient with access to new contacts and companions, usually because they have similar interests or concerns
	Presence	Messages that offer to "be there" for the recipient, for example by listening to them or spending time with them
	Companionship	Messages that emphasize the availability of companions who have similar interests or experiences
	Other	
Tangible Assistance		
	Loan	Messages that offer to lend a material object or money to the recipient
	Perform Direct Task	Messages that offer to perform a task directly related to a stressor
	Perform Indirect Task	Messages that offer to take over a task not directly related to the stressor, but which will help the recipient deal with the stressor

Active Participation	Messages that offer to join the recipient in an activity
Express Willingness	Messages that express readiness to help, without specifying the exact nature of assistance that will be given
Other	