

Media & the Internet and Non-Suicidal Self-Injury

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Tracy struggles with her emotions, visibly frustrated and angered by the contentious interactions with her mother and her best friend. She lives with her single but warm and attentive mother and brother in a working class California neighborhood. At thirteen, Tracy is the epitome of a junior high schooler – worried about fitting in, growing up, and reconciling a somewhat turbulent past with the promise of future independence. One night, after a particularly volatile exchange with her mother followed by a disappointing experience with her best friend, Tracy’s agitation is palpable. At the pinnacle of her distress, Tracy makes her way to the bathroom and reaches for a pair of small scissors stored in the vanity. Although a typical part of bathroom paraphernalia, for Tracy it holds a particular and unusual function. Sinking to the floor, blades in hand, she slides the sharp edge across her wrist – lightly enough to avoid serious injury, but deep enough to cause blood to well up as it slowly passes over the delicate skin. On her wrist lie the tell tale signs of other, similar moments. After one long cut, she lets the blades fall drunkenly from her hand, as she covers her wounds with her shirt sleeve – already stained with dried blood. As Tracy sits crumpled on the floor, the camera zooms out and the scene assumes a slightly fuzzy focus. Sirens wail low and distant in the background. Viewers may or may not realize that the shot is patterned after a typical drug scene, in

which an addict shoots up and nods off in the middle of an inner city slum. No viewer, however, will miss the effect of the act – Tracy is now very calm; her anxiety soothed by a “drug” she has not had to buy, steal, or imbibe.

Tracy’s story, the central narrative of the film *Thirteen*, is important for many reasons. One of these is that her self-injurious response to stress is reflective of what some have called a new “epidemic” among youth (Brumberg, 2006; Galley, 2003; Welsh, 2004). Although lack of baseline data prohibits empirical validation of this assumption, there is a reasonably high degree of consensus about the likelihood of its validity among youth-focused service providers (Heath, Toste, & Beettam, 2006; Whitlock, Eells, Cummings, & Purington, 2007). The second reason Tracy’s story is important is because the public display of her self-injury, available to millions of viewers, has become an increasingly common scene in movies, television shows, and web-based video media. At least fourteen pop icons publicly revealed self-injurious habits from 1993 to 2004 (Beller, 1998; Conroy, 1998; Diamond, 1999; Heath, 1993; Heath, 2001). Although not all possessed widespread popular appeal, celebrities such as Princess Diana, Johnny Depp, Angelina Jolie, and Christina Ricci all publicly admitted to non-suicidal self-injury and shared detailed information about how and why it worked for them. Although not intended to promote self-injury, such high profile disclosures do serve as avenues for dissemination of ideas that, in epidemiological terms, may serve as vectors for contagion. Self-injury scenes and themes have also appeared in popular television shows such as *Seventh Heaven*, *Degrassi*, *House M.D.*, *Grey’s Anatomy*, *Nip/Tuck*, and *Will and Grace*. Although Tracy’s self-mutilative practice is a behavior foreign to most adults, it is

anything but novel to most contemporary adolescents – in part because self-injury is now firmly part of the media landscape.

The remainder of this chapter will be dedicated to a review of literature, theory and nascent empirical study germane to the role of the media in self-injury. We begin with a review of the forms of mass communications daily available to most individuals within and outside of the US followed by a brief discussion of empirical linkages between media exposure and self-injury related behavior, aggression and suicide. We then present preliminary findings from our study in the links between self-injury and media and examine several of the key theoretical mechanisms through which media and the Internet may leverage influence on youth behavior. The final segment of the chapter will discuss implications for clinical practice and community-based intervention.

Vectors for Communication...and Contagion

In 1975, most American families owned or had access to a television, a radio, a phone, and a mailbox. Some received newspapers. By 2006, media routes into and out of the average American home had nearly tripled. Not only had technologies for these basic 1975 media modalities expanded considerably with the advent of cable, satellite, home message recorders, VHS and DVD, and “express” mail deliveries, development of wholly novel technologies evolved as well. Personal computers, iPods, handheld camcorders, wireless technology, smart phones and the Internet are just some of the common fixtures of the contemporary American home media ecology. In the span of less than one generation, opportunities for receiving and sending communications have fundamentally transformed the way individuals connect with information and others outside their proximal environments.

The result of these changes is that today's children and adolescents live media-saturated lives. The sheer multiplicity and pervasiveness of opportunities to both receive and send information has rendered the diffusion of ideas easily accomplished. In a recent nationally representative study of 8-18 year olds (Roberts, Foehr, & Rideout, 2005), researchers found that 99% of American homes possess at least one television and 60% of children aged 2-18 years live in a home with three. Over seventy percent of children aged 2-18 years have in-home access to video game consoles and 86% of youth aged 8-18 years report at least one computer; 74% live in homes with an Internet connection. On average, a typical U.S. child between 8-18 years of age is likely to live in a home equipped with three televisions which probably receive a cable or satellite signal, three VCRs, three radios, three CD/tape players, two video game consoles, and a personal computer. In all likelihood, the computer is connected to the Internet and supports instant messaging. Despite the popularity of interactive media, however, older forms of screen media still dominate young people's media exposure. Indeed, more than two thirds (68%) of youth aged 11 to 14 years have televisions in their bedrooms, where parental oversight of use is limited. Although the average youth reports spending nearly 6½ hours per day using media (including the Internet), they are exposed to more than 8½ hours per day of media messages. Referred to as "media multitasking", this seeming paradox arises as a byproduct of the fact that for a quarter of the time in which youth use media, they reporting using two or more simultaneously (Roberts et al., 2005).

In 1979, well before the media revolution, the much revered psychologist Urie Bronfenbrenner articulated what has become foundational work on the ecology of human development (Bronfenbrenner, 1979). In his reckoning, the media was regarded as a

distal influence with developmental leverage far secondary to that of the real people and institutions in children's lives -- parents, peers, schools, and other important adults and institutions linked to them geographically or through extended family networks. Today, however, peers and even adults who live hundreds or thousands of miles away and without connection to an individual's local family or peer network can assume a pivotal and influential role in a person's life with the mere click of mouse.

Not surprisingly, well-articulated theory and investigation about the full spectrum and magnitude of these changes on human interaction, development, behavior, and life trajectory has not paralleled the rapidity of the media revolution. Most research to date has been conducted on the effects of *screen*, or what we think of as "unidirectional", media in which audio-visual systems that deliver content that does not depend on directive responses from the viewer (e.g., television, cinema / movies, music, and print news). The Internet, however, provides an array of *interactive* or "bidirectional" media in which communications functions are built into traditional screen systems (e.g., Internet, telephone, or satellite based telecommunications such as cell phones, and smart phones).

Empirical study of the role that bidirectional/interactive media plays in real life behavior is less than a decade old. Most commonly, these studies target the Internet, broadly conceived. As with unidirectional media, most of the studies do find effects, although these vary greatly in magnitude and nature. In large part this is because bidirectional media forms allow for much more nuanced types of exchange and effect since users may actually be interacting with real individuals through a virtual medium. For example, studies show that Internet use permits the development of positive bonding through formation of social ties which some individuals find difficult to construct off-line

(Hampton & Wellman, 2003; Kavanaugh & Patterson, 2001). They also suggest, however, that Internet use may increase isolation in real life, expose and reinforce maladaptive self-narratives, and/or permit the networking of individuals with off-line agendas dangerous to society (Becker, Mayer, Nagenborg, El-Faddagh, & Schmidt, 2004; Norris, Boydell, Pinhas, & Katzman, 2006; Whitlock, Powers & Eckenrode, 2006; Ybarra & Mitchell, 2005). Similarly, access to information unavailable locally facilitates information gathering and resources otherwise inaccessible (Borzekowski, Fobil, & Asante, 2006) which can advance educational objectives, and thus academic performance, in children with less reliable access to high quality education (Jackson, vonEye, Biocca, Barbatsis, Zhao, & Fitzgerald, 2006). It may also, however, permit vulnerable individuals to readily identify and view potentially damaging content (Ybarra & Mitchell, 2005).

In contrast, unidirectional media is both better researched and easier to understand – in large part because it does not permit exchange or message co-construction as does the Internet and other bidirectional media modalities. Three decades worth of experience with unidirectional media affirms the potency of influence – especially for adolescents and children (Brown, L'Engle, Pardun, Guo, Kenneavy, & Jackson, 2006; Escobar-Chavez, Tortolero, Markham, Low, Eitel, & Thickstun, 2005; Gould, 2001; Huesmann, Moise-Titus, Podolski, & Eron, 2003; Johnson, Cohen, Smailes, et al., 2002; Paik & Comstock, 1994). For example, every study included in a 2006 special issue of *Archives of Pediatrics and Adolescent Medicine* found significant main effects for media on all child and adolescent behaviors examined. Such findings are not unique. Virtually every media study on the relationship between media and aggression, for example, shows a strong, direct relationship. Indeed, the relationship is so consistently documented that in

July 2000 six major professional societies including the American Psychological Association, the American Medical Association, and the American Academy of Pediatrics, issued a joint statement about its effects. Grounded in a review of over 1000 studies, the statement acknowledged as fact the now well documented empirical link between on-screen violence and child and adolescent behavior and called for coordinated policy responses (*Joint Statement on the Impact of Entertainment Violence on Children*, 2000).

The mechanisms behind such influence are complex. While it would be naïve to assume that media “causes” behavior, such as self-injury, research overwhelmingly shows that media plays a very important role in disseminating behavioral innovations, normalizing novel behaviors, and in “priming,” through the creation of “scripts,” which may slowly prepare viewers, particularly young viewers, to try or adopt behaviors they may never have considered. Most scholars attribute the well-documented relationship between media and aggression to the sheer volume of images young media viewers absorb. For example, a three-year National Television Violence Study (NTVS) analyzing over 10,000 hours of programming in the U.S., found that 61% of all programs and nearly 67% of children’s programs contained violence. On average, the authors conclude, children view about 10,000 acts of violence per year; a figure that exceeds the amount and severity of violence that actually occurs in the U.S. (Center for Communication and Social Policy, 1998).

Image prevalence, however, is not the only empirical link to real life behavior – mere suggestion seems to matter as well. The power of media suggestion was first documented in the eighteenth century when Goethe penned *The Sorrows of the Young*

Werther, a novel in which the main character dies by suicide. Following publication of the book in 1774, a rash of suicides prompted several regions to ban it for fear of more (Marsden, 1998). The possible association between media messages and behavior went uninvestigated until Émile Durkheim, well known for his work on suicide (1897), went in pursuit of the answer. His study found no conclusive evidence that social factors, such as imitation, influenced suicide rates. Durkheim's proclamation effectively ended the scholarship in this area until 1974, when another empirical study of the same question documented a link. Phillips' (1974) study reviewed suicides publicized in the *New York Times*, the *New York Daily News*, the *Chicago Tribune*, and the *London Daily Mirror*, and showed a clear association between published stories about suicide and subsequent completed suicides in the area in which the story was published (Phillips, 1974). More recent studies find similarly - the magnitude of the increase in suicides and suicide attempts following a suicide story is proportional to the amount, duration, and prominence of media coverage (Gould, Jamieson, & Romer, 2003; Stack, 2000).

How a character or scene is portrayed matters as well. For example, in the vast majority of the programs reviewed as part of the NTVS, violent perpetrators were portrayed as heroes of the stories and victims rarely suffered pain (Center for Communication and Social Policy, 1998). Similarly, in a review of suicide contagion studies, Stack (2000) found that reports based on newspaper accounts, celebrity suicides, real rather than fictional suicides, and suicide attempts rather than suicide deaths are more likely to find copycat effects. Nor are all groups are at the same risk for media effects. Research consistently shows adolescents and young to be particularly vulnerable to

reports and depictions of suicide and aggression in the mass media (Bushman & Huesmann, 2006; Gould et al., 2003).

Empirical Study of Self-Injury and the Media

Because it is likely that many of the same factors critical in linking media and aggression or suicide may be at work with self-injury, we set out to examine the extent and characterization of self-injury in unidirectional media, bidirectional media, and on the Internet. The study objectives were modest and aimed primarily at documenting the quantity, form, and characterization of self-injury available in contemporary media outlets – with particular attention to Internet message boards and movies, music, and news articles. The Internet message board-focused component of this work found that self-injury Internet message boards are numerous, very easily accessed, and highly frequented; 406 were identified in January of 2005 and there were over 500 a year later. We also found that once on-line, individuals do much of what they do off-line – namely seek and provide support and information. They also exchange and share strategies for ceasing the behavior, finding help, avoiding detection, treating severe wounds and even for injuring in new or different ways (Whitlock, Powers, & Eckenrode, 2006). Like the complex story emerging from Internet-focused research, the findings hold hope and caution for those interested in understanding and addressing the role the Internet plays in self-injury (Whitlock et al., 2006, Whitlock, Lader & Conterio, in press) and clearly signals the need for additional research in this area.

Our investigation of the role the media plays in disseminating self-injury is less well developed, but merits consideration of findings to date. Although identifying the point at which self-injury began to surface in community populations in more than isolated pockets is impossible, we have endeavored to estimate and track the entry and spread of self-injury images and stories in movies, songs, and print news. We have also conducted content analyses of movies in which self-injury is depicted. The methods, results and interpretation of our findings follow.

Method

Study of the link between self-injury and media is fraught with limitations. The primary limitation resides in the fact that there exists no standardized mechanism for identifying media forms, such as movies, television shows, and music, in which self-injury appears. The only exception to this limitation is print news where search engines such as LexisNexis and Factiva do permit systematic search of current and archived print news by key word. With these limitations in mind, we began building a database of movies, songs, and print news in which self-injury appears in early 2004. Our first task was to simply document frequency of each by year. The second task, particular to movies, was to code for specific content with attention paid to the way characters were portrayed. What follows is a preliminary summary of findings to date.

Determination of movies and songs featuring self-injury content was accomplished by sending out regular inquiries to personal and professional networks about whether they had seen a movie with NSSI scenes or knew of songs with NSSI lyrics, through regular visits to NSSI message boards and YouTube sites where members often discuss music, movies, and television shows with NSSI content, and by visiting two

websites which include specific references for NSSI media and literature

(http://anthology.self-injury.net/section/nonfictional_literature.php and <http://imdb.com/>).

Self-injury news stories were identified in a far more systematic fashion through querying of the Lexis Nexis search engine using multiple terms including “self injury“ and ”self-mutilation.” All news articles identified were counted, even if they originated from the same story (such as an Associated Press article) because including all provides a snapshot of the degree of market penetration. Coding of movie content was accomplished through independent viewing and coding by trained student coders. As show in Table 1, movies were coded to capture: a) sex, race, age, and socioeconomic status of the self-injurious characters, b) self-injury form, c) presence of comorbid mental illness, and suicidality, and d) extent to which self-injurious characters were portrayed as strong (versus weak) and appealing (e.g., likely to be someone with whom viewers would identify). Character strength and appeal were coded dichotomously. To establish intercoder reliability, coding for all movies were compared across coder dyads. Agreement was assessed by calculating the proportion of codes each individual in the pair coded the same. Intercoder agreement across all pairs was 90% and discrepancies were discussed until agreement was reached.

Results

Trends in type and time. As of spring 2007, a total of 47 movies which feature unambiguous NSSI scenes or characters had been identified. Examples include: *Thirteen*, *A Lion in Winter*, *Secretary*, *Sid and Nancy*, and *The Scarlet Letter*. Eleven of these included scenes suggestive of NSSI behavior but not overtly referenced so they were excluded in these analyses. Of the remaining 36, all but one were coded as *dramas*, 16%

(n=6) were coded as *horror*, 11% (n=4) as *biography*, 11% (n=4) as *action* and 5.5% as *romance* (n=2) (movies could fall into more than one genre category). Most, 72.2% (n=26) were rated R, 22.2% (n=8) were rated PG-13, and the remaining 2 were unrated.

A total of 89 songs with self-injury references had been identified by the same date. Although song genre is very difficult to quantify, the vast majority (86.7%) could be classified as some type of rock (alternative, emotional, gothic, heavy metal, punk), 4.8% as pop, and 6.0% as rap.

Figure 1. Movies and Songs with Self-Injury Referenced by Year

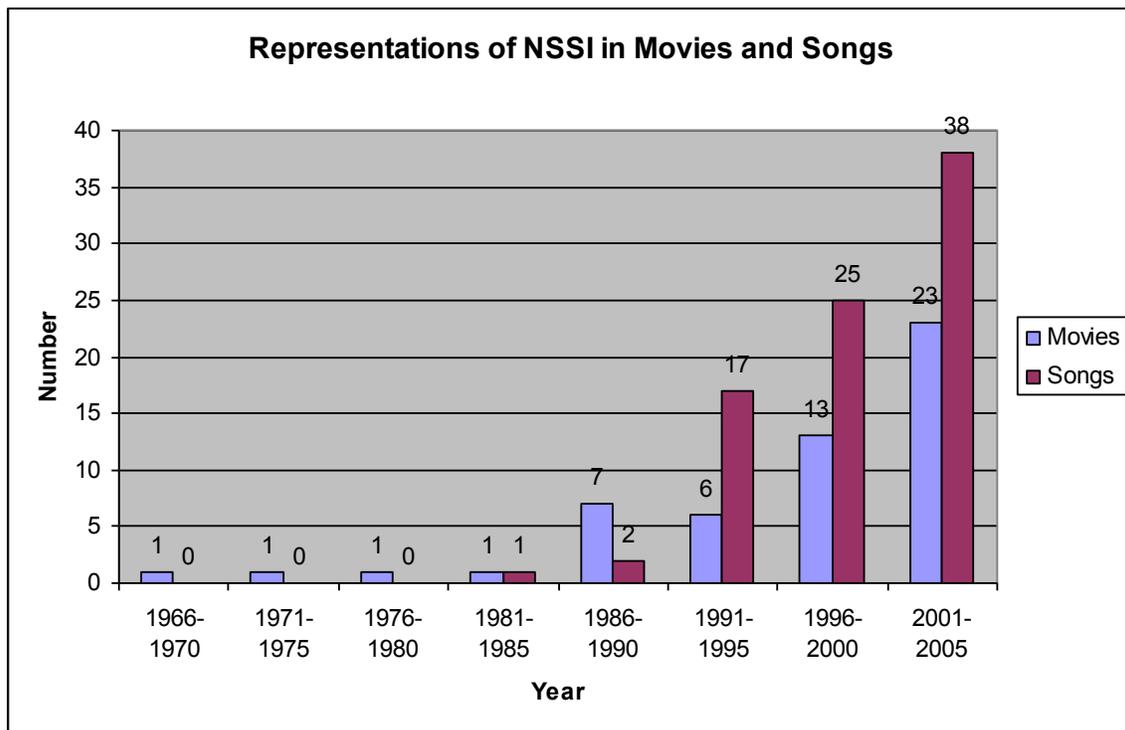
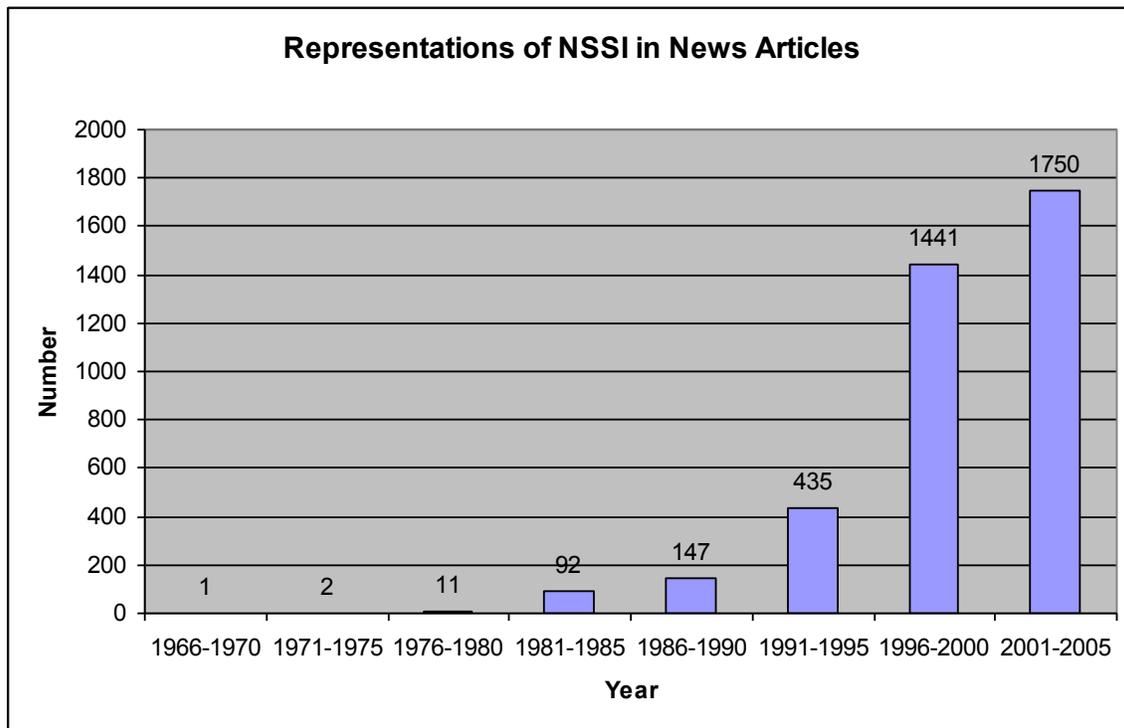


Figure 1 shows the publication data ranges of both movies and songs over time. The upward trend in both categories is striking. Only 2 movies with unambiguous self-injury references or scenes prior to 1980 were identified. In contrast, since 2000 we identified over 50 songs and 20 movies (data collection goes through 2005). Extreme caution in interpreting this trend is warranted since it may be largely due to an artifact of

the methodology used to identify data sources. However, self-injury news stories exhibit a similar trend, as shown in Figure 2. Because we can systematically search for news stories by keyword term, the validity of these data is far more certain.

Figure 2. Self-Injury-Focused Print News Stories by Year



As exhibited with movies and music, there exists a clear upward linear trend over time. Evidence of self-injury in print news media prior to 1990 was quite rare – we identified only 253 stories between 1966 and 1990. In contrast, during the period between 2000 and 2005, we identified 1,750 stories alone, with a steady increase each year.

Analysis of movies with self-injury scenes reveals interesting trends across character. The 36 movies coded featured 43 characters with explicit self-injury experience. As is evident in Table 1, the majority, though not by a large margin, were female (58.1%) and in their teens (28.6%), twenties (31%) or thirties (23.8%). Only 1

was depicted as less than 12 and the remainder (14%) were portrayed as over 40 years of age. All of the self-injurious characters were identified as Caucasian and the majority (78.6%) as of middle to high socioeconomic status. Most (61.5%) were portrayed as strong characters likely to elicit empathy from viewers (79.5%). Most cut (61.5%) and had overt or implied mental illness (69.3%) but only about a third (35.8%) were depicted as having attempted or completed suicide. The majority (61.5%) received no mental or physical treatment for their self-injury during the course of the movie.

Table 1. NSSI Characters

	% of total number of self-injurious characters (n=43)
NSSI Character Profile	
Sex	
Male	41.9 (18)
Female	58.1 (25)
Age	
Under 12	2.4 (1)
12-20	28.6 (12)
21-30	31.0 (13)
31-40	23.8 (10)
Over 40	14.0 (6)
Race	
Caucasian	100% (44)
Socioeconomic Status	
Low	21.4 (9)

Middle	47.6 (20)
High	31.0 (13)
Character Appeal	
Strength	
Strong	61.5 (26)
Weak	39.5 (17)
Character Appeal	
High	79.5 (34)
Low	20.9 (9)
NSSI Form	
Form	
Cutting	61.5 (24)
Bruising	12.8 (5)
Other	15.4 (6)
Burn	7.7 (3)
Stab	2.6 (1)
Comorbidity with Mental Illness and Suicide	
Presence of comorbid mental illness	
Overt (diagnosed)	23.1 (10)
Implied	46.2 (20)
None	30.2 (13)
Suicidality	
Attempt	17.9 (7)
Completion	17.9 (7)

None	67.4 (29)
Intervention	
Mental health treatment	25.6 (11)
Physical health treatment	7.7 (3)
Both mental and physical health treatment	5.1 (2)
No formal treatment	61.5 (26)

In general, the trends observed across time, movie, and character are quite consistent with mainstream perception of the behavior and those who practice it. Considered together, the evidence suggests that media may serve as at least one source of the contemporary public perception of the self-injurer as a white female “cutter” -- of the 36 movies coded nearly half (46.6%) included a white female individual shown cutting; all but 2 of these were featured in movies made since 1995. And, although definitive evidence about changes in self-injury prevalence in media over time will forever be lacking, our data show, with certainty, that it is quite prevalent *now*. The extent to which increasing media coverage of self-injury, as part of narrative, news stories, and focused conversation (as on Internet message boards) spreads and/or reinforces the behavior is beyond the purview of research to date. However, in light of well established research on the effect of media, uni- and bidirectional, on behavior, it is likely that future studies of this relationship will demonstrate a link. To what, however, can we attribute such a link? How do media leverage influence? To these questions we must turn to theory for answers.

Theoretical Explanations for the Effect of Media and the Internet on Self-Injury

No single theory is sufficient to explain human behavior. Human beings are dynamic; the human mind acts as an associative network in which concepts, emotions, and ideas may become activated by related stimuli in ways impossible to predict or model. For example, viewing a violent scene, whether self or other directed, may “prime” individuals for aggressive thoughts, emotions, and scripts. Such priming and its subsequent effects may occur outside of awareness and through cues only remotely connected to aggression. How does this happen? Sociocultural theories are those designed to explain how the external world affects internal developmental processes. The external social worlds in which individuals grow, through engagement in activities which require cognitive and communicative functions, promote and shape developmental options and trajectories (Kublin, Wetherby, Crais, & Prizant, 1998; Vygotsky, 1934/1986). A subset of these theories goes far in helping to explain the effect media has on behavior.

Convergence and Emergent Norm Theories

Convergence theory, first described by Turner and Killian (1972), holds that individuals will seek out and converge around a set of mutual interests. Such impulses, for example, are likely to dictate the media content and virtual communities to which individuals become attracted. Emergent norm theory adds to this the idea that while individuals of a group will consciously or unconsciously alter their behavior to conform to what they perceive to be group norms, groups are also dynamic – once established groups give rise to new and novel norms as they progress (Turner, 1964). The tendency to form groups and to generate new norms may be particularly salient for adolescents and young adults since by middle childhood, peers occupy a primary role in development.

These theories are most applicable to bidirectional media modalities. The role of the virtual world, such as Internet message boards, blogs, or YouTube in permitting self-injury groups to form around a shared behavior is an example of these theories and, in particular, of the way they work in tandem. In these contexts, individuals converge around a set of shared behaviors out of which new norms may arise. For example, virtual communities are formed through convergence, through shared interest in self-injury. Once founded, through small acts of support, censure, and sharing, members establish a set of expectations to guide exchange. Depictions of self-injury posted by members may become attractive or normalized to others over time simply because of the perceived commonalities shared by the group. These on-line experiences may subsequently shape off-line expectations and ultimately, behavior. Similar processes may be at work in unidirectional media as well where the “group” with which one comes to belong, at least symbolically, may consist of a character or set of characters with which one interacts through identification, such as through a movie or television series. This may be especially true if the behavior helps the character achieve an attractive goal, such as easing distress, gaining the attention of others, or gaining status within their peer group.

Social Learning Theory

Social learning theory, most commonly associated with Albert Bandura (1977), suggests that when presented with an ambiguous situation individuals imitate actions they have witnessed others perform in the past. The classic example, based on Bandura’s early experimental tests, showed that after watching a more mature person engage in violent behavior toward a doll, children in the experimental group were significantly more likely

to subsequently behave aggressively toward the doll, even if the reason for the model's behavior was unclear or unprovoked. Media, social learning theory holds, is a particularly potent force in behavior because merely observing what others do, particularly when the others are similar to the observer, can affect later behavioral choices. The ability to visualize and carry out actions which one has witnessed others engage in may ultimately determine behavior -- particularly in situations where behavioral options are ambiguous, such as while experiencing affective distress. This is true even when the original purpose for engaging in the viewed behavior is unclear since it is the contextual, visceral similarities between the observed and observer that forge the behavioral association.

Disinhibition and Script Theories

Disinhibition theory (Freedman, 1982), suggests that behaviors are spread because seeing another individual perform a considered action reduces the inhibition to perform it. Like social learning theory, disinhibition theory suggests that observing others engage in a behavior renders it more possible or conceivable. This is particularly true if an individual is conflicted about performing a certain behavior but sees another complete it successfully or with positive results. For example, in the scene from *Thirteen* described at the beginning of this chapter, observing self-injury as both painless and as an effective means of quickly reducing anxiety may lower viewer inhibitions to trying the behavior in similar circumstances. That the producers actively stage the scene as one likening self-injury to an effective drug – even if only temporarily – may contribute to the disinhibition effect.

Similarly, script theory dictates that individuals are more likely to repeat a behavior, or script, when a previous use of the behavior was successful (Albeson, 1976).

Scripts represent actions, participants, and physical objects that come to represent a narrative to explain perceptions and behaviors. Script theory would predict that individuals adopt not only behaviors from observed models, but storylines as well. Although applicable to unidirectional media experiences, such as viewing, reading, or listening to narratives inclusive of self-injury, script theory holds tremendous promise in explaining the effects of on-line bidirectional exchanges on off-line behavior since participants may engage in “narrative reinforcement” (Whitlock, et. al, in press) which evolve out of co-construction of stories which essentially explain and justify self-injury linked behavioral choices – for better and worse – through interaction with others using similar scripts. Both disinhibition and script theories help to explain the desensitization and normalization of behavior that empirical studies of aggression document. Similarly, they suggest that when self-injury is depicted as painless, effective, and common, inhibition may be lowered and scripts which support its value adopted.

Summary

The evidence reviewed above suggests that individuals vulnerable to the acquisition and maintenance of self-injurious behavior are likely to encounter both a means of exposure and multiple opportunities to experience self injury images, symbols, or stories, either by self-selection or chance. Uni- and bi-directional forms of media may serve as vectors for self-injury introduction and contagion. Indeed, the empirical data presented, though methodologically limited, support this assumption. These same processes may reinforce the behavior among those already engaged in self-injury. In light of the many mechanisms through which media influences behavior, the existence of both

means and likelihood of exposure is concerning and contains important implications for clinicians and researchers.

Clinical Implications

Perceiving that the behavior is common and rational may ultimately render treatment or intervention more difficult. Similarly, identification with individuals known or believed to self-injure through social modeling or actual exchange, such as that provided through the Internet, may couple the need for belonging to a community of like-minded others who engage in self-injurious behavior. Even among individuals committed to ceasing the behavior, consistent and easy access to self-injury scripts and images in media may interfere with recovery. The clinical implications which follow from this review include:

- Media and Internet use histories should be taken as part of intake and risk assessment procedures. When high use of either is detected, integration of periodic assessment and behavioral impact question routes similar to those described for the Internet (Whitlock, et al., in press) may be warranted. Lines of questioning will be most germane to treatment when they assess degree and nature of media exposure or participation, as in the case of Internet communities, as well as the nature and magnitude of the impact on behavior.
- Media and Internet use may introduce and reinforce self-injury behavior through a variety of mechanisms: identification of and fraternization with like-minded others, behavior modeling, and by inclusion of scripts, sounds, or images which introduce or reinforce personal self-injury narratives. As evident in empirical study linking media to aggression and suicide, the impact of uni- and bidirectional media are likely to be

amplified when images are both plentiful and associated with high profile individuals, such as celebrities. Assessing the mechanisms through which clients are influenced by media will assist in deciding appropriate therapeutic approaches and media use recommendations.

Empirical Implications

Research on the relationship between media and self-injury behavior is scant. However, because uni- and bi directional media modalities are potent vectors for the spread of ideas and behavior, it is critical to advance understanding of the means through which they may be encouraging adoption or maintenance of the behavior. Although we present here empirical evidence that media representations of self-injury are increasingly present and available, it is not clear to what extent these representations influence self-injurious behavior of viewers and participants. Nor is it clear how interventions designed to moderate the relationship between media or Internet use and self-injury might most effectively do so. Well designed empirical studies aimed at investigating the nature and magnitude of the relationship between all forms and media exposure to self-injury is needed. Such studies would focus on the effects of media and Internet use on self-injury behavior and the extent to which these effects vary by media type and exposure.

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