Self-Cutting and Suicide: Current Issues

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State of Honor

- Aristotle: Honor & Dishonor are the matters which the high-minded man is especially concerned (Nicomachean Ethics, 340 BC)
- Aristotle: A man naturally expects honor for anything in which he excels (Rhetoric)
- Aristotle: It is the nature of the many to be amenable to fear not to the sense of honor (Nicomachean Ethics)
Definition: Deliberate Self Harm

• Deliberate self-harm is a behavior not an illness (non-suicidal self-injury)

• It is defined as an act by an individual with the intent of harming himself/herself physically

• Also called: attempted suicide or parasuicide

• Suicide is a type of intentional self-harm with death as a result

(Isacsson and Rich, BMJ, 2001; Dougherty, Psychiatry Res 2011—Mar 22)
Suicide: A Global Problem
(Mann, JAMA, 2005)

- 2002: 877,000 suicides in the world
- Up to 200,000 are 15-24 years of age
- Rates from around the world
  - Eastern Europe: 10+: 27+/100,000
  - Latin America + Muslin: Under 6.5
- ’02: 31,655 deaths in the United States (11/100,000)
- 2000 are 15-19 years of age + 2000: 20-24
Adolescent Suicide

• 3rd leading cause of death: 15-19 yr. age group

• **Fifth (Sixth)** leading cause of death in 5-14 yr. age group

• Estimated suicide rate in 2000: 10 per 100,000
  – 14.6 in 15-19 yr old males; 2.9 in females (’98)
  – 5%-10% of depressed teens complete suicide w/in 15 yrs
  – 4,135 suicides for 15-24 year olds in 1998
Methods of Self Harm

- Drug Overdose
- Self-poisoning
- Self-cutting
- Other Self-mutilation (self-hitting [battery, banging], pinching, [severe] scratching, biting, burning)
- Others: Self-shooting, Hanging, Jump from high places, well-jumping

(Clarke, 2001; Lowenstein, 2005; Yip, 2003; Tang, 2011)
Introduction

- Western countries: 5-8% of adolescents report self-harm in the past year
- Risk of self-harm and later suicide is increased
- 5%+ of all self-harm patients seen at a ED/Hospital commit suicide w/in 9 years

(Skegg, Lancet, 2005)
• Risk Factors
  – Poverty
  – Depression (Swannel, 2008)
  – Substance Abuse (Favaro, 2007)
  – Anxiety
  – Eating Disorders (Favaro, 2007)
  – Sexual abuse (Favaro, 2007)

Skegg, Lancet, 2005; Tang, Plos One 2011; 6:e17977
High Risk Factors for Suicide
(Skegg, Lancet, 2005)

-- Strong suicidal intent

– High lethality of method

– Precautions against being discovered

– Psychiatric Illness

– Impulsivity (Dougherty, Psychiatric Res, 2011)

• Homosexuality (Marthy, Soc Psychiatry Psychiatr Epidem, February 2011; 46:111-117)
Prevalence: Self-Cutting
(Nixon, 2008)

- Population-based study of community-based youth in Canada
- Seeking prevalence of self-cutting and related behaviors in 14-21 yr.
- 17% noted self-harm behavior
• 83% of self-harm was cutting, scratching, or self-hitting

• Mean age of onset was 15.2 years

• 56% had sought help for the self-harm

• Related to depression and attention-related problems
Self-Cutting
(Yates, 2008)

- Looked at self-cutting in upper middle youths: 9th to 12th grades
- 1,036 with 51.9% girls on West coast
- Rates of self-cutting ranged from 26% to 37%
- Major factor: parental criticism & youth alienation from parents
- Especially noted in males
Morey, 2008

- Cross-sectional survey of 3,881 Irish teens (85% response rate)
- 9.1% had a lifetime history of deliverable self-harm
- INCR in females (13.9%) vs. males (4.3%)
- Self-cutting: 66% versus 35% for OverDose
• Factors
  – Similar behavior noted in family or friends
  – Coping skills that included Self-Blame

• Most did not seek help before the self-harm behavior began

• Need Preventive Programs
Self-Cutting
(De Leo, 2004)

• Cross-sectional questionnaire in teens: 3757 students in Australia

• 6.2% with deliberate self-harm in past 12 months

• Self-cutting was noted in 59% of self-harmers (OD: 30%)
Ystgaard, 2003

• Evaluated 4,060 11th grades: ages 15-16

• Used self-report survey in Norway

• 6.6% had one or more acts of self-harm

• Most common was cutting: 74% vs. 17% for self-poisoning (SP)

• 6.1% cutters had contact w/ HOSP vs. 47% of SP
• Factors (Ystgaard, 2003)
  – Low self-esteem & depression (Lloyd, ’07)
  – Same behavior in friends
  – Serious conflicts w/parents
  – Parental criticism (Yates, 2008)
  – Drug abuse
Factors for **Girls** also noted  
(Ystgaard, 2003)

– Alcohol misuse (Favaro, 2007)

– Divorce of parents

– History of sexual abuse (skin-pick/biting)

– Anxiety and Impulsivity

• **Males:** **Sign** factor: HX of self-harm in family
Self-Harm in Europe
(Madge, 2008)

- Study: 30,000 15-16 yrs old w/ questionnaires
- 7 European countries: Study of self-harm
- Twice as common in females vs. males
- Self-cutting was main method at home
- MUST get “relief from terrible state of mind”
- 50%: decided in hour before SH & told no-one
- 50%: Had more than one Self-harm attempt
Self-Cutting
(Matsumoto, 2008)

- Looked at prevalence of self-cutting
- **9.9%** in junior and senior high Japanese
- **40.4%** reported suicidal ideations
- ↑ suicidal ideations in young teen female
- ↑ cutting in older teen females
Li, 2007

- Reviewed medical records for ED in eastern Taiwan
- 1% of injuries were self-harm in adolescents and adults
- 80% were stabbing or cutting behaviors
- Major factor: Alcohol use
O’Loughlin, 2005


• 4,474 episodes of DSH and rates were ↑↑ in females

• Highest in 15-24 year old cohort w/ ODs the main DSH
• Males used self-cutting + more than females (ODs)

• Less repetitive DSH with psychiatric management of first episode
Self-Injury & Dissociation
(Yates, Dev Psychopathol, ‘08)

- Minnesota study of 164 Pts (aver age of 26)
- Looked at child sexual abuse vs. phys. abuse
- Self-injury associated w/ dissociation
- Self-injury assoc. w/ somatization
- Assoc. w/ post-traumatic adaptation
Etiology of Self Cutting

- Serves as a form of depersonalization due to family dysfunction (Wolfradt, 2002)
- Due to an altered state of mind or dissociation (Matsumoto, 2005)
- See ↑ed self-cutting in homeless or runaway youth (Tyler, 2003)
- Attention-seeking behavior (Lowenstein, 2005)
- Impulsivity (Lowenstein, 2005)
• Allows release of suppressed negative feelings (depression, anxiety) due to conflicts w/ peers or family (Ross, 2002; Yip, 2003)

• Early separation from parents

• School Bullying

• Sexual or Physical Abuse (Murray, 2008)

• Neglect from dysfunctional family (Zoroglu, 03)
• Noted close association between suicide attempts and self-mutilation (Bolognini, 2003)

• Rodham, 2004: Self-mutilation goes on to suicide was (Rodham, 2004)
  – Depression & Suicidal Ideation
  – Negative attitudes towards life

• ↑ed suicide risk associated with analgesia during self-cutting in males (Matsumoto, 2008)

• Associated with bulimia in males (Matsumoto, 08)
Etiology of Self Cutting
(Klonsky, 2007)

- Non-suicidal self injury: ↑ teens/young adults
- Typically use more than one method
- Two main characteristics
  a. **Negative emotionality**
  b. **Self-derogation**
- Used to temporarily ↓ intense neg emotions
- Used to express self-directed anger or disgust
- End times of dissociation or depersonalization
- Help resist suicidal thoughts
- Get help from others
Features of Self-Cutting

• Poisoning and self-cutting are leading causes of nonfatal self-harm injuries in 10-14 yr olds (Vajani, 2007)

• Self-cutting is ↑ed in girls vs boys (Lundh, 2007)

• Do NOT represent a distinguishable group

• All must be taken seriously for as evidence of suicidality (Fortune, 2006)
• Self-cutters also do other means of deliberate self-harm (Fortune, 2006)

• INCR in adult women with PTSD and Drug Dependence (Harned, 2006)  
  ---self-cutting and self-scratching)

• INCR in adult women Drug Dependence (Harned, 2007) (self-cutting and self-scratching)
• 20% with major SH over past 3 years

• Both: assoc.
  – w/ impulsive (Dougherty, Psych Res 2011; Mar)
  – disordered eating patterns

• Both: obsessive-compulsive and somatic issues

• No major difference in “minor” vs. “major”
Minor vs Major Self-Harm (Croyle, 2007)

- Mild Self-Harm: fingernail biting, skin picking
- Major self-harm: cutting and burning
- 280 undergraduates
- 31% with minor SH over past 3 years
Matsumoto, 2004

- Studied self-cutting in 201 delinquent teens in Japan (178 males)

- 16% reported self-cutting:
  - 61% of females vs. 11% of the males

- Wrist-cutting suggests higher risks for suicidality vs. arm cutting
• Arm cutting suggests more dissociation vs. wrist cutters (using Adolescent Dissociative Experience Scale)

• Increased factors were:
  – Early separation
  – Bullying
  – Sexual/physical abuse
• Earlier smoking and INCR use of drugs
• INCR history of physical abuse
• More suicide attempts
Matsumoto, 2005

- Reviewed self-cutting in male inmates versus non-cutters
- Association with dissociation
- Association with bulimia as w/ females
Groups of non-suicidal Self Injury
(Klonsky, 2008)

• Review of 205 young adults: Four Subgroups

• Types 1 and 2: **80%** w/ minimal psychopathol.

• Type 3: **10%** : high anxiety w/ ↑ psychopathol.

• Type 4: **10%** : cut in private, ↑↑ suicide risk
Range of Self-Harm
(Croyle, Am J Orthopsychiatry, 07)

- Range of self-harm actions: mild to severe
- Study of undergraduates: N = 280
  - 31%: mildly injurious SH
  - 20%: more severe behavior within 3 yrs
- More severe SH: ↑ Hx of emotional abuse
- Both: ↑ impulsivity, eating disorders
- Both: ↑ somatic symp. + obsessive-compuls
Bulimia and DSH
(Favaro, 2003)

- 95 patients with bulimia nervosa
- Social phobia and bipolar disorder assoc. w/ DSH
- Harm avoidance noted w/ skin picking
- Personality disorders assoc. w/ DSH but temperament more important
Suicide Attempt by Burning (SB) (James, 2006)

- 10 patients with SA via SB over 15 yrs
- Main DX: Psychosis & MDD
- Older adults; ↑ African Americans
- Resemble the high jumpers
- Major stress also noted on staff
- Main Dxs: Psychosis and Drug Abuse
Suicide by Burning (Thombs, 2007)

- Data from US National Vital Statistics System
- Highest cohort is 30 to 59 yrs of age
- Lower risk in 18 to 29 yr cohort
- Main Dxs: Psychosis and Drug Abuse
Suicide by Burning
(Tsati, 2005)

- 6 yr study of self-burning in Athens
- 4% of 1,435 burn patients were Self-Burn
- Mean age was 54 (18 to 90 yrs); 57% F
- Pre-existing Psychiatric DX: 43%
- Mortality rate: 75%
Suicide by Burning
(Malic, 2007)

• SB & Burn Assault Study in England
• Study of 1,745 burn pts: ‘94 to ‘05
• 41 assault Pts (29 yrs) vs. 86 SB (37 yrs)
• Males were main ones in both groups
• Burn depth & extent ↑↑ in self-burn pts
• 63% of SB had psychiatric diagnoses
• Drug abuse noted in 25% of both groups
Suicide by Burning
(Greenbaum, 2004)

• Forensic review for MDs & JDs

• Looks at SB and Assault by Burning

• Wrongful accusations of child abuse

• Suggests careful eval to get correct pic.
Suicide by Burning
(Rashid, 2004)

• ’79-’97: 7,139 pts in Birmingham, Engl.

• 184 were self-burners in this burn unit
• 81 of 184 died from Self-burning
• Same risk of dying as other burns pts
• Main: using an accelerant
• Other: no accelerant—ignite clothes
• Use of an accelerant: extensive burns
Self-Burning vs. Self-cutting
(Matsumoto, 2005)

- Examined self-burning vs. self-cutting
- 201 delinquent teens in Japan
- Self-cutting + self-burning: ↑ depression
- ↑ dissociation w/ self-cutting + burning
• **High Risk Factors for DSH:**
  – Childhood sexual abuse
  – Cluster B personality disorder
  – Compulsive DSH assoc/ w/ Cluster C personality disorders
Sexual Abuse as a Child

- Self-cutting
- Eating disorders
- Emotional neglect and abuse
- Physical abuse
- Suicidal ideation

(Murray, 2008)
Ross and Heath, 2002

- Study of adolescent self-mutilation in community sample
- Related to ↑ anxiety and depression
- 13.9% had self-mutilated at some point and was intention
- ↑ed rates in females: 64% vs. 36% (males)
- Most common was self-cutting
Rodham, 2004

- Compared self-poisoners with self-cutters

- Wished to die: 66.7% versus 40.2%

- See if someone loved them: 41.2% vs. 27.8%
• Thought of harm for > 1 hour: 36% vs. 51%

• Self-cutters: Seek self-punishment:
  – 51% (female) vs. 25% (male)

• Self-cutters: Sought relief from mental pain:
  – 77% vs 61% (Female vs male)
Self-Cutting vs. Self-Poisoners
(Hawton, 2004)

- 14,892 self-harm patients seen in a UK general hospital over 23 yrs.

- **428** self-cutters vs. **11,065** self-poisoners

- Self-cutters
  - More male
  - Single and unemployed
  - History of DSM
  - Live alone
  - Misuse alcohol
  - Low suicidal intent scores
• Looked at issues in the lives of teens who died via suicide

• Most: either psychiatric disorders or long-standing problem w/school/home/peers

• Small group: Acute process in reaction to life events
Serious Suicide Intent in Self-Cutting
(Favaro, 2003)

- Repeated self-cutting & MALE
- History of Drug Abuse
- History of relationship problems
- History of mental health problems
Hara-kiri Wounds in Self-Cutting

- Abdominal stab wounds in suicide attempts is highest in Japan
- Transverse cutting of the abdomen
- Hara-kiri wounds are in lower ABD vs ABD stab wounds in epigastric/periumbilical

(Morita, J Trauma, 2008)
• Risk of death from simple abdominal stab wounds: LOW

• Risk of death from Hara-kiri sounds: ↑↑ due to injury to:
  – Major vascular vessels
  – Small bowel
  – Omentum
  – Mesenterium

(Morita, J Trauma, 2008)
Repetitive Episodes of Self-Harm (Zahl, 2004)

- Follow-up of **11,583** with DSH in Oxford from 1978-1997

- **39%** had repeated DSM

- Relative risk of later suicide INCR, especially in females

- High risk: Multiple episodes of DSM in females
Repetitive Episodes of Self-Cutting (Marchetto, 2006)

- Looked at 517 self-cutters at a gen hospital in London
- See an association between personal trauma & self-cutting
- Saw equal numbers with males and females
• Minority: No history of self-trauma

• Self-cutting can arise de nova
  --w/o trauma or
  --borderline personality disorder
DSH and Intellectual Disability

- Common and difficulty behavior to treat
- Can be part of aggressive behavior
- Aggression directed inward or outward
- 10% of children/teens with ID: DSH (Rojahn, 2007)
- Others: Range: 1.7% to 41% (Cooper, 2009)
- Skin-picking, head banging, eye gouging
DSH and Intellectual Disability

- These patients can complete suicide
- Share similar neurogenetic factors to those with normal intelligence (Ernst, 2010; Merrick, 2005)
- May be due to pharmacologic agent!
- Can be due to change in routine (Stein, 2010)
- Inability to do a task chosen by PT/PROF
DSH and Intellectual Disability

• Need careful evaluation for specific etiology in each child or adolescent
  - Neurobiol/)Psychosocial/Environmental Factors
• What is the patient seek to say?
• Factors INCR risks in adults with ID
  (Cooper, J Intellec Disabil Res 2009; 53: 200-16)
  a. Low Ability Level
  b. Not living with a family caregiver
  c. Visual disability
  d. Co-morbid ADHD
DSH and Intellectual Disability

- Research on Aggression Profiles
- Some work: DSH can be reduced in adults
- Some work on seeing remission
- Research on early intervention and prevention (Benson, 2008; Cooper, 2009;)
- Pharmacologic Interventions not helpful
- Antipsychotics not useful unless DSH is due to underlying psychosis
Management: General Measures

- Do not assume self-cutting is only attention-seeking behavior (Lowenstein, 2005)

- Overprotection and intensive monitoring is better than overt suicide

- Need Multiple systems in the management of self-cutting (Yates, 2008)

- Most self-cutters do not come to attention of health services (Morey, 2008)
• **Risk of suicide after a self-harm episode**
  (Hawton, 2003)
  – 1.7% INCR at 5 years
  – 2.4% at 10 years
  – 3.0% at 15 years
Specific Management Options

• Group Therapy
• School-based mental health interventions
• Anti-depressant medications
• Art Therapy
• Hospitalization
General Factors
(Skegg, Lancet, 2005)

• Forming a trust relationship with the PT
• Jointly identifying problems
• Ensuring support is available in a crisis
• Vigorous treatment of psychiatric illness
• Support of family and friends
Specific Studies

(Crawford, Br J Psychiatry 2007)

• Reviewed suicide data from 18 studies

• Meta-analysis

• No evidence that intervention post-self-harm reduces later suicide
Nada-Raja, Skegg, 2003

• Study of Young Adults w/ DSH

• Only half of group with DSH sought professional help

• Rated care in ED poorly

• Noted attitudinal issues with care among those not seeking help
Need Prevention Programs

(Rodham, 2004)

• Focus on encouraging alternative methods of:

  – Managing Stress

  – Problem-solving

  – Help-seeking
DSH and IDs

- Behavioral Modification (differential reinforcement; extinction; response interruption/redirect)
- Give preferred objects (as toys)
- Place in protective helmets and/or gloves
- Avoid punishment-based therapies
- Careful and ethical restraint principles

(Jones, J Intellect Dis 2007; 11: 105-18)

(Lang, Res Dev Disabili 2010; 31: 304-315)
Future Research Suggestions

• Prognosticating is Herculean task!
• Researcher interest vs funding sources
• Attempts for consideration/reflection
• Influence of different family dynamics
  (Influence therapies: Find signals)
• Look at different cultures & communities
• Less cross-sectional research
• More etiologic research
Future Research Suggestions

• More Nostradamus-like predictions!
• Compare intervention methodologies (Secondary and tertiary prevention progs)
• Find better DSM screening tools
• Sec Prev: Which ones with early signs need professional help and when?
• More research on primary prevention
• Improve psychosocial competence and developmental aspects in children/teens
Chinese Proverb

• **Superior** Doctor: Prevents Illness

• **Mediocre** Doctor: Attends to impending sickness

• **Inferior** Doctor: Treats actual illness!
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