Self Injury in Youth: Current Research and Future Directions

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A nice deep gash
To change my pain.
My heart hurts no more,
Solid as rock

Scars lining my skin
To forget my emotions
My pain inside
Shows on the outside

No tears in my eyes
Blood drops streak my skin
Those trusty scissors
Make me alive again

Defining Self Injury

- Deliberate destruction of body tissue without conscious suicidal intent
- Not socially sanctioned
- Occurs within the broader range of non-suicidal self harm behaviors such as minor overdosing, ingesting non ingestible objects etc.

Age of Onset/Gender

- Mean age of onset: 12-15 years
- Gender issues:
  - Some large scale studies have found equal incidence in males and females (Klonsky et al., 2003, Whitlock et al, 2006)
  - Other studies have found more prevalence in females (Nixon et al., 2008)
  - Females tend to cut; males hit and burn

Types of Self Injury

- Scratching
- Cutting
- Burning
- Self hitting
  - In community samples, the majority self injure once or twice
  - Those who repeat often have multiple methods
- Arms, hands, wrists, thighs, stomach

Motivations/Functions of NSSI

Nixon, Cloutier and Aggarwal, 2002

(Affect Regulation and Addictive Features of Repetitive Self Injury in Hospitalized Adolescents)

Why do you self-injure?

N=42

(mean number of reasons 8.2 ±3.8)

• Cope with depression ----------	83.3% (35)
• Release unbearable tension ----------	73.8% (31)
• Cope with nervousness/fear----------	71.4% (30)
• Express frustration ----------	71.4% (30)
• Express anger/revenge ----------	66.7% (28)
• Feel pain in one area, when the other pain I feel is unbearable ----------	61.9% (26)
• Distraction from unpleasant memories------	59.5% (25)
• Punish self for being bad / bad thoughts -----	50.0% (21)
• Stop suicidal ideation/attempt ----------	47.6% (20)
• Stop feeling alone/empty ----------	42.9% (18)
endorsed at least one affect regulation reason	97.6% (41)
endorsed all five affect regulation reasons	40.5% (17)

Addictive Features

(DSM IV S Abuse questions modified)

"Feels relief after SI"(92.9%, n=39)

Since you started to self-injure have you found that:

- SIB occurs more often and/ or severity increased since started ---------- 97.6% (41)
- SIB continues despite recognizing it as harmful 95.2% (40)
- Tension recurs without SI ---------- 85.7% (36)
- Urges are upsetting, but not enough to stop SI 81.0% (34)
- SIB causes problems socially ---------- 73.8% (31)
- Frequency and/or intensity has increased to achieve the same effect ---------- 73.8% (31)
- Time consuming ---------- 64.3% (27)

98% endorsed 3 or more items

81% endorsed 5 or more items

Background

- Non-suicidal self-injury (NSSI) is a growing concern among professionals working in the schools.
- The most recent studies exploring the occurrence of NSSI in high schools indicate that **between 15 to 20%** will admit to having engaged in NSSI at least once .
  - Laye-Gindhu & Schonert-Reichl, 2005; Muehlenkamp & Gutierrez, 2007; Nixon, Cloutier, & Jansson, 2008; Ross & Heath, 2002
- Limited research exists to inform the public and practioners regarding NSSI which has typically been grouped with “suicidal behaviours” or the study of borderline personality disorder

INSYNC

Interdisciplinary National Self Injury in Youth Network Canada

Objective: A biopsychosocial approach to the understanding and treatment of NSSI in youth

Child & Youth Health RESEARCH NETWORK

Social Sciences and Humanities Research Council of Canada | Conseil de recherches en sciences humaines du Canada

Canada

Network Members

- Original Members
  - Elizabeth Banister, RN PhD, UVic
    - Knowledge translation
  - Paula Cloutier, MA, CHEO, Ottawa
    - Measurement, ER Services and NSSI and population based studies
  - Nancy Heath, PhD, McGill
    - School based interventions, training of school counselors
  - Mary K. Nixon, MD, FRCPC, UVic, UBC
    - Network leader, measurement, pop based surveys (longitudinal), groups for youth and their parents who self harm, training of mh clinicians
  - Elizabeth Osuch, MD, UWO
    - neuroimaging
  - Geoffrey Payne, PhD, UNBC, UBC
    - Animal models of repetitive NSSI
- New members:
  - Jean Francois Bureau, PhD, U of O
    - Community based study re attachment and NSSI
  - Aviva Laye-Gindu, PhD candidate, UBC
    - NSSI in street involved youth
  - Yasser Ad'Dab'bagh, MD, FRCPC (PhD Candidate, McGill
    - Dual diagnosis and SI, neuroendocrine/addictive aspects of SI in DD

Some Current Research Projects

Correlates and Predictors of Non-suicidal Self Harm in Youth

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CHILDREN'S HOSPITAL OF EASTERN ONTARIO

Frequency of Non Suicidal Self Harm:16.9%

Nixon, Cloutier, and Jansson CMAJ 2008;178(3):306-12

Have you ever purposely tried to harm yourself without the intent to take your life? If so, how?	N	%
Self injury such as cutting, scratching and self-hitting	79	83
Ingesting a substance in excess of the generally recognized dosage	28	32
Ingesting recreational/illicit drug/alcohol as a means to harm yourself	15	17
Ingesting a non-ingestible substance or object	0	0
Other	8	9

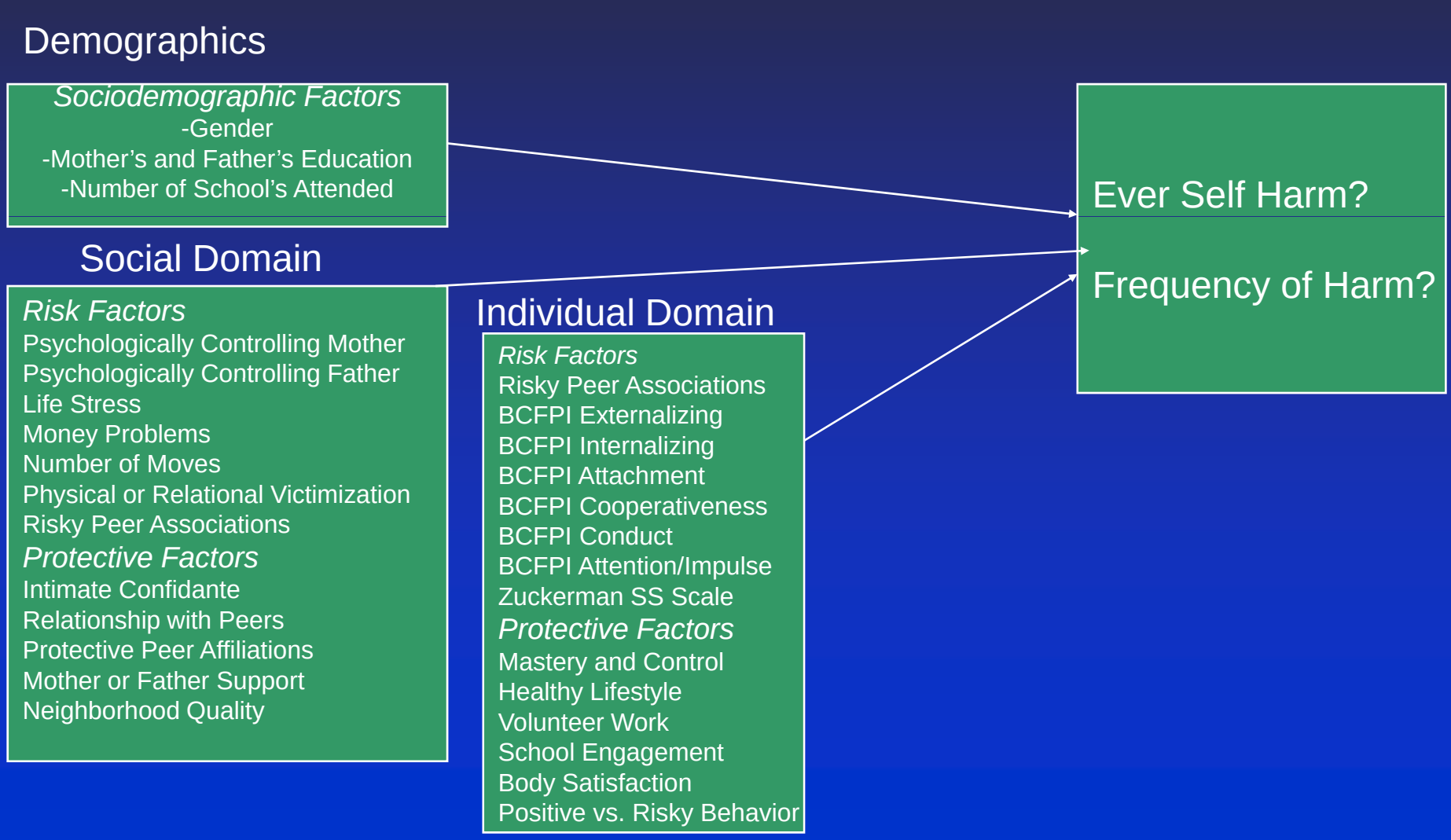
Method

- Health Youth Survey
  - Longitudinal Design/Cross sectional data
    - Three waves of data collected in 2003, 2005 & 2007
  - 580 adolescents completed the 2005 interviews
    - Interviewer administered and self report sections
  - Measures included information on:
    - socioeconomic demographics, neighborhood quality
    - life stress, victimization, peer relationships
    - parental support/quality of relationship
    - mental health (BCFPI), mastery/control, body satisfaction
    - sensation seeking (Zuckerman SS Scale)
    - nonsuicidal self harm (modified CASE definition of DSH)

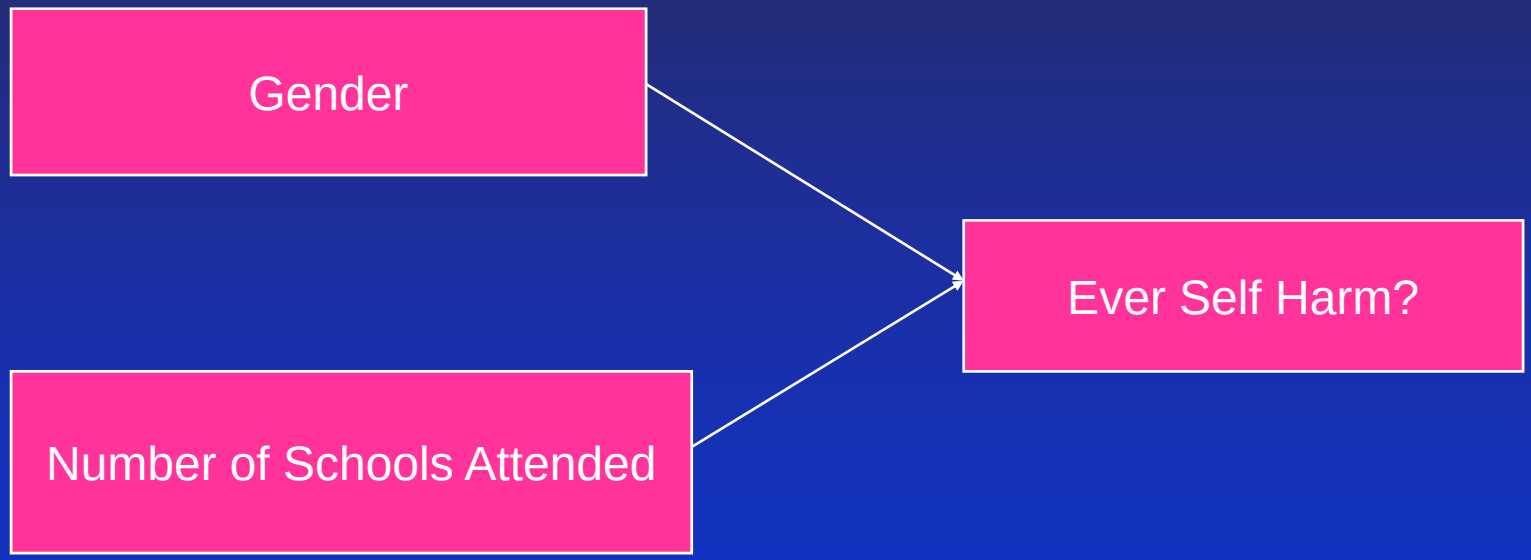
Method (cont'd)

Independent Variables

Dependent Variables



Correlations between Demographic Factors and Self Harm



Correlations Between Social Factors and Non Suicidal Self Harm

Social Factors	Ever Self-Harm	Frequency of Self-Harm
Risk Factors		
Psychologically Controlling Father	.21**	-.02
Psychologically Controlling Mother	.18**	.37**
Life Stress	.27**	.05
Money Problems	.14**	.09
Number of Moves	.09**	.12
Physical Victimization	.10*	.11
Relational Victimization	.19**	.20
Risky Peer Associations	.18**	.16
Protective Factors		
Relationships with Peers	.08	.00
Protective Peer Affiliations	.02	-.23**
Mother Support	-.15**	-.31**
Father Support	-.13**	.08
Neighborhood Quality	-.14**	-.04
Parenting Index		
Protective vs. Risky Parenting	-.29***	-.23*

Correlations or Chi-Square Between Individual Factors and Non Suicidal Self Harm

Individual Factors	Ever Self-Harm		Frequency of Self-Harm	
	r	χ^2	*r*	χ^2
Risk Factors				
Risky Peer Associations	.18***		.16	
BCFPI Externalizing	.25***		.25*	
BCFPI Internalizing	.26***		.25*	
BCFPI Depression	.31***		.40***	
BCFPI Attachment	.10*		.23*	
BCFPI Cooperativeness	.22***		.26*	
BCFPI Conduct	.17***		.09	
BCFPI Attention	.18***		.19	
Sensation Seeking	.12**		-.13	
Sexual Orientation		33.75***		.07
Protective Factors				
Mastery/Control	-.19***		-.17	
Healthy Lifestyle	-.05		-.02	
Volunteer Work	.06		.00	
School Engagement	-.10		-.02	
Body Satisfaction	-.27***		-.37***	

Predictors of Self-Harming Behaviour

Step Predictors	Step 1 OR (95% CI)	Step 2 OR (95% CI)	Step 3 OR (95% CI)
Demographics			
Gender	3.24***(1.91-5.49)	3.32***(1.89-5.90)	2.98***(1.64-5.43)
Number of schools	1.36(.95-1.97)	1.03(.69-1.53)	.92(.61-1.41)
Social Factors			
Protective vs. risky parenting		.79**(.69-.92)	.89(.76-1.05)
Life stress		1.41***(1.20-1.70)	1.32**(1.11-1.57)
Money problems		1.24(.69-2.30)	.90(.47-1.71.)
Number of moves		.98(.79-1.22)	.98(.79-1.23)
Quality of neighborhood		.70(.46-1.07)	.80(.51-1.25)
Individual Factors			
Body satisfaction			.51** (.32-.80)
Sensation Seeking			1.13* (1.01-1.27)
BCFPI depression			3.00** (1.49-6.07)
Sexual orientation			2.44* (1.22-4.85)
Nagelkerke R^2	.08	.23	.33

Summary

- Youth were approximately 1.5-2.5 times more likely to ever self harm if they had:
  - Increased Life Stress
  - Sexual Orientation issues
- Youth were approximately 3 times more likely to ever Self Harm if they had:
  - Higher levels of mood problems
  - Female gender
- Parenting factors were NS when individual factors were entered into the model

Conclusion

- Engaging in non suicidal self harm is likely determined by a constellation of demographic, social and individual factors
- The contribution of negative parenting behavior is mediated by individual factors
- Presence of NSSH is predicted by:
  - Female gender
  - Presence of significant life stress
  - Depressive symptoms, high sensation seeking, and poor body satisfaction
  - Sexual orientation issues
- Future Research: longitudinal study re risk and protective factors

School Counsellors' Experiences with Self-Injury in the Schools

Nancy L. Heath, Ph.D.
Health Research Team

Department of Educational & Counselling Psychology
McGill University, Montreal Quebec

McGill

NSSI in the Schools

- **Amongst college students:**
  - Whitlock et al. (2006) found that counsellors in a college setting reported that an increased number of clients were coming forward with NSSI.

- **Amongst high schools students:**
  - Heath et al. (2006) and Best (2004) found that high school teachers perceived NSSI to be on the rise and were unclear on how this should be handled in high school settings.

Method

- **Participants:**
  - 470 school counsellors (417 female, 53 male)
  - Age range, 23 to 67 years (*M* = 40.74, *SD* = 10.55)
  - Between 0.5 and 38 years of experience (*M* = 6.80, *SD* = 6.43)
- Participants were contacted through school counselling associations across North America, and invited to complete a 35-item online survey.
- **Survey tapped items related to NSSI:**
  - knowledge and attitudes
  - their experiences with students who engage in NSSI
  - beliefs about appropriate response
  - treatment approaches
  - training/professional development

Results

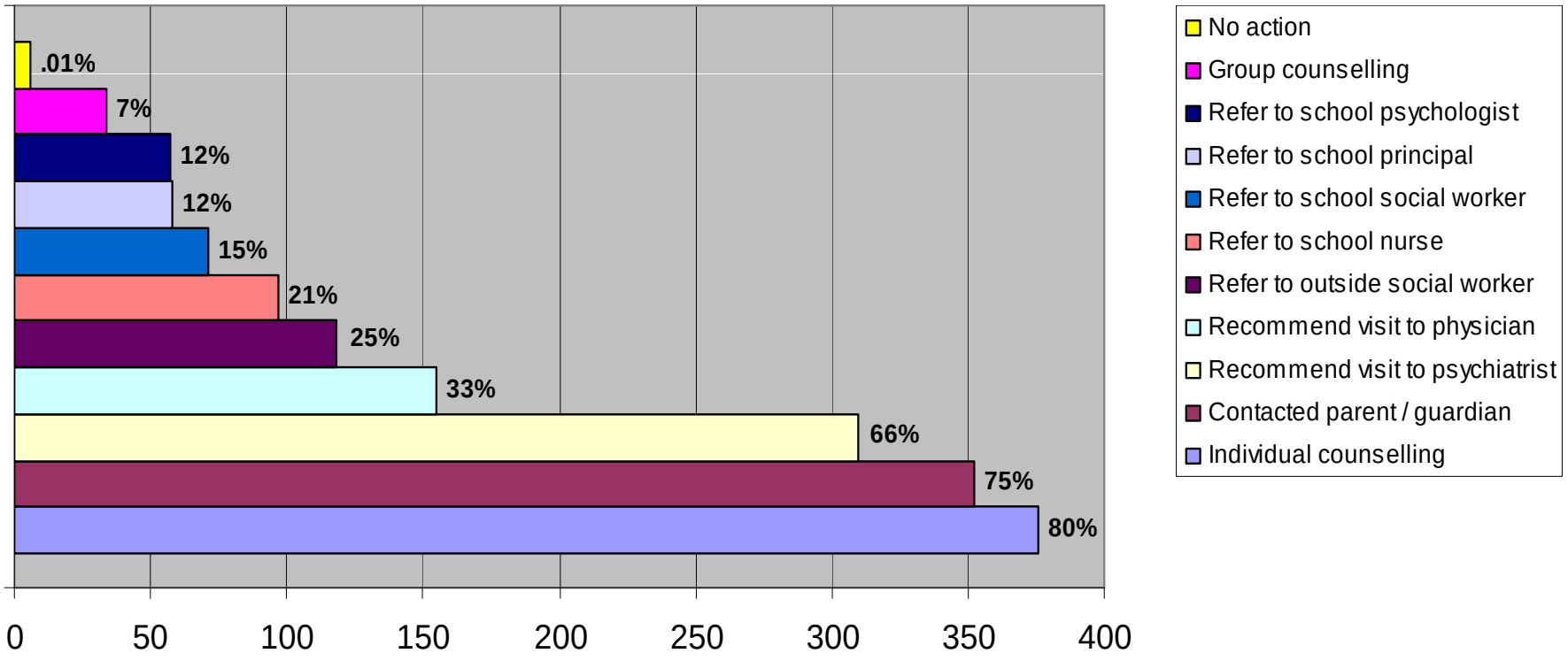
Experience with NSSI in the schools:

- **92%** percent of participants reported having worked with at least one student who self-injures.
- Only **17%** had school protocols for responding to NSSI.

Perceived knowledge:

- **78%** felt somewhat knowledgeable of root causes
  (**12%** felt not at all knowledgeable, **10%** felt very knowledgeable).
- **76%** felt somewhat knowledgeable of symptoms
  (**13%** felt not at all knowledgeable, **11%** felt very knowledgeable).

When working with a student who self-injures, what actions have you taken?



Results

Appropriate responses to NSSI:

- **82%** stated that school counsellors should be conducting interventions with students who self-injure.
- But only **35%** had received training in the area.
- **38%** of school counsellors felt that all students who engage in NSSI should undergo a psychiatric evaluation (even if they continue with intervention in the school setting)

From this:

- development and use of an online training module on NSSI for school counsellors has been initiated

Standardized Assessment of NSSI in Youth

OTTAWA SELF INJURY INVENTORY

(OSI)

Nixon and Cloutier, 2004

Development of the OSI

- Areas that were found lacking in existing measures
  - Assessment of the evolution of the behaviour (what initiates NSSI and what maintains it)
  - Comprehensive evaluation of the functions and efficacy of NSSI at fulfilling those functions
  - Exploration of addictive features
  - Assessment of the motivation to stop self-injuring

Structure of the OSI

- Measure contains items that are both
  - Quantitative
    - Dichotomous
    - Categorical
    - Continuous
  - Qualitative
    - Open ended questions
- Gives a detailed account of NSSI including a functional analysis of the behaviour which has implications for treatment

Functions: Initiation and Maintenance of NSSI

14. Why do you think you started and if you continue, why do you still self-injure (without meaning to kill yourself)? Please circle the number that best represents how much your self-injury is due to that reason.

Circle "0" if it has never been a reason that you self-injure and "4" if it has always been a reason that you self-injure.

WHY DID YOU START?	never a reason		sometimes a reason		always a reason
1. to release unbearable tension	0	1	2	3	4
2. to experience a "high" that feels like a drug high	0	1	2	3	4
3. to stop my parents from being angry with me	0	1	2	3	4
4. to stop feeling alone and empty	0	1	2	3	4
5. to get care or attention from other people	0	1	2	3	4
6. to punish myself	0	1	2	3	4
7. to provide a sense of excitement that feels exhilarating	0	1	2	3	4
8. to relieve nervousness/fearfulness	0	1	2	3	4

IF YOU CONTINUE ~~WHY DO YOU CONTINUE?~~	never a reason		sometimes a reason		always a reason
1. to release unbearable tension	0	1	2	3	4
2. to experience a "high" that feels like a drug high	0	1	2	3	4
3. to stop my parents from being angry with me	0	1	2	3	4
4. to stop feeling alone and empty	0	1	2	3	4
5. to get care or attention from other people	0	1	2	3	4
6. to punish myself	0	1	2	3	4
7. to provide a sense of excitement that feels exhilarating	0	1	2	3	4
8. to relieve nervousness/fearfulness	0	1	2	3	4

Addictive Properties

21. *circle "0" if never and circle "4" if always*

Since you started to self-injure, have you found that:	**never**			**sometimes**	**always**
a. The self-injurious behaviour occurs more often than intended?	0	1	2	3	4
b. The severity in which the self-injurious behaviour occurs has increased (e.g., deeper cuts, more extensive parts of your body)?	0	1	2	3	4
c. If the self-injurious behaviour produced an effect when started, you now need to self-injure more frequently or with greater intensity to produce the same effect?	0	1	2	3	4
d. This behaviour or thinking about it consumes a significant amount of your time (e.g., planning and thinking about it, collecting and hiding sharp objects, doing it and recovering from it)?	0	1	2	3	4
e. Despite a desire to cut down or control this behaviour, you are unable to do so?	0	1	2	3	4
f. You continue this behaviour despite recognizing that it is harmful to you physically and/or emotionally?	0	1	2	3	4
g. Important social, family, academic or recreational activities are given up or reduced because of this behaviour?	0	1	2	3	4

Efficacy of NSSI

16. If you chose any of the following reasons for continuing to self-injure, please rate their helpfulness.

Circle (0) if self-injury is not at all helpful and circle (4) if self-injury is extremely helpful at:

Self-injury is extremely helpful at:	**Not at all helpful**		**somewhat helpful**		**extremely helpful**
Releasing unbearable tension	0	1	2	3	4
Releasing anger	0	1	2	3	4
Releasing frustration	0	1	2	3	4
Releasing nervousness	0	1	2	3	4
Releasing feelings of sadness or feeling down	0	1	2	3	4
If the reason(s) why you continue to self-injure are different than those listed above, please insert your reason on the line provided and rate it's helpfulness					
Write in your reason _____	0	1	2	3	4
Write in your reason _____	0	1	2	3	4

Motivation to stop NSSI

23.

How **motivated** are you at this time to stop self-injuring?	not at all motivated		somewhat motivated		extremely motivated
	0	1	2	3	4

Evaluation of the OSI

Study currently underway

Cloutier, P., Nixon, M.K., Lofthouse, N., Greenham, S., Bisnaire, L., Steele, M., & Soliman, W. (2007). Functional Analysis of Self-Injury in Adolescents: Psychometric Properties of the Ottawa Self-Injury Inventory. Funding received through CHEO Research Institute, $29,301.

4 inpatient sites:

- Children's Hospital of Eastern Ontario (up and running)
- The Children's Hospital of Western Ontario (up and running)
- St Joseph's Health Care-Regional Mental Health Care,London, ON (up and running)
- The Ohio State University-Harding Child and Adolescent Inpatient Hospital (awaiting IRB approval)

Next Steps

- conduct a factor analysis on the functions of NSSI scale to determine the underlying structure
- evaluate the internal consistency of the functions of NSSI scale
- extend the evaluation of the measure to non-clinical samples
- evaluate if the factor structure changes between community and clinical samples
- conduct a test-retest evaluation on the newly modified questionnaire on a much larger sample

Emergency Services and Self-Injury in Youth: Characteristics and Referral Patterns

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[3] UNIVERSITY OF OTTAWA

[4] University of Victoria | British Columbia Canada

Background

- Emergency Departments (ED) are increasingly becoming a primary source to obtain MH services for children and youth (Breslow et al. 2000; Christodulu et al., 2002 Edelsohn et al. 2003; Meunier-Sham & Needham 2003; Sills & Bland 2002).

- Some researchers propose that this increase is due to lack of inpatient and outpatient mental health services in both the U.S. (Breslow et al. 2000;Meunier-Sham & Needham, 2003; Edelsohn et al. 2003; Sills & Bland 2002;) and Canada (Smith & Hadorn 2002; Parker, et al. 2003; MHECCU 2003).

- Pediatric ED literature examining self-harm presentations report:

-62% to 67.2% for self-poisoning
-17% to 25.8% for self-cutting

(Bolger et al. 2004; MacAlaney et al. 2004; Olfson et al. 2005)

Objectives

- Determine the prevalence rate of NSSI in patients receiving a crisis assessment in the ED
- Compare the similarities and differences between pediatric mental health presentations to the ED for those with NSSI to those without NSSI
- Determine the overlap between NSSI and suicidal ideation in a pediatric emergency sample

Method

Timeline: April 1, 2005- March 31, 2006

Procedure: Patients arriving at the ED for a mental health emergency

Triaged to: 1) Crisis Intervention Worker (CIW)

-masters level clinicians

-standard clinical battery of psychometric measures

-emphasis on risk assessment

-empowered to discharge from the ED

with appropriate follow-up instruction

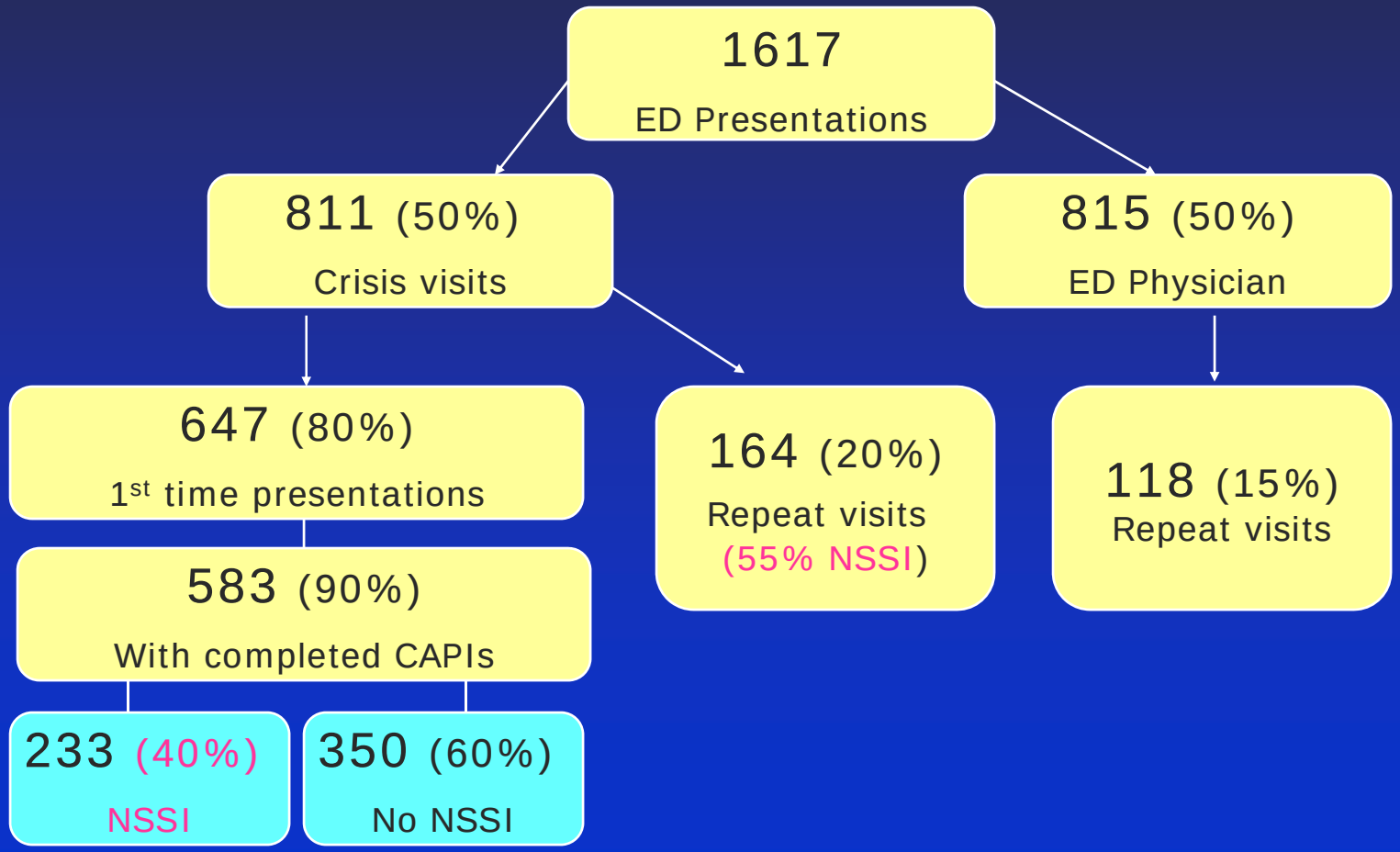
-consultation with psychiatry on call as necessary

2) Emergency Department Physician

-when there are immediate medical concerns

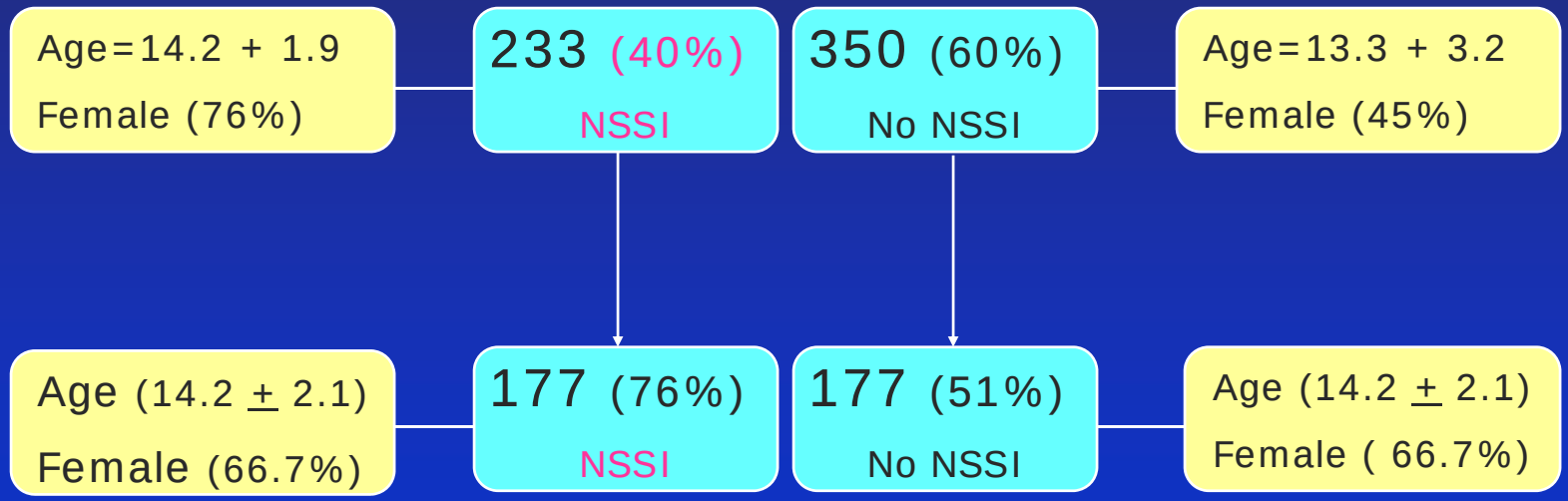
(e.g., ingestion, stitches for a self-inflicted wound)

Patient flow chart



Sample matching (Crisis Visits)

The self-injuring and non-self-injuring groups were matched on age and sex



Results (Patient Characteristics)

- No significant demographic differences:
  - -Current living arrangement
  - -Bio family intact (45%)
  - -CAS involvement (24%)
  - -School attendance (full-time 87%)
- No significant ED presentation differences:
  - -Day of the week
  - -Arrival shift (days 46%, evenings 48%, nights 6%)
  - -Who recommended that youth come to the ED
    (top 3, parent (34%), family doc (24%), school (19%))
  - -Presenting problem as recorded by the CIWs
    (top 3, mood (55%), situational crisis (39%), behaviour (22%)

Results (Clinical Characteristics)

- Significant Clinical differences:
  - -Currently receiving counseling (49% vs. 38%)
  - -Previous psychiatric admission (23% vs. 14%)

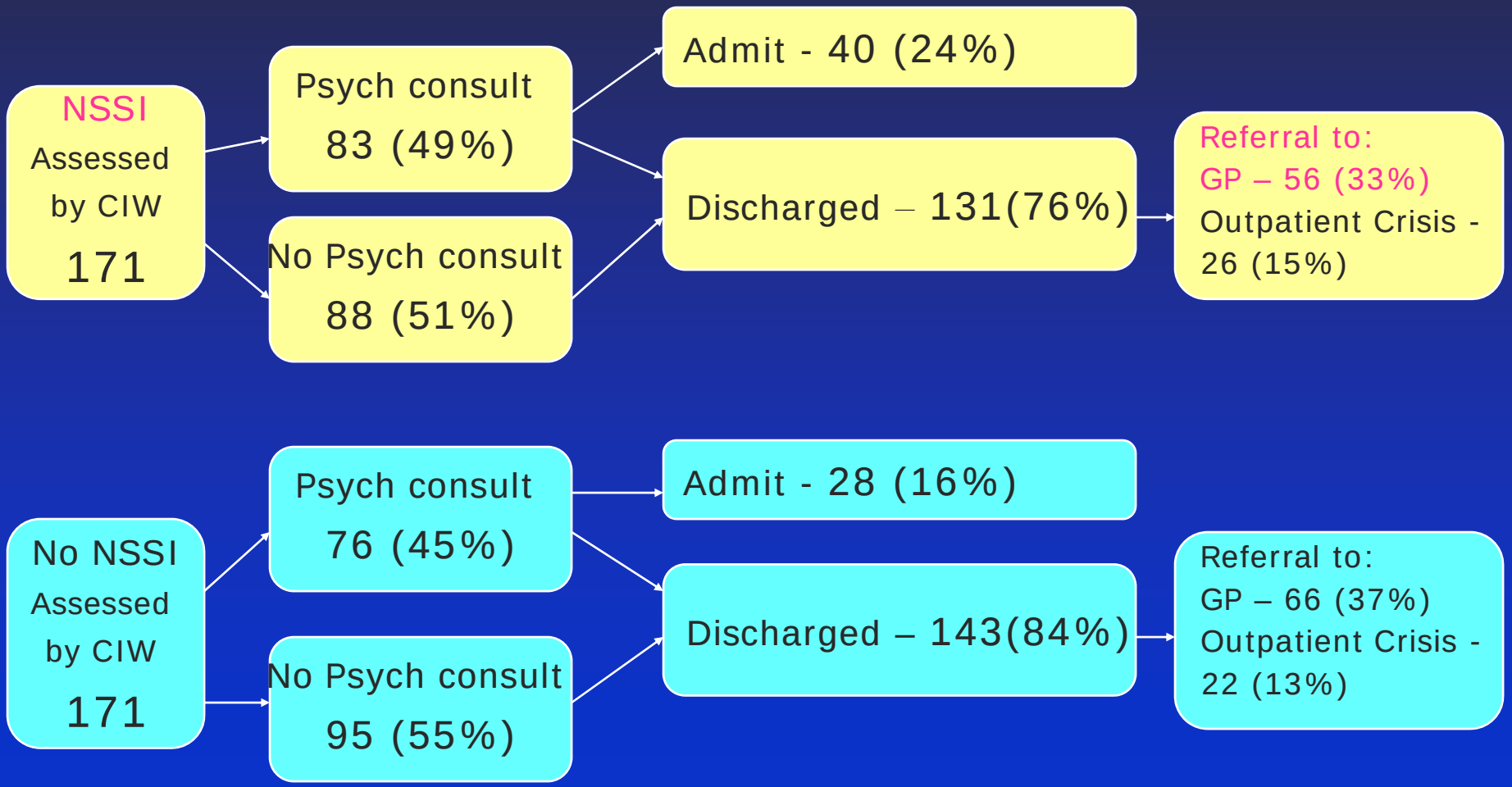
- No significant Clinical differences:
  - -Previous psychiatric history (56% vs. 54%)
  - -Medical attention required (17% vs. 19%)
  - -Admission rates (24% vs. 16%)

39% of those with NSSI also had suicidal ideation

Results (Self-reports)

Scale	NSSI	No NSSI	P value
CDI % in the clinical range	77.8 (14.8) 81 %	69.4 (17.3) 56 %	.000 .000
MASC – 10 % in the clinical range	59.8 (12.9) 37 %	57.2 (12.2) 26 %	ns .049
Conners – Wells			
Conduct Problems % in the clinical range	64.8 (13.2) 43 %	59.6 (12.7) 28 %	.003 .018
Cognitive Problems % in the clinical range	62.7 (11.9) 45 %	58.8 (11.5) 36 %	.013 ns
Hyperactivity % in the clinical range	57.3 (11.0) 33 %	54.9 (11.4) 28 %	ns ns
ADHD Index % in the clinical range	66.1 (10.5) 52 %	62.7 (11.4) 45 %	.020 ns

Disposition



Summary

- The 40% prevalence rate of SI falls within the range of previous research (22% to 67%)

- The NSSI group:
  - report greater psychopathology
  - higher rate of suicidality
  - more likely to have prior contact with MH services
  - higher admission rate

Clinical Implications

- There is a substantial number of patients presenting to ED with NSSI.
- Adolescents who Self-injure are a highly symptomatic group of mental health service users.
- Patient presenting with NSSI should receive a careful assessment of suicidal risk at each visit.
- Issues for frontline ED staff.
  - Be aware of counter-transference (do not dismiss them).
  - Is anyone being missed because of being labeled BPD?
  - Is their depression being properly treated?
- Large numbers are being referred back to their community providers
  - Community providers often report not feeling qualified or comfortable with treating youth who self-injure
  - Lack of support/community services
  - The importance of training and expanding community services.

Treating Youth Who Self Injure and Their Parents with A Group Approach

Developmental Group Psychotherapy for Self harming Adolescents (Wood et al., 2001)

Focus on adolescents going through difficulty by using positive corrective therapeutic relationships

- Goals: reduce self harm, reduce depression

- Combines Problem solving, CBT, DBT, and Psychodynamic psychotherapy

  Open groups:

  - Acute phase: 6 themes including relationships, school problems, personal relationships, family problems, anger management depression and self harm, hopelessness and feeling re the future

  - Long term group: emphasis on group process

Wood et al 2001, DGT

- N=62
- Single blind RCT
- DGT and routine care vs routine care
  - DGT group less likely to self harm, had better school attendance and lower behavioral problems on follow up (7 months)
  - No significant change in levels of depression, suicidal thinking

Piloting Groups for Self Harming Adolescents and their Parents (Nixon et al., 2004)

- *Adolescent,* 12 sessions, weekly
  - *Modified DBT (50 mins)(Miller et al, 2004):* validation, introduction of new skills and concepts practice and reinforcing of new skills
  - Mindfulness exercise
  - Nutrition break
  - *Therapeutic Support for Adolescents, (Fine et al 1991):* (50 minutes)
- Parent Group, 6-7 sessions
  - psychoeducation, therapeutic support, skill building, eg mindfulness, communication, highlight separation and individuation developmental goals of adolescents.

Dialectial Behaviour Therapy

- Combines PST, dialectical and validation strategies. (Rathus & Miller, 2002)
- In formal DBT:
  - Individual and family skills training (24 session program conducted in 12 weeks):

- DBT skills training focuses on:
  - Mindfulness
  - Distress tolerance
  - Emotional regulation
  - Interpersonal/communication skills
  - New component – Walking the Middle Path

Therapeutic Support Group component (S. Fine)

- structured, process oriented, based on experiential, interpersonal and insight oriented approach

  -provide milieu where adolescents use their peers to facilitate separation from parents supportive environment within which change can be facilitated

S.A.S
(Self-Assessment Sheet)

Was there a "TRIGGER"? What was the situation that **UPSET YOU**?
Where were you? _____
Who was there? _____
BRIEFLY – Tell us what happened? _____
_____

_____
What were you THINKING? _____
_____
How UPSET were you? Circle one**:**

1	2	3	4	5
Very upset	**Really**	**Moderately**	**Mildly But still ok**	**Not at all**

What did you DO? How did you handle this situation? _____
_____
_____
_____
Did you use any techniques or ways to cope differently with your distress?
_____
_____
_____
_____
How well do you feel you handled yourself? Circle one**:**

1	2	3	4	5
Poorly	**Not so well**	**Okay**	**Good**	**Great**

What were the consequences? What happened as a result of how you handled this situation? Short term? Long-term?
_____
_____
_____
_____
Is there anything that you could have done differently ? _____

Psychoeducation: DBT

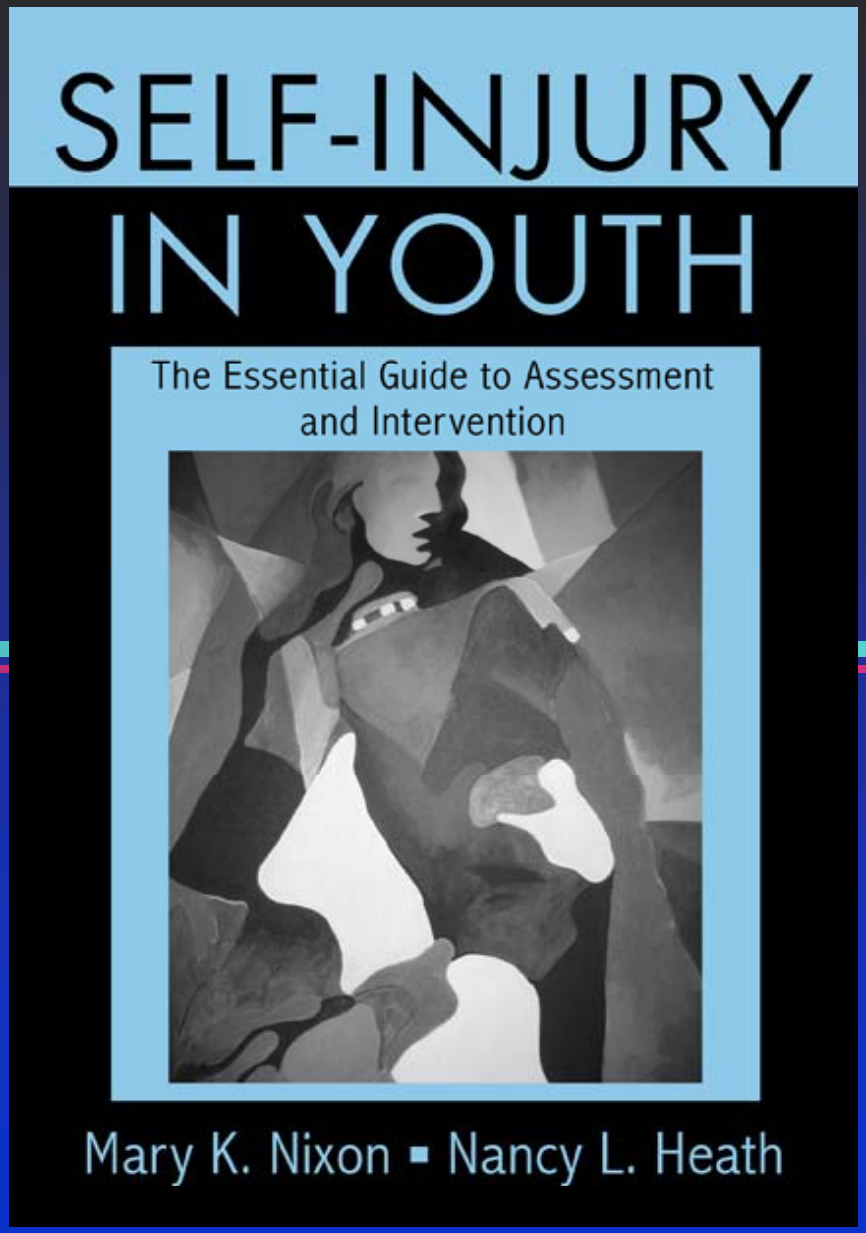
Group Characteristics (8 groups post pilot)

- Ave age started NSSI: 12.77 (SD 2.41)
- Mean age, 15.45 (SD 1.36)
- n=54 started, n=40 completed
  - 74% retention rate
- How to measure treatment outcome?
  - ? Reduction in SI behaviour
  - ?Increase in alternative coping strategies
  - ?Improvements in depression, anxiety, self esteem
- Predictors of treatment outcome
  - ?addictive aspects more resistant to shorter term treatment

Treatment Considerations

- Treatment needs to be tailored to the specific issues presented by each individual (and family)
- Treatment intervention(s) depend on level of motivation for change
- Those with repetitive self injury with addictive features may require longer term treatment with reasonable expectations regarding outcome
- Ongoing communication between treatment team members is essential to gain information that aids in assessment as well as to ensure consistency and assess for efficacy

Other Resources



Routledge Press, Taylor and Francis, NY, 2008

INSYNC website

www.insync-group.ca

Areas for New/Further Research

- Knowledge Translation/Training and Service Delivery Issues
  - For youth
  - For parents
  - For professionals
  - For practitioners
- Addictive Aspects of Repetitive NSSI
  - Implications for assessment and treatment
  - Early identification of those at risk of repetition
- Evaluation of Treatment Interventions

Thank you