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# Innovation in understanding and responding to self-harm: the Card Sort Task for Self-Harm (CaTS)

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**Self-Harm Research Group**

**@selfharmnotts**





**Self-harm is very complex and changes over time: CaTS key transitions**

**Key transitions are modifiable: talking therapies help (need more)**

**Involve those with lived experience meaningfully: how?**



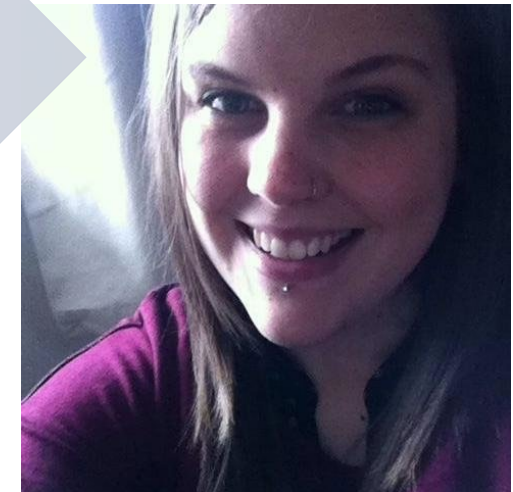
Sensitive/accurate

• Died by suicide



Non-stigmatizing

• Person who ...

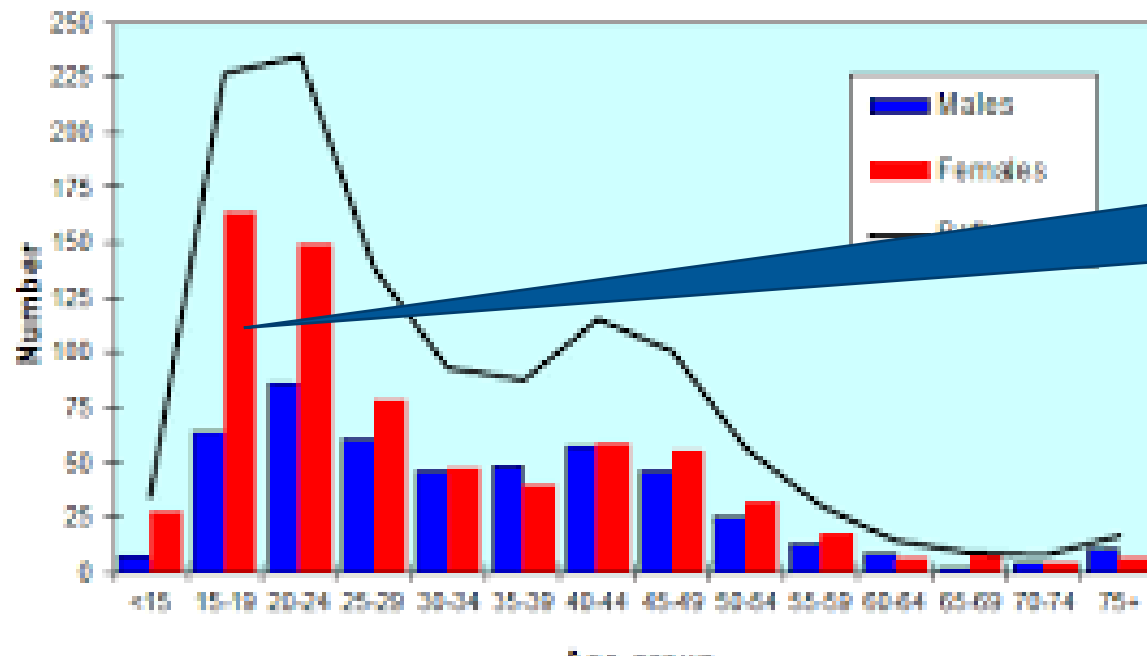


**Emma Nielsen – Mind your ‘C’s and ‘S’s: The Language of Self-harm and Suicide (and why it matters): IMH Blog**



Any act of intentional self-poisoning or self-injury, regardless of suicidal intent (NICE, 2011)

Oxford Monitoring System for Attempted Suicide  
Age groups by gender in self-harm patients presenting  
to the John Radcliffe Hospital in 2011



Mid-late  
adolescence

50% CYP suicide → previous SH → **prevention**

Suicide – leading cause of death 5-19 years England (ONS)

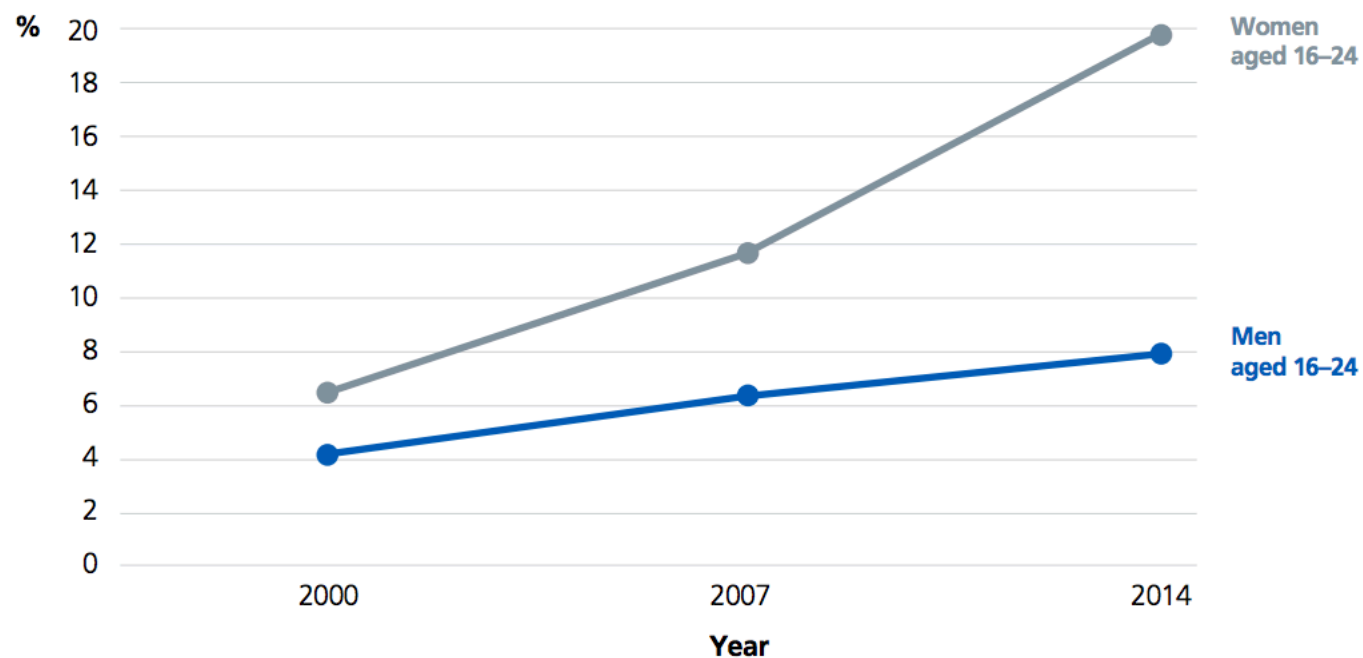


# Self-harm is on the increase



## Self-harm ever (reported face-to-face) in 16–24 year olds, by sex: 2000, 2007 and 2014

*Base: adults aged 16–24 and living in England*





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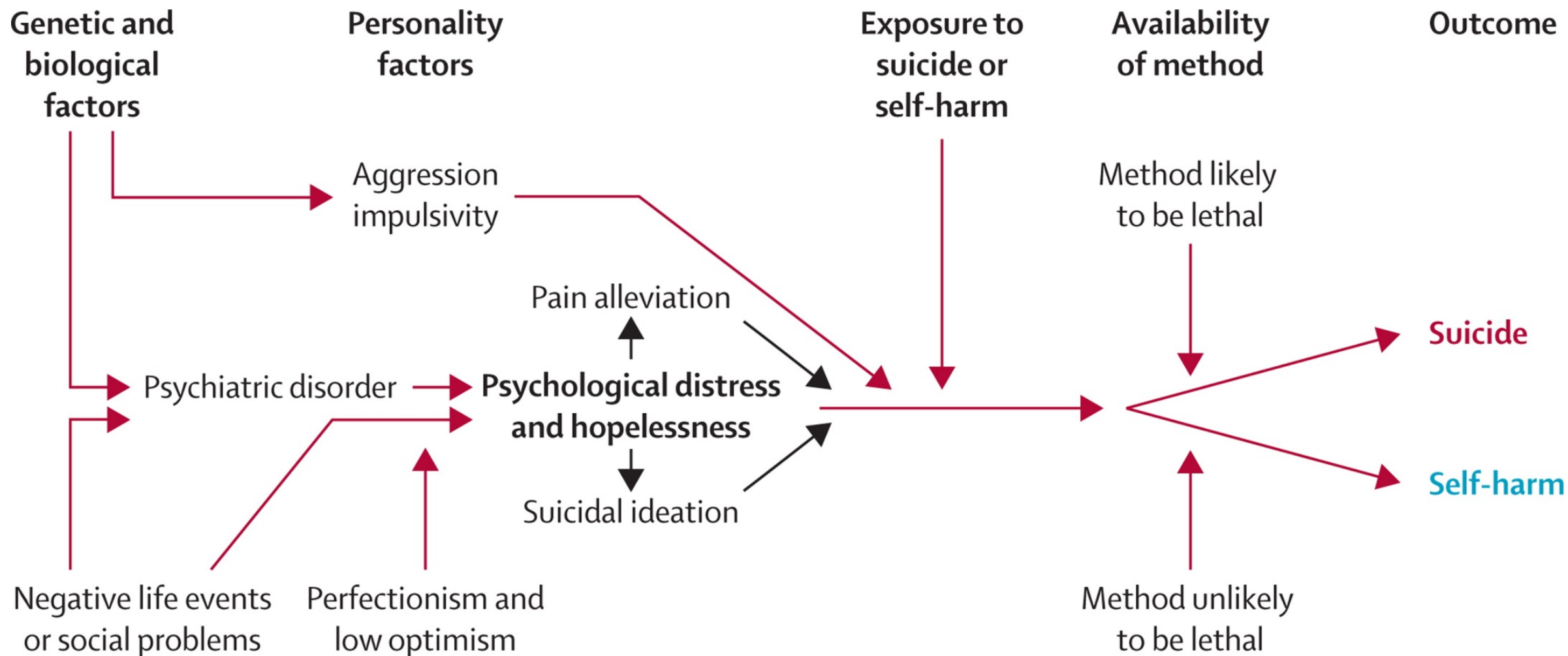
# Self-harm is complex

It evolves and changes over time





# Complexity = opportunity



Hawton et al. *Lancet* 2012, 379, 2373-2382





## Complexity

- Card Sort Task for Self-Harm
- (CaTS)

## Temporal relationships?

- Sequence analysis
- (Order matters)



“**o**kn**dge****f**he**O**fowle ua  
p**m**en**f**utaheno, t**m**ost  
va**a**luo**a**ble tho O**o**hnn se  
tu**s**are the to **the o t suc**dv**ce**  
a **ssion**. rel**c**tsaur**t**ing **r**der to  
th relate ese is fod ev**w**tery  
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pothower posses**f**lues ll**heir**  
wh**h**of invic**e** **m**ina se fa to o  
tru**i**cts aan  
we 1)

"Of all the truths relating to  
phenomena, the most valuable  
to us are those which relate to  
**the order of their  
succession**. On a knowledge of  
these is founded every  
reasonable anticipation of  
future facts, and whatever  
power we possess of influencing  
those facts to our advantage."  
(John Stuart Mill, 1851)

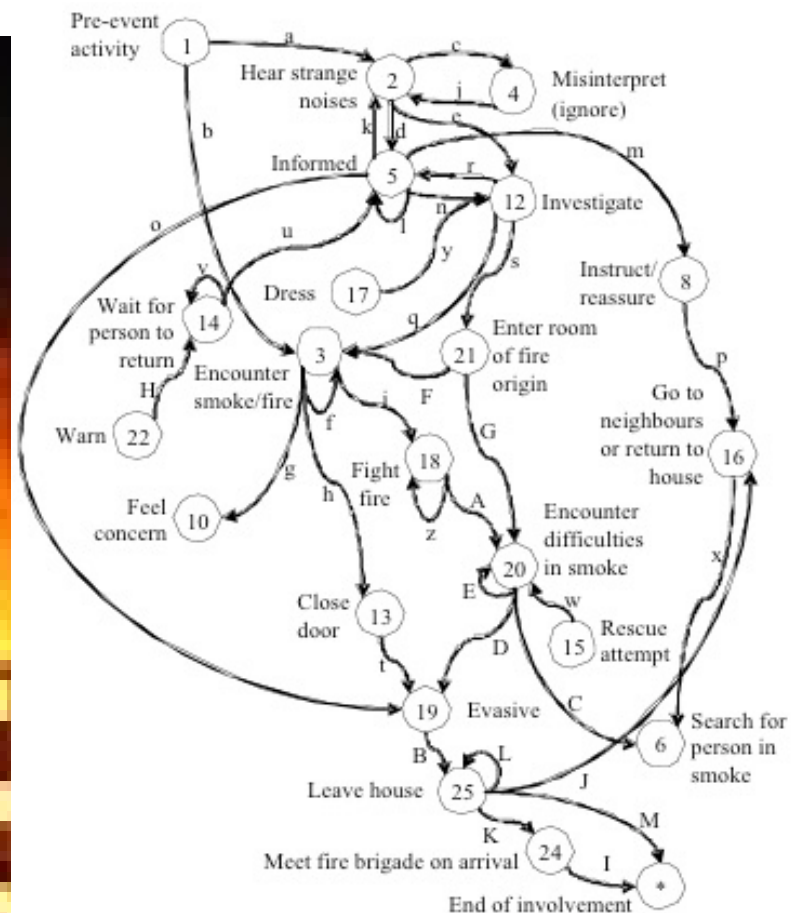
Thoughts

Feelings

Events/  
Behaviours

# Sequence Analysis in capturing complexity and time

- **Understand patterns of actions/events**
- **Events past**
- **Complex casual factors**
- **Dynamic interplay**







1. Test novel task to examine thoughts, feelings, events and behaviours prior to/following SH
  - **C**ard Sort **T**ask for **S**elf-Harm (CaTS)
2. Sequence analysis: What are the important **sequences of factors** leading to self-harm?
3. First ever vs most recent episode SH

Townsend et al. (2016). *Journal of Affective Disorders*, 206, 161-168





- CaTS co-created with Advisory Group of YP: Harmless
- 117 cards - thoughts, feelings, events, behaviours
  - E.g. “I was not afraid of death”, “I felt trapped”, “I was depressed and sad”, “I was drunk”
  - Participants could create additional cards
  - Timeline: 6mo, 1mo, 1 week, 1 day, 1 hr before/after
- First time and most recent episodes
- VAS – mood at start and end
- Mood repair
- SH past 6 months, age 11-21 years



Townsend et al. (2016). *Journal of Affective Disorders*, 206, 161-168





## Top 5 cards used

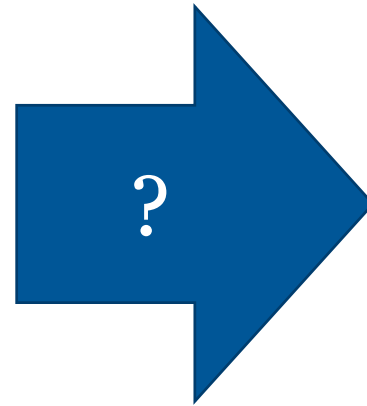


First episode of self-harm	Most recent episode of self-harm
I felt depressed and sad	I felt depressed and sad
I could not tell anyone how I was feeling	I could not tell anyone how I was feeling
I hated myself	I isolated myself from others
I isolated myself from others	I hated myself
I felt worthless	I felt like a burden on people



- Do we observe a sequence/pattern over time?
- How often did card pairings occur?
- Which card pairings contribute most strongly to sequence?

**I felt depressed  
and sad**

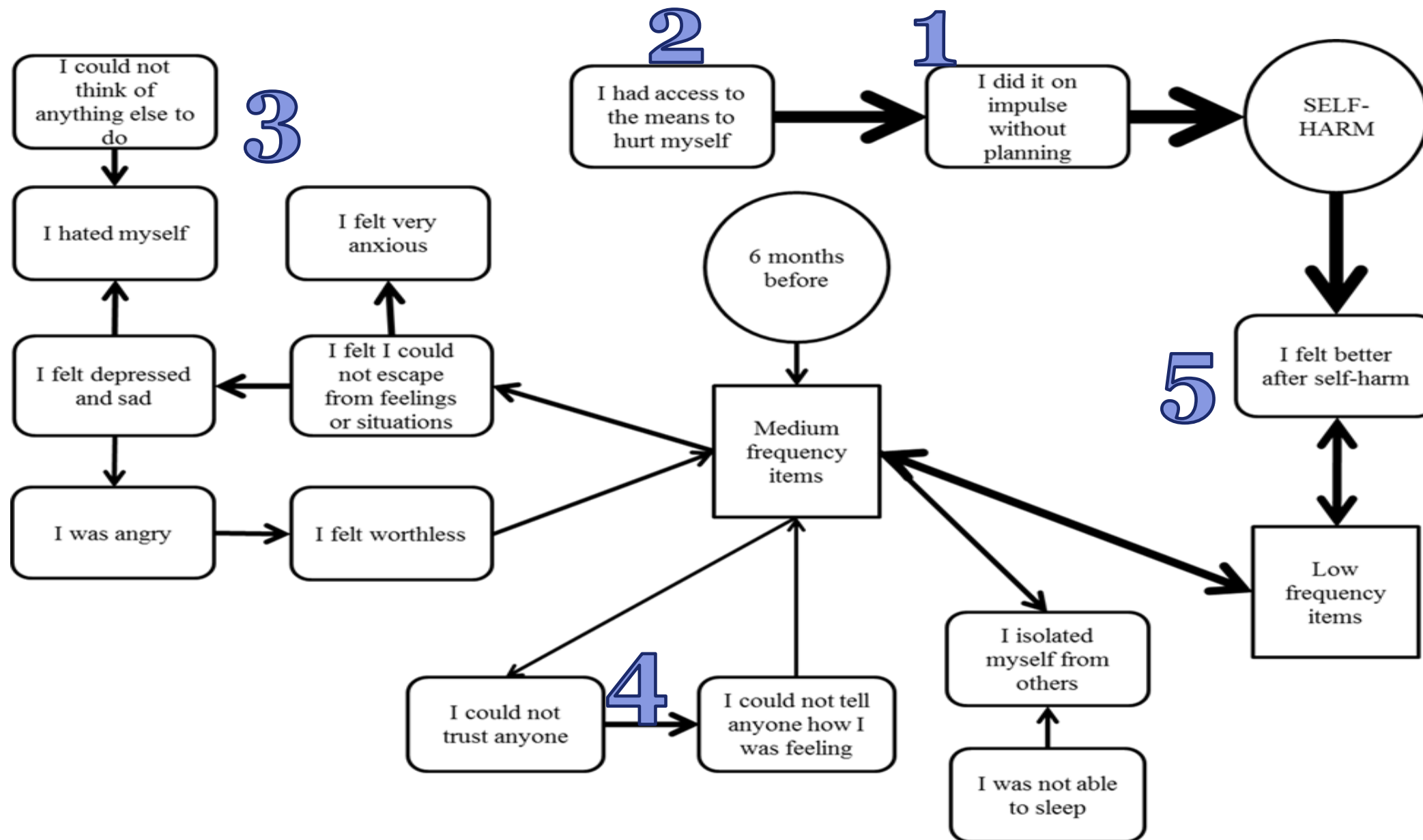


**I could not trust  
anyone**





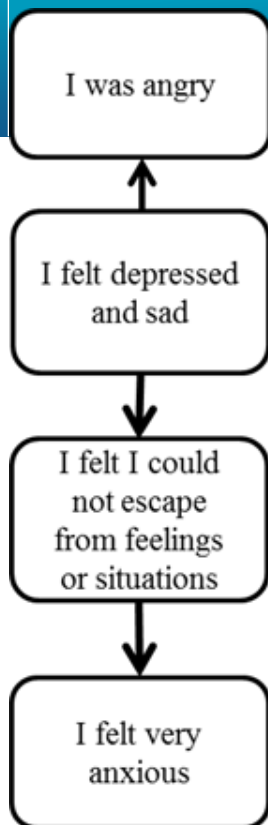
# Study 1: First episode – state transition diagram





# Most recent episode

3



4

I felt hopeless about the future

I felt worthless

2

I hated myself

I had access to the means to hurt myself

I did it on impulse without planning

1

SELF-HARM



I felt like a burden on people

Medium frequency items

Low frequency items

5

I was not able to sleep

I was very agitated and restless

I could not tell anyone how I was feeling

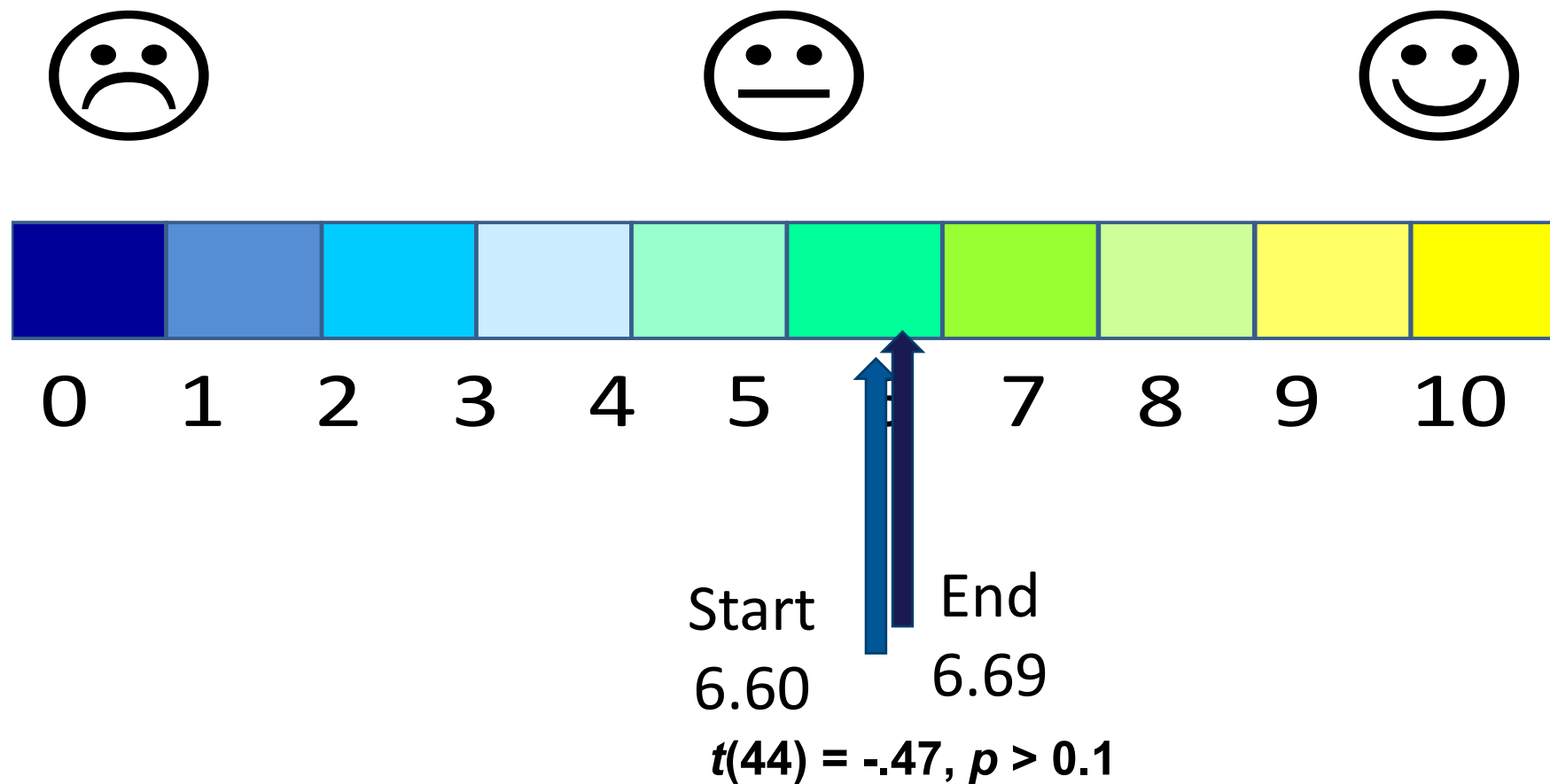
I wanted to die

I isolated myself from others

6 months before



# Impact of taking part ...

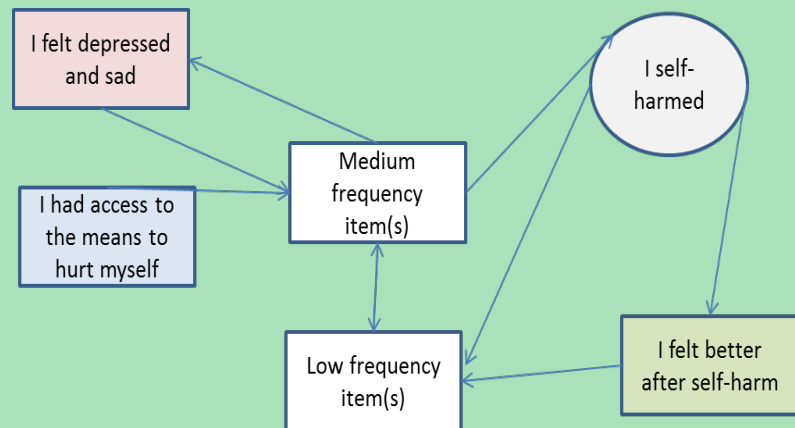




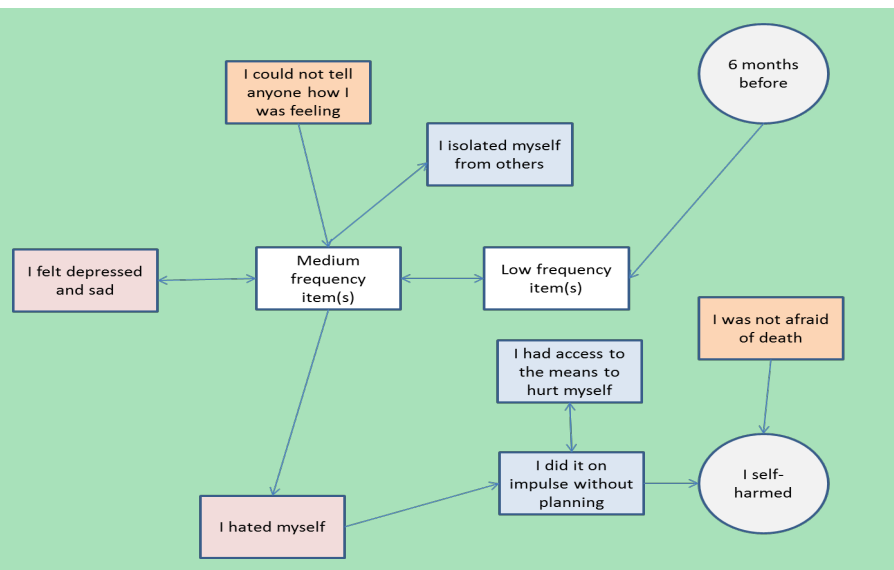
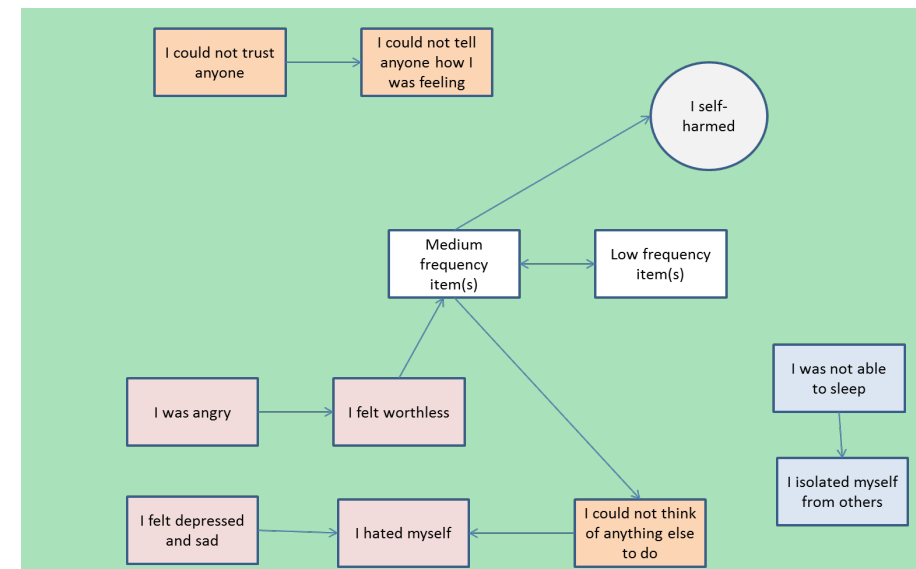
## Study 2: Increase complexity?

- More complexity? What if looked-after? Impact on sequences?
- Wadman et al (2017) *British Journal of Clinical Psychology*

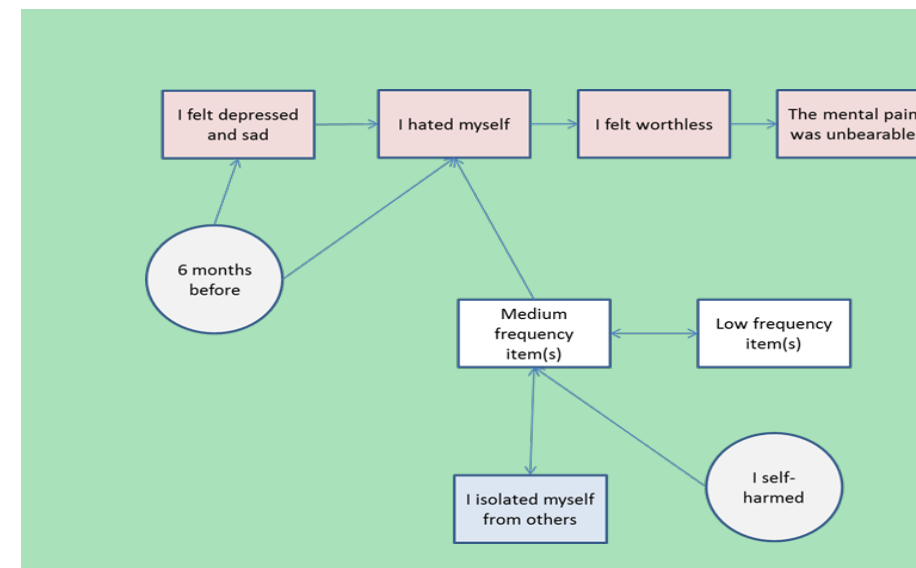




## FIRST EVER



## MOST RECENT





## Study 3: E-Cats (Thynne et al, *In prep*)



Online recruitment

>18 years

More time stamps

Use cards more than once



and click custom card to create a card with that text.

You can also use the circular buttons above the columns to show where new cards should be placed.

Thoughts ▼

Feelings ▼

Events ▼

Behaviours ▼

Support ▼

Afterwards ▼

Arrange cards here:

☒ More than  
6 months  
before

☐ 6 months  
before

☐ 1 month  
before

☐ 1 week  
before

☐ 1 day  
before

☐ 1 hour  
before

☐ Just before

☐ I self-  
harm

☐ Immediately  
afterwards

☐ Later on  
afterwards



## Study 3: E-Cats (Thynne et al, *In prep*)



Sequential pattern

Impulsivity key factor  
proximally

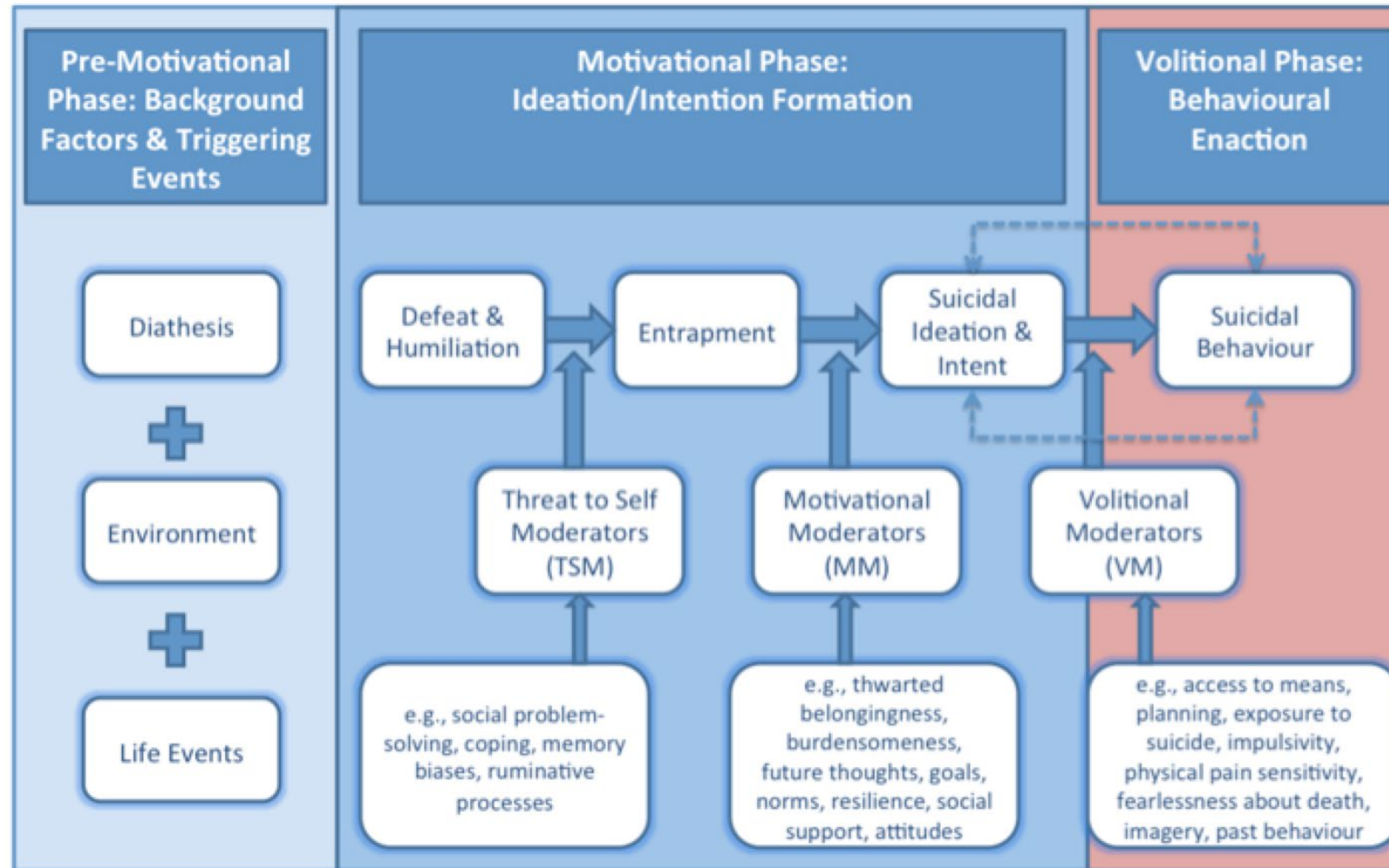
Many cards added- after

Useful for adults too



# CaTS: Findings support IMV model

Figure 1. The integrated motivational–volitional (IMV) model of suicidal behaviour



O'Connor, R.C., Kirtley, O.J. (2018). The Integrated Motivational-Volitional Model of Suicidal Behaviour. *Philosophical Transactions of the Royal Society B*. 373: 20170268.

## All about Me (first task)

25 cards + blank cards – select cards that best capture how you would describe yourself

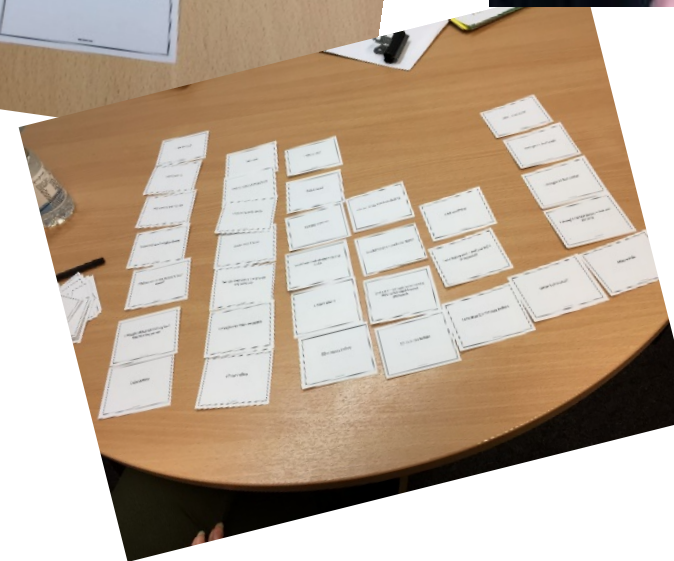
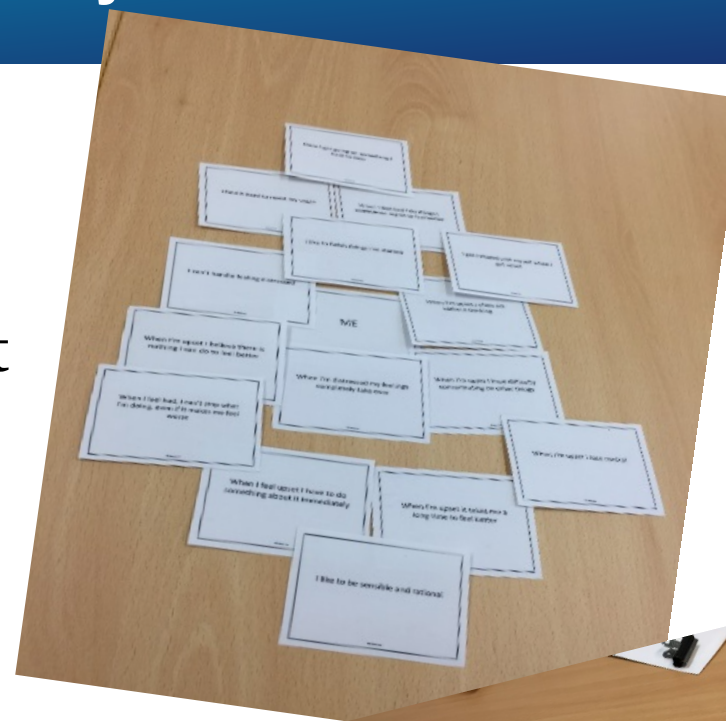
## My experience

43 cards + blank cards

Follows the CaTS timeline approach

- shortened time frame

- Structured springboard for nuanced dialogue
- Support understanding – conscious awareness?
- Build rapport and reduce power differentials





YP valued CaTS: benefit – discussing stages, progression and change

Multidimensional understanding of impulsivity made sense to YP

All about me: highest frequency cards → managing/tolerating negative emotion



Self-harm changes/evolves: assessments implication.

Recent self-harm: fearlessness of death, access to means, wish to die, hopelessness, impulsivity

Underlying emotional distress, particularly depression anger and self-hatred important

Regular monitoring and assessment vital: restrict access to potentially fatal means

CaTS clinical utility as an assessment tool: start difficult conversations, track change over time



"I especially loved the card sort task as it helped me to look at and understand my experience and communicate this across within the research. I was able to complete the task freely in my own time and in my own way"







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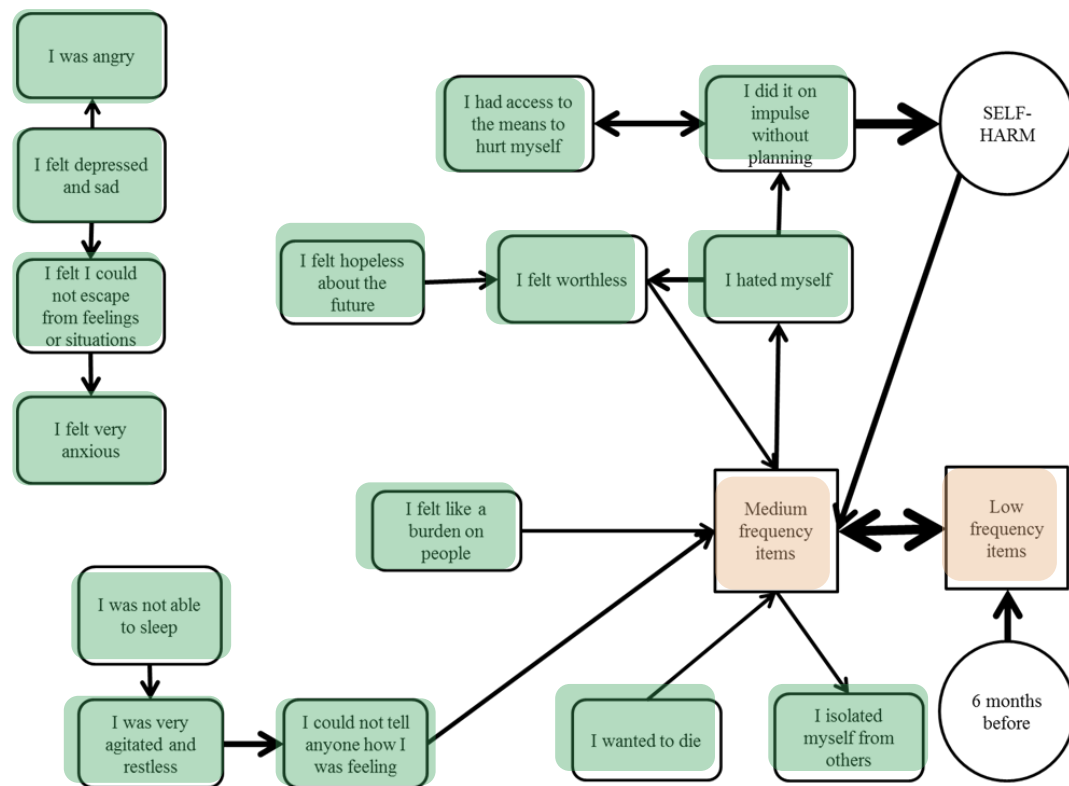
# Key transitions are modifiable

Talking therapies help – we need more



## Factors in key transitions = modifiable

- ✓ Means access
- ✓ Negative thoughts and emotions, and impulsivity → PS, CBT, DBT, MBT
- ✓ (Hawton et 2015: 2016 Cochrane Reviews)





MBT does reduce  
number repeating SH  
( $K=1$ )

DBT does improve  
depression,  
hopelessness, ideation  
( $K=1$ )

DBT does not reduce  
number repeating SH  
(or frequency)  
( $K=2$ )

No other intervention significant reduction in number repeating SH



**Cochrane  
Library**

Cochrane Database of Systematic Reviews



## Interventions for self-harm in children and adolescents (Review)

Hawton K, Witt KG, Taylor Salisbury TL, Arensman E, Gunnell D, Townsend E, van Heeringen K, Hazell P

Cochrane Database of Systematic  
Reviews 2015, Issue 12. Art. No.: CD012013.  
DOI: 10.1002/14651858.CD012013.



Psychological therapies ('talking treatments') may help people who self harm.



New Cochrane review; 55 studies, where a total of 17,699 participants were randomized to receive either a psychosocial intervention or the care they would normally have received.

[uk.cochrane.org](http://uk.cochrane.org) | [@ukcochranecontr](https://twitter.com/ukcochranecontr) | [#cochranevidence](https://hashtagevidence.co.uk) | [bit.ly/1NsL8X2](https://bit.ly/1NsL8X2)

Psychosocial  
interventions for  
self-harm in  
adults







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**Involve those  
with lived  
experience  
meaningfully:  
How?**

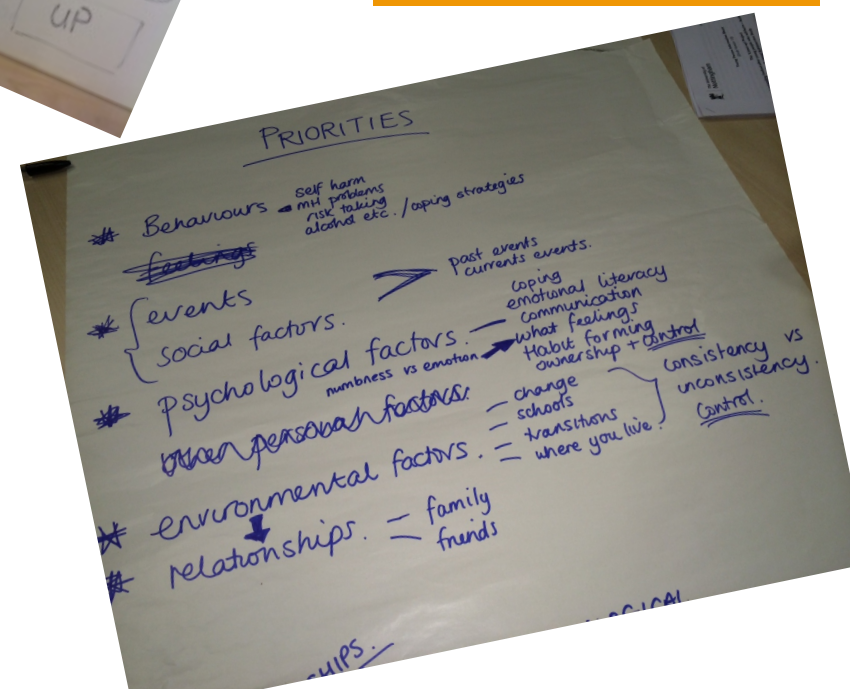
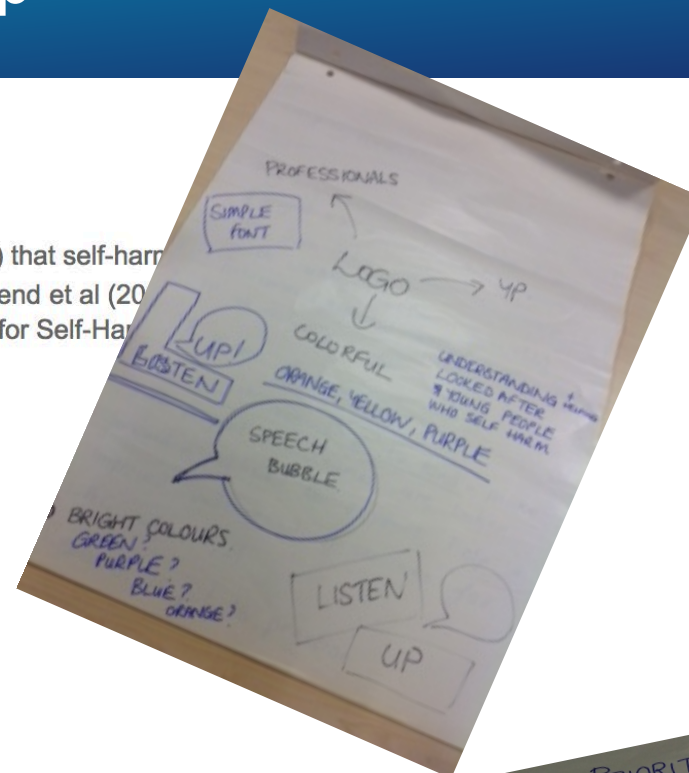




## Young people share their reactions to Listen-up! project findings

posted Jul 15, 2016, 11:43 AM by Ellen Townsend [ updated Jul 18, 2016, 1:58 PM ]

In this podcast, young people reacted to our finding using the Card Sort Task for Self-Harm (CaTS) that self-harm makes them feel better the first time they self-harmed, but this effect disappeared over time. (See Townsend et al (2016) Uncovering key patterns in self-harm in adolescents: Sequence analysis using the Card Sort Task for Self-Harm <http://www.sciencedirect.com/science/article/pii/S0165032716303585>)





*Self-harm can be difficult to talk about – help us find new ways*







# Café Connect ...

**Meaningful engagement at all stages of the research lifecycle**

PI - setting the  
agenda, study  
design

Data gathering and  
analysis

KE/dissemination

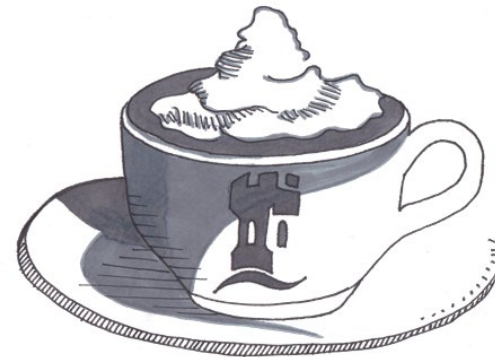
Engaging the public ensures research questions relevant to them are investigated and that solutions are likely to be more successful.

**Comfortable, accessible environment**



# Why a café?

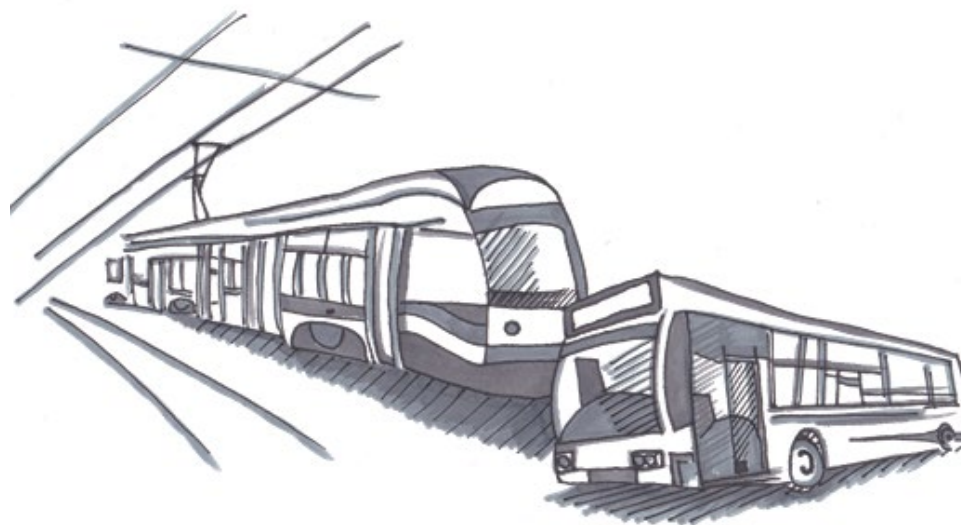
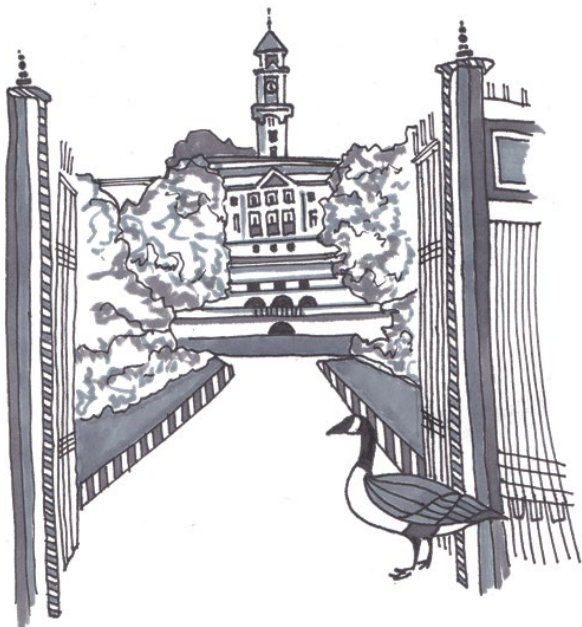
- Relaxed, welcoming atmosphere
- Serendipity







# Why in the city centre?







## What we did ...

October  
2017

- Flagship Cafe Connect

March  
2017

- Specific Projects Cafe Connect

May 2017

- Specific Projects Cafe Connect

June 2017

- Flagship Cafe Connect

July 2017

- Cafe Connect at Night - Self-Harm project



# Where next? Clinical development of CaTS



## Card sort task for self-harm (CaTS)



<https://sites.google.com/view/self-harm-research-group>

Complex!  
Need more info/time  
Discussions were key  
Thinking about timing



You complete the following CaTS with a young person who has recently self-harmed. How would you approach working with them based on this?



# CaTS: Most recent episode by young person X



6 months  
before

Someone  
close to me  
died

1 month  
before

I was not  
able to sleep

I was having  
nightmares

I was bullied

1 week  
before

No one  
listened to  
me and took  
me seriously

I isolated  
myself from  
others

I could not  
tell anyone  
how I was  
feeling

1 day  
before

I felt  
depressed &  
sad

I felt like a  
burden on  
people

I wanted to  
die

I was not  
afraid of  
death

I had an  
argument  
with my  
boyfriend

1 hour  
before

I felt  
hopeless  
about the  
future

I felt very  
anxious

I was angry

I could not  
think of  
anything  
else to do

I was very  
agitated and  
restless

Self-  
harm

I did it on  
impulse  
without  
planning

I had access  
to the means  
to hurt  
myself

I hated  
myself

I felt  
worthless

After

I felt worse  
after self-  
harm

I felt  
disgusting



**Self-harm is very complex and changes over time: CaTS  
key transitions- we've got this!**



**Key transitions are modifiable: Talking therapies help  
(need more <18 ) – access is issue**



**Involve those with lived experience meaningfully:  
embedded in research practices- Listen-up! Café Connect**





Hawton K, Witt KG, Taylor Salisbury TL, Arensman E, Gunnell D, Townsend E, van Heeringen K. Hazell P (2015). Interventions for self-harm in children and adolescents. *Cochrane Library*.  
<https://www.cochranelibrary.com/cdsr/doi/10.1002/14651858.CD012013/abstract>

Hawton K, Witt KG, Taylor Salisbury TL, Arensman E, Gunnell D, Hazell P, Townsend E, van Heeringen K. (2016) Psychosocial interventions for self-harm in adults. *Cochrane Library*. DOI: 10.1002/14651858.CD012189.

Hawton K, Witt KG, Taylor Salisbury TL, Arensman E, Gunnell D, Hazell P, Townsend E, van Heeringen K. (2016) Psychosocial interventions following self-harm in adults: A systematic review and meta-analysis. *Lancet Psychiatry*, DOI: [10.1016/S2215-0366\(16\)30070-0](https://doi.org/10.1016/S2215-0366(16)30070-0)

Nielsen, E. (2016) <https://imhblog.wordpress.com/2016/01/22/emma-nielsen-mind-your-cs-and-ss-the-language-of-self-harm-and-suicide-and-why-it-matters/>

Townsend E, Wadman R, Sayal K, Armstrong M, Harroe C, Majumder, Vostanis, Clarke. (2016). Uncovering key patterns in self-harm in adolescents: Sequence analysis using the Card Sort Task for Self-harm (CaTS), *Journal of Affective Disorders*, 206, 161-168

Wadman R, Clarke D, Sayal K, Armstrong M, Harroe C, Majumder P, Vostanis P, Townsend E. (2017) A sequence analysis of patterns in self-harm in young people with and without experience of being looked-after in care. *British Journal of Clinical Psychology*. doi: 10.1111/bjc.12145

CaTS training workshop slides: <http://www.nspa.org.uk/wp-content/uploads/2019/02/Reducing-self-harm-in-young-people.pdf>

Thanks!



Our Advisory Group  
of young people

Participants

Participant Engagers

Front-line staff

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@selfharmnotts

