The Relationship between victimization, depressive symptoms and self concept in children aged 9 years

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**Fás Aníos in Éirinn** Growing Up in Ireland



OUTLINE

Rationale & predictions

Method

Findings

Conclusions

#### Rationale

- Being Bullied is a common experience for children and adolescents
- Children who are bullied earlier in life are at increased risk of developing poor mental health later in life
- But what is the mechanism by which being bullied leads to poorer mental health?



## Does self-concept play a role?

- One possibility is that the effect being bullied has on self concept, is the mechanism by which bullying leads to poorer mental health
- Some evidence of this from work in polder children /adolescents and young adults.
- But what about younger children aged 9?
- Testing whether individual differences in self concept mediate the association between being bullied and poorer mental health was the primary aim of this study, with reference to specific subtypes and frequency of victimization.





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# Why research mediating candidates in victimisation & Depression in younger children?

- Children bullied earlier in life have more adverse outcomes in adulthood than those bullied later (Kaplow & Widom, 2007)
- Developmental cascade theory many adverse childhood experiences occurring before adolescence shape adolescent and adult mental health poor outcomes. (Masten & Cicchetti, 2010),
- Early stressful life events between 2 and 5 years lead to disruption inhibitory control at 7 to 8 years, leading to further problem behaviour at ages 9 and 10, culminating in substance abuse in adolescence at 14 years (Otten et al., 2018)
- Early rejection by peers is associated with declining classroom participation and school avoidance, chronic peer exclusion mediates the link between peer rejection and classroom participation (Buhs et al., 2006)
- Children refine their self-concept in middle childhood, and negative experiences with peers may shape their evaluations of self, mirroring the attitudes they experience from others (Mead., 1934) determining less successful pathways in adolescence and adulthood.
- critical developmental period for social competence and foundational for the later development of romantic relationships and close friendships (Masten & Coatsworth, 1998; Obradovic et al., 2010)
- Resulting deficits in the Structural Brain



# Changes in the functional structural Brain linked with acute exclusion victimization

- ventral Anterior Cingulate Cortex (v ACC) motivation, decision making, conflict and error monitoring
- medial Pre Frontal Cortex (m PFC) habit formation, inhibitory control, spatial and long -term memory
- Insula -conducts sensorimotor processing, risk/reward cognition
- The dorsal Anterior Cingulate Cortex (d ACC) assisting executive control functions, learning, adjustment and self control
- The sub-genual Anterior Cingulate Cortes (s ACC) regulates emotion, degeneration of which correlates with depressed mood and anhedonia
- The lateral Prefrontal cortex (PFC) reasoning, planning and problem solving

# Deficits in the developing brain linked with multiple experiences of depression in early childhood

- Higher than average cortisol levels affecting memory, dysregulation within the Hypothalamus Pituitary Adrenal Axis (HPA-axis) regulating stress response.
- Elevated cortisol levels linked with enlarged amygdalaleading to sleep deprivation, hormonal imbalance and changes in energy affecting energy levels, hypoxia
- Hypoxia reduced oxygen levels inducing inflammation and cellular death resulting in learning difficulties, deficits in mood regulation, remembering details and reduced hippocampal volume (Gorham et al.,2019)



Victimizationdepressive symptoms & self concept

This study explored the relationships between frequency of victimisation, global self- concept and depressive symptoms, and physical, verbal, cyber, written and exclusion bullying, with global self- concept in a mediating role



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#### **PREDICTIONS**

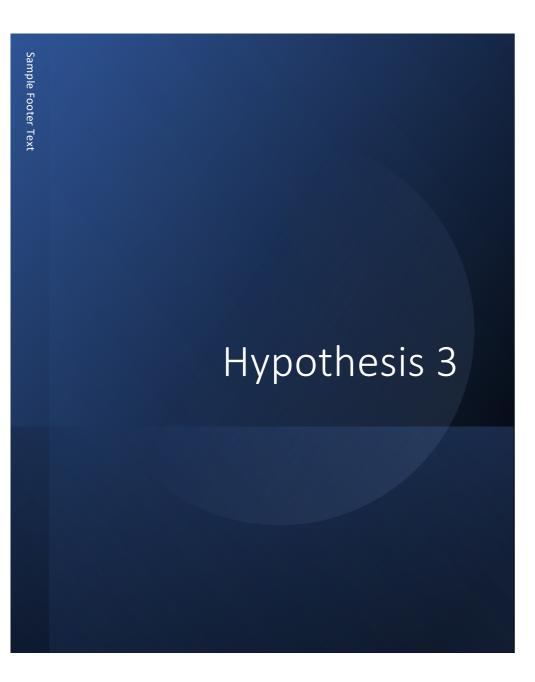
Hypotheses: 1

There would be significant correlations between:

- 1(a) self -concept and the frequency of victimization, with more frequent victimization associated with lower level of self-concept level.
- 1(b) depression and self-concept, with lower levels of selfconcept associated with higher levels of depression symptoms.
- 1(c) depression and victimization frequency, with more frequent victimization associated with higher levels of depression.

### Hypothesis 2

- 2. Controlling for parental depression and socio- economic status associated with depression in the data set, in regression analysis the following variables will be significant independent predictors of depression scores (outcome variable)
- a) frequency of victimization,
- Each of the subtypes -physical, verbal, written cyber & exclusion
- self-concept level



A significant indirect effect of frequency of victimization, and subtypes on depression via self concept.



#### Method

Study used Growing Up in Ireland Data from

Wave 5 of the 2008 infant cohort -

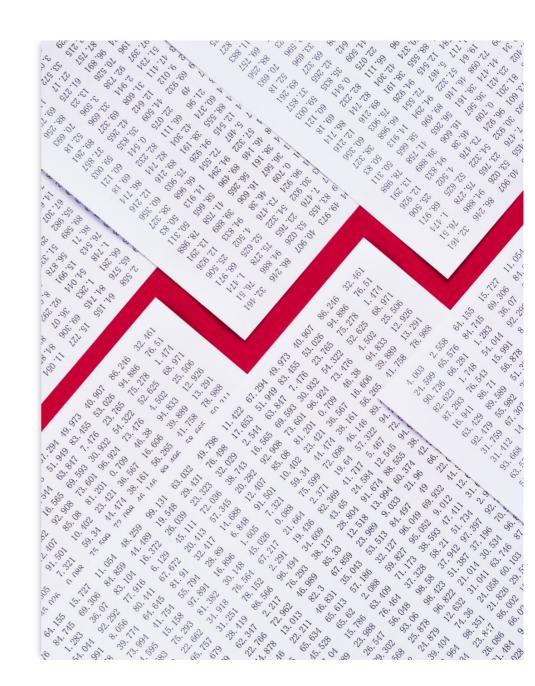
8032 mixed gender children aged 9 (2017)

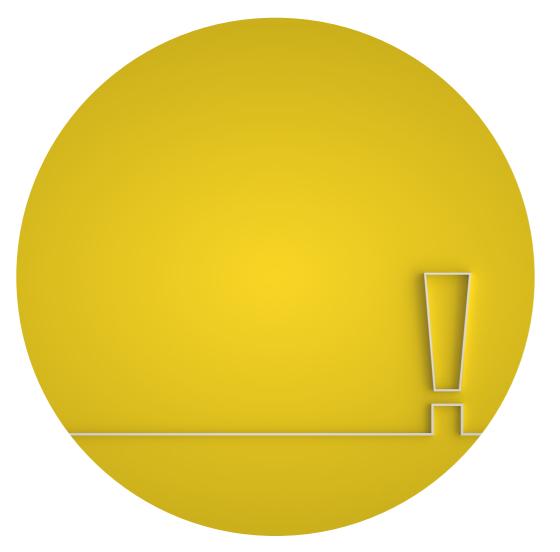
Statistical Analysis: IBM -SPSS

Descriptive, correlational, hierarchical regression analyses & mediation processes

#### Measures

- Emotional Subscale of The Strengths & Difficulties Questionnaire (Goodman., R. 1997)
- The Growing Up in Ireland Team's Bullying questionnaire
- The Piers Harris Self Concept Scale(2<sup>nd</sup> Edition)
   (Piers, E. V., & Herzberg, D. S. 2002).





Emotional Subscale of Strengths & Difficulties Questionnaire(SADQ) (Goodman., R. 1997)

Measure of depressive symptoms/negative mood

**Scale 1-10** 

Robust measure in discriminating Major depressive disorder MDD from General Anxiety Disorder and other anxiety disorders (Armitage et al.,2023)

Cut off point: 3 and above

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## GUI Victimization questionnaire

- Physical
- Verbal
- Cyber
- Written
- Exclusion
- Frequency





## The Piers Harris Self Concept Scale

- Behavioral adjustment
- Intellectual & school status,
- Physical appearance & attributes,
  - Freedom from anxiety,
- Popularity
- .
- Happiness and satisfaction.

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# Exploratory Data Analysis –Victimization - frequency & subtype

(N = 8032) -reports over the previous year

- 42% picked on once or twice
- 35% reporting now and again,
- 12% weekly
- 11% almost every day.
- 57% exclusion,
- 56% verbal,
- 41 % physical,
- 9% by written methods and
- 5% cyber.

#### Primary caregiver scoring over previous 6 months (M = 1.9; SD = 1.9)

32% at 3 and above,

EDA – SDQ-Emotional Scale (1-10) 11.5% above 5, (3.4% of these between 7 and 10).

There were twelve outliers, three participants at maximum 10, three at 9, and a further 4 at 8.

\*\*\*Scores at three and higher on this scale suggest poor mental wellbeing indicating the possibility of Major Depressive Disorder (MDD), (Armitage et al., 2023).

### Pier Harris Self Concept Variable

- Piers Harris Self Concept Scale (PHSCS) 'How I feel about myself' Total Score
- (N = 7998) (M = 27; SD =4 .0) range of scores 28,
- negatively skewed (-1.6),
- 80% of children scored 25 and above,
- 18% scoring between 16 and 24,
- 2% scoring below 15.
- 27 outliers at the bottom end of the scale ranging between 2 and 15.

Higher scores on this scale indicate high level of positive self-regard.

## Mann Whitney Analysis

Mann Whitney Tests(non- parametric) comparing groups

mean ranks of victimised children by each of the subtypes, presented lower on the Piers Harris self- concept scale than non-victimised

Exclusion bullying presented as the most detrimental to self –concept levels, followed by verbal and written, physical and cyber

Exclusion and physical bullying subtypes showed significant effects on scores on the SDQ-E

Mann Whitney – Comparing those victimized, and not - ranks on SDQ-E & PHSCS

Victimisation Subtype	Subtype	N	Mean Rank	Mean		
Exclusion						
SDQ-E	Yes	1621	1452	1.9		
	No	1212	1369	1.9		
PHSCS	Yes	1524	1210	27		
	No	1144	1499	27		
Written Notes						
SDQ-E	Yes	251	1424	1.9		
	No	2516	1379	1.9		
PHSCS	Yes	239	1027	27		
	No	2372	1334	27		
Verbal						
SDQ-E	Yes	1585	1415	1.9		
	No	1250	1420	1.9		
PHSCS	Yes	1497	1250	27		
	No	1174	1444	27		
Physical						
SDQ-E	Yes	1148	1401	1.9		
	No	1167	1412	1.9		
PHSCS	Yes	1072	1225	27		
	No	1584	1397	27		
Cyber						
SDQ-E	Yes	121	1347	1.9		
	No	2648	1386	1.9		
PHSCS	Yes	115	1053			
	No	2500	1319	27		

# Mann Whitney analysis 2 — comparing groups differences on SDQ-E and PHSCS scores

Victimization Subtype	SDQ-E	PHSCS
Exclusion Victimization.	z =-2.78 (1)	z = -9.6. (1)
	p =.006	p <.001
Written Victimization	z =85. (2)	z = -6.02. (3)
	p = .39	p <.001
Verbal Victimization	z =15. (5)	z = -6.48. (2)
	p = . 88	p <.001
Physical Victimization	z =37. (4)	z = -5.6. (4)
	p = .70	p <.001
Cyber Victimization	Z =54. (3)	z =-3.7. (5)
	P = .58	P <.001

#### Correlational Analyses Results

A lower Piers Harris Self concept score reporting, is
linked with a higher SDQ
emotional score, indicating
that more negative self concept indicates more
feelings of a negative mood

$$p(2654) = -.202, p < .001$$

 Correlational analysis suggested a significant negative relationship between frequency of victimization and global self concept level score,

$$p(2824) = -.22$$
, p = .001

 a significant positive relationship between frequency of victimization and scores on the Strengths and Difficulties Emotional Subscale

$$p(2821) = .07$$
, p = .001

Correlation strengths between the variables

Variable	Mean	SD	2	3
1. Frequency of	1.6	0.98	.074	223
Victimisation				
2. SDQ Emotional	1.9	1.9		202
Subscale				
3. Piers Harris Self-	27	4		
Concept				

## Hierarchical Multi Linear Regression Analysis

Variable	В.	SE.B	β	p-value		
Model 1						
Socio-Economic Status	0.18	0.08	0.04	.03		
Parent Depression	1.2	0.13	0.18	<.001		
Frequency of Victimisation	0.19	0.04	0.08	<.001		
Model 2						
Socio-Economic	0.18	0.09	0.17	<.001		
Status						
Parent Depression Score	1.2	0.08	0.17	<.001		
Frequency of Victimisation	0.08	0.04	0.08	.04		
Piers Harris Global Self-	-0.09	0.00	-0.20	<.001		
Concept Score						

## Independent ANOVA regression models

Bullying Subtype	В.	SE.B	β	p-value		
Model 1	Model 1					
Exclusion	-0.26	0.08	-0.3	.003		
Physical	0.03	0.08	0.00	.72		
Cyber	0.04	0.21	0.00	.83		
Written	-0.13	0.15	-0.01	.38		
Verbal	0.00	0.08	0.00	.96		
Model 2	Model 2					
Exclusion	-0.06	0.08	-0.01	.49		
Physical	0.13	0.00	0.03	.12		
Cyber	0.19	0.02	0.01	.35		
Written	0.08	0.14	0.01	.58		
Verbal	0.11	0.08	0.02	.16		
Piers Harris Self-Concept	-0.10	0.00	-0.22	<.001		

# Regression & Hierarchical Regression Analyses

 Exclusion bullying - the most detrimental predictor of mental well-being of all the subtypes accounting for 1% of the variance in SDQ-E scores

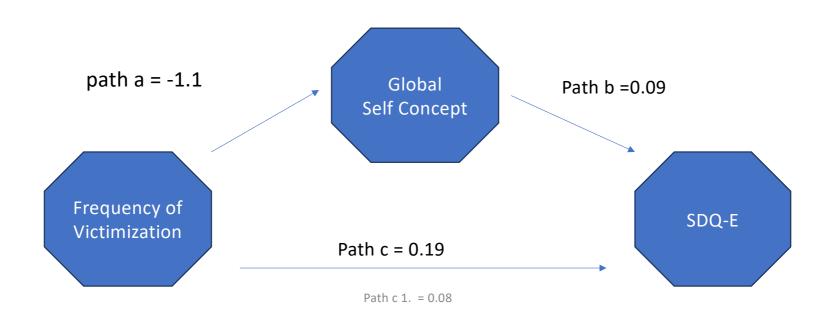
Frequency of incidences accounting for 1% of the variance in SDQ-E scores

- Five separate hierarchical regression analyses with self concept input negated exclusion bullying as a significant predictor of SDQ-E scores
- Implication of Self concept in a mediating role.



• Global self -concept partially mediates victimisation frequency and depressive symptoms

#### SELF -CONCEPT PARTIALLY MEDIATING FREQUENCY OF VICTIMISATION & SDQ-E score



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#### To Conclude

Multiple detrimental impacts of victimization & depression

Research Findings

Self Concept

Limitations

Further Research-

How might this research inform policy

### How might these findings inform policy?

The percentage of children scoring 3 and above, on the Strengths and Difficulties Emotional Subscale, almost a third of the cohort, must be considered very seriously, in terms of possible future increasing trajectories of children with poor mental health negotiating adolescence, and the consequences of increasing burden on Health Service providers and cost for government.



This study also highlights the modifiable aspect of the self-concept, presenting educators and governing bodies with a possible practical cost-effective solution to the national problem of increasing numbers of children and adolescents on waiting lists for mental health support services and admissions to hospitals and CALMHS units.



Individual differences in personality influence how children perceive and experience victimisation experiences and perpetrators subjectively, and increasing poly-victimisation and depression levels may further influence their perceptions of themselves and others as objects to be annihilated, indicative in more extreme cases, in the prevalence of mass shootings where in many instances the perpetrators have been victims of peer rejection with poor impulse control.



Emotion regulation functions by cognitive reappraisal and emotion suppression, and cognitive reappraisal of emotion has been found minimise the impacts of victimisation (Gardner et al., 2017).

# An Urgent Need for evaluation, research & action

The environments in which children's personalities are firmly grounded, are constantly changing, due to the pressures of globalisation accelerating changes how, when and where children interact and form alliances.



The education system offers a stable common resource, accessible for all children, and an environment where the scaffolding of global selfconcept of young children can be promoted by teachers. Research has shown that those with high levels of concept have a more positive self- regard, positive evaluation of own worth and levels of competence, which contribute to sense of well -being, and may serve to protect against depressive symptomatology simultaneously buffering within victimisation experiences.



The evidence suggests that provision of intervention and prevention strategies for victimisation at the earliest stage in childhood are imperative, in connection with screening for depressive symptomatology, due to possible resulting structural and functional damage to the brain and disruption of of emotional regulation, directing subsequent mental well-being levels throughout the lifespan.