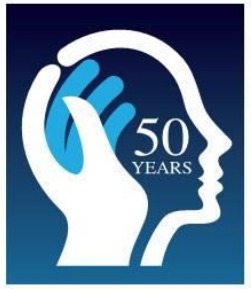

Applied Psychology UCC

Early childhood adversity and later life outcomes

Dr Raegan Murphy and Dr Sharon Lambert

Irish Street Medicine Symposium 27th and 28th September, Cork 2019

Introduction

- Our focus is on associations between adverse childhood experiences and later life outcomes.
- We present a summation of work that has been conducted and which is still on-going.

Introduction

We will present summary findings from these eight studies:

1. Investigating possible contagion effects on front-line service employees.
2. Investigating ACEs among people experiencing homelessness (x 2 studies.)
3. Investigating early childhood trauma and problem/pathological gambling later on.
4. Dual diagnosis and adverse childhood experiences.

Introduction

7. Differences in early age onset gamblers vs later age onset gamblers with reference to ACEs.
8. Predictors of dropout in disordered gamblers with reference to ACEs.
9. Predictors of suicide attempts in treatment-seeking gamblers with reference to ACEs.

Contagion effect

Contagion effect

- An online survey (Oct ‘18-May ‘19) was fully completed by 576 frontline homelessness service providers in Ireland.
- We asked about:

- Sociodemographic information
- Their Professional Quality of Life (30-item ProQOL, Stamm, 2010)
- Their early negative childhood experiences, if any (10-item ACE scale Felitti et al., 1998)
- An indication of how stressful it was to complete the survey on a scale of 0 – 10 (*‘completing the survey was not emotionally difficult’* to *‘completing the survey was very difficult’*)

Contagion effect

- ProQOL consists of three sub-scales:
- Compassion Satisfaction
- Burnout
- Secondary Traumatic Stress

Employment profile of our sample of frontline service providers

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Years in current role	Social care/work	Medicine/ health	EMS	Psychologist	Counselling/therapy	Education	Justice	Admin/other
<1 year	14	0	0	2	1	0	0	1
1-5 years	87	19	25	19	27	8	6	16
6-10 years	53	16	11	3	11	8	5	8
11-15 years	34	20	11	1	11	9	15	8
16-20 years	9	14	16	1	2	7	11	7
21+ years	8	15	10	1	2	9	9	4
Total	205	84	73	27	54	41	46	44

ACE scores across employment sector

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Employment sector	Average ACE score (SD)	ACE score range	SE	95% CI
Social care/work	2.29 (2.29)	0-10 [one score of 10]	.16	1.97-2.6
Medicine and health	1.1 (1.86)	0-7	.24	1.1-1.9
EMS	1.81 (2.19)	0-9	.25	1.3-2.32
Psychologist	2 (1.92)	0-6	.36	1.25-2.75
Counsellor/therapist	2.98 (2.51)	0-9	.34	2.3-3.67
Education	1.39 (2.2)	0-10 [one score of 10]	.34	.7-2.08
Justice	.85 (1.26)	0-6	.18	.47-1.22
Administration/other	2.89 (2.53)	0-8	.37	2.13-3.65

Main findings

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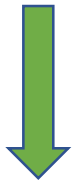
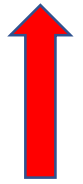
- Longer service



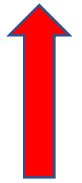
Lower ACE

- Social care/work, counsellors/therapists (including drug addiction workers)



Higher ACE

- Women scored higher on ACE scores than men



Higher ACE

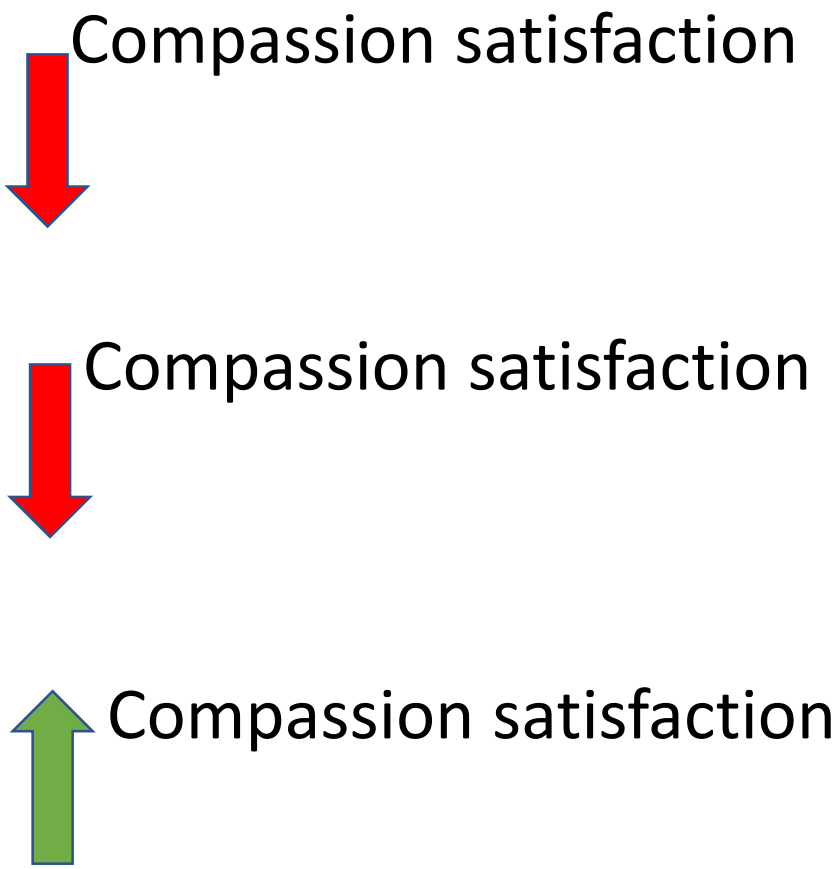
Main findings

Applied Psychology UCC

- Women found answering the survey more emotionally taxing than did men.
- The mean score across both genders for how emotionally taxing respondents found the survey, was 2.23 (*SD*=2.27) (range of 0-10).

Main findings

- Longer service
- Social care, medicine, health and justice
- Emergency medical responders and those working within administrative roles



Main findings

Applied Psychology UCC

- There seems to be a measure of resilience among emergency medical responders given the nature of the work in which they are engaged.
- Those working in administrative roles would be expected to score higher on compassion satisfaction given their comparative emotional distance from front-line service work given the nature of their roles.

Main findings

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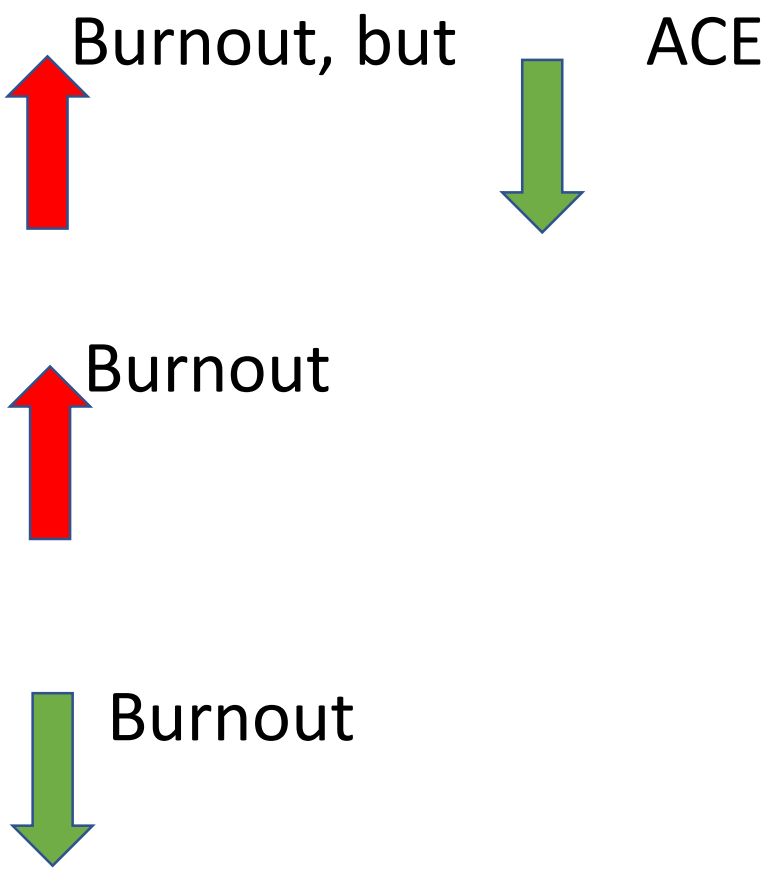
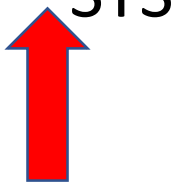
- Longer service
- Social care, medicine, health and justice
- Counsellors and administrators



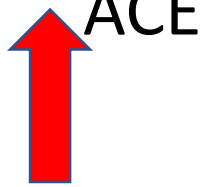
Main findings

Applied Psychology UCC

- Female social care workers



- Female emergency medical responders as well as those who had greater emotional difficulty in completing the survey



- Higher ACE

ACE and the experience of homelessness

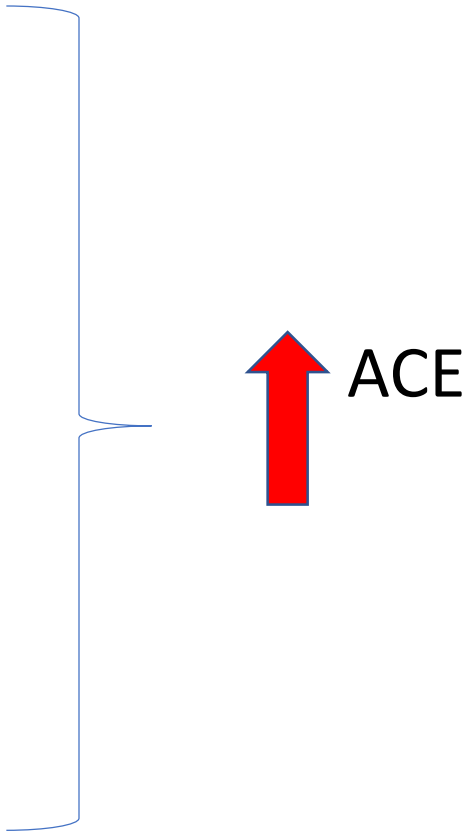
ACE and the experience of homelessness

- Fifty homeless individuals presented at a homeless shelter in the south of Ireland over a period of 12 months.
- A routine part of the screening procedure includes an initial assessment.
- Wide range of sociodemographic and mental/physical health items.

Main findings

Applied Psychology UCC

- Inject at earlier ages
- Higher frequencies of overdosing
- Higher frequencies of self-harming
- Higher frequencies of domestic violence
- More risk-associated behaviour
- Higher frequencies of treatments



Sociodemographic overview of sample experiencing homelessness

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Variable		Male n (%)	Female n (%)
Age	<25	5(10)	3(6)
	26-35	26(52)	5(10)
	36+	9(18)	2(4)
School leaving age	10-14	13(26)	2(4)
	15-17	22(44)	5(10)
	18+	3(6)	3(6)
Number of children	No children	17(37)	2(4.3)
	One	10(21.7)	4(8.7)
	Two or more	9(19.6)	4(8.7)
Highest education attained	National certificate/up to Junior certificate	31(66)	8(17)
	Up to leaving certificate	6(12.8)	2(4.3)

Developmental overview of sample experiencing homelessness

Applied Psychology UCC

Variable		Male n (%)	Female n (%)
Spent time in prison	Yes	9(50)	2(11.1)
	No	5(27.8)	2(11.1)
Presence of substance use in family	Yes	29(64.4)	5(11.1)
	No	8(17.8)	3(6.7)
Ever been in care	Yes	11(37.9)	4(13.8)
	No	13(44.8)	1(3.4)
Ever had children removed from parents to care	Yes	4(19)	4(19)
	No	11(52.4)	2(9.5)

Substance use among sample experiencing homelessness

Applied Psychology UCC

Variable		Male n (%)	Female n (%)
Age at first alcohol consumption	<10	7(14)	0(0)
	11-15	19(38)	4(8)
	16-17	5(10)	1(2)
First drug taken	Alcohol	14(28)	2(4)
	Cannabis	12(24)	1(2)
	Other	7(14)	1(2)
Present drug of choice	Cannabis	4(8)	1(2)
	Heroin	25(50)	1(2)
	Other	4(8)	2(4)
Age at which alcohol first taken	7-12	12(33.3)	4(11.1)
	13-17	19(52.8)	1(2.8)
Age at which cannabis first used	10-14	23(53.5)	6(14)
	15+	12(27.9)	2(4.7)

Substance use among sample experiencing homelessness

Applied Psychology UCC

Variable		Male n (%)	Female n (%)
Age at which heroin first used	13-19	6(15.8)	4(10.5)
	20-25	12(31.6)	1(2.6)
	26+	14(36.8)	1(2.6)
Route of heroin transmission	Intravenous	12(28.6)	2(4.8)
	Smoking	7(16.7)	1(2.4)
	Intravenous and smoking	15(35.7)	5(11.9)
Past drug of choice	Alcohol	17(45.9)	3(8.1)
	Cannabis	7(18.9)	0(0)
	Heroin/Other	9(24.3)	1(2.7)
Present drug of choice	Cannabis	4(12.9)	1(3.2)
	Heroin	25(80.6)	1(3.2)

Risky behaviour among sample experiencing homelessness

Applied Psychology UCC

Variable		Male n (%)	Female n (%)
History of STI (sexually transmitted infection)	Yes	7(16.3)	2(4.7)
	No	28(65.1)	6(14)
Taken unprotected risks	Yes	15(38.5)	4(21.1)
	No	18(46.2)	2(5.1)
Ever injected substances	Yes	29(61.7)	9(191)
	No	8(17)	1(2.1)
Ever shared needles	Yes	13(31)	5(11.9)
	No	21(50)	3(7.1)
Currently have a charge	Yes	16(35.6)	3(6.7)
	No	20(44.4)	6(13.3)
History of assault	Yes	18(38.3)	2(4.3)
	No	20(42.6)	7(14.9)

Treatment seeking behaviour and ACE scores among sample experiencing homelessness

Applied Psychology UCC

Variable		Male n (%)	Female n (%)
Number of visits ever to accidents and emergency wards	1-5	7(15.9)	3(6.8)
	6-12	12(27.3)	2(4.5)
	13+	18(40.9)	2(4.5)
Ever been in intensive care	Yes	14(31.8)	2(4.5)
	No	23(52.3)	5(11.4)
Ever been treated for substance use or gambling	Yes	31(63.3)	10(20.4)
	No	8(16.3)	0(0)
Is there a history of domestic violence	Yes	20(44.4)	8(17.8)
	No	15(33.3)	2(4.4)

Treatment seeking behaviour and ACE scores among sample experiencing homelessness

Applied Psychology UCC

Variable		Male n (%)	Female n (%)
Is there a history of suicidal thoughts	Yes	26(56.5)	7(15.2)
	No	11(23.9)	2(4.3)
Ever self-harmed	Yes	17(34)	4(8)
	No	23(46)	6(12)
ACE scores grouped X 2	0-3(low trauma)	10(20)	3(6)
	4+ (high to very high)	30(60)	7(14)
ACE scores grouped X 4	0 (none)	1(2)	0(0)
	1-3 (low trauma)	9(18)	3(6)
	4-6 (high trauma)	18(36)	3(6)
	7-10 (very high trauma)	12(24)	4(8)

Mental and physical health of sample experiencing homelessness

Mental and physical health of sample experiencing homeless

- Ninety people experiencing homelessness in Cork city were interviewed between April and November 2017 by 10 medical and social science researchers.
- The interviews were all conducted on-site which included homeless shelters, hostels and rough sleeping areas.
- There was no direct ACE item on the survey, so being raised in care is used as a proxy.

Main findings – being raised in care

- Participants who had been raised in care before the age of 18 showed a tendency to have fewer children later on.

Main findings – being raised in care

People experiencing homelessness and who were raised in care before the age of 18 were more likely to:

- be younger
- be diagnosed with depression
- have foot problems
- have received a diagnosis of hepatitis C
- have been offered treatment

Main findings – being raised in care

People experiencing homelessness and who were raised in care before the age of 18 were less likely to:

- have their own GP
- be taking medications on a long-term basis

Main findings

- People experiencing homelessness who were in receipt of job seekers allowance were more likely than those in receipt of disability allowance to enjoy better health.
- There were more younger people experiencing homelessness than older people.
- Those with an anxiety diagnoses were more likely to rate their health as ‘poor’.
- All people experiencing dental problems more likely to rate their health as ‘poor’.

Main findings - gender

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- Although not statistically significant, females were likely to experience poorer health overall than males.
- More females were diagnosed with depression and anxiety than males.
- Males were more likely to be diagnosed with psychosis than females and in turn they were also more likely to be on disability allowance.
- Females were more likely to experience dental problems than males

Type and number of medical conditions reported

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Health issue	Nominal figure (out of the total answering)
High blood pressure	18 (41)
Arthritis	7 (40)
Heart disease	5 (34)
Epilepsy	7 (38)
Tuberculosis	2 (30)
Chronic respiratory problems	9 (38)
Asthma	19 (39)
Peptic ulcer	5 (33)
Stomach problems	15 (40)

Type and number of medical conditions reported

Applied Psychology UCC

Health issue	Nominal figure (out of the total answering)
Depression	43 (61)
Anxiety	38 (55)
Schizophrenia	5 (34)
Psychosis	6 (38)
Dental problems	32 (49)
Skin ulcers, wounds, of skin infections	10 (37)
Foot problems	10 (40)
Hepatitis C	7 (36)
HIV	1 (31)
Liver disease	3 (34)
STD	4 (32)

Reported mental health issue and time frame

Applied Psychology UCC

Mental health issue	Time-frame	Nominal figure (of the total responding)
Self-harm	Past six months	6 (84)
Suicidal thoughts	Past six months	27 (52)
Attempted suicide	Past six months	7 (36)

Number and types of contraception currently used

Applied Psychology UCC

Contraception currently being used	Nominal figure
'The Pill'	1
Depot injection	4
Mirena Coil	1
Copper Coil	1
Condoms	24

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Gambling and negative life events in a nationally representative sample of UK men

Gambling and negative life events

- A cross-sectional UK representative general population survey was conducted in 2009 with 3025 men aged 18–64 years.
- Measurements included self-reported gambling behaviours, as measured by the South Oaks Gambling Scale (SOGS) and traumatic or stressful life events. Covariates included alcohol and drug dependence and socio-demographics.

Main findings

Applied Psychology UCC

- Problem and probable pathological gambling was associated with increased odds of trauma in childhood (e.g. violence in the home) and life stressors in adulthood (e.g. intimate partner violence) as well as experiencing homelessness.
- Among men in the United Kingdom, disordered gambling remains uniquely associated with trauma and life stressors in childhood and adulthood after adjusting for alcohol and drug dependence.

Independent associations between gambling, trauma and life stressors

Applied Psychology UCC

Traumatic Events- Childhood	Non-Gambler/ Non-Problem Gambler (N=2144) (SOGS 0)		Borderline Problem Gambler (N=523) (SOGS 1-2)		Problem Gambler (N=144) (SOGS 3-4)		Probable Pathological Gambler (N=197) (SOGS 5+)	
	% (n)	AOR	% (n)	AOR (CI)	% (n)	AOR (CI)	% (n)	AOR (CI)
Witnessing violence in home	7.9 (170)	1	11.1 (58)	1.3 (0.92-1.93)	22.9 (33)	**3.0*** (1.80-5.00)**	25.4 (50)	**2.6*** (1.70-4.08)**
Physical abuse/ assault	3.6 (77)	1	7.1 (37)	**1.7* (1.1-2.79)**	9.7 (14)	2.0 (0.98-4.26)	10.1 (20)	**2.1* (1.17-3.93)**
Sexual abuse	1.9 (40)	1	2.1 (11)	1.1 (0.53-2.62)	2.7 (4)	2.2 (0.75-6.48)	3.0 (6)	2.5 (0.99-6.29)
Serious/life threatening injury	1.8 (39)	1	1.9 (10)	0.8 (0.37-1.99)	2.7 (4)	0.4 (0.05-3.13)	7.6 (15)	**3.5*** (1.70-7.30)**

Independent associations between gambling, trauma and life stressors

Applied Psychology UCC

- All these highlighted findings' odds ratios (in red) remained robust and statistically significant when alcohol and drug dependence were entered into the model as covariates.

Dual Diagnosis and adverse childhood experiences

Dual diagnosis and adverse childhood experiences

- Fifty clients (38 male) who self-presented or who were referred onward from general practitioners presented at an Irish residential treatment programme.
- They were screened upon initial assessment and intake and several questions were asked of consenting clients.
- Data were collected in the form of a questionnaire and was completed together by frontline staff and clients during 2016-2017.

Main findings

- A number of socio-demographic variables were recorded and included, among others, client age, sex, employment status, total Adverse Childhood Experiences score and several mental health items.

Main findings

Applied Psychology UCC

Variable	Mean (%)	Median	Mode	SD	Information
Age	38	36	33	11.56	Ages ranged from 20 through to 66
Sex					
Male	32(64)	-	-	-	Currently there are more males presenting
Female	18(36)	-	-	-	-
Total ACE score	2.98	3	2		Eight participants scored a zero and twenty-one scored 4 and higher
Mental health diagnosis					
No diagnosis	22(44)	-	-	-	Objective diagnosis
Yes, a diagnosis	28(56)	-	-	-	Objective diagnosis
Depression diagnosis					
No diagnosis	24(48)	-	-	-	Objective diagnosis
Yes, a diagnosis	26(52)	-	-	-	Objective diagnosis

Main findings

Applied Psychology UCC

Variable	Mean (%)	Median	Mode	SD	Information
Anxiety diagnosis					
No diagnosis	42(84)	-	-	-	Objective diagnosis
Yes, a diagnosis	8(16)	-	-	-	Objective diagnosis
Self-reported mental health issues					
No self-report	4(8)	-	-	-	Large discrepancy from the official objective diagnosis
Yes, self-report	46(92)	-	-	-	Large discrepancy from the official objective diagnosis
Self-reported depression					
No self-report	14(28)	-	-	-	Large discrepancy from the official objective diagnosis
Yes, self-report	36(72)	-	-	-	Large discrepancy from the official objective diagnosis

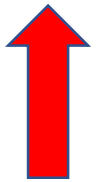
Main findings

Variable	Mean (%)	Median	Mode	SD	Information
Self-reported anxiety					
No self-report	16(32)	-	-	-	Large discrepancy from the official objective diagnosis
Yes, self-report	34(68)	-	-	-	Large discrepancy from the official objective diagnosis

Main findings

Applied Psychology UCC

High ACE scorers



- Are almost four times more likely to report thinking about suicide when compared to low ACE scorers.
- Are almost eleven times more likely to report being incarcerated when compared to low ACE scorers.
- Are likely to have a mental health diagnosis when compared to low ACE scorers.
- Are likely to have be clinically depressed when compared to low ACE scorers.
- Are likely to have self-reported their depression when compared to low ACE scorers.

Main findings

- The prevalence of mental health diagnosis and exposure to adverse childhood traumatic events is higher in those seeking residential addiction support than that of the general population.
- Participants in this study reported alcohol as the primary drug of choice, however poly substance use was more likely with cannabis, benzodiazepines and cocaine being the other most commonly reported substances.

Main findings

Applied Psychology UCC

- Analysis revealed an objective mental health diagnosis in 44% of cases, however this increased to 92 % for self-reported mental health disorders.
- Almost half of clients had received a diagnosis of primarily depression or anxiety from a clinician, however almost all reported that they believed that they had a mental health issue.

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Psychosocial correlates in treatment seeking gamblers: Differences in early age onset gamblers vs later age onset gamblers

Main findings

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- Age of onset is an important factor in the development and trajectory of psychiatric disorders.
- Utilising a large residential treatment seeking gambler cohort, the current study examined the relationship between age of gambling onset and a range of variables thought to be associated with disordered gambling.
- Data were collected from 768 gamblers attending residential treatment for disordered gambling. Individuals were grouped per the age they started gambling as either a child (≤12), adolescent (13–15), or young adult/adult (≥ 16).

Main findings

Applied Psychology UCC

- Results indicate the younger age of gambling onset was associated with increased gambling severity.
- Those who began gambling at an earlier age were more likely to have abused drugs or solvents, committed an unreported crime, been verbally aggressive and experienced violent outbursts.
- They are less likely to report a positive childhood family environment and are more likely to have had a parent with gambling and/or alcohol problems.
- Gamblers who began gambling at an earlier age experience negative life events and exhibit some antisocial behaviours more than later onset gamblers.

Predictors of Dropout in Disordered Gamblers in UK Residential Treatment

Main findings

- Data on 658 gamblers seeking residential treatment with the Gordon Moody Association (GMA) was analysed, collected between 2000 and 2015.
- Measurements included demographic data, self-reported gambling behaviour, (including the Problem Gambling Severity Index-PGSI), mental and physical health status, and a risk assessment.

Differences in treatment, clinical and childhood adversity variables

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Completed treatment (N=321)			Terminated treatment (N=337)			Comparison Group
Childhood adversity	% (n)	OR	% (n)	χ^2	OR (CI)	
Parental divorce/separation	55.5(308)	1	44.5(247)	4.12, (p =0.042)	**1.42(1.013-2.015)***	No Parental divorce/separation
Childhood adversity (violence, sexual, bullied)	48.8(321)	1	51.1(337)	6.81, (p =0.009)	**1.56(1.117-2.182)****	No assault during childhood (violence, sexual, bullied)

Main findings

- Significant predictors of treatment dropout included older age of the client, higher levels of education, higher levels of debt, online gambling, gambling on poker, shorter duration of treatment, higher depression, experience of previous treatment programmes and medication, and adverse childhood experiences.

Predictors of suicide attempts in UK treatment seeking gamblers

Prior suicide attempts

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- Research has indicated that disordered gamblers are at an increased risk of suicidal behaviour (thoughts, ideation) and has sought to identify sociodemographic variables thought to be associated with such behaviour.
- However, to date, few studies have sought to utilise data from large clinical samples to specifically identify factors that are statistically associated with suicide attempts.

Main findings

- Clinical data from an initial assessment of 658 patients entering a gambling-specific residential facility were analysed.
- A series of initial Chi-Square analyses and four follow-up binary logistic regressions were run.

Main findings

- Each regression was themed:
- the first regression included relationship and loss predictor variables;
- the second regression included physical and mental health predictor variables,
- the third regression included co-morbid substance use variables and
- the fourth included crime related variables.
- Any relationships between preferred form of gambling and suicide attempts were also explored

Main findings

Applied Psychology UCC

- Loss of family, loss of home, loss of job, prior depression, prior suicidal thoughts, a prior mental health condition (other than addiction), and medication use were all significantly associated with prior suicide attempt.

Main findings

- None of the co-morbid substance use or crime variables were significantly associated with prior suicide attempts.
- Gamblers who identified Fixed Odds Betting Terminals (FOBTs) as a preferred form were more likely to have attempted suicide than those who did not gamble on FOBTs.

Main findings

Applied Psychology UCC

- Disordered gamblers are vulnerable to suicide; however, a number of factors have been identified in the current study that predict an increased likelihood of attempted suicide. The factors mainly revolve around loss, not financial loss, but rather disintegration of an individual's support network and deterioration in the individual's mental health.

Main findings

- Findings indicate that isolation and negative affect associated with gambling are most influential in attempted suicide and should therefore be more strongly considered when creating and providing the legislative, educational and treatment environments for those experiencing gambling related harm.

In progress

In progress

Applied Psychology UCC

- Working with the National Ambulance Services investigating stress and mental health resilience within the larger organisation.
- UCC Early Adverse Childhood experiences working group.

Collaborators

Collaborators

- The authors are part of larger teams and we are very grateful for the opportunities afforded us to work with the following researchers/collaborators:

Collaborators

Graham Gill Emerson (Cork Simon)

Prof Colin Bradley (UCC)

Laura Lanigan (UCC)

Dr Anna Marie Naughton (HSE)

Shayna Henry (UCC)

Dr Amanda Roberts (Uni. of Lincoln, UK)

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Dr Jason Landon (Gambling & Addictions Res. Centre, New Zealand)

Dr John Turner (Uni. of East London, UK)

Olivia Quinn (UCC)

Gordon Moody Association (UK)

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Stephanie Meleck (National Problem Gambling Clinic, UK)

Dr Henrietta Bowden-Jones (Imperial College, UK)

Dr Robert King (University College Cork, Ireland)

Dr Jeremy Coid (Queen Mary University of London, UK)

Katie Palmer du Preez (Auckland Uni., New Zealand)

Cork Simon (Ireland)

Tabor Group (Ireland)

HSE Addiction Services South (Ireland)