Received: 28 February 2022 | Accepted: 2 September 2022

DOI: 10.1111/bjc.12401

the british psychological society
promoting excellence in psychology

RESEARCH ARTICLE

Prevalence of probable eating disorders and associated risk factors: An analysis of the Northern Ireland Youth Wellbeing Survey using the SCOFF

Emma Nolan[1] | Lisa Bunting[2] | Claire McCartan[2] | Gavin Davidson[2] | Anne Grant[2] | Dirk Schubotz[2] | Ciaran Mulholland[2] | Orla McBride[1] | Jamie Murphy[1] | Mark Shevlin[1]

[1]Ulster University, Coleraine, UK

[2]Queen's University Belfast, Belfast, UK

Correspondence
Emma Nolan, School of Psychology, Ulster University, UK.
Email: e.nolan@ulster.ac.uk

Abstract

Objectives: Eating disorders (ED) are associated with significant morbidity and mortality rates and are most common in young people aged between 15 and 19 years. Large representative surveys on disordered eating in youth are lacking. The main aims were to estimate the prevalence of disordered eating in a representative sample of 11–19 year olds in Northern Ireland and investigate the associations between probable eating disorder and a range of risk factors.

Designs and Methods: A large nationally representative household survey was conducted, and the bivariate and multivariate associations between demographic, familial, economic and psychological risk factors and probable eating disorder were assessed.

Results: A total of 16.2% (n = 211) of the sample met the SCOFF screening criteria for disordered eating. Probable eating disorder was associated with being female (OR = 2.44), having a parent with mental health problems (OR = 1.68), suffering from certain psychological problems, such as mood or anxiety disorder (OR = 2.55), social media disorder (OR = 2.95), being the victim of physical bullying (OR = 1.71) and having smoked (OR = 2.46).

Conclusions: This study provides the first prevalence estimates of probable eating disorder among youth in Northern Ireland. Furthermore, the study identifies unique risk factors for probable eating disorder among this representative sample.

KEYWORDS
adolescents, eating disorders, general population, probable eating disorder, SCOFF

Practitioner Points

- To date, no study has assessed the rates of probable eating disorders in the youth of Northern Ireland (NI). This study provides the first estimates of the prevalence of probable eating disorder rates in a representative sample of 11–19 year olds in NI.
- This is the first study to investigate the associations between probable eating disorder rates and a range of risk factors in NI. These results help create a profile of individuals that may be at greater risk of developing a clinical eating disorder. The results suggest that there are independent risk factors that are associated with risk of probable EDs and provide insight into possible high-risk individuals. These results are therefore useful for clinicians and researchers in deepening our understanding of these conditions, improving early management and referrals for EDs.
- This is the first study in the UK to explore prevalence rates of probable eating disorder using the SCOFF measure in a non-clinical youth sample. This measure has been continually identified as a useful screener for identifying risk of an ED and has been recommended as a screening tool for assessing risk of disordered eating in the general population by a number of authorities (Kutz et al., 2020). Furthermore, this measure has been praised for its ability to identify probable eating disorders in males in comparison to other measures such as the EDE-Q. Therefore, this study adds a reliable estimate of probable eating disorders in boys, which is currently lacking within the literature.

BACKGROUND

Eating disorders (ED) are a serious mental health concern associated with significant morbidity and mortality rates (Hudson et al., 2007). A recent study exploring all EDs using health care data from 1990 to 2013 found that patients with EDs had seven times higher mortality rates compared with the general population (Iwajomo et al., 2021). Anorexia nervosa, a type of eating disorder, has the highest mortality rate of any psychiatric disease (Edakubo & Fushimi, 2020). The age of first recorded ED diagnosis is evidenced to peak between 15 and 19 years for both male and females (Demmler et al., 2020). Disordered eating can be very distressing and often co-occurs with other health problems. Between 51% and 93% of individuals with an eating disorder have a comorbid psychiatric diagnosis (Rojo-Moreno et al., 2015), with mood, anxiety and substance misuse disorders showing the highest co-occurrence with EDs (Kaye et al., 2010; Swinbourne et al., 2012).

Possibly due to the broadening of diagnostic criteria in the last decade, studies have reported higher prevalence rates of EDs in the general population over time (Hay, 2020). Recent studies have assessed the presence of probable eating disorders, which is described as useful in improving early detection (Schmidt et al., 2016), and may also contribute to increased rates. Probable eating disorders represent problematic eating patterns that might indicate increased risk of an eating disorder, as opposed to undiagnosed eating disorders. Findings from the Mental Health of Children and Young People Survey (MHCYP) in England (NHS Digital, 2021) reported a rate of a probable EDs in 11–16 year olds of 13.0%, an almost 2-fold increase compared with the previous MHCYP survey in 2017. Despite this evidence for high rates, it is suggested that EDs are often undetected due to the co-morbidity with other mental health problems (Sim et al., 2010). There is evidence that treating and identifying probable EDs early improves outcomes and reduces risk of progression and that early screening is an imperative research focus (Schmidt et al., 2016. Franko et al., 2013). Some authors have argued for the use of more liberal measures (i.e., measures that do not assess diagnostic criteria) to screen for problematic disordered eating as a useful way of spotting potential EDs at an early stage (Hölling & Schlack, 2007; Jones et al., 2001). The SCOFF is a useful screener for identifying risk of a probable ED and has been recommended as a screening tool for assessing risk of disordered eating in the general population by a number of authorities (Kutz et al., 2020).

The majority of the studies based on the SCOFF have focused on adult participants (McBride et al., 2013; Solmi et al., 2015), primary care samples (Hill et al., 2010; Mond et al., 2008) or university students (Cotton et al., 2003; Teixeira et al., 2021). Several North American and European studies in college populations using the SCOFF have reported broadly similar rates; Parker et al. (2005) reported 16.2% of college students screened positive for a probable eating disorder in the United States. Eisenberg et al. (2011) found that 13% of college females and 4% of college males screened positive for probable ED in the US. A further study found that 20.3% of university students scored above the cutoff on the SCOFF (Hasselle et al., 2017).

Prevalence studies for EDs in youth populations are lacking, but there are some relevant studies in European countries: Denmark (28%; Lichtenstein et al., 2017), France (13.5%; Duarte Garcia et al., 2010) and Germany (21.9%; Hölling & Schlack, 2007). These results suggest similarly high rates to adult populations (Richter et al., 2017). One notable study that explored disordered eating longitudinally, demonstrated that adolescents who screened positive for probable eating disorder using the SCOFF, were significantly more likely to have reported probable eating disorders in young adulthood (OR = 1.32) and were significantly associated with depression in young adulthood (Herpertz-Dahlmann, 2009).

The extant research has identified risk factors for EDs, such as age (adolescence and early adulthood; Jacobi et al., 2004), being female (Field et al., 2001), victimization, such as being bullied (Gardner et al., 2000; Haines & Neumark-Sztainer, 2006), body dissatisfaction (Killen et al., 1996), media pressures (Field et al., 1999; Harrison et al., 2010; McCabe et al., 2019), a family history of mental health problems (Hudson et al., 2007) and smoking (Anzengruber et al., 2006). Evidence repeatedly suggests that early intervention is extremely beneficial in relation to recovery and reducing the transition to a more serious case. Indeed, early identification has been demonstrated to be the greatest predictor of recovery from EDs (Parker et al., 2005). Recently, a position statement released by the Royal College of Psychiatrists reinforced the importance of early identification of EDs and its use in minimizing the negative impact of delayed help (Royal College of Psychiatrists, 2019).

The primary aim of this paper is to report prevalence estimates for probable eating disorder among young people in a representative sample and assess associations between probable eating disorder and a range of potential risk factors. This study extends contemporary knowledge on probable eating disorders in young people and associated risk factors by (1) using a large representative sample of young people aged 11 to 19 from Northern Ireland (NI), (2) assessing rates of probable eating disorder using the SCOFF questionnaire (Morgan et al., 2000) and (3) assessing bivariate and multivariate associations with demographic (sex, age, special educational needs, physical health and living location), familial (parental separation and parental mental health), economic (deprivation) and psychological (depression or anxiety, problematic social media use, bullied, childhood adversity and substance use) correlates.

METHODS

Sampling and data collection

Eligibility to take part in the Northern Ireland Youth Wellbeing Survey (NIYWS) required participants to be aged between 2 and 19 and to live in NI. To recruit participants, addresses from households across NI were randomly selected from the Pointer Database, which is a postcode register of all 989,639 addresses in Northern Ireland (see Bunting et al., 2022 for a full description of methodology). Fieldwork took place between 1st of June 2019 and 19th March 2020. Interviews were conducted by the Belfast-based market research company Perceptive Insight.

The data for this study were collected via self-completion questionnaires with the use of assisted personal interviewing. For young people aged 11–19 years, parents/guardians were asked to answer questions relating to the household and parents, while the young people were asked to complete the mental health and well-being part of the questionnaire themselves. Young people aged 16–19 who were living independently, or who were living at home but did not want their guardian or parent to participate, were asked to complete the demographics and background section to the best of their ability.

Participants

In total, 3074 surveys were completed with a response rate of 67%. Comparisons of the demographic breakdown of the sample with official NI population data demonstrated close similarities between sample distribution and the population distribution, with just minor variations within child age by individual year. Stratification of the sample by county and deprivation decile in comparison with the proportion of the residential addresses by county and deprivation decile was almost identical at the time of sample selection. Within the NIWYS only those aged 11–19 was asked to fill in the SCOFF questionnaire. Therefore, any results within this study are limited to those in the 11–19 age group (N = 1291).

Data analysis

The rate of probable ED was estimated by calculating the percentage of participants that exceed the cut-off score of 2 or more on the SCOFF. A binary variable was created to represent those who exceed the cut-off score (1) and those that did not (0). This variable was then used as the outcome variable in a series of bivariate binary logistic regression models, with the risk factor variables as the predictor variables. Finally, all the risk factors were included as predictor variables in a multivariate binary logistic regression model. Effects are reported as odds ratios (OR). It should be noted the term 'predictors' does not mean that causality is inferred; this is a cross-sectional study, and the predictor-outcome association is statistical only. A small number of missing data on the SCOFF (N = 12.9%) were removed resulting in a final sample of N = 1291.

Measures

Eating disorders

The risk of eating disorders was assessed using the 5-item SCOFF questionnaire (Morgan et al., 2000) that assesses the core features of anorexia nervosa and bulimia nervosa; (1) do you ever make yourself *sick* because you feel uncomfortably full?; (2) do you worry you have lost *control* over how much you eat?; (3) have you recently lost more than *one* stone in a three month period?; (4) do you believe yourself to be *fat* when others say you are too thin?; (5) would you say that *food* dominates your life? Each item is scored 'Yes' (1) or 'No' (0) which produces a possible range of scores from 0 to 5, with a score of 2 or

more considered to represent the probable presence of anorexia nervosa or bulimia. Previous research has shown that using the cut-off score of ≥2 on the SCOFF has a high sensitivity screening ability for measuring young people at risk of anorexia nervosa and bulimia nervosa, with 100% sensitivity. This means that this screening scale was able to correctly identify all individuals who had a probable eating disorder when compared the results obtained from a gold standard diagnostic assessment (Morgan et al., 2000). Furthermore, it had a specificity of 87.5% (Morgan et al., 2000), this means that it also a useful tool for correctly identifying those individuals who do not have an eating disorder. A systematic review of 25 studies also supported the use of the SCOFF, with a cut-off score of ≥2, in young people (Kutz et al., 2020). Internal reliability was assessed using composite reliability (CR) as the scores are binary, and the estimate of reliability in this sample was high (CR = .84). It has been stated by the developers of this scale that possibility of false positives and negatives cannot be ruled out, as the scale is designed to be a screener rather than detect presence of a specified ED. Nevertheless, this scale and cut-off value is a useful in identifying individuals who may be experiencing a pattern of probable ED and who may require clinical assessment.

Age and sex

Age was recorded in years (11–12, 13–14, 15–16 and 17–19). Sex of young people was assessed as Male, Female, Other. Only one participant selected 'Other' therefore sex was recoded to 'Male' (0) and 'Female' (1). The one person that selected 'other' was excluded from the analysis.

Special education needs

Participants were asked: 'While at school, did you ever have a diagnosis of or have a suspected special education need?' The response options were 'Yes', 'No' and 'Prefer not to say' these were then coded as 'Yes' (1) and 'No/Prefer not to say' (0).

Child health

Health status was self-reported by answering, 'How is your health in general? Would you say it is…' with possible responses 'Very Good' (1), 'Good' (2), 'Fair' (3), 'Bad' (4), 'Very Bad' (5). These scores were then dichotomized (1 = Very Bad/Bad, 0 = Fair/Good/Very Good).

Parental separation

Parents/carers of participants aged 11–15 years were asked 'What is your relationship to [nominated child]' and 'What is your partner's relationship to [nominated child]'. If the response option 'Parent' was selected for both questions, then the young people were considered to be living with both parents. Participants aged 16 to 19 years were asked, 'Are your parents…. married/ living together as if married'.

Parental mental health

To assess parental mental health, the 12-item version of the General Health Questionnaire (GHQ-12: Goldberg, 1988) was used. The GHQ-12 is a standard measure of non-psychotic psychopathology in the general population (Lundin et al., 2016). The items were scored using 0, 0, 1 and 1 to produce total scores ranging from 0 to 12, with any score over 4 reflecting potential mental health problems (Goldberg, 1988). A binary variable was created to represent 'Mental health problem' (1)

and 'No Mental health problem' (0). The scale scores from this study indicated acceptable levels of reliability, $\alpha = .90$.

Family benefits

Parents/Carers were asked, 'Is your household receiving any state benefits?' A list of benefits was provided, and participants were asked to mark which ones their household was receiving. If any benefits were selected this was coded as 'In receipt of benefits' (1) and if none were selected this was coded as 'No Benefits' (0).

Area level deprivation

Deprivation was assessed using the 2017 Northern Ireland Multiple Deprivation Measure (NIMDM) scores (NI Statistics and Research Agency [NISRA], 2017). NISRA calculated this area-based measure to assesses deprivation on seven different domains which are: education skills and training; employment: health; income; proximity to services; living environment; and crime and disorder. To weight the scores, the number of people experiencing each type of deprivation within a Super Output Area (SOA) was calculated. NI is divided into 890 SOAs with an average population size of 2100 people. In this study, the SOA for each resident was recorded and linked to NI's 2017 NIMDM data (NI Statistics and Research Agency, 2017) and then stratified by deprivation decile. This was the further recoded to identify the top 20% areas of deprivation.

Living location

A 'Settlement band' is calculated by NISRA which includes an index of all settlements in NI on an urban–rural spectrum. This spectrum is based on population size, population density and service provision and summary index were created to represent living in an 'Urban' (1) or 'Rural/Mixed' (0) area.

Mood and anxiety disorders

Mood and anxiety disorders were assessed using the Revised Children's Anxiety and Depression Scale (RCADS: Chorpita et al., 2000). This self-report questionnaire has 47 items that produces severity scores and probable diagnoses based on 'clinical thresholds' for six disorders based on the DSM-IV criteria: Panic disorder, obsessive–compulsive disorder, separation anxiety disorder, social phobia, generalized anxiety disorder and major depressive disorder. The RCADS is a widely used measure that is a reliable screening measure for symptoms of anxiety and depression. It has demonstrated robust internal consistency reliability in different assessment settings, countries and languages (Piqueras et al., 2017), good test–retest reliability (Chorpita et al., 2000) and good convergent validity (Bouvard et al., 2015; Esbjørn et al., 2012). If a participant met the criteria for one or more disorders, they were coded as 'Yes' (1) on a 'Any Mood/Anxiety Disorder' variable. The reliability estimates (Cronbach's α) for this scale scores were acceptable $\alpha = .97$.

Social media disorder

Social media disorder was assessed using the Social Media Disorder Scale (SMD; Van den Eijnden et al., 2016). This is a recent 9-item measure that is based on the DSM-5 criteria for Internet Gaming

Disorder. This scale assesses nine criteria (preoccupation, tolerance, withdrawal, displacement, escape, problems, deception, displace and conflict) and each is scored 'Yes' (1) or 'No' (0) which produces a possible range of scores from 0 to 9, with a score of 5 or more considered to represent the presence of social media disorder. Social Media Disorder will hereby be referred to as 'Problematic Social Media Use' as this is not yet a recognized diagnostic criteria within current diagnostic manuals. The scale scores from this study indicated acceptable levels of reliability, $\alpha = .74$.

Cyberbullying/bullying

Cyberbullying was assessed by asking the two questions developed by Smith et al. (2008): 'In the past couple of months have you been cyberbullied' …(1) 'by mobile phone (nasty text messages, nasty mobile phone pictures or video clips sent to you, nasty or silent phone calls)?' and (2) … 'through the internet (abusive emails or bullying on websites, in chat rooms, or through messages on WhatsApp, Snap Chat or other instant messaging)?' Four response options were provided ('No', 'Once or twice', 'Several times', 'Very often') and participants screened positive for cyberbullying if they answered 'Once or twice', 'Several times' or 'Very often' to either of these questions.

Bullying was assessed by two separate questions which were: In the past month… (1) 'Have you been hit, kicked or pushed by another student?' and (2) 'Has anyone teased you or called you names?' Responses were binary (Yes/No) and participants screened positive for bullying if they responded 'Yes' to either question.

Childhood adversity

Childhood Adversity was assessed for both parents and young people, using the Adverse Childhood Experiences Scale (ACE: Felitti et al., 1998). This scale is a ten-item self-report questionnaire and measures the occurrence of abuse (physical, emotional and sexual), neglect (physical and emotional) and household dysfunction (separation, mental illness, substance abuse, domestic abuse and imprisonment). Responses are scored in a binary fashion (No = 0, Yes = 1), with a possible range of scores of 0–10. Previous research has demonstrated this scale has good internal reliability and validity (Kazeem, 2015), and this was also acceptable within the current study (ACE, $\alpha = .79$).

Drug use/smoking

Smoking was assessed by asking participants 'Have you ever smoked cigarettes?' with 'Yes' (1) and 'No' (0) response options. Drug use was assessed by asking participants 'Have ever used drugs?' with 'Yes' (1) and 'No' (0) response options.

Alcohol use: Hazardous alcohol use was assessed using the Alcohol Use Disorders Identification Test-Concise (AUDIT-C; Bush et al., 1998) questions. The AUDIT-C has three questions; 'How often do you have a drink containing alcohol?', 'How many drinks containing alcohol do you have a typical day when you are drinking?' and 'How often do you have six or more drinks on one occasion?' Each of these questions is scored from 0–4, with a potential range of scores from 0 to 12, and a score of 4 or more is considered to be indicative of hazardous drinking. In this study, scores were recoded into a binary variable 'Hazardous drinking' (1) and 'No hazardous drinking' (0). The scale scores from this scale indicated acceptable levels of reliability, $a = .70$ for this study.

RESULTS

The endorsement rates of SCOFF items are reported in Table 1.

TABLE 1 Endorsement rates of SCOFF items

	N (%)
1. Do you ever make yourself sick because you feel uncomfortably full?	94 (7.2)
2. Do you worry you have lost control over how much you eat?	233 (17.9)
3. Have you recently lost more than one stone in a three-month period?	106 (8.2)
4. Do you believe yourself to be fat when others say you are too thin?	200 (15.4)
5. Would you say that food dominates your life?	135 (10.4)
Eating Disorder Diagnosis (SCOFF ≥2)	211 (16.2)

The total scores on the SCOFF scale ranged from 0 to 5, with a mean of .59 (*SD* = 1.03). Most participants scored 0 (*n* = 871, 67.4%) or 1 (*n* = 211, 6.9%) with 16.2% (*n* = 211) meeting the cut-off score of 2 or more.

Table 2 shows the results for the descriptive statistics and regression analyses for the entire sample. The sample was equally split in relation to sex (female = 48.8%). The majority of the sample were white (97%). Over half of the sample lived in an urban area (62.2%). The majority of the sample had no special educational needs (86.5%), and around 13% reported poor health. The presence of a probable eating disorder was stratified based on demographic, familial, economic and psychological factors.

The bivariate (unadjusted) odds ratios (OR) for the demographic and familial variables showed that screening positive on the SCOFF was associated with being female (OR = 2.69, CI = 1.96–3.69), aged between 17 and 19 years (OR = 1.78, CI = 1.15–2.76), poor physical health (OR = 2.59, CI = 1.78–3.76), not living with both biological parents (OR = 1.37, CI = 1.01–1.85) and a parental with a mental health problem (OR = 1.93, CI = 1.35–2.77). No economic variables were statistically significant. All psychological risk factors were associated with an increased likelihood of screening positive for probable eating disorder: mood/anxiety disorder (OR = 6.13, CI = 4.35–8.64), problematic social media use (OR = 3.75, CI = 2.16–6.52), having been cyber-bullied (OR = 3.43, CI = 2.41–4.88), having been bullied (OR = 2.38, CI = 1.68–3.38), having experienced 1 or more aces (OR = 1.87, CI = 1.38–2.53), drug use (OR = 2.12, CI = 1.38–3.24), having ever smoked (OR = 2.57. CI = 1.86–3.55) and hazardous drinking (OR = 2.01, CI = 1.44–2.80).

In the adjusted model, the results suggested that those individuals with a probable eating disorder were more likely to be female (OR = 2.44, CI = 1.60–3.70), have a parent with mental health problems (OR = 1.68, CI = 1.10–2.57), suffer from certain psychological problems, such as mood or anxiety disorder (OR = 2.55, CI = 1.58–4.12) or problematic social media use (OR = 2.95, CI = 1.50–5.79), be the victim of physical bullying (OR = 1.71, CI = 1.04–2.79) and have smoked (OR = 2.46, CI = 1.34–4.49).

DISCUSSION

To our knowledge, this is the first representative study in the UK that has used the SCOFF to assess probable eating disorder rates in a youth sample (11–19 year olds). Using the recommended cut-off score of 2 or more on the SCOFF results demonstrated that the proportion of young people that screened positive for a probable eating disorder was 16.2%. Females (23.0%) were significantly more likely to screen positive than males (10.0%) which supports previous findings that females are at greater risk of eating disorder problems (Fairburn & Harrison, 2003). Having poor physical health, having a parent that suffered from a mental health problem and not living with both parents also increased likelihood of screening positive for probable eating disorder. There were no significant associations between a probable eating disorder and deprivation.

Bivariate associations with other psychological disorders or problems demonstrated the strongest overall effects. Results indicated that odds of screening positive for a probable eating disorder were highest in individuals who also screened positive for 'Any Mood and Anxiety Disorder'. In addition

TABLE 2 Probable eating disorder rates stratified by risk factors: Unadjusted and adjusted estimates from logistic regression

	N (%)	SCOFF ≥2 (%)	Unadjusted OR	Adjusted OR
Total sample				
11–19 year olds	1291	211 (16.2%)		
Sex				
Male	662 (51.2%)	66 (10.0%)	–	–
Female	631 (48.8%)	145 (23.0%)	2.69 (1.96–3.69)*	2.44 (1.60–3.70)*
Age (years)				
11–12	270 (20.9%)	31 (11.5%)	–	
13–14	263 (20.3%)	46 (17.4%)	1.63 (.99–2.66)	1.38 (.80–2.40)
15–16	278 (21.5%)	43 (15.4%)	1.40 (.85–2.30)	.90 (.48–1.62)
17–19	482 (37.3%)	91 (18.8%)	1.78 (1.15–2.76)*	.63 (.32–1.26)
Special educational needs				
No	1119 (86.5%)	939 (16.1%)	–	–
Yes	174 (13.5%)	31 (17.8%)	1.13 (.74–1.72)	1.64 (.88–3.05)
Child health				
Very Good/Good	1060 (86.7%)	156 (14.7%)	–	–
Fair/Bad/Very Bad	162 (13.3%)	50 (30.9%)	2.59 (1.78–3.76)*	1.64 (.93–2.89)
Parental separation				
Living with both parents	825 (62.4%)	122 (14.8%)	–	–
Not living with both parents	460 (35.8%)	88 (19.1%)	1.37 (1.01–1.85)*	1.04 (.58–1.39)
Parental mental health problems				
No	748 (74.4%)	100 (13.4%)	–	–
Yes	257 (25.6%)	59 (23.0%)	1.93 (1.35–2.77)*	1.68 (1.10–2.57)*
Family benefits				
No benefits	829 (64.1%)	131 (15.8%)	–	–
Benefits	464 (35.9%)	80 (17.2%)	1.11 (.82–1.51)	.87 (.54–1.38)
Multiple deprivation				
Most deprived	240 (18.6%)	46 (19.0%)	–	–
Other quintiles	1053 (81.4%)	165 (15.6%)	.78 (.55–1.13)	.84 (.50–1.42)
Living location				
Rural/mixed	484 (37.4%)	69 (14.3%)	–	–
Urban	809 (62.6%)	142 (17.6%)	1.28 (.94–1.75)	.89 (.58–1.34)
Any mood/anxiety disorder				
No	989 (84.0%)	123 (12.4%)	–	–
Yes	189 (16.0%)	88 (46.6%)	6.13 (4.35–8.64)*	2.55 (1.58–4.12)*
Problematic social media use				
No	1121 (95.2%)	187 (16.7%)	–	–
Yes	56 (4.8%)	24 (42.9%)	3.75 (2.16–6.52)*	2.95 (1.50–5.79)*
Cyber-bullied				
No	1001 (85.0%)	146 (14.6%)	–	–
Yes	176 (15.0%)	65 (36.9%)	3.43 (2.41–4.88)*	1.59 (.94–2.67)

TABLE 2 (Continued)

	N (%)	SCOFF ≥2 (%)	Unadjusted OR	Adjusted OR
Bullied				
No	979 (83.2%)	151 (15.4%)	–	–
Yes	198 (16.8%)	60 (30.3%)	2.38 (1.68–3.38)*	1.71 (1.04–2.79)*
ACEs				
None	676 (52.3%)	83 (12.25%)	–	–
1 or more	617 (47.7%)	128 (20.6%)	1.87 (1.38–2.53)*	1.30 (.74–2.28)
Ever use drugs				
No	1059 (90.0%)	176 (16.6%)	–	–
Yes	118 (10.0%)	35 (29.7%)	2.12 (1.38–3.24)*	1.05 (.49–2.28)
Ever smoke				
No	923 (78.4%)	134 (14.5%)	–	–
Yes	254 (21.6%)	77 (30.3%)	2.57 (1.86–3.55)*	2.46 (1.34–4.49)*
Hazardous drinking				
No	924 (78.5%)	143 (15.4%)	–	–
Yes	253 (21.5%)	68 (22.7%)	2.01 (1.44–2.80)*	1.51 (.75–3.03)

*$p < .05$.

there was a 3.7-fold increase in disordered eating if an individual met the criteria for Problematic Social Media Use (OR = 3.75). In line with previous research, the results indicated that being virtually or physically bullied also significantly increased the risk of screening positive for a probable eating disorder. Other significant predictors were identified in this model, such as experiencing adverse childhood experiences (OR = 1.87), using drugs (OR = 2.12), smoking (OR = 2.57) and hazardous drinking (OR = 2.01).

While bivariate associations such as age, parental separation, child health, cyber bullying, the presence of ACES and a history of substance misuse demonstrated moderate effects in the bivariate analysis, these associations did not survive the multivariate model and were no longer statistically significant. In the adjusted model, being female, having a parent with mental health problems, suffering from reported psychological problems, such as mood and anxiety disorders, screening positive for problematic social media use, smoking and being physically bullied remained independent factors when controlling for all other predictors. The data for this study precluded investigation into transgender/non-binary/gender diverse youth, who have been identified at being of increased risk of probable eating disorders (Coelho et al., 2019).

To our knowledge, no study has examined the role that problematic social media use potentially has on the development of probable eating disorders, based on the Social Media Disorder Scale (Van den Eijnden et al., 2016). Although SMD is not yet a recognized disorder in the diagnostic manuals, the results of this study suggest an association between the use, and excess use, of social media increases risk of a probable eating disorders. Previously, studies that have examined the effect of media use (Morris & Katzman, 2003) have indicated that using online media sites is related to eating disorder symptoms (Santarossa & Woodruff, 2017). Recent work further suggested strong mediational links between media pressures (TV, magazines and internet) and EDs via disordered eating (Sanchez-Ruiz et al., 2019). Further examination into the specific effects of social media use is warranted.

Previous studies that have examined bullying as a predictor for eating disorders have not differentiated between physical bullying and cyberbullying (Lie et al., 2019). Our results demonstrate that there is a significant difference in relation to risk of probable eating disorder between these two variables. In the multi-variate model, being physically bullied was associated with risk of a probable eating disorder,

whereas being cyberbullied was no longer significant in the adjusted model. Overall, these results support previous findings that suggest there are independent risk factors that increase vulnerability to EDs and are line with other studies. These include both clinical samples (Jacobi et al., 2004; Striegel-Moore & Bulik, 2007) and adolescent general population samples (Gardner et al., 2000) that have identified similar putative risk factors for example, sex, adverse childhood experiences and psychiatric morbidity and teasing. The presence of these risk factors in both general population and clinical samples might support the suggestion that EDs and its subtypes, exist on a continuum of severity (Gleaves et al., 2004), and at-risk individuals may be identifiable in sub-clinical samples.

There are some limitations to this study. First, the measures used to assess mental health problems are based on self-reporting, rather than clinically administered interviews. Furthermore, the population of NI is ethnically homogeneous, 97% of this sample identified as white and therefore does not assess the differences of probable eating disorders across ethnic groups. This SCOFF measure was chosen to assess probable EDs over the use of more specific measures such as the EDE-Q and EDE-QS, as the EDE-Q has recently been criticized as not being a reliable measure for assessing eating and weight control behaviours in adolescent boys (Mond et al., 2008). In addition to this, the SCOFF has been favoured by many in primary care because of its brevity and is therefore a common measure in assessing problematic eating in adolescents. However, the SCOFF measure has attracted criticism, as it is a non-specific measure of eating disorders used to screen for early signs of a probable eating disorder that might warrant clinical assessment. The SCOFF is designed to be a screener, and studies have suggested it is only reliable in screening for possible symptoms of anorexia nervosa and bulimia nervosa, and therefore this scale may be less sensitive in screening for other eating disorders such as avoidant/restrictive food intake disorder, binge eating disorder, other non-specified feeding or eating disorder, rumination disorder and Pica. Therefore, these results should be interpreted with caution, as they may not represent incidence rates of all eating and feeding problems, and there will be both false positives and false negatives (Morgan et al., 2000). The SCOFF has, however, been judged to be a reliable measure in assessing at-risk behaviours or probable eating disorders (sub-clinical) in the general population (Jacobi et al., 2004). These screening tools do not replace the need for clinical examination and assessment but help to determine those at risk, improve our understanding of potential eating disorders in non-clinical samples and provide enhanced detection of individuals who may benefit for early intervention.

The data collected for this survey was completed in March 2020, just before the UK enforced national lockdown restrictions as a response to COVID-19 pandemic. There is recent evidence to suggest that lockdown restrictions may have impacted the rates of eating disorders in the UK, with referrals to eating disorder services almost doubling in the last year (Solmi et al., 2021). Therefore, the rates in this study may not be representative of current probable eating disorders. Currently, no data on EDs or probable EDs after the lockdown period exists within the UK. What this study does provide, is essential data on the rates of probable EDs pre-lockdown, which in turn provides a baseline assessment for comparison in future studies.

This study provides the first report of estimates of probable EDs among a representative population of young people in NI. Furthermore, it provides the first estimates of probable EDs in the UK using the SCOFF measure. Rates in this study are elevated, in comparison with the MHCYP survey carried out in England. The MHCYP England survey, assessed probable EDs using a score of two or more on the Developmental and Wellbeing Assessment (DAWBA). Their results indicated 13% of respondents screened positive for probable eating disorder, a 2-fold increase in prevalence since the 2017 MHCYPS (7%). The results of the current study demonstrate an increase in the rate of individuals who screened positive using the SCOFF for probable ED in NI (16.2%) in comparison with England (13%). The differences in assessments used to measure probable EDs, however, make it difficult to comparatively understand these differences in prevalence rates. A recent paper report by National Institute for Health and Care Excellence (2017) recognized the use of both the DAWBA and the SCOFF as assessments for probable EDs in the general population (National Guideline Alliance, 2017). However, no study to date has compared the diagnostic

accuracy or validity of the DAWBA against the SCOFF or vice versa. Therefore, the use of different diagnostic assessments to measure probable EDs makes it difficult to directly compare prevalence rates. Further, the results of this survey cannot be compared with the Republic of Ireland or other areas within the UK, such as Wales and Scotland as no equivalent data on these nations currently exists.

To date, no study has comprehensively researched the epidemiology of EDs or probable EDs in Ireland, Scotland or Wales. One study (McNicolas et al., 2010) explored eating attitudes in Ireland and found that 7.6% of the sample scored above clinical cut-off on the EAT-26, 10.9% of females and 2.4% of boys. However, due to the differences in assessment and timeframe, comparing reports of probable EDs is futile. The prevalence rates of probable EDs in England is often generalized to the wider UK. In addition, none of these studies have examined probable EDs in adolescent samples explicitly, or in non-treatment seeking groups, and have used different methods of assessing probable EDs. The results of our study suggest, perhaps, that rates of probable EDs should not be generalized to each nation within the UK or Ireland, and differences in age should be assessed, as rates may differ within these different populations.

In comparison with other European countries that have used the SCOFF measure with a cut-off rate of 2 or more in young people (under 19), the rate of probable ED in NI appears to align. Studies of young people in Denmark found 28% of young people screened positive on the SCOFF for a probable ED (Lichtenstein et al., 2017). In Germany 21.9% (Hölling & Schlack, 2007) of young people screened positive and in France 13.5% of young people screened positive for probable ED (Duarte Garcia et al., 2010). A recent study in Italy, used a cut-off score of 3 or more on the SCOFF in 14–19 year olds. The authors reported 31% of these young people screened positive for a probable ED (D'Anna et al., 2022).

It is noteworthy that even though this study found girls are more at risk of probable EDs in comparison with boys, a high percentage of boys (10%) also meet the criteria for probable ED. There is no available evidence on males specifically in the England MHCYPS or Ireland data, but the overall one-year prevalence for probable eating disorders in males, in the general population, is estimated to be .67% (Galmiche et al., 2019). The rates of males screening positive in this study is markedly higher. These results may therefore suggest that the gender gap in probable ED symptoms may be less pronounced in the general population, or indeed, on the rise in young males.

Focusing on detecting eating disorders at an early stage, or before they are clinically significant, has been empirically demonstrated to be the best predictor of treatment success and recovery (Parker et al., 2005). From a public health perspective, this study has provided much needed estimates of probable EDs within a youth population. The results suggest that there are independent risk factors that are associated with risk of probable EDs and provide insight into possible high risk individuals. Understanding these estimates and their associations with other important correlates will be useful for clinicians and researchers in deepening our understanding of these conditions, improving early management and referrals for EDs (Royal College of Psychiatrists, 2019).

AUTHOR CONTRIBUTIONS

Emma Nolan: Conceptualization; data curation; formal analysis; investigation; methodology; project administration; writing – original draft; writing – review and editing. **Lisa Bunting:** Conceptualization; funding acquisition; writing – review and editing. **Claire McCartan:** Conceptualization; resources; writing – review and editing. **Gavin Davidson:** Resources; writing – review and editing. **Anne Grant:** Resources; writing – review and editing. **Dirk Schubotz:** Resources; writing – review and editing. **Ciaran Mulholland:** Conceptualization; writing – original draft; writing – review and editing. **Orla McBride:** Resources; writing – original draft; writing – review and editing. **Jamie Murphy:** Resources; writing – original draft; writing – review and editing. **Mark Shevlin:** Conceptualization; data curation; formal analysis; methodology; supervision; writing – original draft; writing – review and editing.

CONFLICT OF INTEREST

All authors declare no conflict of interest.

DATA AVAILABILITY STATEMENT

The data used in this paper are part of the Northern Ireland Youth Wellbeing Prevalence Survey. This data are currently not publicly available due to a 5-year moratorium placed on access to the data. A link to the OSF webpage with details of the study, however, can be found here: https://osf.io/fjms3/.

ORCID

Emma Nolan https://orcid.org/0000-0003-2135-7597

REFERENCES

Anzengruber, D., Klump, K. L., Thornton, L., Brandt, H., Crawford, S., Fichter, M. M., Halmi, K. A., Johnson, C., Kaplan, A. S., Lavia, M., Mitchell, J., Strober, M., Woodside, D. B., Rotondo, A., Berrettini, W. H., Kaye, W. H., & Bulik, C. M. (2006). Smoking in eating disorders. *Eating Behaviors*, *7*(4), 291–299. https://doi.org/10.1016/j.eatbeh.2006.06.005

Bouvard, M., Denis, A., & Roulin, J. L. (2015). The French version of the revised child anxiety and depression scale (RCADS) in a nonclinical sample. *Swiss Journal of Psychology*, *74*, 119–127.

Bunting, L., McCartan, C., Davidson, G., Grant, A., Mulholland, C., Schubotz, D., McBride, O., Murphy, J., & Shevlin, M. (2022). Rationale and methods of the 'Northern Ireland youth wellbeing Survey' and initial findings from the strengths and difficulties questionnaire. *Clinical Child Psychology and Psychiatry*, *27*(3), 670–685. https://doi.org/10.1024/1421-0185/a000158

Bush, K., Kivlahan, D. R., McDonell, M. B., Fihn, S. D., Bradley, K. A., & Ambulatory Care Quality Improvement Project (ACQUIP). (1998). The AUDIT alcohol consumption questions (AUDIT-C): an effective brief screening test for problem drinking. *Archives of Internal Medicine*, *158*(16), 1789–1795. https://doi.org/10.1001/archinte.158.16.1789

Chorpita, B. F., Yim, L., Moffitt, C., Umemoto, L. A., & Francis, S. E. (2000). Assessment of symptoms of DSM-IV anxiety and depression in children: A revised child anxiety and depression scale. *Behaviour Research and Therapy*, *38*(8), 835–855. https://doi.org/10.1016/S0005-7967(99)00130-8

Coelho, J. S., Suen, J., Clark, B. A., Marshall, S. K., Geller, J., & Lam, P. Y. (2019). Eating disorder diagnoses and symptom presentation in transgender youth: A scoping review. *Current Psychiatry Reports*, *21*(11), 1–10. https://doi.org/10.1007/s11920-019-1097-x

Cotton, M. A., Ball, C., & Robinson, P. (2003). Four simple questions can help screen for eating disorders. *Journal of General Internal Medicine*, *18*(1), 53–56.

D'Anna, G., Lazzeretti, M., Castellini, G., Ricca, V., Cassioli, E., Rossi, E., Silvestri, C., & Voller, F. (2022). Risk of eating disorders in a representative sample of Italian adolescents: Prevalence and association with self-reported interpersonal factors. *Eating and Weight Disorders-Studies on Anorexia, Bulimia and Obesity*, *27*(2), 701–708. https://doi.org/10.1007/s40519-021-01214-4

Demmler, J. C., Brophy, S. T., Marchant, A., John, A., & Tan, J. O. (2020). Shining the light on eating disorders, incidence, prognosis and profiling of patients in primary and secondary care: National data linkage study. *The British Journal of Psychiatry*, *216*(2), 105–112. https://doi.org/10.1192/bjp.2019.153

Edakubo, S., & Fushimi, K. (2020). Mortality and risk assessment for anorexia nervosa in acute-care hospitals: A nationwide administrative database analysis. *BMC Psychiatry*, *20*(1), 1–8. https://doi.org/10.1186/s12888-020-2433-8

Eisenberg, D., Nicklett, E. J., Roeder, K., & Kirz, N. E. (2011). Eating disorder symptoms among college students: Prevalence, persistence, correlates, and treatment-seeking. *Journal of American College Health*, *59*(8), 700–707. https://doi.org/10.1080/07448481.2010.546461

Esbjørn, B. H., Sømhovd, M. J., Turnstedt, C., & Reinholdt-Dunne, M. L. (2012). Assessing the revised child anxiety and depression scale (RCADS) in a national sample of Danish youth aged 8–16 years. *PLoS One*, *7*(5), e37339. https://doi.org/10.1371/journal.pone.0037339

Fairburn, C. G., & Harrison, P. J. (2003). Eating disorders. *Lancet*, *361*(9355), 407–416. https://doi.org/10.1016/S0140-6736(03)12378-1

Felitti, V. J., Anda, R. F., Nordenberg, D., & Williamson, D. F. (1998). Adverse childhood experiences and health outcomes in adults: The ace study. *Journal of Family and Consumer Sciences*, *90*(3), 31–258. https://doi.org/10.1016/s0749-3797(98)00017-8

Field, A. E., Camargo, C. A., Taylor, C. B., Berkey, C. S., Roberts, S. B., & Colditz, G. A. (2001). Peer, parent, and media influences on the development of weight concerns and frequent dieting among preadolescent and adolescent girls and boys. *Paediatrics*, *107*(1), 54–60. https://doi.org/10.1542/peds.107.1.54

Field, A. E., Camargo, C. A., Jr., Taylor, C. B., Berkey, C. S., Frazier, A. L., Gillman, M. W., & Colditz, G. A. (1999). Overweight, weight concerns, and bulimic behaviors among girls and boys. *Journal of the American Academy of Child & Adolescent Psychiatry*, *38*(6), 754–760. https://doi.org/10.1097/00004583-199906000-00024

Franko, D. L., Keshaviah, A., Eddy, K. T., Krishna, M., Davis, M. C., Keel, P. K., & Herzog, D. B. (2013). Do mortality rates in eating disorders change over time? A longitudinal look at anorexia nervosa and bulimia nervosa. *The American Journal of Psychiatry*, *170*(8), 917–925. https://doi.org/10.1176/appi.ajp.2013.12070868

Galmiche, M., Déchelotte, P., Lambert, G., & Tavolacci, M. P. (2019). Prevalence of eating disorders over the 2000–2018 period: A systematic literature review. *The American Journal of Clinical Nutrition*, *109*(5), 1402–1413. https://doi.org/10.1093/ajcn/nqy342

Garcia, F. D., Grigioni, S., Chelali, S., Meyrignac, G., Thibaut, F., & Dechelotte, P. (2010). Validation of the French version of SCOFF questionnaire for screening of eating disorders among adults. *The World Journal of Biological Psychiatry*, *11*(7), 888–893. https://doi.org/10.3109/15622975.2010.483251

Gardner, R. M., Stark, K., Friedman, B. N., & Jackson, N. A. (2000). Predictors of eating disorder scores in children ages 6 through 14: A longitudinal study. *Journal of Psychosomatic Research*, *49*(3), 199–205. https://doi.org/10.1016/S0022-3999(00)00172-0

Gleaves, D. H., Brown, J. D., & Warren, C. S. (2004). The continuity/discontinuity models of eating disorders: A review of the literature and implications for assessment, treatment, and prevention. *Behavior Modification*, *28*(6), 739–762. https://doi.org/10.1177/0145445503259859

Goldberg, D. P. (1988). *User's guide to the general health questionnaire*. NFER-NELSON. https://doi.org/10.1037/t00297-000

Haines, J., & Neumark-Sztainer, D. (2006). Prevention of obesity and eating disorders: A consideration of shared risk factors. *Health Education Research*, *21*(6), 770–782. https://doi.org/10.1093/her/cyl094

Harrison, A., Sullivan, S., Tchanturia, K., & Treasure, J. (2010). Emotional functioning in eating disorders: Attentional bias, emotion recognition and emotion regulation. *Psychological Medicine*, *40*(11), 1887–1897. https://doi.org/10.1017/S0033291710000036

Hasselle, A. J., Howell, K. H., Dormois, M., & Miller-Graff, L. E. (2017). The influence of childhood polyvictimization on disordered eating symptoms in emerging adulthood. *Child Abuse & Neglect*, *68*, 55–64. https://doi.org/10.1016/j.chiabu.2017.04.003

Hay, P. (2020). Current approach to eating disorders: A clinical update. *Internal Medicine Journal*, *50*(1), 24–29. https://doi.org/10.1111/imj.14691

Herpertz-Dahlmann, B. (2009). Adolescent eating disorders: Definitions, symptomatology, epidemiology and comorbidity. *Child and Adolescent Psychiatric Clinics of North America*, *18*(1), 31–47. https://doi.org/10.1016/j.chc.2008.07.005

Hill, L. S., Reid, F., Morgan, J. F., & Lacey, J. H. (2010). SCOFF, the development of an eating disorder screening questionnaire. *International Journal of Eating Disorders*, *43*(4), 344–351. https://doi.org/10.1002/eat.20679

Hölling, H., & Schlack, R. (2007). Eating disorders in children and adolescents. First results of the German health interview and examination survey for children and adolescents (KiGGS). *Bundesgesundheitsblatt, Gesundheitsforschung, Gesundheitsschutz*, *50*(5–6), 794–799. https://doi.org/10.1007/s00103-007-0242-6

Hudson, J. I., Hiripi, E., Pope, H. G., Jr., & Kessler, R. C. (2007). The prevalence and correlates of eating disorders in the National Comorbidity Survey Replication. *Biological Psychiatry*, *61*(3), 348–358. https://doi.org/10.1016/j.biopsych.2006.03.040

Iwajomo, T., Bondy, S. J., de Oliveira, C., Colton, P., Trottier, K., & Kurdyak, P. (2021). Excess mortality associated with eating disorders: Population-based cohort study. *The British Journal of Psychiatry*, *219*(3), 487–493. https://doi.org/10.1192/bjp.2020.197

Jacobi, C., Hayward, C., de Zwaan, M., Kraemer, H. C., & Agras, W. S. (2004). Coming to terms with risk factors for eating disorders: Application of risk terminology and suggestions for a general taxonomy. *Psychological Bulletin*, *130*(1), 19–65. https://doi.org/10.1037/0033-2909.130.1.19

Jones, J. M., Bennett, S., Olmsted, M. P., Lawson, M. L., & Rodin, G. (2001). Disordered eating attitudes and behaviours in teenaged girls: A school-based study. *Canadian Medical Association Journal (CMAJ)*, *165*(5), 547–552. https://www.cmaj.ca/content/cmaj/165/5/547.full.pdf

Kaye, W. H., Wagner, A., Fudge, J. L., & Paulus, M. (2010). Neurocircuity of eating disorders. *Behavioral Neurobiology of Eating Disorders*, *6*, 37–57. https://doi.org/10.1007/7854_2010_85

Kazeem, O. T. (2015). A validation of the adverse childhood experiences scale in Nigeria. *Research on Humanities and Social Sciences*, *5*(11), 18–23. https://doi.org/10.4324/9781003022985-1

Killen, J. D., Taylor, C. B., Hayward, C., Haydel, K. F., Wilson, D. M., Hammer, L., Kraemer, H., Blair-Greiner, A., & Strachowski, D. (1996). Weight concerns influence the development of eating disorders: A 4-year prospective study. *Journal of Consulting and Clinical Psychology*, *64*(5), 936–940. https://doi.org/10.1037//0022-006x.64.5.936

Kutz, A. M., Marsh, A. G., Gunderson, C. G., Maguen, S., & Masheb, R. M. (2020). Eating disorder screening: A systematic review and meta-analysis of diagnostic test characteristics of the SCOFF. *Journal of General Internal Medicine*, *35*(3), 885–893. https://doi.org/10.1007/s11606-019-05478-6

Lichtenstein, M. B., Hemmingsen, S. D., & Støving, R. K. (2017). Identification of eating disorder symptoms in Danish adolescents with the SCOFF questionnaire. *Nordic Journal of Psychiatry*, *71*(5), 340–347. https://doi.org/10.1080/08039488.2017.1300322

Lie, S. Ø., Rø, Ø., & Bang, L. (2019). Is bullying and teasing associated with eating disorders? A systematic review and meta-analysis. *International Journal of Eating Disorders*, *52*(5), 497–514. https://doi.org/10.1002/eat.23035

Lundin, A., Hallgren, M., Theobald, H., Hellgren, C., & Torgén, M. (2016). Validity of the 12-item version of the general health questionnaire in detecting depression in the general population. *Public Health*, *136*, 66–74. https://doi.org/10.1016/j.puhe.2016.03.005

McBride, O., McManus, S., Thompson, J., Palmer, R. L., & Brugha, T. (2013). Profiling disordered eating patterns and body mass index (BMI) in the English general population. *Social Psychiatry and Psychiatric Epidemiology*, *48*(5), 783–793. https://doi.org/10.1007/s00127-012-0613-7

McCabe, M., Tatangelo, G., Watson, B., Fuller-Tyszkiewicz, M., Rodgers, R. F., Aimé, A., Mellor, D., Granero-Gallegos, A., Strodl, E., Caltabiano, M., Camacho, A. S., Castelnuovo, G., Coco, G. L., Grogan, S., Probst, M., Dion, J., Maïano, C., Manzoni, G., Begin, C., … Ricciardelli, L. (2019). Development and testing of a model for risk and protective factors for eating disorders and higher weight among emerging adults: A study protocol. *Body Image*, *31*, 139–149. https://doi.org/10.1016/j.bodyim.2019.10.001

McNicolas, F., Dooley, B., Keogh, L., Lydon, A., Lennon, R., Ahern, S., Coyle, C., Whelan, A., & Donoghue, L. O. (2010). Eating problems in Irish children and adolescence–EPICA. *Irish Journal of Psychological Medicine*, *27*(4), 172–178. https://doi.org/10.1017/S0790966700001476

Mond, J. M., Myers, T. C., Crosby, R. D., Hay, P. J., Rodgers, B., Morgan, J. F., Lacey, J. H., & Mitchell, J. E. (2008). Screening for eating disorders in primary care: EDE-Q versus SCOFF. *Behaviour Research and Therapy*, *46*(5), 612–622. https://doi.org/10.1016/j.brat.2008.02.003

Morgan, J. F., Reid, F., & Lacey, J. H. (2000). The SCOFF questionnaire. *The Western Journal of Medicine*, *172*(3), 164–165. https://doi.org/10.1136/ewjm.172.3.164

Morris, A. M., & Katzman, D. K. (2003). The impact of the media on eating disorders in children and adolescents. *Paediatrics & Child Health*, *8*(5), 287–289. https://doi.org/10.1093/pch/8.5.287

National Guideline Alliance (Great Britain). (2017). Eating Disorders: Recognition and Treatment: Full Guideline. National Institute for Health and Care Excellence 69 (NG69). https://www.sochob.cl/pdf/libros/Eating%20Disorders%20Recognition%20and%20Treatment.pdf

NI Statistics and Research Agency. (2017). *Northern Ireland multiple deprivation measure 2017(NIMDM2017)–SOA results*. Northern Ireland Statistics and Research Agency.

Parker, S. C., Lyons, J., & Bonner, J. (2005). Eating disorders in graduate students: Exploring the SCOFF questionnaire as a simple screening tool. *Journal of American College Health*, *54*(2), 103–107. https://doi.org/10.3200/JACH.54.2.103-107

Piqueras, J. A., Martín-Vivar, M., Sandin, B., San Luis, C., & Pineda, D. (2017). The revised child anxiety and depression scale: A systematic review and reliability generalization meta-analysis. *Journal of Affective Disorders*, *218*, 153–169. https://doi.org/10.1016/j.jad.2017.04.022

Richter, F., Strauss, B., Braehler, E., Adametz, L., & Berger, U. (2017). Screening disordered eating in a representative sample of the German population: Usefulness and psychometric properties of the German SCOFF questionnaire. *Eating Behaviors*, *25*, 81–88.

Rojo-Moreno, L., Arribas, P., Plumed, J., Gimeno, N., García-Blanco, A., Vaz-Leal, F., Luisa Vila, M., & Livianos, L. (2015). Prevalence and comorbidity of eating disorders among a community sample of adolescents: 2-year follow-up. *Psychiatry Research*, *227*(1), 52–57. https://doi.org/10.1016/j.psychres.2015.02.015

Royal College of Psychiatrists. (2019). *Position Statement on Early Intervention for Eating Disorders*. https://www.rcpsych.ac.uk/docs/default-source/improving-care/better-mh-policy/position-statements/ps03_19.pdf?sfvrsn=b1283556_2

Sanchez-Ruiz, M. J., El-Jor, C., Abi Kharma, J., Bassil, M., & Zeeni, N. (2019). Personality, emotion-related variables, and media pressure predict eating disorders via disordered eating in Lebanese university students. *Eating and Weight Disorders-Studies on Anorexia, Bulimia and Obesity*, *24*(2), 313–322. https://doi.org/10.1007/s40519-017-0387-8

Santarossa, S., & Woodruff, S. J. (2017). SocialMedia: Exploring the relationship of social networking sites on body image, self-esteem, and eating disorders. *Social Media and Society*, *3*(2), 2056305117704407. https://doi.org/10.1177/2056305117704407

Schmidt, U., Adan, R., Böhm, I., Campbell, I. C., Dingemans, A., Ehrlich, S., Elzakkers, I., Favaro, A., Giel, K., Harrison, A., Himmerich, H., Hoek, H. W., Herpertz-Dahlmann, B., Kas, M. J., Seitz, J., Smeets, P., Sternheim, L., Tenconi, E., van Elburg, A., … Zipfel, S. (2016). Eating disorders: The big issue. *The Lancet Psychiatry*, *3*(4), 313–315. https://doi.org/10.1016/S2215-0366(16)00081-X

Sim, L. A., McAlpine, D. E., Grothe, K. B., Himes, S. M., Cockerill, R. G., & Clark, M. M. (2010). Identification and treatment of eating disorders in the primary care setting. In *Mayo Clinic proceedings* (Vol. *85*, No. 8, pp. 746–751). Elsevier. https://doi.org/10.4065/mcp.2010.0070

Smith, P. K., Mahdavi, J., Carvalho, M., Fisher, S., Russell, S., & Tippett, N. (2008). Cyberbullying: Its nature and impact in secondary school pupils. *Journal of Child Psychology and Psychiatry*, *49*(4), 376–385. https://doi.org/10.1111/j.1469-7610.2007.01846.x

Solmi, F., Downs, J. L., & Nicholls, D. E. (2021). COVID-19 and eating disorders in young people. *The Lancet Child & Adolescent Health*, *5*(5), 316–318. https://doi.org/10.1016/S2352-4642(21)00094-8

Solmi, F., Hatch, S. L., Hotopf, M., Treasure, J., & Micali, N. (2015). Validation of the SCOFF questionnaire for eating disorders in a multi-ethnic general population sample. *International Journal of Eating Disorders*, *48*(3), 312–316. https://doi.org/10.1002/eat.22373

Striegel-Moore, R. H., & Bulik, C. M. (2007). Risk factors for eating disorders. *American Psychologist*, *62*(3), 181–198. https://doi.org/10.1037/0003-066X.62.3.181

Swinbourne, J., Hunt, C., Abbott, M., Russell, J., St Clare, T., & Touyz, S. (2012). The comorbidity between eating disorders and anxiety disorders: Prevalence in an eating disorder sample and anxiety disorder sample. *The Australian and New Zealand Journal of Psychiatry*, *46*(2), 118–131. https://doi.org/10.1177/0004867411432071

Teixeira, A. A., Roque, M. A., de Freitas, A. A., Dos Santos, N. F., Garcia, F. M., Khoury, J. M., Albuquerque, M. R., das Neves, M. C., & Garcia, F. D. (2021). The Brazilian version of the SCOFF questionnaire to screen eating disorders in young adults: Cultural adaptation and validation study in a university population. *Brazilian Journal of Psychiatry*, *43*, 613–616. https://doi.org/10.1590/1516-4446-2020-1667

The NHS Information Centre. (2021). *MHMDS Statistics*: *Data Quality and Methodology*: The NHS Information Centre, 2017. https://digital.nhs.uk/data-and-information/data-collections-and-data-sets/data-sets/mental-health-services-data-set

Van den Eijnden, R. J., Lemmens, J. S., & Valkenburg, P. M. (2016). The social media disorder scale. *Computers in Human Behavior*, *61*, 478–487. https://doi.org/10.1016/j.chb.2016.03.038

How to cite this article: Nolan, E., Bunting, L., McCartan, C., Davidson, G., Grant, A., Schubotz, D., Mulholland, C., McBride, O., Murphy, J., & Shevlin, M. (2023). Prevalence of probable eating disorders and associated risk factors: An analysis of the Northern Ireland Youth Wellbeing Survey using the SCOFF. *British Journal of Clinical Psychology*, *62*, 180–195. https://doi.org/10.1111/bjc.12401