

Original Research

Occupational stress in clinical and non-clinical staff in Child and Adolescent Mental Health Services (CAMHS): a cross-sectional study

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Abstract

Background: Previous literature has highlighted high rates of burnout among doctors and nurses in healthcare settings. Non-clinical and support staff such as administrative, housekeeping and managerial staff are also exposed to the stressors of a health care setting, but fewer studies report on their experiences. Therefore, the aim of this research is to examine occupational stress in all staff working in Child and Adolescent Mental Health Services (CAMHS) in Ireland and identify risk and protective factors.

Method: Fifty-nine clinical and non-clinical staff (44% response rate) were surveyed. Participants completed the Copenhagen Burnout Inventory (CBI) and the Effort Reward Imbalance scale, as well as survey-specific questions.

Results: Both clinical and non-clinical staff were found to experience moderate or high rates of work-related, personal and patient-related burnout (57.6%, 52.2% and 50.8%, respectively). Univariate general linear modelling showed an association between total CBI scores and effort reward index ($B = 64.306$, $t = 3.430$, $p = 0.001$); overcommitment ($B = 1.963$, $t = 3.061$, $p = 0.003$); and an unwillingness to work in CAMHS ($B = 28.429$, $t = 3.247$, $p = 0.002$).

Conclusion: Pre-pandemic levels of stress were high among clinical and non-clinical staff surveyed. Given the anticipated increased demand on CAMHS post COVID-19, urgent action is needed to protect all staff from intolerable levels of occupational stress and burnout.

Keywords: burnout; CAMHS; interventions; mental health; occupational stress

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Occupational stress described by the World Health Organisation as an 'occupational phenomenon' is the fastest growing reason for disability leave, with significant personal and economical costs to society. The rate of increase in workers in Ireland is the fastest in Europe (Russell *et al.* 2018). While occupational stress describes an increasingly common experience, the term burnout, first coined in the 1980s by Maslach *et al.* (1986), is more specifically related to healthcare. Burnout consists of emotional exhaustion, depersonalisation and low personal accomplishment (Rotenstein *et al.* 2018). Significantly elevated levels of burnout contribute to employees experiencing exhaustion, ineffectiveness and cynicism (Maslach & Leiter, 2016) and require individual and work/organisational related interventions (Maslach & Leiter, 2016).

Higher rates of occupational stress have been reported among doctors working in Irish hospital setting compared to European colleagues (Hayes *et al.* 2017a). Some studies have identified psychiatrists as experiencing higher levels than other specialities (Sahraian *et al.* 2008; Howard *et al.* 2019; Margiotta *et al.* 2019). A previous study among consultant child psychiatrists in

Ireland showed the majority (59.6%) to have moderate to high levels of burnout with 85% having considered changing jobs with serious implications for service delivery and development, particularly in a clinical field known to be under resourced (McNicholas *et al.* 2020). Such under resourcing is also likely to have an impact on other employees within the organisation. However, few studies have examined stress levels in non-clinical and support staff.

Aim

This study aimed to examine rates of burnout and Effort Reward Imbalance (ERI) among all staff working in Child and Adolescent Mental Health Services (CAMHS).

Method

Following ethical approval, a study specific questionnaire was designed and sent by email to all clinical and non-clinical staff (administrative and support services) employed by Saint John of God Organisations' five CAMHS clinics ($n = 134$). A poster reminder was displayed in clinic communal areas and an independent clinician was available to offer support in questionnaire completion to ensure optimum response.

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Study Questionnaire

The study questionnaire included basic demographic questions, such as years in practice and type of work. In accordance with ethical committee guidance on anonymity, specific professional type, age, gender or marital status data were not collected. Study specific questions included willingness to remain working in CAMHS, time spent outside area of expertise and whether there were occasions when the respondent should have taken time off for illness but did not (presenteeism). Public perception and expectation of CAMHS, respondents prior professional or 'on the job' training in managing burnout and organisational efforts to mitigate against occupational stress were also asked.

Two additional standardised and well validated questionnaires were incorporated into the study.

Copenhagen Burnout Inventory

This scale measures three domains of burnout; personal (six items), work-related (seven items) and client or patient-related burnout (six items) (Kristensen *et al.* 2005). Questions are easy to understand and answer making it suitable for a broad range of professional and educational groups. All questions are measured on a five-point Likert scale. Copenhagen Burnout Inventory (CBI) cut-off points, based on number of groups and distributions of data, allow the CBI to be presented along a continuum, with higher scores indicating higher burnout (Borritz & Kristensen, 1999; Winwood & Winefield, 2004; Stein & Sibanda, 2016; Creedy *et al.* 2017). Similarly construct validity and agreement with other scales have shown satisfactory results (Winwood & Winefield, 2004; Thrush *et al.* 2021). Cronbach alpha coefficients for the current study were 0.86 (work-related burnout $\alpha = 0.74$, personal burnout $\alpha = 0.88$ and patient related burnout $\alpha = 0.88$), suggesting high internal consistency and reliability.

Effort Reward Imbalance

This questionnaire with 19 questions uses a four-point Likert Style response measuring effort (5 items), reward (11 items) and overcommitment (3 items) (Siegrist *et al.* 2014). Higher scores indicate more effort, reward and over commitment. As per guidelines, items; ERI9, ERI10, ERI11 and ERI12 were reverse scored before data analysis. The ERI has good psychometric properties, with alpha coefficients of 0.85 for effort and 0.84 for reward (Tsutsumi *et al.* 2001). It has previously been used and validated in European countries, with high effort and poor reward correlating well with poor health (Siegrist & Marmot, 2004; Van Vegchel *et al.* 2005). Cronbach alpha coefficients for the ERI for the present study were: effort $a = 0.70$, reward $a = 0.47$, overcommitment $a = 0.82$.

The scale allows for the calculation of an effort reward index (ERIdx) which can be transformed to the log-10 and be used as a continuous variable (Siegrist *et al.* 2014).

Statistics

IBM SPSS v25 software was used. Categorical variables are reported as counts and percentages while continuous variables as means and standard deviations. The variables were tested for normality assumptions and parametric and non-parametric tests used accordingly. The division into categories of CBI total scale and subscales were based on the distribution of scores. Respondents falling below average (50% of sample scores) have been characterised as experiencing low/no burnout, the 25% above

average as moderate levels of burnout and top 25% as falling into the high burnout category (Winwood & Winefield, 2004). The relationship between the subscales and total CBI scales with presenteeism and ERIdx (all of them continuous variables) were examined using correlations. *T-tests* were used to examine levels of burnout and effort/reward between the clinical and non-clinical groups. Differences between groups of > 2 using ANOVA, and a Univariate Analysis of Variance used to examine the effects of individual variables on the total burnout score.

Results

Sample profile

Responses were received from 59 staff (44% response rate); 27 (45.8%) identified as clinicians and 13 (22%) as support staff, a further 19 (32.2%) did not indicate professional role status. The majority (more than half) of respondents were working in Mental Health services for greater than 10 years (30, 51%).

Study specific questions

62% (36) felt valued in their job, and nearly half of respondents had seriously considered changing jobs (26, 44%) (Table 1). Participants felt both workload (45, 77%) and job satisfaction (28, 47%) interfered with their ability to train or develop new service initiatives, and 20% (12) perceived they were working outside of their area of responsibility 'a lot'.

Copenhagen Burnout Inventory

The majority (31, 52.5%) reported levels of Burnout as moderate or high (Table 2). More than half (31, 52.5%) reported levels of personal burnout as moderate or high, 34 (57.6%) respondents for work-related burnout, and 30 (50.8%) for patient or client-related burnout. Independent samples *t-test* revealed no significant differences between burnout rates for clinical and non-clinical staff, $t(38) = -0.750$, $p = 0.311$. Descriptive statistics on the ERI showed a mean effort score for the participant population 17(3.45), indicating a high level of effort overall. Mean reward scores was 35(5.50) indicating staff find their profession rewarding despite the high effort reported. Also, overcommitment for staff was reported as high, mean score 8(3.13). Bivariate Pearson's correlations were examined between burnout, presenteeism, Effort/Reward and overcommitment. Analysis revealed more effort for reward was statistically significantly associated with higher total burnout ($r = 0.439$, $n = 59$, $p \leq 0.001$), the subscales personal burnout ($r = 0.464$, $n = 59$, $p \leq 0.001$) and work-related burnout ($r = 0.514$, $n = 59$, $p \leq 0.001$). Effort/Reward and over commitment was not related to years of service or seniority.

To investigate the effects of study variables on total CBI, a Univariate General Linear Model was conducted with total CBI scores as dependent variable. After controlling for other confounders higher scores in total CBI are significantly associated with (i) higher E-R ratio (more effort for each reward); (ii) higher scores of overcommitment and (iii) un-willingness to work in CAMHS (Table 3) (Graph 1).

Respondents were asked if they had any stress reduction training in their professional training or following recruitment to their post. 84.7% ($n = 50$) did not receive any stress reduction training in their job and 61% ($n = 36$) did not receive any training in their professional training. 66% of participants ($n = 39$) reported they did not believe their organisation has tried to reduce work related

Table 1. Professional characteristics and study-specific questions

Total sample	Response rate	<i>n</i> = 59, 44%
Workplace setting: <i>n</i> = 40	Clinical Work in CAMHS;	<i>n</i> = 27, 45.8%
	Non-Clinical work in CAMHS;	<i>n</i> = 13, 22%
	Missing;	<i>n</i> = 19, 32.2%
Years working in Mental Health Services: <i>n</i> = 57	<5 years:	<i>n</i> = 11, 19%
	5–10 years:	<i>n</i> = 16, 27%
	>10 years:	<i>n</i> = 30, 51%
Do you feel valued in your job? <i>n</i> = 58	Yes definitely:	<i>n</i> = 18, 31%
	Probably:	<i>n</i> = 18, 31%
	I'm not sure:	<i>n</i> = 7, 12%
	Probably not:	<i>n</i> = 14, 24%
	Definitely not:	<i>n</i> = 1, 2%
Have you seriously thought of changing jobs in the last 6–12 months? <i>n</i> = 59	Yes definitely:	<i>n</i> = 15, 25%
	Probably:	<i>n</i> = 11, 19%
	I'm not sure:	<i>n</i> = 3, 5%
	Probably not:	<i>n</i> = 14, 24%
	Definitely not:	<i>n</i> = 16, 27%
Do you believe that the government are serious about investing in child mental health services? <i>n</i> = 59	Yes definitely:	<i>n</i> = 1, 2%
	Probably:	<i>n</i> = 5, 8%
	I'm not sure:	<i>n</i> = 8, 13%
	Probably not:	<i>n</i> = 24, 41%
	Definitely not:	<i>n</i> = 21, 36%
Do you feel that the HSE is effectively planning improvements in child mental health services? <i>n</i> = 59	Yes definitely:	<i>n</i> = 2, 3%
	Probably:	<i>n</i> = 7, 12%
	I'm not sure:	<i>n</i> = 7, 12%
	Probably not:	<i>n</i> = 18, 31%
	Definitely not:	<i>n</i> = 25, 42%
Do you feel that the public have unrealistic expectations of what child mental health services can provide? <i>n</i> = 59	Yes definitely:	<i>n</i> = 38, 64%
	Probably:	<i>n</i> = 11, 19%
	I'm not sure:	<i>n</i> = 6, 10%
	Probably not:	<i>n</i> = 1, 2%
	Definitely not:	<i>n</i> = 3, 5%

Table 2. Total scores, cut-offs and reliability of Copenhagen Burnout Inventory (CBI)

CBI	M (SD)	Prevalence cut-off N (%)	Cronbach alpha
Work-related burnout <i>n</i> = 59	51 (16.70)	No/Low (<50) = 25 (42.4%) Moderate (50–74) = 19 (32.2%) High (>75) = 15 (25.4%)	0.738
Personal burnout <i>n</i> = 59	48 (20.11)	No/Low (<50) = 28 (47.5%) Moderate (50–74) = 14 (23.7%) High (>75) = 17 (28.8%)	0.888
Patient-related burnout <i>n</i> = 56 (missing = 3)	34 (21.16)	No/Low (<50) = 26 (44.1%) Moderate (50–74) = 12 (20.3%) High (>75) = 18 (30.5%)	0.882
Total burnout <i>n</i> = 59	44 (18.62)	No/Low (<50) = 28 (47.5%) Moderate (50–74) = 17 (28.8%) High (>75) = 14 (23.7%)	0.864

Table 3. General linear model for total CBI and willingness to work in CAMHS again, ERI and over-commitment

	B	Std. error	t	Sig.
Would you choose to work in CAMHS again: Definitely not	28.429	8.757	3.247	0.002
Would you choose to work in CAMHS again: Probably not	22.468	8.589	2.616	0.012
Would you choose to work in CAMHS again: I am not sure	14.726	5.429	2.712	0.009
Would you choose to work in CAMHS again: Probably would	1.250	4.700	0.266	0.791
Would you choose to work in CAMHS again: Definitely would	0*			
Log10ERIndex	64.306	18.748	3.430	0.001
Over-commitment	1.963	0.641	3.061	0.003

*This parameter is set to zero because it is the reference parameter.

stress. 29% ($n = 17$) reported not having anyone in their organisation they could talk to about work-related stress or burnout.

Discussion

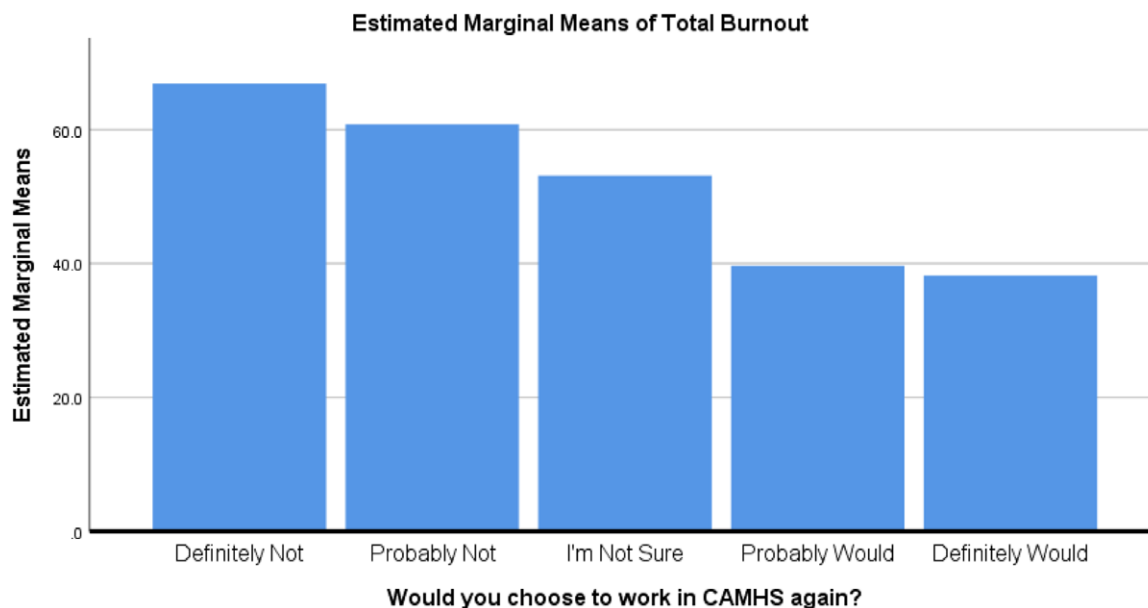
This study was conducted prior to COVID-19 pandemic. However, almost immediately with the announcement of the lockdown it was hypothesised there would be increasing mental health difficulties associated with an increase in demand and referrals to specialist services like CAMHS. As early as June 2020, rapid reviews highlighted that children and adolescents were also likely to experience high levels of anxiety and depression as a consequence to lockdowns, suspension of in-person schooling and significant reductions in opportunities for social interaction (Loades *et al.* 2020). Furthermore, changes to service provision were highlighted as having the potential to interfere with patients already linked in with services, especially those with neurodevelopmental conditions such as autism and ADHD and those with eating disorders (Guessoum *et al.* 2020). Following an initial decline, referrals to the five CAMHS teams in this survey increased consistently (McNicholas *et al.* 2021). Both routine and urgent referrals increased by 50% compared to similar time periods in previous years, as did clinic activity, with twice as many out-patient appointments offered and waiting times lengthened (McNicholas *et al.* 2021). This additional demand is likely to further denude an already struggling service and contribute to additional staff burnout.

Although this study did not examine occupational stress during COVID-19, the College of Psychiatrists in Ireland survey ($n = 195$) reported decreased psychiatrists well-being, a 61% increase in workload and a decrease in ability to avail of annual leave (College of Psychiatrists Ireland, 2020). Other studies have also shown raised levels of stress among healthcare workers (Vindegard & Benros, 2020). Moreover, the reality of chronic underfunding, inadequate resources and perceived lack of commitment from government to increase public funding or meaningfully address service deficits remain with the majority of staff surveyed expressing little confidence in the health service executive (HSE) to effectively address key concerns. The reality of underfunding coupled with a sense of hopelessness to change, is likely to have contributed to the high rates of occupation stress reported in this study. The sense of being not valued in their job, experienced by

24%, in both clinical and non-clinical groups, is also likely to increase job dissatisfaction and be a risk for burnout.

A *culture of health* is essential in any healthcare organisation in order to maintain high quality service provision while ensuring staff wellbeing and protecting against burnout. Meaningful engagement by senior management requires fully integrating staff wellbeing as core within the organisational culture of how all staff think and act. Almost a third of respondents (29%) reported they had no-one in their organisation to talk to, and 66% perceived that their organisation had not tried to reduce work related stress underscore the urgency with which the issue of CAMHS staff wellbeing needs to be addressed by the Department of Health/HSE and local management structures. It is imperative that efforts are made to reduce burnout rates and reverse ERI. When a work force perceives their organisation not to be trying to address this, it leads to further despondency and a sense of lack of value and validation, work dissatisfaction and increasing stress. Despite the panoply of methods described in the literature to support wellbeing in healthcare staff, (Balint, 2000; Byron *et al.* 2015; George, 2016; Taylor *et al.* 2018) evidence to date is limited as to the long-term impact of most existing interventions. A potential approach for the Department of Health/HSE could be to engage with staff in an attempt to determine suitable supports and interventions that would be both practical and beneficial to staff in reducing occupational stress and the risk of burnout. Increased resources may also aid staff in reducing a sense of helplessness and of being unable to offer the level of assistance they would like.

This study found evidence of high levels of stress and burnout among staff in CAMHS. Of the 59 respondents, over half (52.5%) reported moderate or high levels of burnout as measured by the CBI and 24% of participants do not feel valued in their jobs. Stress experienced in the work domain was highest, with 57.6% reporting moderate-high levels, followed by stress experienced at a personal level (52.5%). Client-related burnout whilst experienced in more than half the sample (50.8%) was lower. Levels of stress among all CAMHS staff were somewhat lower than those reported in a similar study among consultants in CAMHS in Ireland (McNicholas *et al.* 2020). Both work and personal burnout levels were reported to be in the moderate-high range for 75% and 63% of consultants, respectively. Stress associated with working with patients was somewhat protected, with fewer than a third (27%) of consultants reporting moderate to high levels. This is reassuring suggesting that compassion fatigue had not developed but highlights that rates of stress linked to ongoing patient engagement is indeed contributory to occupational stress when all staff are considered. The unique inherent risks in engagement with patients who have mental illness or individuals caring for an ill family member are well described (Turgoose & Maddox, 2017), and demand for CAMHS recognised to have increased post COVID-19 (Patrick *et al.* 2020; Singh *et al.* 2020). These include the emotional toll on the clinician, illnesses contributing to raised expressed emotions or emotional dysregulation leading to challenging therapeutic or administrative engagement. The myriad potential negative psychological impacts of therapeutic work have been extensively documented with the term secondary traumatic stress introduced to describe the psychological distress that can occur from hearing another's account of trauma (Turgoose & Maddox, 2017). However, the impact of similar processes on administrative staff has seldom been explored, for example, listening to harrowing dictations relating to people's experience of trauma as they type or being at the frontline in taking calls from distressed parents.



Graph 1. Means of total burnout according to groups with intention to leave the CAMHS. Covariates appearing in the model are evaluated at the following values: Over-commitment = 9.5763, Log10ERIIndex = 0.0310.

As such non-clinical groups have typically been excluded from research related to occupational stress, with their inclusion a strength of this study. Contrary to the perception of clinical staff being at higher risk of burnout, in this study, there was no difference in burnout with burnout moderate-high in both groups. (Kristensen *et al.* 2005), studied 1914 participants, reporting mean personal burnout of 35.9, work-related burnout of 33.0 and client-related burnout of 30.9. In a sub-analysis, non-clinical staff, particularly hospital secretaries, scored highly on the personal ($M = 39.4$) and work-related burnout ($M = 37.8$), ranking third and fourth among 15 job titles specified in the sample (Kristensen *et al.* 2005). In a comparable Taiwanese Hospital sample, physicians and administrative staff had comparable high levels of burnout, 41.6% of Physicians compared to 45.5% of administrative staff (Chou *et al.* 2014).

Participants in this study reported experiencing more effort to reward with high levels of over-commitment. The theoretical underpinnings of the ERI model indicate high effort-low reward increases the possibility of negative emotions and sustained stress responses, while overcommitment increases risk of poorer mental and physical health (Siegrist, 2012). Higher levels of burnout in those reporting higher ERI and over-commitment have been previously reported in Irish doctors (Hayes *et al.* 2017b). Elevated ERI scores have been associated with adverse medical outcomes including heart disease (Bosma *et al.* 1998; Kuper *et al.* 2002) and mental illness (Stansfeld *et al.* 1999; Godin *et al.* 2005) including alcohol dependence (Head *et al.* 2004) and Higher ERI imbalance is associated with poorer health and life-satisfaction (Buddeberg-Fischer *et al.* 2008), while higher scores on over-commitment have been significantly correlated with depressive states (Kikuchi *et al.* 2010). No significant difference between clinical and non-clinical staff in any of the ERI elements, indicating the same risks across area of work within the organisation. While clinical and non-clinical staff have different roles within CAMHS, they all contribute to the provision of the service and engage with families and youth and the results of this study underscore the need for service-wide initiatives to ensure the role of all staff is valued and protected.

However, to date interventions designed to address occupational stress even within a designated professional group have not demonstrated adequate efficacy and it appears reasonable to assume that applying a generic model to all staff would further dilute its impact. This suggests that further research is required to establish the best overarching framework to employ to facilitate a 'culture of health' within mental health services with a greater focus required on how supports, training and interventions can be flexibly adapted to different staff members reflective of varying needs and training depending on the role of each individual within the organisation.

Strengths and Limitations

This is the first study examining levels of stress among CAMHS multidisciplinary team in Ireland, set against a landscape of an imbalance between workload and available resources. The methodology does not allow for cause and effect to be inferred and may be limited by self-selection or recall bias. An inability to examine other putative risks, such as age, gender, marital and parental status and discipline type was limited due to ethical consideration with respect to anonymity. Despite a low response rate (47%), it is on a par with other studies in this area (Chambers *et al.* 2016; Creedy *et al.* 2017). However, it is possible that staff who are already overburdened might not have time or desire to complete the study, and if true, rates of burnout might be even higher than currently reported. However, it may also be possible that people not experiencing burnout may have no desire to participate in this research. The inclusion of well validated questionnaires allows comparisons with other studies across disciplines and countries. Furthermore, the data collection period for this study was pre-COVID-19 pandemic and it is highly probable that the pandemic has had a considerable impact on burnout, ERI and overall occupational stress.

A considerable strength of this study is the inclusion of non-clinical staff, a gap in current burnout research.

Conclusions

This study examined levels of occupational stress and burnout in all staff working across five CAMHS clinics in Ireland. The study found evidence of high rates of staff burnout, with over half (52.5%) reporting moderate or high levels. Work-related burnout was highest, 57.6% reporting moderate or high levels. There is an urgent need to carefully manage the increased demand on CAMHS consequent to COVID-19, and to shield both clinical and non-clinical staff from intolerable levels of occupational stress and burnout. While occupational stress is experienced on an individual level, the evidence strongly suggests that top-down system changes are needed to transform the landscape of mental health services.

This research has indicated that despite the professional role played within the organisation, clinical or non-clinical, there was no difference in burnout levels by staff type. This indicates the importance of all staff, in as far as it is possible, being protected from occupational stress and burnout and offered stress reduction training and interventions. Further research is needed to evaluate about interventions and develop bespoke training.

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Author contributions. All contributors have met all criteria recommended by the ICMJE. FMcN conceived and designed the study and wrote the first draft of manuscript. EM, ND and DA assisted with data analysis and contributed to subsequent drafts and revisions of the paper. BG contributed to subsequent drafts and revisions of the paper.

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Conflict of interest. There is no conflict of interest to declare.

Ethical standards. This study received ethical approval by Saint John of God research ethics committee. Informed consent was obtained from all individual participants included in the study.

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