Scoping review with textual narrative synthesis of the literature reporting stress and burn-out in specialist nurses: making the case for inflammatory bowel disease nurse specialists

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ABSTRACT

Objective Inflammatory bowel disease clinical nurse specialists (IBD-CNSs) face increasing pressures due to rising clinical and patient demands, advanced complexity of work role, and minimal specialist management training and support. Stress and burn-out could undermine the stability of this workforce, disrupting clinical provision. We reviewed the literature on stress and burn-out to demonstrate the lack of evidence pertinent to IBD-CNSs and make the case for further research.

Design Following Levac *et al*'s scoping review framework, relevant databases were searched for publications reporting work-related stress and burn-out among specialist nurses. Following screening and consensus on selection of the final articles for review, all authors contributed to data charting. The Preferred Reporting Items for Systematic Reviews and Meta-Analyses Scoping Review extension guided reporting of the review.

Results Of 194 retrieved articles, eight were eligible for review. None focused on IBD-CNSs, were qualitative, or UK-based. Three core themes were identified: Rates of Burn-out, Mitigating and Alleviating Factors, and Preventing and Resolving Burn-out. Risk of burn-out is greatest in novice and mid-career CNSs. Age and duration in role appear protective. Personal achievement is also protective and can mitigate earlier episodes of burn-out; opportunities for career progression are limited. Promoting personal well-being is beneficial. Senior managers have poor understanding of the role and provide inadequate support. Commitment to patients remains high.

Conclusion Burn-out arises in CNSs across clinical specialisms in the international literature and has a significant negative effect on the workforce. Further research is needed to address the dearth of evidence on burn-out in IBD-CNSs in the UK.

Summary box

► There is a worrying level of burn-out amongst clinical nurse specialists (CNSs).
► Subjective data from one professional support group in the UK indicate the presence of burn-out in inflammatory bowel disease (IBD) CNSs.
► The components of burn-out (emotional exhaustion, depersonalisation and lack of personal achievement) affect different cohorts (age, workplace environment, time in role) differently.
► Current evidence comes from international studies where the structure and management of healthcare services and the remit of the CNS differ to those of the UK's National Health Service.
► There is no global or UK data specifically addressing burn-out in IBD CNS.
► There is no qualitative evidence to explain relationships between different components of burn-out and personal characteristics such as age, and time in role.
► Further research is needed to understand the experiences of burn-out within the IBD CNS workforce, and to determine the most effective strategies for addressing burn-out in this cohort.
► Failure to address burn-out in IBD CNSs risks disruption to the clinical workforce, and thus the quality of service provided to patients due to attrition.
► Junior IBD-CNSs need mentoring and support but risk losing this if senior colleagues leave the service.

INTRODUCTION

People living with inflammatory bowel disease (IBD) in the UK are supported by the knowledge, experience, and availability of IBD clinical nurse specialists (IBD-CNSs) who provide a range of advisory, therapeutic, advanced clinical services and emotional support to patients in many (often complex) situations. These IBD-CNSs have advanced or specialist expertise in caring for people with IBD and, as a core part of a multidisciplinary team (MDT), lead and manage a caseload of patients, providing diagnoses, care planning,

treatment and follow-up and continuity of care. In the UK, IBD-CNSs may also deliver a broad range of additional clinical activities, including infusion clinics, endoscopy clinics, and email and telephone advice services. Yet as IBD interventions advance, and the patient population increases in size, the workload for IBD-CNSs increases. This workload can feel relentless and demanding, and the personal impact of responding to and working with patients with whom nurses have a long-term professional relationship, can be intense. Patients routinely report the IBD-CNS as their preferred point of contact when they need urgent clinical support or ongoing advice,[1 2] bringing an expectation from patients of rapid response to queries, and resolution of problems. Many IBD-CNSs enter this specialist post soon after qualifying rather than after several years of gathering experience in clinical practice, and the increasing demands the specialist role places on them can quickly lead to work-related distress, burn-out and attrition.[3] This complex and demanding caseload is unsustainable, both for service provision and for nurses themselves.[4] As with other clinical specialisms,[5] the Royal College of Nursing (RCN) IBD Nurse Network provides an important national network through which IBD-CNSs can seek clinical advice and pastoral support from each other; posts onto the Network's Facebook page evidence the stress that many specialist nurses are and have been under since before the COVID-19 pandemic. Stress, and burn-out (characterised by high levels of emotional exhaustion (EE) and depersonalisation (DP) and low levels of personal accomplishment)[6] are similarly reported in other advanced roles, including renal and oncology nurse specialists.[7–9] The objectives of this scoping review were to identify the current evidence reporting experiences of stress and burn-out in specialist nurses, and to demonstrate the case for undertaking further qualitative investigation of this topic in IBD-CNSs.

MATERIALS AND METHODS
Scoping reviews are appropriate when the aim is to identify and analyse knowledge gaps.[10] The approach facilitates a broad sweep of available evidence and is useful for informing focus and methodology of follow-up studies. As with a classic systematic review, the methodology is rigorous with transparent processes that enable the reader to assess the quality of what has been done.

We, therefore, conducted a scoping review of the relevant literature guided by the six-step framework recommended by Levac et al,[11] (table 1), which extends the original work of Arksey and O'Malley.[12]

The Preferred Reporting Items for Systematic Reviews and Meta-Analyses extension for Scoping Reviews (PRISMA-ScR) extension for scoping reviews guided the reporting of the work.[13] The scoping

Table 1	The six stage scoping review methodology of Levac et al[11]
Framework stage	**Purpose**
Stage 1	Identifying the research question
Stage 2	Identifying relevant studies
Stage 3	Study selection
Stage 4	Charting the data
Stage 5	Collating, summarising and reporting the results
Stage 6	Consultation with stakeholders

review approach enables the merging and presentation of data from studies of different design and from a range of sources via a narrative synthesis, to represent the meaning of the body of work reported in the selected papers.[14]

Stage 1: identifying the research (review) question
Levac et al recommend considering the target population (CNSs), the outcomes of interest (stress and burn-out) and the concept (experiences of burn-out) when developing the review question.[11] We used the SPIDER (**S**ample size; **P**henomenon of **I**nterest; Study **D**esign; **E**valuation; Research type) tool to develop a broad search question incorporating these aspects.[15] A preliminary sweep of the literature had indicated there may be very little evidence specific to IBD-CNSs, so our scoping review question was: What evidence exists on the personal experiences of work-related stress and burn-out among CNSs?

Stage 2: identifying relevant studies

Search strategy
The process of identifying studies is iterative, requiring repeated visits to the literature to gradually refine the search strategy.[11] Early searches produced very few 'hits', which seemed unlikely, so the strategy was gradually refined until the most effective approach across all databases was confirmed. This flexibility is acceptable in a scoping review where the aim is to get a sense if what data exists on a topic, rather than produce a definitive answer to a specific question.[10] To allow for the wide variation in job titles associated with these specialist roles, the final search terms were: ("Specialist nurse" OR "nurse specialist" OR "advanced nurse practitioner" OR "Advanced practice nurse" OR " Consultant nurse" OR "clinical nurse specialist") AND (("work-related" OR "work related" OR job OR role) AND (wellbeing OR well-being OR "well being" OR stress OR burnout OR burn-out OR "burn out")). The definitive searches were conducted in July 2020 in CINAHL Plus with full text, Google Scholar, Internurse, Medline, Pubmed, Science Direct, Scopus, and Web of Science. Reference lists of identified papers were also hand-searched. Throughout this paper, the term CNS is used to refer to nurses in

any advanced, consultant or specialist clinical role. As recommended in the PRISMA-SCR checklist, the search strategy for one database is provided in online supplemental additional file .

Search inclusion and exclusion criteria

We used the following broad inclusion and exclusion criteria to capture as many articles as possible:

Inclusion criteria

Original, full text, peer reviewed research.
Published in English, since first January 2000.
Qualitative, quantitative or mixed-methods design.
Key search terms in title and/or abstract.
Focuses on experiences/measurements of stress, burn-out and/or well-being.

Exclusion criteria for the search

All other forms of publication (abstracts only, conference proceedings, editorials, literature reviews, opinion pieces).
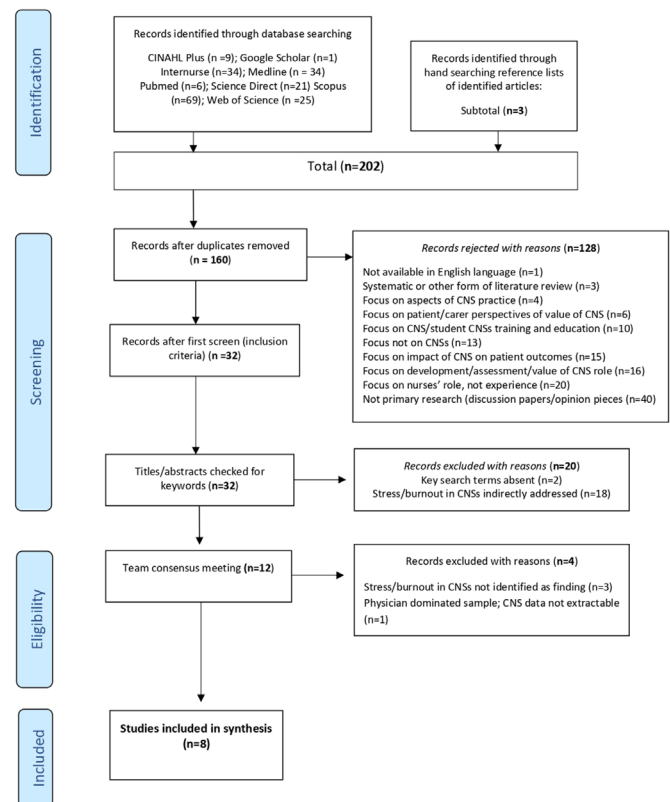
Stage 3: study selection

Duplicates were removed, and all studies were screened by the first and the senior author against the inclusion criteria. Studies were further excluded if: (1) the search term 'Clinical nurse specialist' or any of the equivalent role descriptors (detailed in stage 2: Identifying Relevant Studies, above) not appear in the title, and (2) if the term 'burn-out', 'burn-out' or 'burn out' was absent from title or abstract, or (3) was only included as a recommendation/conclusion of the study. The remaining articles were then reviewed by the team, before meeting to agree by consensus the final articles for the review. The process of study selection is demonstrated in the PRISMA diagram[16] in figure 1.

Stage 4: charting the data

Study design and participant demographic data were extracted by the senior author (LD) onto a prepared data chart, before circulating this to the team who extracted data relevant to the variables of interest and the scoping review question (table 2).

Three authors (JD, IM and LY) extracted data from two of the eight selected papers, while KK and LD extracted data from four, and all eight papers, respectively. Each selected article was thus charted at least twice. Extracted data were combined on a single data chart, and early themes were identified by LD. Initial or preliminary codes were allocated, guided by the stated aims of the scoping review. Following team discussion of these codes, main themes and subthemes were developed, and agreed. Data charting identified similarities and some outlying concepts across the eight included papers, leading to a detailed insight into the prevalence, development and impact of stress and burn-out in CNSs. Extracted data and summary of included papers is provided in table 3.

Figure 1 PRISMA Flow diagram detailing study selection.[16] CNSs, clinical nurse specialists; PRISMA, Preferred Reporting Items for Systematic Reviews and Meta-Analyses.

Stage 5: collating, summarising and reporting the results

The three distinct steps in stage 5 of Levac *et al*'s framework,[11] reflect the standard reporting sequence of Results, Discussion, and Conclusions and Recommendations.

RESULTS

Study characteristics

Of the eight included studies, there were five from the USA,[17–21] one from Canada/USA,[22] one from Spain,[8] and one from Australasia.[7] All were quantitative, with seven cross-sectional surveys,[7 17–22] of which four[7 19–21] were online; the remaining study was a meta-analysis of existing data.[8] Of the seven studies that recruited participants, five described purposive sampling, but did not overtly state that as the method[7 18–20 22]; one used purposive and snowball sampling,[21] and two used convenience sampling.[8 17] These sampling methods are acceptable in quantitative studies when a particular population is being investigated. All studies used statistical methods for data analysis and reported findings using data charts or diagrams and explanatory text.

In total, there were 12 828 CNS participants (range 8–9959) of which 11 850 (92.3%) were female; where reported, ages ranged from 20 to 65+ years[17–20 22] or were given as a mean of 38.2 years.[8] Time as a nurse was reported by two studies, ranging from <5 to 20 years+,[14] or as a mean of 8.78 years.[8] Four studies reported time in the specialist role as either a range (<6 months to 20

Table 2 Variables of interest extracted from each included study, with rationale

Variable	Rationale, simplifications or assumptions
Authors, year, country	To demonstrate that selected articles are current and relevant; to illustrate the geographical spread of the literature
Research question/purpose	To demonstrate relationship between the research question of the selected articles, and the aims of the current scoping review
Methodology and methods	To evidence the type of research included in the review, and the core methods used to select participants, collect data and conduct analysis
Age of participants	Age may influence job satisfaction/burn-out
Gender of participants	To understand any gendered differences in experiences of burn-out
Years as nurse	Length of clinical experience may affect well-being/burn-out
Years in specialist role	Nurses who are new in role may have different responses to stress/ burn-out than nurses with more experience
Married/family commitments	Blurring of home and work life boundaries may influence experiences of stress and burn-out
Evidence of stress/burn-out	To enable the scoping review question to be answered
Contributors to stress/burn-out	To identify factors and correlations that make stress/ burn-out worse
Mitigators against stress/burn-out	To identify factors and correlations which reduce stress/burn-out or prevent its occurrence

years+)[7 19 21] or a mean of 6.4 years[10]; two reported marital status.[8 20] To measure or rate burn-out, five studies[7 8 18–20] used the Maslach burn-out Inventory (MBI),[6] one study[22] used a single item from the Mini-Z survey,[23] and one study[21] used the Copenhagen burn-out Inventory.[24] The remaining study[17] used the Professional Quality of Life Scale to assess compassion fatigue (CF) and compassion satisfaction (CS) as predictors of burn-out.[25]

Three themes were established: Rates of burn-out, Mitigating and Alleviating Factors, and Preventing and Resolving burn-out.

Rates of burn-out

A total of 30%–35% of oncology CNSs report high levels of EE and DP and low levels of personal achievement (PA)[8]; similarly, haemodialysis CNSs report scores of ≥28 for EE (low ≤16, average 17–27, high ≥28); ≥10 for DP (low ≤5, average 6–9, high ≥10); and ≥40 for PA (low ≥40, average 39–34, high ≤33).[7] Among haematopoietic cell transplantation CNSs, scores for EE and PA are similarly high, but lower (mean 4.8) for DP, although an average burn-out rate of 45% is reported.[20] A burn-out rate of 20.9% is reported among CNSs using electronic health records (EHRs),[22] and there was a mean composite score of 2.56 (range 0–6) for the MBI in a large group of mixed specialty CNSs, although composite score reporting is not recommended.[26] In a cohort of 433 mixed specialty CNSs, burn-out was reported as occurring currently (26.3%), formerly (33.2%) or never (40.4%).[18] In contrast to all this evidence, one very small study (n=7) reported a mean composite score of 43.05% of participants experiencing high levels of burn-out and deduced that there was no evidence of burn-out in CNSs,[21] but the sample size is too small for results to be reliable. Finally, an exploration of CF and CS, both known precursors to burn-out, reported low levels of CF and high levels of CS

in the sample (n=208), deducing low levels of burn-out across the cohort.[17]

Mitigating and alleviating factors
Demographic influences

Burn-out was less prevalent among older nurses[7 17–20] and those with more experience/years in the role. Older participants had better CS scores (aged 50–60, 60.4%; aged >60, 58.3%); high levels of CS were also found in those with 5–10 years in practice (58.8%), with the highest CS scores reported by those with >20 years in practice (80%).[17] In another study, older nurses and those with more time in the role (16–20 years) had higher job satisfaction scores, decreased stress and lower levels of burn-out, while all age groups below 60 years+ had lower job satisfaction scores, and nurses in mid-life (31–40 years old) had higher DP scores than older nurses (51–60 years old).[7] A third study found that while 41% of participants had never experienced burn-out, the highest rates of burn-out were reported in the 24–34 years (former burn-out 32.6%; current burn-out 30.7%), and 35–44 years (former 41.0%; current 29.8%) age groups. In contrast, those aged >55 years, reported low burn-out rates (former 4.9%; current 11.4%).[18] This pattern continues across two other studies, where older professionals were found to experience higher levels of engagement with work (correlation coefficient (r)=0.11; probability (p)<0.05), while younger professionals experienced higher levels of job stress (r=−0.10; p<0.05),[19] and nurses aged 40 years and older (40–49, 50–59, 60+) had lower DP scores than younger nurses (aged 20–29).[20] Counter to this evidence, one very small study (n=7) reported that CNSs do not experience significant burn-out or endure risk factors predisposing them to burn-out, and states that burn-out appears more likely in more experienced nurses.[21]

Table 3 Summary of included studies

Author(s) year Country Title	Sample: ▲ N= ▲ Age (mean and/or range) ▲ Gender ▲ Years as nurse ▲ Years in specialist role ▲ Married/family	▲ Methodology ▲ Sampling ▲ Data capture ▲ Data analysis	Contributors to stress/BO	Mitigators against stress/BO
1. Cañadas De La Fuente et al 2017[8] Spain *Prevalence of burn-out syndrome in oncology nursing: A meta-analytic study*	Across 17 included studies: 9959 Mean age: 38.2 years Female (92%) 8.78 (mean) 6.4 (mean) 50.8%	▲ Meta-analytical study ▲ N/A ▲ MBI ▲ Statistical	Workload (volume and nature) Impact of relationship with patients and investment of care – long term but also terminal in many cases. Work location ((treatment centres vs palliative care) Investment in relationships and development of long-term relationships with patients Emotional commitment: Dealing with death (patients, and heightened awareness of own mortality); communicating bad news; supporting relatives; complex ethical decision-making PA: reported here as low, caused by a sense of 'failure' when patients die.	Not specifically studied in this paper, but suggestions by authors include: Orientation to role Specific 'resilience' training Managerial support/mentorship Supervision/individual and group as part of clinical workload
2. Glover-Stief et al 2020[17] USA *An exploratory descriptive study of compassion fatigue and compassion satisfaction: Examining potential risk and protective factors in advanced nurse practitioners*	208 20–60+years Female (97.1%) Under 5 years to 20+years Not recorded Not recorded	▲ Quant: exploratory descriptive cross-sectional survey ▲ Convenience sampling ▲ Professional Quality of Life Scale V ▲ Statistical: descriptive, χ^2 with Cramer V	Time in role: participants practicing 5–10 years and >20 years had highest rate of CS, suggesting those new to role, or in mid-career (10–20 years in role) have lower CS scores and may therefore be at greater risk of BO.	Mindfulness practices=lower BO (statistically significant), meditative practices; support from family, co-workers, and administration=lower BO and CF, and higher CS. Presence and amount of support significant. Greater age=better CS; between 5 and 10 years, and over 20 years in practice=better CS; mid-range (10–20 years)=lower CS. Working hours/pattern, education & qualifications did not seem to impact. Professional relationships important; mentor relationships for new specialist nurses recommended
3. Harris et al 2018[22] Canada/USA *Estimating the association between burn-out and electronic health record-related stress among advanced practice registered nurses*	371 24–60+years Female (88.4%) Not recorded Not recorded Not recorded	▲ Quant: cross-sectional survey ▲ Purposive sampling (described, not stated) ▲ Single Item from MBI; stress items from the Mini Z ▲ Logistic regression analysis	Using EHRs decreases job satisfaction; EHR use is significantly associated with increasing frustration, having insufficient time for documentation, and spending time on EHRs at home, thus increasing BO. Remote EHR access significantly associated with BO. After adjusting for variables, insufficient time for documentation and increased frustration remain significantly associated with BO. High need to access EHRs remotely as unable to complete work in regular hours; use of EHGRs in outpatients setting=higher OR for BO, but not significant.	Medical scribes (UK equivalent=admin/med secretary) might mitigate BO associated with documentation. Authors comment that recognition of BO and widespread support available for physicians, but not for APNs

Table 3 Continued

Author(s) year Country Title	Methodology Sampling Data capture Data analysis	Sample: N= Age (mean and/or range) Gender Years as nurse Years in specialist role Married/family	Contributors to stress/BO	Mitigators against stress/BO
4. Hayes et al 2015[7] Australia /NZ *Work environment, job satisfaction, stress and burn-out among haemodialysis nurses*	▲ Quant: cross-sectional online survey ▲ Purposive (described, not stated) ▲ BPEM, IWS, NSS, MBI ▲ Independent t-test, ANOVAs; Pearson's correlation co-efficients.	▲ 379 ▲ 21–60+years ▲ Female ▲ Not recorded ▲ <1 year to 20+years ▲ Not recorded	Higher BO levels among in-centre (ie, Hospital-based) haemodialysis nurses, when compared with nurses in satellite centres and in patient's homes; work environment and job satisfaction scores deteriorate as patient numbers rise, but no obvious link to BO. BO positively correlated to lack of support, workload, conflict with physicians (BO rises as each of these factors increases), and negatively correlated with 'getting things done, task requirements and feeling valued (BO rises as each of these factors decrease) Job satisfaction high, except in relation to pay. Job Stress is mostly generated by workload	Work environment (tertiary, satellite, rural or home) affects job satisfaction and stress and BO levels. Satisfaction scores increased with longer duration in the role, and when working as a home dialysis nurse (not satellite or hospital based). Greater satisfaction with work environment correlates with greater job satisfaction, lower job stress, and lower EE. Supportive work environment is important. Flexible management (fair, equitable managerial support, clinical support, fair rostering). Professional status, interactions with others, and autonomy increase job satisfaction. Nurses with more time in the role (16–20) years had higher job satisfaction than nurses with 3–5 years in the role. Support, workload management and reduced peer to peer conflict recommended to reduce BO and increase retention
5. Kapu et al 2019[18] USA *Assessing and addressing practitioner burn-out: Results from an advanced practice registered nurse health and well-being study*	▲ Quant: cross-sectional survey ▲ Purposive (described, not stated) ▲ MBI; BSS; RAND 20; SSCS; ▲ Pearson χ^2; Kruskall-Wallis	▲ 433 ▲ 24–65+years ▲ Female (91.8%) ▲ Not recorded ▲ Not recorded ▲ Not recorded	High EE and DP scores were associated with current BO. Lower health function scores are detrimental. Caring strongly for patients. Limited opportunities for advancement. Lower work–life balance. High reliance on peers. Working hard without recognition, no energy to commit to PA or exercise. No control over workload, poor support from supervisors who do not understand daily work-related struggles and barriers. Social withdrawal.	Older nurses reported less BO. Those with high PA scores were less likely to have current BO. Supportive relationships with peers/ colleagues, being appreciated, opportunities for career advancement. Breaks from work/leave/holidays, talking to others, seeking support. Personal hobbies, destress activities. PA can overcome previous episodes of BO. Changing work schedule, exercise, self-care measures, healthy eating, meditation, seeking therapy. Report recommends: * Self-care * Career development * Leadership support * Community and provides details of what each should entail
6. Klein et al 2020[19] USA *Exploring burn-out and job stressors among advanced practice providers*	▲ Quant: Cross-sectional online survey ▲ Purposive (described, not stated) ▲ JSM; MBI; UWES; WFB ▲ Structural equation modelling	▲ 1216 ▲ 23–60+years ▲ Female (84.8%) ▲ <1 year to 15+ years ▲ Not recorded	Contributors to BO-EE, DP, work pressure, lack of autonomy, role ambiguity. High correlation between job stressors and BO, and negative effect of job stress and work engagement. BO affects work engagement. Younger professionals experience higher levels of job stress. Role ambiguity, work pressures, lack of autonomy contribute to BO. High levels of EE and DP=lower PA.	Mitigators to BO-PA, vigour, dedication, absorption. Higher levels of work–family balance=lower job stress levels. Older professionals experience higher levels of engagement. Support needed for younger professionals transitioning into the role. Resolving work–family conflict. Social relationships are important.
7. Neumann et al 2018[20] USA	▲ Quant: cross-sectional online survey ▲ Purposive (described, not stated) ▲ MBI; MDS-R ▲ Tukey–Kramer; χ^2; multivariable linear regression	APP group data only: ▲ 255 ▲ 20–60+ years ▲ Female (94%) ▲ Not recorded ▲ Not recorded ▲ 180 (71%)	Moral distress significant contributing factor to BO. BO more likely with inadequate work–life balance and low level of career satisfaction. High demand for direct patient care and related admin tasks leaves little time for personal and professional development activities and contributes to increased BO.	Identifies strategies recommended in other literature, including counselling, mindfulness, stress-reduction confidence-building, exercise, team building, adjustments to rostering,

Table 3 Continued

Author(s) year Country Title	Sample: ▲ N= ▲ Age (mean and/or range) ▲ Gender ▲ Years as nurse ▲ Years in specialist role ▲ Married/family	▲ Methodology ▲ Sampling ▲ Data capture ▲ Data analysis	Contributors to stress/BO	Mitigators against stress/BO
8. White 2018[21] Unpublished Masters thesis USA	▲ Seven ▲ Not recorded ▲ Female (100%) ▲ Not recorded ▲ <6 months to 10+ years ▲ Not recorded	▲ Quant: cross-sectional online survey ▲ Purposive+snowball ▲ CBI ▲ Independent t-tests	Suggests that despite personal and work-related challenges, commitment to patients remains high. Also suggests that CNSs do not have significant BO or risk factors, but that BO appears to be more likely in experienced nurses (counter to all other evidence) BUT very small sample size.	No mitigating factors identified

ANOVA, analysis of variance; APN, advanced practice nurses; APP, advanced practice provider; BO, burn-out; BPEM, Brisbane Practice Environment Scale; BSS, Burn-out Status Survey; CBI, Copenhagen burn-out Inventory; CF, Compassion fatigue; CNS, Clinical Nurse Specialist; CS, compassion satisfaction; DP, depersonalisation; EE, emotional exhaustion; EHR, electronic health record; IWS, Index for Work Satisfaction; JSM, Job Stressors Measure; MBI, Maslach burn-out Inventory; MDS-R, Moral Distress Scale-Revised; NSS, Nursing Stress Scale; PA, Personal Accomplishment/Personal Achievement; SSCS, Social Support and Coping Scale ; UWES, Utrecht Work Engagement Scale; WFB, Work Family Balance.

Organisational influences

Working environment was found to influence burn-out. Oncology nurses based in hospital treatment centres had higher rates of burn-out than nurses working in palliative care or community settings.[8] Among haemodialysis nurses, those working in tertiary (hospital-base) centres had lower satisfaction scores, higher stress levels and higher burn-out scores (mean (M)=30.71, SD=12.13) particularly when compared with nurses working in patients' homes who had high satisfaction scores, low stress levels, and low burn-out scores (M=28.29, SD=10.46) although these differences did not reach statistical significance.[7] In contrast, greater satisfaction with the working environment correlates with greater job satisfaction (r=0.70, p=<0.01), lower job stress (r=−0.41, p=0.01) and lower EE (r=−0.49, p<0.01).[7] Working in an outpatients' setting and completing longer hours including extra work at home predicts burn-out among haematopoietic cell transplantation specialist nurses.[20] Similarly, the likelihood of burn-out increases among advanced practice/specialist nurses working with EHRs in an outpatients setting (adjusted OR: 1.30 (95% CI 0.53 to 3.24); p=0.567) who have to catch up with EHR-related administration at home (adjusted OR: 2.66 (95% CI 0.91 to 7.80); p=0.075) due to having insufficient time for documentation during the working day, which predicts a three times higher likelihood of burn-out (Adjusted OR: 3.72 (95% CI 1.78 to 7.80); p=0.001).[22] Workload was identified as influential across three other studies[7 18 20] where the EE component of burn-out was positively correlated with workload (r=0.44),[7] the high demand for direct patient care and related administrative tasks left little time for personal and professional development activities and contributed to increased burn-out,[20] and where specialist nurses felt they had no control over their workload.[18] Low levels of personal accomplishment, either due to failure to 'save' the patient[8] or having fewer opportunities for personal development/career advancement,[18] and lack of career satisfaction[20] lead to lower PA scores and increase burn-out risk. Nurses with high personal accomplishment scores were less likely to currently be experiencing burn-out, than to never or previously have experienced it (14.5% vs 53.4%, 32.1% respectively, p=<0.001), suggesting that PAs can overcome previous episodes of burn-out.[18] Additional work-related factors that contribute to burn-out included feeling undervalued or unrecognised for one's work,[7 18] poor work–life balance,[18 20 22] conflict with physicians,[7] lack of autonomy and role ambiguity,[19] and managers having a poor understanding of the day-to-day role of the CNS.[18] Increased autonomy increases job satisfaction, thus protecting against burn-out.[7] In contrast, three studies found that good managerial and peer support mitigated against the factors that lead to burn-out.[7 17 18] There was a significant positive relationship between increased levels of CS and increased perceptions of report received from managers (p=0.025, Cramér V=0.231), coworkers (p≤0.001, Cramér V=0.347) and family and friends (p≤0.001, Cramér

V=0.385), which was then related to lower levels of burn-out.[17]

Nurses were most satisfied when managerial support was perceived as fair and equitable (including fairness in rostering) and supported their clinical practice.[7] Being able to attend to their own self-care needs, being appreciated, receiving good leadership/management support, and experiencing organisational promotion of health and well-being were identified as strategies for mitigating against burn-out,[18] alongside opportunities for career advancement.[18 19]

Job stress[19] and moral distress[20] are also influential. Job stress is positively related to burn-out (p<0.01), and both stress and burn-out are negatively related to work engagement (both p≤0.01); moral distress (arising from the inability due to external influences to deliver care to a preferred standard) was reported as medium (44–62) or high (>63) in 31% and 37% of specialist nurses respectively.[20] burn-out (specifically the component of EE) negatively correlates with getting things done (r=−0.48, p=<0.01), task requirements (r=−0.46, p≤0.01) and feeling valued (r=−0.46, p≤0.01).[7]

The relationship between specialist nurses and patients appears influential. Lower levels of DP (manifesting as an affective-symptomatic lack of empathy)[27] among CNSs are reported in one study with oncology nurses,[8] with others observing that dedication to patients and absorption in the specialist role reduces burn-out[19] and that despite personal and work-related challenges, commitment to patients remains high.[18 21]

Internal influences

While working practices, the work environment and the quality of managerial/leadership support were shown to affect burn-out, nurses' internal influences often mitigated against it. Robust social support from family and friends appears important,[19] more so than relationships with co-workers,[17] and better work–life balance facilitates lower job stress levels.[19] In one study, 75% of specialist nurses who reported that they had never experienced burn-out, had high PA scores, strong family support, close friendships, and engaged in group activities outside the workplace.[18] In contrast, 57% (n=65.5) of 115 Advanced Practice Providers reporting burn-out either disagreed or strongly disagreed with the statement 'my work schedule leaves me enough time for personal/family life', indicating a poor work≤life balance.[20] Self-care practices—including healthy eating, exercise, mindfulness practices, taking time off/holidays and seeking therapy were protective.[17 18 20]

Preventing and resolving burn-out

Four of the eight studies make recommendations for addressing burn-out based on their findings[7 17–19] while one reinforces strategies recommended in previous literature.[20] There was a statistically significant positive relationship between mindfulness practices and the level of CS with a moderate to large effect size (p=0.016, Cramér

V=0.242), and between meditative practices and burn-out (p=0.42, Cramér V=0.219).[17] As described above, the presence and quality of support from coworkers, managers and administrators affects the level of burn-out among CNSs,[17] and support, workload management and reducing peer to peer conflict are recommended to reduce burn-out and increase retention among CNSs.[7] In another study, 'self-care', 'career development', 'leadership support' and 'creating community' (work-based teambuilding) are recommended areas for attention,[18] while the final study recommends resolving work–family conflict (restoring work–life balance and giving greater support (mentorship) to young professionals transitioning into the CNS role'.[19] Drawing on recommendations from previous studies, the strategies of counselling, mindfulness, stress-reduction, confidence-building, exercise, team building and adjustments to rostering are advised.[20]

DISCUSSION

Burn-out arises across numerous nurse specialist and advanced practice roles and affects clinicians differently throughout their career—findings that are highly relevant to the UK IBD-CNS workforce. Evidence indicates that CNSs who are new in post and those who are mid-career experience burn-out more than those who have many more years of experience and thus are also older. There are numerous possible explanations: younger nurses moving into the specialist role soon after qualification without an arsenal of advanced skills gained in a ward-based role; mid-career nurses moving into lead or consultant nurse roles without the necessary staff management and senior level operational skills; and nurses with many more years in the role having gained skills and competence through the natural novice-expert progression that is typical across nursing.[28] The need for better preparedness for the role is indicated in this review and evidenced in the literature.[29–31]

Much of the evidence points to the importance of work–life balance, family time and support and self-care, and it is possible that the predominantly female nursing workforce experiences a great amount of stress from trying to balance home and family life, with the demands of their role. Where early and mid-career IBD-CNSs may also be raising children and managing their family, this may compound the stress factors that lead to burn-out. If the desire for personal advancement to progress their career (from study days, conferences and required training, through to clinically based Masters and doctoral studies) also arises during this time period the demands may be compounded, increasing the risk of low personal accomplishment as a precursor to burn-out. Older nurses not only benefit from the years of experience they have in the role, but may have fewer direct family responsibilities due, for example, to children growing up and achieving independence. This changing responsibility within the family home may bring more freedom to

pursue personal development/achievement goals, thus reducing burn-out.

The importance of and desire for ongoing education and training to support the CNS role is well-recognised.[9 32 33] As evidenced in this review, opportunities for personal development can mitigate against earlier episodes of burn-out, which suggests that providing personal development as an intervention for burn-out, may be beneficial. One report focusses specifically on the limited options for professional development among the older experienced specialist workforce but does not acknowledge this representation of low PA as a precursor to burn-out.[9]

The use of EHRs and working in outpatient settings are identified in this review as contributing to burn-out. Since the majority of IBD-CNS workload is clinic/outpatient based, with regular use of remote methods of access such as telephone clinic and advice lines,[2] these factors may be highly significant to this and other CNS cohorts. Recent changes to the delivery of clinical services—particularly routine follow-up—due to the COVID-19 pandemic indicate that e-health is likely to have a bigger profile in the working practices of many clinicians,[34] including IBD CNSs[35]; thus while addressing one problem, increased use of EHRs may compound another.

This review also highlights that poor acknowledgement by senior managers of the CNS role and unsustainable workload also fuel burn-out. Health service personnel outside the immediate MDT in which the specialist nurse sits, have a poor understanding of the complexity and range of the CNS role[36 37] despite growing evidence on the clinical value of CNSs and the positive impact on patient care.[38–42] Workload across IBD-CNSs has been shown to exceed recommended guidelines, with 63% of participants in one study reporting a caseload above the recommended level, and 84% doing unpaid overtime to manage this[3]; the consequence is that the opportunities for PA may diminish. As evidenced above, these factors contribute to burn-out, likely due to moral distress and EE. Addressing these issues is critical, as evidence indicates that job autonomy, role clarity, and job support are associated with a high level of job satisfaction[29] which keeps nurses in post. One study from Germany reports that factors that 'push' nurses to leave their post and the country to take up clinical appointments elsewhere, include high workload, limited decision-making power, low recognition, lack of collaboration between nurses and physicians, poor working environment, low renumeration and poor advanced training opportunities.[43] All of these 'push' factors, except low renumeration, are evidenced in this review, suggesting that this European data may be globally applicable.

Many of the difficulties and challenges identified in this scoping review are also relevant to IBD CNSs. There is thought-provoking commentary[4] on the likely devastating impact to IBD services if the early indicators of burn-out, particularly among experienced IBD CNSs in senior positions, are not addressed. Burn-out has also been identified in colorectal surgeons, gastroenterologists and surgical and medical gastroenterology nurses, with similar factors (age, gender, years in role, workload and leadership responsibilities) being influential on the extent of burn-out experienced.[44–46] While a useful contextual tool, some of the solutions suggested for medical staff and colorectal surgeons (mentoring, dedicated study time, support to follow specific areas of clinical interest)[44 45] are unrealistic across a nursing workforce which already has, for example, difficulty simply securing study leave.

Avoiding attrition of these highly-skilled IBD-CNSs may be a considerable challenge in the current climate, when morale within the workforce is very low and the Registered Nurse vacancy rate in the UK's National Health Service (NHS) is currently at 10.5% (39,813 vacancies) amidst an overall vacancy figure of 100 000.[47] This staffing crisis, which existed prior to 2019, is currently escalating due to the significant personal impact of the pandemic on all clinical staff and on NHS services. An RCN press release in July 2020 reported that of their surveyed members, 36% were now thinking of leaving the profession.[48] 'Push factors' cited include dissatisfaction with the way staff were treated during the pandemic, low staffing levels and lack of management support. These factors reflect the aspects identified in this literature review of feeling undervalued, overworked, and experiencing poor support from senior management, suggesting that a system-wide approach is needed to resolve burn-out throughout the clinical workforce, regardless of specialism.

There are some suggestions from this review of the strategies that nurses can employ personally to help mitigate against the risk of burn-out (physical exercise, social support networks, mindfulness activities, eg) but we do not know how transferable these potential mitigating factors are to the IBD CNS workforce; further, individual efforts are unlikely to overcome the negative systemic influences detailed above.

An IBD-CNS collaborative workshop to acknowledge emotional impact and risk of burn-out identified that these specialist nurses need support addressing the many ways in which they are emotionally affected by their work, with an express request for further training and support, including access to clinical supervision.[49] The potential for clinical supervision to counter burn-out in nurses is recognised[50 51] and has been demonstrated, in principle, in one small pilot study with IBD-CNSs,[52] but more work is needed to strengthen this evidence and to understand the experiences and implications of burn-out among these specialist nurses.

LIMITATIONS

Although the CNS role in the UK is among the most established globally, with a wide remit and high level of role autonomy, we could find no published UK data addressing burn-out in this professional group, and none specifically relevant to IBD-CNSs in the UK, or globally.

Participant cohorts in the included studies were not described, so it is not known if IBD CNSs/gastrointestinal nurses were included.

CONCLUSION

There is no evidence of either the prevalence and experience of burn-out in IBD-CNSs in the UK, and no UK or global qualitative data to explain correlations such as age and years in role, or why the mid-career group (aged 31–50 years, 10–20 years in practice) seem the most vulnerable.

Further qualitative work may give insights into the impact of burn-out on nurses' decisions to remain in or leave the service, the factors which mitigate or exacerbate well-being, and the future security of the IBD CNS workforce in the UK. Such work could also lead to the development of a nationwide survey to measure prevalence of burn-out using the MBI. This evidence would provide a robust rationale for developing interventions to protect and support the well-being of IBD-CNSs.

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REFERENCES

1. Mikocka-Walus A, Power M, Rook L, et al. What do participants of the Crohn's and colitis UK (CCUK) annual York walk think of their inflammatory bowel disease care? a short report on a survey. Gastroenterol Nurs 2018;41:59–64.
2. Kemp K, Dibley L, Chauhan U, et al. Second N-ECCO Consensus Statements on the European Nursing Roles in Caring for Patients with Crohn's Disease or Ulcerative Colitis. J Crohn's Colitis 2018;12:760–76.
3. Leary A, Mason I, Punshon G. Modelling the inflammatory bowel disease specialist nurse workforce standards by determination of optimum Caseloads in the UK. J Crohns Colitis 2018;12:1295–301.
4. Stansfield C. Inflammatory bowel disease nurse specialists: sailing into a perfect storm? Br J Nurs 2019;28:278–80.
5. Ward N, Embrey N, Lowndes C, et al. Specialist nurse network improves MS practice. Nurs Times 2002;98:34–6.
6. Maslach C, Jackson S, Leiter M. Maslach Burnout Inventory:. In: Zalaquett C, Wood R, eds. Evaluating stress: a book of resources. Third ed. Scarecrow Education, 1997: 191–218.
7. Hayes B, Douglas C, Bonner A. Work environment, job satisfaction, stress and burnout among haemodialysis nurses. J Nurs Manag 2015;23:588–98.
8. Cañadas-De la Fuente GA, Gómez-Urquiza JL, Ortega-Campos EM, et al. Prevalence of burnout syndrome in oncology nursing: a meta-analytic study. Psychooncology 2018;27:1426–33.
9. Macmillan. Voices from the frontline: workforce CDP review, 2020.
10. Munn Z, Peters MDJ, Stern C, et al. Systematic review or scoping review? guidance for authors when choosing between a systematic or scoping review approach. BMC Med Res Methodol 2018;18:143.
11. Levac D, Colquhoun H, O'Brien KK. Scoping studies: advancing the methodology. Implementation Sci 2010;5:69.
12. Arksey H, O'Malley L. Scoping studies: towards a methodological framework. Int J Soc Res Methodol 2005;8:19–32.
13. Tricco AC, Lillie E, Zarin W, et al. PRISMA extension for scoping reviews (PRISMA-ScR): checklist and explanation. Ann Intern Med 2018;169:467–73.
14. Snilstveit B, Oliver S, Vojtkova M. Narrative approaches to systematic review and synthesis of evidence for international development policy and practice. J Dev Effect 2012;4:409–29.
15. Cooke A, Smith D, Booth A. Beyond PICO: the spider tool for qualitative evidence synthesis. Qual Health Res 2012;22:1435–43.
16. Moher D, Liberati A, Tetzlaff J, et al. Preferred reporting items for systematic reviews and meta-analyses: the PRISMA statement. Int J Surg 2010;8:336–41.
17. Glover-Stief M, Jannen S, Cohn T. An exploratory descriptive study of compassion fatigue and compassion satisfaction: examining potential risk and protective factors in advanced nurse practitioners. J Am Assoc Nurse Pract 2020;33:143–9.
18. Kapu AN, Borg Card E, Jackson H, et al. Assessing and addressing practitioner burnout: results from an advanced practice registered nurse health and well-being study. J Am Assoc Nurse Pract 2019;33:38–48.
19. Klein CJ, Weinzimmer LG, Cooling M, et al. Exploring burnout and job stressors among advanced practice providers. Nurs Outlook 2020;68:145–54.
20. Neumann JL, Mau L-W, Virani S, et al. Burnout, moral distress, work-life balance, and career satisfaction among hematopoietic cell transplantation professionals. Biol Blood Marrow Transplant 2018;24:849–60.
21. White M. Identifying burnout and its risk factors in clinical nurse specialists. St John Fisher College, 2018.
22. Harris DA, Haskell J, Cooper E, et al. Estimating the association between burnout and electronic health record-related stress among advanced practice registered nurses. Appl Nurs Res 2018;43:36–41.
23. Williams ES et al. Refining the measurement of physician job satisfaction: results from the physician worklife survey. Med Care 1999;37:1140–54.
24. Kristensen TS, Borritz M, Villadsen E, et al. The Copenhagen burnout inventory: a new tool for the assessment of burnout. Work Stress 2005;19:192–207.
25. Stamm B. Professional quality of life: compassion satisfaction and fatigue version 5 (ProQoL), 2009.
26. Stamps P. Nurses and work satisfaction: an index for measurement. Health Administration Press, 1997.
27. Prinz P, Hertrich K, Hirschfelder U, et al. Burnout, depression and depersonalisation--psychological factors and coping strategies in dental and medical students. GMS Z Med Ausbild 2012;29:Doc10.
28. Benner PE. From novice to expert : excellence and power in clinical nursing practice. Pearson, 1984.

29 Giles M, Parker V, Mitchell R, *et al*. How do nurse consultant job characteristics impact on job satisfaction? an Australian quantitative study. *BMC Nurs* 2017;16:51.

30 Rosser E, Grey R, Neal D, *et al*. Supporting clinical leadership through action: the nurse consultant role. *J Clin Nurs* 2017;26:4768–76.

31 Younge L, Mason I, Kapasi R. Specialist inflammatory bowel disease nursing in the UK: current situation and future proofing. *Frontline Gastroenterol* 2021;12:169–74.

32 Albers-Heitner PCP, Lagro-Janssen TALM, Venema PPL, *et al*. Experiences and attitudes of nurse specialists in primary care regarding their role in care for patients with urinary incontinence. *Scand J Caring Sci* 2011;25:303–10.

33 Anderson B. Challenges for the clinical nurse specialist in uro-oncology care. *Br J Nurs* 2014;23:S18–22.

34 Kennedy NA, Hansen R, Younge L, *et al*. Organisational changes and challenges for inflammatory bowel disease services in the UK during the COVID-19 pandemic. *Frontline Gastroenterol* 2020;11:343–50.

35 Avery P, Younge L, Dibley L, *et al*. Inflammatory bowel disease advice lines during the COVID-19 pandemic: a retrospective service evaluation. *Gastrointestinal Nursing* 2021;19:38–49.

36 Leary A, Crouch H, Lezard A, *et al*. Dimensions of clinical nurse specialist work in the UK. *Nurs Stand* 2008;23:40–4.

37 Kerr H, Donovan M, McSorley O. Evaluation of the role of the clinical nurse specialist in cancer care: an integrative literature review. *Eur J Cancer Care* 2021;30:e13415.

38 Winwood PC, Winefield AH, Lushington K. Work-related fatigue and recovery: the contribution of age, domestic responsibilities and shiftwork. *J Adv Nurs* 2006;56:438–49.

39 Riordan F, McHugh SM, Murphy K, *et al*. The role of nurse specialists in the delivery of integrated diabetes care: a cross-sectional survey of diabetes nurse specialist services. *BMJ Open* 2017;7:e015049.

40 McClelland M, McCoy MA, Burson R. Clinical nurse specialists: then, now, and the future of the profession. *Clin Nurse Spec* 2013;27:96–102.

41 Rosso C, Aaron AA, Armandi A, *et al*. Inflammatory bowel disease Nurse-Practical messages. *Nurs Rep* 2021;11:229–41.

42 Martinez-Vinson C, Le S, Blachier A, *et al*. Effects of introduction of an inflammatory bowel disease nurse position on healthcare use. *BMJ Open* 2020;10:e036929.

43 Zander B, Blümel M, Busse R. Nurse migration in Europe--can expectations really be met? Combining qualitative and quantitative data from Germany and eight of its destination and source countries. *Int J Nurs Stud* 2013;50:210–8.

44 Sharma A, Sharp DM, Walker LG, *et al*. Stress and burnout in colorectal and vascular surgical consultants working in the UK National health service. *Psychooncology* 2008;17:570–6.

45 Barnes EL, Ketwaroo GA, Shields HM. Scope of burnout among young Gastroenterologists and practical solutions from gastroenterology and other disciplines. *Dig Dis Sci* 2019;64:302–6.

46 Socaciu AI, Ionut R, Barsan M, *et al*. Burnout in gastroenterology unit nurses. *Int J Environ Res Public Health* 2020;17:3115.

47 NHS Digital. NHS vacancy statistics England April 2015 – September 2021 experimental statistics, 2021. Available: https://digital.nhs.uk/data-and-information/publications/statistical/nhs-vacancies-survey/april-2015-september-2021-experimental-statistics

48 Royal College of Nursing. Press release, 2020. Available: https://www.rcn.org.uk/news-and-events/press-releases/Sharp increase in nursing staff thinking of leaving profession reveals RCN research

49 Younge L, Medcalf L, Hall A, *et al*. N19 understanding the emotional impact of inflammatory bowel disease: looking after nurses looking after patients. *J Crohn's Colitis* 2020;14:S666.

50 Hyrkäs K, Appelqvist-Schmidlechner K, Haataja R. Efficacy of clinical supervision: influence on job satisfaction, burnout and quality of care. *J Adv Nurs* 2006;55:521–35.

51 Edwards D, Burnard P, Hannigan B, *et al*. Clinical supervision and burnout: the influence of clinical supervision for community mental health nurses. *J Clin Nurs* 2006;15:1007–15.

52 Younge L, Sufi H, Dibley L. Regular clinical supervision to enhance wellbeing in inflammatory bowel disease specialist nurses: a small pilot study. *Gastrointestinal Nursing* 2020;18:36–42.