Full data extraction, characteristics and findings of included studies.

Authors	Study Design	Variable / outcome measurement	Condition / absence details	Data analysis	Sample	Recruitment / sampling	Setting	Demographics	Response rate	Key findings - personal, social, organisational needs	Additional findings	Recommendations	Risk of biases*
HEE (2018)[4]	Cross-sectional survey	Needs, challenges and support required - de novo mixed methods survey	All reasons included	Mixed method – Descriptive statistics	97 doctors	Invitation email via UK Medical Royal Colleges, British Medical Association, NHS England and Health Education England	UK	Not reported	Not reported	Personal - lack of confidence, emotional needs (coping and managing uncertainty), self-efficacy, childcare, communication and information about return. Social - views of colleagues. Organisational - pastoral support, wider support package, organisational culture, unfamiliar with workplace	Returner views on support. Personal - training. Social - peer support. Organisational - phased return, clearer entry/exit & KIT process, mentor/coach.	Further collation of evidence and development of successful approaches required for supporting returning doctors, including policy advice and available resources	Selection bias, recall bias, measurement bias, analysis bias (lack of methodology)
AoMRC (2016)[12]	Cross-sectional survey	Barriers experienced - de novo mixed methods survey ('Flexibility & Equality Parental Leave Survey'	Parental leave	Mixed method – Descriptive statistics	1,225 doctors	Invitation email to every member from each UK Medical Royal College	UK	70% female, 70% 31-46 years of age, spread across UK & specialties, 79% white ethnic background, majority doctors in training, 60% had more than 1 instance of parental leave	84% response rate	Only 3.5% of respondents reported no worries about returning. Personal - self-efficacy, maintaining CPD, childcare, finance (main reason for pressure to return), emotional state (13.5% not emotionally ready to return), sleep deprivation, breastfeeding - delay to return and stopping early. Low concentration 45%. Social - 68% reported no family support, colleagues were a main source of info, relationships with colleagues. Colleagues views 34%. Organisational - medical HR were a main source of info, relationship with department. Significant lack of access to support. Flexibility, 75% full time down to 36%	Resources were identified for returners. Social - partner (48% of respondents), other parents (48%), workplace social support (14-20%)	Improved communications of support and resources available when returning from parental leave. Dedicated support for childcare and breastfeeding requirements. Access to the clinical information required, including updates and changes. A designated supervisor who is aware and supportive of RTW, and a workplace risk assessment in line with employment contracts	Selection bias, recall bias, measurement bias, analysis bias (lack of methodology)
Brooks et al (2014)[29]	Qualitative semistructured interviews	Experience of sick leave and RTW - 2hr semistructured interview	Sick leave - any illness, for at least 6 months	Qualitative - Thematic analysis	19 doctors	Invitation email via a medical charity, UK regulator or confidential doctor health service	UK	10/19 female, age range 20s-60s, 18/19 mental health problem/addiction, 7 physical health problems, 14 involved with GMC	25% response rate	Regulator interactions can be positive, helpful and necessary (e.g. with supportive supervisors and case workers) as well as distressing and anxiety provoking. Personal - clear information, emotional needs, empathy Social - Illness as a deficiency or flaw (attitudes). Organisational - RTW support, to the point of detriment to health. Lack of clear info and empathy in correspondence. Relationship with regulator		Improved distinction between ill health and misconduct in the way the regulator works with doctors. A dedicated process for ill health as this process can be a barrier to RTW. Improved communication and awareness from the regulator to reduce fear and anxiety for doctors	Selection bias
Doran et al (2014)[30]	Qualitative semistructured interviews	Reasons for leaving & barriers to returning - 40-60 minute semistructured interview	Career break or leavers	Qualitative - Thematic analysis	21 primary care doctors	Volunteer sampling following participation in an online survey (survey sampling not described	UK	67% female, age range 32-54, years as a GP 2.5-20	55% response rate	Personal - clear information, work-life balance, fear (emotional needs). Social - peer support, relationships with colleagues. Organisational - support package with process and information to access support, autonomy over role, work design (specialty specific concern, primary-secondary care interface and referrals), culture and working atmosphere			Selection bias, recall bias
Fox et al (2009)[31]	Qualitative semistructured interviews	Experience of sick leave and RTW - semistructured interviews	Sick leave - any serious illness	Qualitative - Interpretative Phenomenological Analysis	17 primary care doctors	Invitation email via regional primary care provider and commissioner	UK	10/17 male, 31-69 years of age, mean 46 years, 16/17 white British	Not reported	Personal - emotional needs (feeling powerless, out of control, vulnerable due to patient-doctor status and label), managing disclosure, self-perception, self-stigma (internalising illness as a vulnerability)	Resources identified. Personal - awareness of RTW, increased empathy (e.g. self-disclosure), insight into doctor-patient relationship and power.		Selection bias, recall bias
Gordon et al (2013)[32]	Cross-sectional survey	Experience of paternity leave - de novo mixed methods survey	Parental leave - paternity	Mixed method – Descriptive statistics	364 doctors	Invitation message via a professional network (London Deanery Synapse)	UK	32% consultants, 56% registrars, 10% more junior doctors, range of specialties	Not reported	Personal - financial concerns, career implications. Social - balance family and care-giving needs. Organisational - clear information and knowledge of support, support package available, flexibility in working role, workload and staffing management, supportive culture		Clearer parental leave policy and subsequent communication to raise awareness and uptake	Selection bias, recall bias, measurement bias, analysis bias (lack of methodology)
Grant et al (2019)[33]	Biographical narrative interviewing method	Experience of mental health condition - biographical narrative interviews	Sick leave - mental health condition	Qualitative - Thematic analysis	10 doctors	Invitation email via Health Education England & Wales Deanery, final sample selected purposively	UK	8/10 female, post-medical degree to registrar, cross-specialty	Not reported	Personal - managing disclosure, taking sick leave, loss of professional identity, career support and risk of damage Social - required perception of fulfilment from role, help-seeking behaviour, perception of sick leave and negative attitudes of colleagues Organisational - work design (high pressure, high risk duties, staffing and workforce issues), confidentiality and awareness of management, new colleagues and setting upon return		Improve the support available for doctors with mental health conditions, including a dedicated supervisor/mentor. OH input required but often lacking, and organisational and professionals attitudes towards mental health require improvement	Selection bias

Henderson et al (2012)[34]	Qualitative semistructured interviews	Barriers experienced - 1-3hr semistructured interviews	Sick leave - any illness, for at least 6 months	Qualitative - Thematic analysis	19 doctors	Invitation email via a medical charity, UK regulator or confidential doctor health service	UK	10/19 female, age range 20s-60s, 18/19 mental health problem/addiction, 7 physical health problems, 14 involved with GMC	25% response rate	Personal - Work identity & career, personal identity changes, self-view and sense of failure in work and life generally, beyond low self-esteem to self-stigma Social - relationships with family and friends, stigmatisation, culture of competitiveness and toughness Organisational - support package		Reduce professional stigma towards mental health conditions and improve confidential Occupational Health services for doctors	Selection bias
Hertzberg et al (2016)[35]	Qualitative interviews	Work-life balance & professional dedication - 60-90 minute focus group interviews	All reasons included	Qualitative - Systematic text condensation	48 hospital doctors	Invitation email via union representatives and senior managers	Norway	56% female, 5-45 years experience, 22 registrars and 26 consultants, 19 Psychiatry, 15 internal medicine, 14 surgery	Not reported	Personal - work-life balance as there are too many things to balance and be a good doctor. Social - Colleague relationships, leave equals disloyalty. Organisational - work design (managing clinical and managerial/leadership duties), relationship with management and feeling valued		Adapting the requirements of a doctor's role to their life stage and circumstances. Improve the logistical management of absences and professional attitudes towards taking leave. Closer working relationship between doctors, clinicians and senior management	Selection bias, analysis bias (based on methodology)
McKevitt et al (1997)[36]	Between groups comparison	Prevalence & decision-making - quantitative survey & qualitative interviews	Sick leave - any illness	Mixed method - One-way ANOVA, logistic regression & thematic analysis	1,102 doctors (532 primary care, 506 hospital doctors, 64 additional interviews)	Postal invitation survey via 3 NHS Trusts and 2 primary care providers	UK	Reported by each group in full in the paper	74% response rate	Work design and organisation, alongside poor staffing management and professional work ethic encourage presenteeism and poor attitudes towards sick leave. Personal - self-stigma. Social - attitudes and stigma towards illness representing weakness, pressure from colleagues, professional culture (work ethic), help-seeking behaviour. Organisational - work design and organisation (high pressure), staffing and workload management, organisational culture			Selection bias, measurement bias
Miller (2009)[37]	Cross-sectional survey	Experience of mental health condition - mixed methods survey	Sick leave - mental health condition	Mixed method – Descriptive statistics & content analysis	116 doctors	Invitation message via a doctors peer support organisation (Doctors Support Network)	UK	Mean age 45 (range 26-68), 63% female	35% response rate	Upon returning there was a significantly lower proportion of full time work, replaced by part time working. RTW should be supported with a combination of personal, social and workplace strategies, preceded by preventative approaches where possible. Personal - work-life balance, caregiver duties, career support and damage, personal-professional identity, financial considerations Social - family and social support, colleague stigma and negative attitudes. Organisational - flexibility in working role, OH support	Resources - improved empathy, understanding and job satisfaction, self-awareness, relationships, varied career and WLB	Flexibility to individual needs and work, alongside OH support	Selection bias, recall bias, measurement bias, analysis bias (lack of methodology)
Nomura et al (2015)[38]	Cross-sectional survey	Barriers experienced - de novo qualitative survey	All reasons included	Qualitative - Kawakita Jiro method (explained in full in paper)	359 female doctors	Invitation email via alumni association	Japan	Median age 45 (range 38-53), 91% working clinically, 60% full time, 74% had children	Not reported	Personal - childcare and caregiver role, confidence in managing work-life balance, professional drive and identity. Social - expectation on working parents to manage personal and professional role. Organisational - work design (long hours and shift patterns), workload and staffing management (staff shortages)			Selection bias, recall bias
Perez-Alvarez et al (2019)[39]	Qualitative semistructured interviews	Experience of illness - semistructured interviews	Sick leave - any serious illness	Qualitative - Inductive qualitative data analysis	10 doctors	Intentional sampling, no further description	Spain	Not reported	Not reported	Personal - career support and damage, clear information, emotional needs, self-view (feel failure, failing colleagues), finance. Social - support from a mentor/supervisor, colleagues' views. Organisational - clear giving of info, workplace and role adaptations, job control	Resources - learn from experience	Improve the 1-to-1 support available from supervisors	Selection bias, recall bias, measurement bias, analysis bias (lack of methodology)
Reese et al (2015)[40]	Cross-sectional survey	Self-efficacy, clinical procedures - de novo survey ('Redeployment Specialty Skills Matrix Survey')	Active military duty	Quantitative – Descriptive statistics & chi squared	179 family medicine doctors	Invitation email to all active duty medical officers eligible for redeployment via Army Medical Centre	US	Not reported	49% response rate	Self-efficacy increased significantly for management of major trauma and significantly reduced or did not change for all other procedures/scenarios, demonstrating reduced self-efficacy. Personal - self-efficacy for clinical procedures	Only 16% of participants were offered support on returning, possibly due to perceptions of what constitutes absence and return.	Additional training resources to improve self-efficacy for clinical procedures	Selection bias, recall bias, measurement bias
Rizan et al (2019)[41]	Qualitative semistructured interviews	Reasons for career break - 30-45 minute semistructured interview	Career break or leavers - one year break	Qualitative - Content analysis	14 foundation year doctors (2-3 years post medical degree)	Invitation email from training programme, final sample selected purposively	UK	8/14 female, mean age 30 (range 27-35), 10/14 white British	Not reported	A career break can have a positive personal impact on doctors and provide resources for their future career and practice. Personal - fatigue, exhaustion and stress, career support and decisions, job and career control, integrating personal experiences into being doctors (personal-professional identity)			Selection bias, recall bias, measurement bias, data collection bias
Rosta et al (2014)[42]	Between groups comparison	Characteristics of sickness absence - de novo	Sick leave - any illness	Quantitative - Chi-squared, ANOVA, logistic regression	948 doctors (521 hospital doctors, 313 self-	Data from previous study, postal survey from Norwegian Medical Association	Norway	Reported by each group in full in the paper	62% response rate	Self-employed doctors (primary care and private practice) are less likely to take sick leave, other than for serious and chronic conditions. Low professional autonomy and poor self-rated health predict sickness absence, more so that work		Reduce the threshold for sickness absence, both in terms of policy and doctors' attitudes	Selection bias, recall bias, measurement bias

		quantitative survey			employed primary care or private doctors)	to a representative panel of Norwegian doctors				stress, age and gender. Personal - self-view of health. Organisational - professional autonomy			
Sattari et al (2016)[43]	Cross-sectional survey	Infant-feeding intention & behaviour - de novo quantitative survey	Parental leave - maternity	Quantitative – Descriptive statistics & inferential analysis (no further details given)	72 female internal medicine doctors	Data from previous study, recruitment email via training program directors and hospital Women's Task Force	US	Mean age 38 (range 27-58), 26% trainees and 74% consultants, range of IM specialties	Not reported	Only 26% of respondents had received education about breastfeeding. Breastfeeding intention is high but behaviour is prevented due to work factors, including insufficient time for milk expression and inadequate milk supply. Personal - education and awareness, managing disclosure. Social - colleague and peer support. Organisational - flexibility and time through work design, senior colleague awareness and supportive, facilities		Education on infant-feeding, from medical school through to the workplace	Selection bias, recall bias, measurement bias, analysis bias (lack of methodology)
Saunders et al (2020)[44]	Naturalistic observation	Returner needs, experience and outcomes of training – unstructured observation and field notes	All reasons included	Qualitative – Thematic analysis	58 doctors, 4 allied health professionals, 1 nurse, 1 other clinical professional	Opportunity sampling through training participation	UK	Not reported	Not applicable	Emergent themes relating to participants' needs were psychosocial needs, peer support, and psychological concepts such as self-perception. Personal - psychosocial needs relating to their return to work, wellbeing and self-care, work-life balance, self-esteem, self-identity, confidence. Social - feeling valued, peer support, peer learning, shared experience and not feeling alone or socially isolated, accessing support, respect of peers. Organisational – senior colleague support			Selection bias, measurement bias, analysis bias
van Boxel et al (2020)[45]	Cross-sectional survey	Confidence on RTW - de novo mixed methods survey	Parental leave - maternity	Mixed method – Descriptive statistics	146 paediatric doctors	Invitation email via deaneries/training programs	UK	Not reported - 120/126 had returned to work	Not reported	96% of returners reported a lack of confidence, with 36% requiring more than 3 months to return to pre-absence confidence levels. Personal - childcare, confidence, work-life balance and managing commitments, managing emotional stress. Organisational - supervisor support, keeping in touch/unfamiliar workplace, work design and time		Use a risk stratification score, the 'MoTHER' score, to identify doctors likely to have low confidence on RTW (Months out, Training stage, Hours worked on return, Educational activities, Recognition by consultant)	Selection bias, recall bias, measurement bias, analysis bias (lack of methodology)
Walsh et al (2005)[46]	Qualitative semistructured interviews	Experience of maternity leave - semistructured interviews	Parental leave - maternity	Qualitative - Thematic analysis	21 family medicine doctors	Invitation letter from the Postgraduate Program Director	Canada	Not reported	78% response rate	Personal - high expectations, stress, childcare and breastfeeding, WLB, sleep & fatigue. Social - professional culture, guilt from absences & workload colleagues, colleague and peer support (reduced post-pregnancy without visible difference). Organisational - work design (long hours, unpredictable work demands), staffing management, organisational culture, physical strain, flexibility, facilities (breaks, privacy, fridges), keeping in touch (can improve perceived skills and peer support)	Resources - paid leave, supportive colleagues & seniors, flexible schedules, phased/gradual return.		Selection bias, recall bias, data collection bias, analysis bias
Finlayson et al (2013)[47]	Between groups comparison	Characteristics & morbidity of fitness for duty referrals - historic patient data	Referred for fitness for duty	Quantitative – Descriptive statistics, t-tests or chi-squared, logistic regression	381 doctors	Recruited at fitness for duty evaluation (consent process not described)	US	70% male, 71% white, mean age 49	Not reported	70% of those referred were deemed fit to practice and not offered additional support. Personal - psychological support, behavioural guidance and training		Biopsychosocial evaluation of doctors, their life and their workplace are required for adequate remediation and supported RTW	Analysis bias (team involved)
Isaksson et al (2012)[48]	3-year follow-up intervention study	Emotional exhaustion - Maslach Burnout Inventory	Sick leave - severe distress	Quantitative - T-tests or chi-squared, linear regression	227 doctors (184 at 3-year follow-up)	Invitation upon accessing intervention	Norway	Not described, but used in analyses	94% response rate, 19% attrition rate	Length of full-time sickness absence following a counselling intervention can predict reduced burnout 3 years after initial sickness. No optimum length was found so this should be personalised. Personal - fatigue, emotional exhaustion. Organisational - tailoring of support to individual		Ensure that personal needs are considered on an individual basis	Analysis bias (team involved)
Kodama et al (2012)[49]	Between groups comparison	Working practices - mandatory 'National Survey of Physicians'	All reasons included	Quantitative – Descriptive statistics	86,459 doctors	Mandatory workforce survey distributed via workplaces	Japan	Not reported	90% response rate	The number of female doctors on leave is increasing faster than those returning. Personal - work-life balance and managing care-giver requirements. Organisational - flexibility of working practices, workload and staffing management		Create a working environment that allows female doctors to stay or return to work, starting with policy and workforce planning	
Rose et al (2013)[50]	Between groups comparison	Substance misuse relapse & RTW - clinical records data	Sick leave - substance misuse	Quantitative - T-tests or chi-squared	780 doctors (56 emergency physicians, 724 non-emergency physicians)	Data from previous study, sampling not described	US	Reported by each group in full in the paper	Not reported	There is a higher rate of substance use disorders in emergency physicians, but comparable completion rates of support programs including RTW (72-84%). Personal - psychological health needs. Organisational - Occupational Health programs, personalised for doctors	No differences between specialties in use and completion of support programs.		

**risk of bias that was adequately addressed in the article has not been included here*