Supplemental File 1. MEDLINE Search History

Ovid MEDLINE(R) and Epub Ahead of Print, In-Process, In-Data-Review & Other Non-Indexed Citations, Daily and Versions(R) <1946 to June 28, 2021>		
1	exp mental health/	44634
2	exp mental disorders/	1298619
3	stress, psychological/	126122
4	occupational stress/	2451
5	burnout, psychological/	804
6	burnout, professional/	13498
7	((mental or psychological) adj3 (health or ill* or well-being or wellbeing)).ab,kw,ti.	212487
8	((mental or psychological or job* or work* or occupational) adj3 (stress* or distress)).ab,kw,ti.	57530
9	(burnout or burn-out).ab,kw,ti.	14703
10	anxiety/ or anxiety disorders/	118392
11	mood disorders/	14895
12	depression/ or depressive disorder/	194197
13	Substance-Related Disorders/	98438
14	(depression or depressive or suicid*).ab,kw,ti.	471841
15	(anxiety or mood).ab,kw,ti.	272026
16	addict*.ab,kw,ti.	69293
17	((substance or drug or alcohol) adj1 (misus* or use* or abuse*)).ab,kw,ti.	184772
18	or/1-17	1991766
19	exp Dentists/ or Dental Staff/	21581
20	dentist*.kw,ti.	41051
21	Dental hygienist*.kw,ti.	1466
22	Dental therapist*.kw,ti.	185
23	dental technician*.kw,ti.	686
24	Orthodontic therap*.kw,ti.	460
25	Dental nurse*.kw,ti.	202

26	oral surgeon*.kw,ti.	225
27	periodontist*.kw,ti.	156
28	endodontist*.kw,ti.	154
29	orthodontist*.kw,ti.	870
30	dental team.kw,ti.	243
31	(dental adj3 staff).kw,ti.	158
32	(dental adj3 professional*).kw,ti.	802
33	dental practitioner*.kw,ti.	1336
34	dental assistant*.kw,ti.	1039
35	(dental adj3 (trainee or training)).kw,ti.	629
36	(dental adj3 (speciality or specialist)).kw,ti.	91
37	(dental adj3 (student* or graduate* or undergraduate*)).kw,ti.	4477
38	or/19-37	64372
39	18 and 38	2768
40	(congress or editorial or letter).pt.	1777509
41	39 not 40	2666

Supplemental File 2. List of excluded studies

Citation	Reason
(2019). "ADA, Alliance of ADA promoting ways to banish burnout https://www.ada.org/en/publications/ada-news/2019-archive/may/ada-promoting-ways-to-banish-burnout American Dental Association News 50(10): 1-8.	No outcome data available
Aboalshamat, K., et al. (2015). "The impact of a self-development coaching programme on medical and dental students' psychological health and academic performance: a randomised controlled trial." BMC medical education 15: 134.	Dental outcome data are not presented separately
Baesso Cavalca, A. M., et al. (2019). "The effect of acupuncture on exam anxiety in medical students: a randomized crossover study." Revista Internacional de Acupuntura 13(2): 43-48.	Not Very High Human Development Country (Brazil)
Braun, S. E., et al. (2019). "Brief Yoga Intervention for Dental and Dental Hygiene Students: A Feasibility and Acceptability Study." Journal of evidence-based integrative medicine 24: 2515690X19855303.	Measures state mindfulness
Braun, S. E., et al. (2019). "Brief Yoga Intervention for Dental and Dental Hygiene Students: A Feasibility and Acceptability Study." Journal of evidence-based integrative medicine 24: 2515690X19855303.	No full text available
Brondani, M. A., et al. (2014). "Tackling stress management, addiction, and suicide prevention in a predoctoral dental curriculum." Journal of dental education 78(9): 1286-1293.	No outcome data available
Brooks, S. K., et al. (2013). "Doctors and dentists with mental ill health and addictions: Outcomes of treatment from the Practitioner Health Programme." Journal of Mental Health 22(3): 237-245.	Dental outcome data are not presented separately
Burk DT, Bender DJ. ‘‘Use and perceived effectiveness of student support services in a first-year dental student population.’’ Journal of Dental Education 2005 Oct;69(10):1148-1160.	Non validated outcome measures
Colley, J. M., et al. (2018). "Teaching stress management in undergraduate dental education: are we doing enough?" British Dental Journal 224(6): 405-407.	Opinion piece, no outcome data
Dilbone, D. A., et al. (2018). "Influence of Preparatory Workshops on Dental Students' Academic Performance and Stress on Their First Operative Dentistry Psychomotor Exam." Journal of dental education 82(6): 608-613.	Non validated outcome measures
Howard C. E, et al. (1986) ‘‘A comparison of methods for reducing stress among dental students’’. Journal of Dental Education. 50(9):542-544.	No full text available
Jackson E, Mealiea WL Jr. (1977) ‘‘Stress management and personal satisfaction in dental practice’’. Dental Clinics of North America. 1977 Jul;21(3):559-576	No full text available
Karpenko, A. E., et al. (2020). "Virtual online learning communities reducing dental student stress and anxiety." Journal of dental education.	Non validated outcome measures
Kinser, P., et al. (2016). "Awareness is the first step: An interprofessional course on mindfulness & mindful-movement for healthcare professionals and students." Complementary Therapies in Clinical Practice	Dental outcome data are not presented separately
Lopez, N., et al. (2010). "Does peer mentoring work? Dental students assess its benefits as an adaptive coping strategy." Journal of dental education 74(11): 1197-1205.	Non validated outcome measures
Moss, S. B. and N. W. Gaughf (2006). "Dentist impairment: risk factors, signs, prevention, and treatment." Texas dental journal 123(4): 350-355.	No full text available

Schroeder DG. (1980)‘‘The effects of group study skills counseling and applied relaxation on study behaviors and test anxiety in medical and dental students’’. Annu Conf Res Med Educ. (19):175-80.	No full text available
Schwartz RM, Eigenbrode CR, Cantor O. ‘‘A comprehensive stress-reduction program for dental students.’’ Journal of Dental Education. 1984 Apr;48(4):203-237.	No full text is available
Shankarapillai R, Nair MA, George R. (2012) ‘‘The effect of yoga in stress reduction for dental students performing their first periodontal surgery: A randomized controlled study.’’ International Journal of Yoga. 5(1):48-51.	Not Very High Human Development Country (India)
Singh, M., et al. (2020). "Mindful awareness for female dental students through yoga, motivational video, and a combination of two on stress reduction." Journal of family medicine and primary care 9(4): 2028-2032.	Not Very High Human Development Country (India)
Tisdelle DA, et al. (1984) ‘‘Stress management training for dental students.’’ J Dent Educ. 48(4):196-202.	No full text available
Walden, K. (2019). "A Conversation About Well Being: Treating the Impaired Dentist." Journal of the Indiana Dental Association 98(3): 26-28.	No full text available

Supplemental File 3. Table of study characteristics

Author (Date)	Aboalshamat et al. (2020)	Adams (2017)	Chapman, et al. (2017)	Gonzalez & Quezada (2016)	Gorter et al. (2001) Brake et al. (2001)	Metz et al. (2020)	Newton et al. (2006)	Piazza-Waggoner et al. (2003)
Country/City	Saudi Arabia	US (Iowa)	UK (England)	Chile	Netherlands	USA (Louisville)	UK (England)	USA (West Virginia)
Study Type	Quasi-experimental, two groups	Quasi-experimental, one group	Quasi-experimental, two groups	Quasi-experimental, one group	Quasi-experimental, three groups	Quasi-experimental, one group	Quasi-experimental, one group	Quasi-experimental, two groups
N of participants/ professional groups	88 dental students 44 in coaching programme 44 in control group	55 dental students	40 primary care dentists 20 participants for the guided self-help CBT programme 20 participants for the self-help CBT programme	5 dental students	92 primary care dentists previously identified at high risk for burnout 19 in intervention group 73 in control group	103 first year dental students	20 primary care dentists	26 second year dental students

Characteristics of participants	M=0, F=88 mean age 21.84 (SD:1.50) Age range 19-24	M=18, F=37 Age Range 21-55	**Guided self help** **CBT** M=6, F=11 GDS=15, CDS=0, Armed Forces=2 Principal=4, Associate=10, DF1=1, Salaried=2 Qualified: 1998.71 (SD 12.61) (Range 1976-2012) Practising Years: 20.82(SD 11.06)(1-37) **Self-help CBT** M=6, F=12 GDS=15, CDS=2, Armed Forces=1 Principal=3, Associate=7, DF1=5, Salaried=3 Qualified: 1990.88 (SD 10.23) (Range 1975-2012) Practising Years: 13.44(SD 12.09)(Range: 1-38)	No details provided	No details provided	M=48, F=55 Age groups: ≤21(6%), 22-25 (72%), >25 (22%)	No details provided	**Anxiety Management group:** **Relaxation training** (N=13) M=6, F=7 Mean age:27 years **The control Educational group (N = 13)** M=8, F=5 Mean age = 26.1 years

Instrument/tool used to measure MHWB issues	Depression and Anxiety Stress Scale **(DASS-21)** Resilience scale **(RS-14)** Psychological Well-Being Scale–Short **(PWB-S)**	Counselling Centre Assessment of Psychological Symptoms-34 **(CCAPS-34)** Outcome Rating Scale **(ORS)**	The Maslach Burnout Inventory **(MBI)** Dentists Anxieties in Clinical Situation Scale **(DACSS)**	Outcome Questionnaire **(OQ-45.2)** Dental Environment Stress questionnaire **(DES)**	The Maslach Burnout Inventory **(MBI)**	Clance Impostor Phenomenon Scale **(CIPS)**	Clinical Outcomes in Routine Evaluation **(CORE)** General Health Questionnaire. The Work Stress Inventory	Spielberger State-Trait Anxiety Inventory **(STAI)**

Type of interventions	**A life coaching programme.** Five one-on-one weekly standardised 15-minute phone coaching sessions delivered by five senior dental students who had received intensive coaching training by an expert coach.	**Individual Intervention:** In-house counselling office embedded within the school to provide psychological services to dental students **Group Intervention:** outreach health promotion programmes designed to increase student knowledge, awareness, and self-efficacy regarding psychological stress management practices that promote personal and professional growth and development Attendance was voluntary with no limit on the number of programs students could attend.	Self Help **CBT Bibliotherapy** CPD Programme + 3h Guided workshop	**Counselling.** The theory of the treatment was based on the cognitive-behavioural paradigm, taking as the basis stress training by inoculation and the general guidelines for anxiety treatment.	Intensive individual **Councelling** and 3 group sessions	**Impostor Video**—The video elaborated on the impostor cycle and identified 6 specific coping mechanisms for impostor thoughts. **Reminder Cards—**At the conclusion of the video, students were provided with small, double-sided reminder cards. One side of the card contained a custom-designed graphic of the impostor cycle, while the other side contained reminders of the 6 proposed coping mechanisms	**Counselling** (up to 6 one-hour sessions) provided by the Kent Dental Practitioners Support Service (DPSS). – Interventions were tailored to meet the individual needs of general dental practitioners within the framework of the six hours and they were not standardised. The techniques adopted by the consultants were various including counselling and therapeutic approaches, teaching and role play, and the identification of information and resources.	**60-minute training** session on how to use specific relaxation strategies (i.e., deep breathing, progressive muscle relaxation) to manage stress and anxiety. Participants also received a cassette tape that contained step-by-step directions for deep breathing and progressive muscle relaxation.

Comparator	The participants in the control group received no coaching or intervention during this time.	Participants acted as their own control	Self-help CBT Bibliotherapy CPD Programme	Participants acted as their own control	Participants received no councelling. However, some of the control group partitipants acted upon their self-initiative to reduce their stress	Participants acted as their own control	Participants acted as their own control	Lecture on the relation among stress, anxiety, and health. Participants in this group received cassette tapes containing ocean wave sounds, but no further instructions about how or when to use the tapes.

Effect of interventions	The results showed that there were significant differences in the depression, stress, self-acceptance, and goal approach measurements. Conversely, the other measurements showed no significant differences.	A positive relationship was found between number of counselling appointments and increased overall functioning.	DASS(Depression) was significantly reduced at 6 weeks with the reduction maintained at 6 months. At 6 weeks there was a clinically and statistically significant reduction in depression, anxiety and stress levels (DASS-21), a statistically significant reduction in burnout (emotional exhaustion) and hypervigilant decision-making, and an increase in personal achievement. The improvements in depression, stress, emotional exhaustion and hypervigilant decision-making were maintained at 6 months.	After attending 8 sessions, all 5 participants reduced their perceived stress in the dental environment. Two of the 5 participants initially had dysfunctional scores according to the questionnaire OQ-45.2 and by the end had normal scores.	Participants in the psychological intervention showed decreased burn-out scores (MBI) at the end of the intervention. In a year's follow up participants in the intervention group demonstrated relapse in their burn-out scores, however those who had spontaneously acted to reduce their stress showed sustained improvements.	There was a statistically significant decrease in impostor thoughts following the coping skills intervention from 63.44 ± 14.92 to 59.12 ± 14.56 ($P < 0.05$); an improvement of 4.32 ± 9.85. the percentage of students exhibiting intense impostor experiences decreased from 13.6% to 4.9%. Additionally, a greater percentage of students had few impostor characteristics, from 5.8% at the beginning of the semester to 10.7% at the end of the semester.	General Health Questionnaire (General distress)- Mean(SD) Pre 14.8 (5.4) - Post 9.38 (3.29), Z=-2.18, P=0.003 Clinical Outcomes in Research & Evaluation Total Score Mean(SD) Pre 1.00(0.45)- Post 0.79(0.47), Z=-0.85, P=0.40 The Work Stress Inventory, Mean(SD) Pre 99.94 (22.92)- Post 90.67 (19.22), Z=-1.24, P=0.21 Respondents' views of treatment using the Treatment Evaluation Inventory Total (Score Range 19-95)- Scored 73.9 (11.75) Progress	No significant differences were found between groups on any of the ratings of anxiety.

							(Score Range 11-55), Scored 38.08(8.72) Acceptability (Score Range 8-40), Scored 35.85 (4.56)	