

Supporting doctors' mental health: Exploring the utility of a life skills programme for interns in rural Eastern Cape Province, South Africa

Z Zingela,¹ MMed (Psych), PhD ; S van Wyk,² MMed (Psych), FCPsych (SA) ;
Y Thungana,¹ MMed (Psych), FCPsych ; E Abakisi,³ FCPsych (SA) 

¹ Executive Dean's Office, Faculty of Health Sciences, Nelson Mandela University, Gqeberha, South Africa

² Western Health and Social Trust, Londonderry, UK

³ Tamale Teaching Hospital, Tamale, Ghana

Corresponding author: Z Zingela (Zukiswa.Zingela@mandela.ac.za)

Background. Occupational stress affecting junior doctors poses a serious risk to mental health, with consequences such as anxiety, burnout, substance misuse and suicide.

Objectives. To evaluate the utility of a life skills training programme (LSTP) developed and implemented at Nelson Mandela Academic Hospital in the Eastern Cape Province, South Africa, in improving stress levels and coping abilities among second-year medical interns.

Methods. We used a quasi-experimental pre-post quantitative design without a control group. Identical surveys were administered before and after the intervention, including the Perceived Stress Scale (PSS-10) and items on coping behaviours. Descriptive statistics, paired *t*-tests and Wilcoxon signed-rank tests were used for analysis.

Results. Of 56 eligible interns, 45 (80.4%) completed both pre- and post-intervention assessments. Stress scores decreased significantly (from mean 2.92 to 2.51, $p < 0.001$), while coping scores improved (from mean 3.26 to 3.48, $p = 0.001$). Wilcoxon tests confirmed significant gains, with enhanced confidence in ethical reasoning ($Z = -5.014$, $p < 0.001$), professionalism ($Z = -2.673$, $p = 0.008$) and teamwork ($Z = -2.357$, $p = 0.018$). Participants who were single or lived alone showed higher stress levels. Subgroup analysis also revealed that interns who were single or lived alone had lower coping scores.

Conclusion. The LSTP improved interns' mental wellbeing and coping mechanisms. Findings support integrating life skills training into internship programmes.

Keywords: junior doctors, stress, coping, life skills training, internship, South Africa

S Afr Med J 2026;116(2):e3770. <https://doi.org/10.7196/SAMJ.2026.v116i2.3770>

Doctors' mental health has emerged as a major public health concern globally, with increasing evidence pointing to high levels of stress, burnout, anxiety, depression and psychological distress among medical professionals.^[1-12] The COVID-19 pandemic further magnified these challenges, due to overwhelming clinical loads, fear of infection and ethical dilemmas, leading to increased levels of anxiety, depression, substance use, sleep disturbances and, in some cases, suicide.^[13-16] Recommendations to mitigate this crisis have included improved access to mental healthcare, structural reform to reduce workplace stress and targeted interventions to improve psychological wellbeing.^[14-18]

South African (SA) studies mirror these global trends, with high levels of stress and psychological morbidity among doctors and medical students.^[3,16,17] Young doctors, in particular, must navigate the dual pressures of adapting to new professional roles and coping with emotionally demanding environments. They transition from academic training to clinical responsibility, mastering clinical competencies, building confidence in decision-making and managing high expectations, while adjusting to long work hours and complex interpersonal dynamics.^[19-21]

Background

The medical profession offers unique rewards, such as a sense of purpose and personal fulfilment, but also carries a heightened risk of mental health challenges, as already outlined.^[21] The conse-

quences of untreated mental distress among doctors extend beyond the individual, potentially affecting professionalism, patient safety and clinical outcomes.^[22,23] Multifactorial causes underlie the mental health vulnerabilities of doctors, including the pressures of perfectionism, exposure to trauma, limited peer support and stigma around seeking help.^[9]

In the USA, an estimated 300 physicians die by suicide annually, with 1% of doctors reporting attempted suicide and 42% reporting burnout, as of 2020.^[24] These rates have remained consistent over several years, reinforcing the need for systemic solutions. Until recently, physician wellbeing was not widely considered a key quality indicator for health systems, although this is beginning to change in the post-pandemic landscape.^[25-27]

A 2020 report from the Health Professions Council of SA (HPCSA) showed a rise in the number of impaired doctors. Of the newly referred cases, 55% were due to substance use disorders, either alone or in combination with other mental health diagnoses.^[28] Medical practitioners constituted 96% of referrals for impairment, with interns accounting for 8% of the 96%. Despite the Eastern Cape being only the fourth most populous province in SA, it reported the second highest number of impaired interns, possibly suggesting a region-specific vulnerability.^[28,29]

Various interventions have been developed to mitigate doctors' psychological distress, including stress management workshops,

resilience-building programmes, mentorship, Balint groups, cognitive behavioural therapy and life skills interventions.^[30-33] These approaches have produced variable results, and little consensus exists on which interventions are most effective for specific subgroups or settings. One notable example is an initiative by the US National Academy of Medicine, which promoted an intervention focused on enhancing communication, empathy, organisational skills and stress resilience.^[26] Despite promising outcomes, burnout symptoms remained significantly higher in doctors than in the general population, reinforcing the need for tailored programmes that acknowledge the unique pressures of medical practice. Another example is a residency resiliency programme, also in the USA, which comprised interactive sessions for 10 residents, with a control group of 13.^[34] The sessions focused on building self-awareness, coping skills, strength and meaning in work, time management, self-care and connections in and outside of medicine to support resident wellbeing, alongside systemic changes to foster wellness. Feedback from residents described the intervention as very useful, with an average score of 9.25 out of 11, but with a barrier to implementation of logistical arrangements.

Sahebalzamani *et al.*^[35] demonstrated the positive impact of life skills training on the general health of nursing students in Iran. In a quasi-experimental pre-test/post-test design with 40 students, the study found a significant 22-point reduction in General Health Questionnaire (GHQ) scores following life skills training ($p < 0.01$), indicating improved psychological and overall health. Extending beyond general health, Jaworski *et al.*^[36] examined the role of life skills in shaping authentic leadership among public health students in a multicentre cross-sectional study of 329 Master's students in Poland. The study validated a theoretical model linking self-efficacy, decision-making, fairness and empathy with authentic leadership attitudes. Sharma^[37] evaluated the effectiveness of a training programme that integrated life skills education with financial literacy for accredited social health activists in India. The programme significantly improved both life skills and financial knowledge, highlighting the broader utility of life skills training in empowering community health workers by strengthening both professional capacity and economic agency. Al Adnan^[38] reviewed the effectiveness of communication skills training in medical students. This review found that structured communication skills programmes significantly enhanced medical students' competence in patient interactions, empathy and teamwork.

To date, few published data exist on the implementation or evaluation of targeted life skills interventions for doctors in SA. There is especially a lack of research on structured, psychosocial training programmes aimed at enhancing the coping capacity of junior doctors. This study sought to address this gap by evaluating the usefulness and impact of a locally developed life skills training programme (LSTP) for second-year medical interns rotating through the Department of Psychiatry at Nelson Mandela Academic Hospital (NMAH), in OR Tambo District, one of the districts in rural Eastern Cape Province.^[39] The programme was developed through feedback sessions with previous intern groups, guided through identification of common themes described as sources of stress. The focus was enhancement of stress management strategies, improvement of professional and interpersonal functioning and provision of a safe facilitated space for interns to reflect on their challenges as a group.

Methods

We employed a quasi-experimental pre-post quantitative design without a control group, using identical survey tools administered before and after participation in the LSTP. This design allowed for

assessment of within-subject changes in perceived stress, coping behaviours and professional confidence among interns during their psychiatry rotation. The absence of random assignment or a parallel control group classifies this as quasi-experimental.

Participants completed identical surveys before and after the LSTP, from early November 2021 to end of August 2022. The pre-intervention survey was completed before the intervention, and the post-intervention survey at the end of the rotation (8 weeks later). The Perceived Stress Scale (PSS-10 in [Appendix 1](#)) and a data collection form ([Appendix 2](#)), which included items on substance use and coping behaviours, were used for data collection. The PSS is a standardised and validated, widely used, 10-item Likert scale (0 - 4) that measures participants' perceptions of stress.^[40]

Coping was assessed through the common coping behaviours described by interns during feedback sessions prior to the development of the LSTP content. Items related to coping were assessed using a Likert scale for the use of alcohol to cope, feeling overwhelmed, irritability when situations were out of one's control and loss of control over emotions (including conflict with others).

Medical interns allocated to NMAH come from across SA, with varying social backgrounds. NMAH has 113 slots for both first- and second-year interns, and the intake of first-year interns every year depends on the number of slots available for that year. At the time of the study, there were 56 first-year intern and 56 second-year intern posts filled. The rotations done in the first year are paediatrics, obstetrics and gynaecology, surgery and internal medicine, and these are for a period of 3 months each. The rotations in the second year of internship are psychiatry for 2 months, anaesthesia for 2 months, orthopaedics for 2 months and family medicine for 6 months. The psychiatry rotation is done in the psychiatry department of NMAH, the department piloting the LSTP. All medical interns who rotated in the Department of Psychiatry were invited to take part.

The LSTP sessions consisted of eight themed sessions that were 90 minutes long, once to twice a week, in a group format: dealing with challenges of death and grief; ethics and professionalism in medical practice; making decisions about career pathing after internship; identifying and managing one's unique stress signature; multidisciplinary team (MDT) work and the role of the MDT in sharing the load of patient care; managing one's own finances and financial planning; the doctor as a leader and the doctor as a manager; and substance misuse and responsible drinking. Each LSTP session was facilitated in an interactive group format with structured discussions, reflective exercises and scenario-based learning. Scenarios were provided by facilitators, based on real-life experiences, and participants were invited to share voluntarily if they wished to do so. Further details on the LSTP sessions can be found in [Appendix 3](#).

All facilitators were part of the MDT, which included the psychiatrist who designed the programme, two registrars, a psychologist (on substance use and responsible drinking) and a social worker. All facilitators were skilled in crisis intervention, which ensured the ability to detect and address any distress that could potentially arise in participants during the sessions. The sessions were facilitated in a supportive, reflective manner that started with laying the ground rules for respectful behaviour toward each other at all times, and the confidentiality of anything shared between each other about personal problems or matters that the participants identified as sensitive. The space encouraged free expression and participation while observing any boundaries participants chose to set on information they were willing to share, and respectful behaviour towards each other and facilitators.

The data analysis plan included descriptive statistics to summarise demographic data and mean item responses, paired *t*-tests to evaluate changes in aggregated stress and coping factor scores and Wilcoxon signed-rank tests for individual item comparisons, particularly for data that were non-normally distributed, due to the small sample size.

Ethical considerations

Ethical approval for this study was granted by the Walter Sisulu University Human Research Ethics Committee (ref. no. 127/2021). Written informed consent was obtained from all participants prior to data collection. Participation was voluntary, and interns were assured that their decision to participate or to decline would not affect their clinical evaluations or relationships with supervisors. Sessions were facilitated independently from formal assessments for signing of intern logbooks.

Results

Of the projected 56 interns, 45 (80.4%) completed the LSTP and the pre- and post-training surveys. Participants were predominantly male (66.7%) and black (93.3%), with the majority (77.8%) aged between 24 and 29 years. Relationship status remained stable post training, although there was a slight increase in those living alone, from 64.4% to 66.7%. Participant demographics are reflected in Table 1.

Coping behaviours and substance use

Alcohol use remained prevalent, with 60% of participants reporting use pre training and 62.2% post training. However, the number of participants who reported using alcohol 'often' or 'very often' to relax after work decreased notably, from 15.5% to 8.9%, with no participants indicating 'very often' post training.

Professional and ethical coping capacities

Wilcoxon signed-rank tests showed significant improvements in participants' comfort with ethical decision-making ($Z=-5.014$, $p<0.001$), professionalism ($Z=-2.673$, $p=0.008$) and teamwork ($Z=-2.357$, $p=0.018$).

Stress and coping – Perceived Stress Scale

Significant improvements were observed in several PSS items. Participants reported lower stress responses to unpredictable events ($Z=-3.525$, $p<0.001$), reduced feelings of lack of control ($Z=-3.842$, $p<0.001$) and fewer instances of feeling overwhelmed ($Z=-4.506$, $p<0.001$). Confidence in handling personal problems increased significantly ($Z=-2.891$, $p=0.004$), as did perceptions of being on top of responsibilities ($Z=-4.12$, $p<0.001$).

Stress and coping factor scores

Post training, the mean (standard deviation (SD)) perceived stress level decreased from 2.92 (0.54) to 2.51 (0.42), while coping skills improved from 3.26 (0.56) to 3.48 (0.44). Both differences were statistically significant ($p<0.001$) using paired *t*-tests. Fig. 1 provides a depiction of the decline in stress and the improvement in coping following the intervention.

Table 1. Participant demographic characteristics (N=45)

Characteristic	n (%)
Age 24 - 29 years	35 (77.8)
Male	30 (66.7)
Black African	42 (93.3)
Single	28 (62.2)
Living alone	30 (66.7)

Participants who were single reported higher pre-training stress ($M=3.19$) than those in relationships or married ($M=2.79$), a difference that remained post training, though attenuated. Similarly, those living alone had higher post-training stress ($M=2.59$) compared with those living with a partner or family ($M=2.37$). Coping skills were also significantly lower in those living alone pre training. No significant differences were found when comparing age or sex.

Participant engagement

Many participants engaged freely, and expressed appreciation for the opportunity to share experiences with colleagues, and for the guidance they received from the facilitators and from each other. Interaction between the participants and facilitators and among the participants themselves was observed by facilitators to be respectful, sometimes humorous and mostly supportive. There was one participant who described bullying by colleagues during the session. The session provided an opportunity for the participant to express their negative experience in a cathartic way (as described by them), and allowed opportunities to access advice on actions that they could take to address the issues with colleagues.

Discussion

This study provides preliminary evidence for the usefulness of a context-specific LSTP in supporting junior doctors' mental health during internship. Statistically significant reductions in perceived stress levels and improvements in coping suggest that a focused, multi-session intervention can positively influence mental wellbeing during one of the most demanding periods of early medical practice. The findings suggest enhanced workplace coping following the LSTP.

Other various LSTPs that have been implemented across diverse settings globally have similarly yielded benefits. From nursing education in Iran (Sahebalzamani *et al.*^[35]), public health leadership in Poland (Jaworski *et al.*^[36]) and community health workers in India (Sharma^[37]), to medical education in the USA (Brennan *et al.*^[34]), multidimensional benefits of LSTP interventions have been described. These benefits have been in areas such as psychological health (Sahebalzamani *et al.*^[35]), leadership development and professional identity (Jaworski *et al.*^[36]), empowerment through financial management and practical financial skills (Sharma^[37]) and

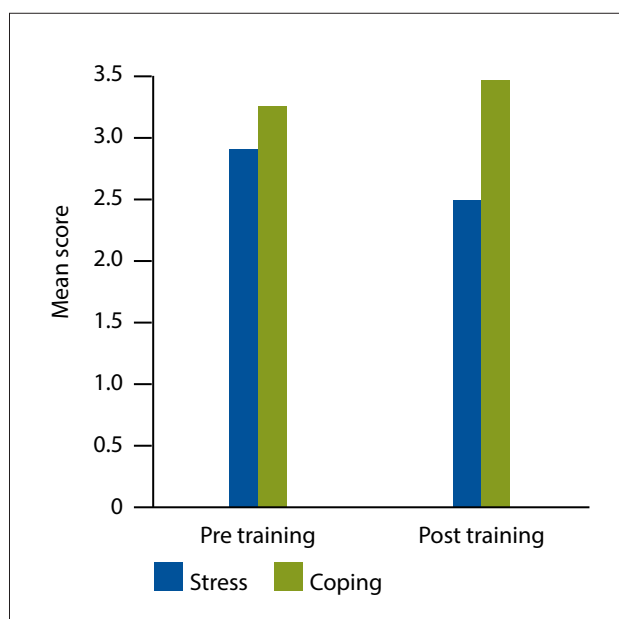


Fig. 1. Pre- and post-training stress and coping scores.

improved communication and clinical competence (Al Adnan^[38]). When taken with the findings of the current study, these benefits not only highlight the utility of LSTPs, but also suggest the necessity of embedding LSTPs systematically within health student and professional training programmes, such as medical internship in SA. Based on the evidence from the current study and other LSTP intervention studies, such integration has the potential to enhance individual resilience and adaptability, and also to contribute to the mental health and wellbeing of medical interns at a critical point in their professional development.

The tailored nature of the programme, which was driven by interns' own feedback during a pre-programme informal survey, may account for the high engagement, speaking to its relevance to participants' life experiences. Key themes such as ethical practice, professional identity, stress recognition and responsible substance use addressed both the practical and emotional challenges faced during internship.

On the one hand, the frequency of alcohol use remained stable. This should be understood with the following context in mind: the issue identified through the informal surveys of previous interns to help target specific focus areas for the content of the LSTP was problematic drinking, or the use of alcohol to deal with stress, and not social alcohol use *per se*. In the design of the content for substance misuse, the specific focus area was therefore the maladaptive use of alcohol and the concept of responsible drinking, rather than total abstinence from alcohol. The results show a decline in frequent alcohol use specifically for the purpose of coping with work-related stress. This suggests that the primary aim of the session on 'substance misuse and responsible drinking' was met, because alcohol was no longer used as a way to cope with work stress, further suggesting a shift away from unhealthy coping skills. Smoking rates remained relatively constant at 17.8%, with one participant (2.2% of 45) who reported smoking cessation.

Participants with social support (through relationships or cohabitation) exhibited lower stress and higher coping levels, both pre and post training. This underscores the buffering role of social relationships in managing workplace stress. These findings align with the broader literature in highlighting the importance of psychosocial factors in maintaining mental health.^[41-43] A similar protective effect has been described in doctors and in other high-pressure occupational settings.^[41-43] The value of this is that interventions can actively include cultivation and maintenance of social connections as part of wellness programmes for healthcare workers.

Although most stress-related items improved, factors such as controlling irritability and coping with cumulative demands did not show significant change. These may represent deeper or more persistent stress responses that require more intensive or alternative long-term interventions.

Study strengths and limitations

These findings are promising, but they must be interpreted with caution. A few of the PSS items had low paired response counts and minimal variability in scores. In some cases, identical pre- and post-training values limited the statistical validity of the Wilcoxon test. As such, while the general trend suggests improvement, the generalisability of item-level results is limited by missing data and reduced statistical power.

The LSTP was launched during the time of the COVID-19 pandemic, when healthcare workers were still struggling with the effects of the pandemic on their mental health and wellbeing. This LSTP was one of two new psychosocial interventions launched at the Department of Psychiatry during this time, with the LSTP specifically focused on interns. The sessions also had to include

an aspect of infection control for any group setting, and social distancing. The content of the LSTP deliberately included sessions on dealing with death and dying, identifying and managing unique stress signatures, and a focus on alcohol misuse for coping with stress and financial management. All of these represented challenges that had been described through informal surveys of previous interns, and described as amplified by the pandemic. Later studies also confirmed various effects of the pandemic on the mental health of doctors and healthcare workers. Despite these challenges, the pandemic presented an opportunity for healthcare workers to focus on their wellbeing as a result of pressures imposed by working under extreme pressure, including dealing with death.

Implementation of the intervention also benefited from integration of the sessions into the psychiatry rotation without requiring additional time over and above the usual rotation, and without encroaching on rotation time in other disciplines.

Other limitations of this study include the lack of a control group, which has implications for causal inferences to attribute observed changes solely to the intervention. Improvements may have been influenced by external factors such as difference in departmental rotations, clinical exposure, or peer interactions. The small sample size ($n=45$) and focus on a single hospital in a rural province limit the generalisability of findings to other settings, particularly urban or private-sector environments. The setting for the intervention was rural, which has potential implications for generalisability of results in other settings, where challenges faced by interns may be different. The measures relied on subjective self-reported experiences and perceptions, which may have been influenced by factors such as social desirability bias, particularly around such sensitive topics as substance use and coping with stress. Another limitation was the short data-collection period. The length of time was chosen for feasibility and logistical arrangements that enabled it to be delivered effectively. This was because the LSTP and the time for implementation and data collection had to be integrated into the psychiatry rotation (which is 8 weeks). As much as this posed a potential limitation, the design of the programme was deliberately structured to allow for completion of the programme and collection of data. The data generated from this current study can guide further research studies on scaling up the intervention, and assessment of its effects on mental health and wellbeing over a longer duration. In addition, the pre- and post-intervention assessments occurred 8 weeks apart, and therefore the durability of the changes over time is unknown. Lastly, some survey items had incomplete or unpaired responses, which may have reduced statistical power and precision in certain analyses.

Strengths include the use of a contextually grounded intervention, because the LSTP was co-designed with feedback from prior intern groups, enhancing relevance and cultural sensitivity to the unique stressors faced by junior doctors in a rural SA context. The high participation rate (80.4%) suggests good engagement and acceptability of the programme among interns. Use of validated instruments such as the PSS-10 strengthens the reliability of the findings. Real-world implementation of the intervention in a naturalistic clinical setting (during internship rotations) increases the ecological validity and the potential feasibility of broader integration into internship curricula. The outcome measures were multidimensional, and went beyond stress to include coping behaviours, ethical reasoning, professionalism and substance use, offering a holistic approach to intervention for supporting mental wellbeing. Implementation of the intervention also benefited from integration of the sessions into the psychiatry rotation, without requiring additional time over and above the usual rotation time and without encroaching on rotation time in other disciplines.

Relevance and recommendations

The relevance of the findings of this study to current practice include providing the first evidence on the utility and positive benefits of a LSTP intervention delivered in a naturalistic setting in SA. By affording an opportunity to integrate the intervention into the usual medical internship training and rotation, the feasibility of implementation at other sites becomes possible. However, this would depend on the capacity of the psychiatry department where the interns are doing their rotation, and would require training of facilitators to roll out the programme. A possible way around this may be to implement the programme earlier in the clinical years of training, as part of the psychiatry curriculum, although one would need to conduct a needs survey among medical students in their clinical years to ensure continued relevance of programme content.

Based on the findings, it is recommended that LSTPs be further researched for the role that they could play in broad intervention programmes for supporting junior doctors' mental wellbeing. Such studies should target larger samples, and have longitudinal follow-up at multiple sites to assess sustained impact. Exploration of a life skills programme and its relevance across medical disciplines and seniority levels may be a further avenue to explore, given the stress faced by all doctors across the profession.

Social connection has emerged as a mitigating factor, and occupational health intervention programmes should include aspects of reinforcing and enhancing social connectivity in work settings. Further studies would need to add a control group to allow for comparison, which would potentially strengthen causal inferences.

Conclusion

This article presented promising results of an LSTP intervention, with improvements noted in interns' stress and adaptive coping behaviours following attendance of the 8-week training. Further research targeting bigger sample sizes and across different settings may determine whether this or similar interventions could be integrated successfully into medical internship training programmes in the near future.

Data availability. The anonymised data set in support of findings reported in this article is available upon reasonable request from the corresponding author (ZZ).

Declaration. None.

Acknowledgements. The authors thank the NMAH Mental Health Team for supporting implementation of the programme, and all medical interns who rotated in the NMAH Department of Psychiatry during the implementation of the programme.

Author contributions. ZZ conceptualised and developed the training programmes and wrote the manuscript. ZZ, SVW and YT contributed to the development of the research protocol and writing of the manuscript. EA contributed to the protocol development and collection of data.

Funding. None.

Conflicts of interest. None.

- Barber C, Geneser WM. Drug and alcohol rehab for doctors near me. American Addiction Centers, 2022. <https://americanaddictioncenters.org/healthcare-professionals/rehab-for-doctors> (accessed 18 February 2026).
- Arora S, Sevdalis N, Nestel D, Woloshynowych M, Darzi A, Kneebone R. The impact of stress on surgical performance: A systematic review of literature. *Surgery* 2010;147(3):318-330. <https://doi.org/10.1016/j.surg.2009.10.007>
- Avramenko S, Valli A, Hope G, Libhaber E, Glory A. Stress and burnout in doctors working at a regional hospital in Gauteng. *S Afr J Psychiatr* 2014;20(3):114-115.
- Bagdey P, Parmar D, Adikane H. Job stress among interns of a tertiary care hospital in central India. *Scholars J Applied Med Sci* 2016;4(8):3128-3131.
- Baldisseri MR. Impaired healthcare professional. *Crit Care Med* 2007;35(Suppl 2):S106-S116. <https://doi.org/10.1097/01.CCM.0000252918.87746.96>
- Bennett J, O'Donovan D. Substance misuse by doctors, nurses and other healthcare workers. *Curr Opin Psychiatr* 2001;14(3):195-199. <https://doi.org/10.1097/00001504-200105000-00006>
- Caplan RP. Stress, anxiety, and depression in hospital consultants, general practitioners, and senior health service managers. *BMJ* 1994;309(6964):1261-1263. <https://doi.org/10.1136/bmj.309.6964.1261>
- Cooke GP, Doust JA, Steele MC. A survey of resilience, burnout, and tolerance of uncertainty in Australian general practice registrars. *BMC Med Educ* 2013;13(2):1-6. <https://doi.org/10.1186/1472-6920-13-2>
- Devi S. Doctors in distress. *Lancet* 2011;377(9764):454-455. [https://doi.org/10.1016/S0140-6736\(11\)60145-1](https://doi.org/10.1016/S0140-6736(11)60145-1)
- Dubale BW, Friedman LE, Chemali Z, et al. Systematic review of burnout among healthcare providers in sub-Saharan Africa. *BMC Public Health* 2019;19(1):1-20. <https://doi.org/10.1186/s12889-019-7566-7>
- Dyrbye LN, West CP, Satele D, et al. Burnout among US medical students, residents, and early career physicians relative to the general US population. *Acad Med* 2014;89(3):443-451. <https://doi.org/10.1097/ACM.0000000000000134>
- Ebrahimi S, Kargar Z. Occupational stress among medical residents in educational hospitals. *Ann Occup Environ Med* 2018;30(1):1-6. <https://doi.org/10.4088/PCC.20com02867>
- Lai J, Ma S, Wang Y, et al. Factors associated with mental health outcomes among health care workers exposed to Coronavirus disease 2019. *JAMA Netw Open* 2020;3(3):1-12. <https://doi.org/10.1001/jamanetworkopen.2020.3976>
- Kakarala SE, Prigerson HG. COVID-19 and increased risk of physician suicide: A call to identify the US medical system. *Front Psychiatr* 2022;13:791752. <https://doi.org/10.3389/fpsy.2022.791752>
- Uvais NA. Suicide of doctors during the COVID-19 pandemic. *Prim Care Companion CNS Disord* 2021;23(1):20com02867. <https://doi.org/10.4088/PCC.20com02867>
- Zingela Z, van Wyk S, Bronkhorst A, Groves C. Developing a healthcare worker psychological preparedness support programme for the COVID-19 outbreak. *S Afr J Psychiatr* 2022;28(1):1-12. <https://doi.org/10.4102/sajpsychiatry.v28i0.1665>
- Naidoo T, Tomita A, Paruk S. Burnout, anxiety and depression risk in medical doctors working in KwaZulu-Natal Province, South Africa: Evidence from a multi-site study of resource-constrained government hospitals in a generalised HIV epidemic setting. *PLoS ONE* 2020;15(10):1-14. <https://doi.org/10.1371/journal.pone.0239753>
- Arora S, Aggarwal R, Moran A, et al. Mental practice: Effective stress management training for novice surgeons. *J Am Coll Surg* 2011;212(2):225-233. <https://doi.org/10.1016/j.jamcollsurg.2010.09.025>
- Mavroforou A, Giannoukas AD, Michalodimitrakis E. Alcohol and drug abuse among doctors. *Med Law* 2006;25(4):611-625. <https://pubmed.ncbi.nlm.nih.gov/17263030/> (accessed 18 February 2026).
- Shanafelt TD, Boone S, Tan L, et al. Burnout and satisfaction with work-life balance among US physicians relative to the general US population. *Arch Intern Med* 2012;172(18):1377-1385. <https://doi.org/10.1001/archinternmed.2012.3199>
- Elhadi M, Mshergahi A, Elgzairi M, et al. Psychological status of healthcare workers during the civil war and COVID-19 pandemic: A cross-sectional study. *J Psychosomatic Res* 2020;137:110221. <https://doi.org/10.1016/j.jpsychores.2020.110221>
- Shanafelt TD, Sloan JA, Habermann TM. The well-being of physicians. *Am J Med* 2003;114(6):513-519. [https://doi.org/10.1016/s0002-9343\(03\)00117-7](https://doi.org/10.1016/s0002-9343(03)00117-7)
- West CP, Huschka MM, Novotny PJ, et al. Association of perceived medical errors with resident distress and empathy: A prospective longitudinal study. *JAMA* 2006;296(9):1071-1078. <https://doi.org/10.1001/jama.296.9.1071>
- Medscape. 'Death by 1000 Cuts': Medscape National Physician Burnout and Suicide Report 2021. New York: WebMD, 2021. <https://www.medscape.com/slideshow/2021-lifestyle-burnout-6013456> (accessed 18 February 2026).
- Wallace JE, Lemaire JB, Ghali WA. Physician wellness: A missing quality indicator. *Lancet* 2009;374(9702):1714-1721. [https://doi.org/10.1016/S0140-6736\(09\)61424-0](https://doi.org/10.1016/S0140-6736(09)61424-0)
- Shanafelt T, Trockel M, Ripp J, Murphy ML, Sandborg C, Bohman B. Building a program on well-being: Key design considerations to meet the unique needs of each organisation. *Acad Med* 2019;94(2):156-161. <https://doi.org/10.1097/ACM.00000000000002415>
- National Academy of Medicine. Action collaborative on clinician well-being and resilience network organisations. Washington DC: National Academy of Medicine, 2018. <https://nam.edu/action-collaborative-on-clinician-well-being-and-resilience-network-organizations/> (accessed 18 February 2026).
- Health Professions Council of South Africa. First Quarterly Report, 2022/23. Pretoria: HPCSA, 2023.
- OR Tambo District Municipalities, Eastern Cape Province. Profile and analysis – district development model. Pretoria: Department of Cooperative Governance and Traditional Affairs, 2020. <https://www.coga.gov.za/ddm/wp-content/uploads/2020/11/ORTamco-September-2020.pdf> (accessed 5 April 2023).
- Aslinejad MA, Alemi A, Tajaddodi M. Life Skills. 1st ed. Mashhad: Ney Negar Publication, 2008.
- Bar-Sela G, Lulav-Grinwald D, Mitnik I. 'Balint group' meetings for oncology residents as a tool to improve therapeutic communication skills and reduce burnout level. *J Cancer Educ* 2012;27(4):786-789. <https://doi.org/10.1007/s13187-012-0407-3>
- Bragard I, Etienne A-M, Merckaert I, Libert Y, Razavi D. Efficacy of communication and stress management training on medical residents' self-efficacy, stress to communicate and burnout: A randomised controlled study. *J Health Psychol* 2010;15(7):1075-1081. <https://doi.org/10.1177/1359105310361992>
- Branch WT Jr, Frankel R, Gracey CF, et al. A good clinician and a caring person: Longitudinal faculty development and the enhancement of the human dimensions of care. *Academic Med* 2009;84(1):117-125. <https://doi.org/10.1097/ACM.0b013e3181900f8a>
- Brennan J, McGrady A. Designing and implementing a resiliency program for family medicine residents. *Int J Psychiatr Med* 2015;50(1):104-114. <https://doi.org/10.1177/0091217415592369>
- Sahebzamani M, Farahani H, Feizi F. Efficacy of life skills training on general health in students. *Iranian J Nurs Midwifery Res* 2012;17(7):553-555. <https://pubmed.ncbi.nlm.nih.gov/23922605/> (accessed 18 February 2026).
- Jaworski M, Panczyk M, Cieslak I, et al. The role of life skills in developing an authentic leadership attitude in public health students: A multicenter cross-sectional study in Poland. *BMC Public Health* 2022;22:1485. <https://doi.org/10.1186/s12889-022-13907-1>
- Sharma S. Evaluation of a training program for life skills education and financial literacy of Accredited Social Health Activists (ASHAs) in India. *BMC Health Serv Res* 2021;21(1):46. <https://doi.org/10.1186/s12913-020-06025-4>
- Al Adnan A. Effectiveness of communication skills training in medical students using simulated patients or volunteer outpatients. *Cureus* 2022;14(7):e26717. <https://doi.org/10.7759/cureus.26717>
- Municipalities of South Africa. OR Tambo District Municipality – demographic information. <https://municipalities.co.za/demographic/106/or-tambo-district-municipality> (accessed 26 April 2023).
- Cohen S, Kamarck T, Mermelstein R. A global measure of perceived stress. *J Health Soc Behav* 1983;24(4):385-396. <https://doi.org/10.2307/2136404>
- Wang B, Zhong X, Fu H, et al. Effect of social support on anxiety of medical staff one year after the COVID-19 epidemic: The mediating role of emotional characteristics of risk perception and resilience. *Scient Rep* 2022;12:21590. <https://doi.org/10.1038/s41598-022-25126-0>
- Xu C, Wang Y, Wang Z, et al. Social support and coping style of medical residents in China: The mediating role of psychological resilience. *Front Psychiatr* 2022;13:888024. <https://doi.org/10.3389/fpsy.2022.888024>
- Gui J, Liang K, Yang Y, et al. Protective and risk factors of social support for healthcare workers in high-pressure occupational settings. *Front Psychol* 2025;16:1547777. <https://doi.org/10.3389/fpsyg.2025.1547777>

Received 12 June 2025; accepted 9 September 2025.