Residency training: a period of risk for mental health?

Ricard Navinés[1]
https://orcid.org/0000-0002-6999-7510

Victoria Olivé[2]
https://orcid.org/0000-0002-2015-4678

Rocio Martín-Santos[1,3]
https://orcid.org/0000-0003-4150-4726

[1] Servicio de Psiquiatría y Psicología, Hospital Clínic, Instituto de Investigación Biomédica August Pi i Sunyer (IDIBAPS), Departamento de Medicina, Universidad de Barcelona (UB), y Centro de Investigación Biomédica en Red de Salud Mental (CIBERSAM), Barcelona, España.
[2] Servicio de Prevención de Riesgos Laborales, Hospital Clínic, y Departamento de Medicina, Universidad de Barcelona (UB), Barcelona, España.
[3] National Institute for Translational Medicine (INCT-TM), CNPq, Ribeirão Preto, SP, Brazil.

Received: 10/24/2019 – **Accepted:** 10/28/2019
DOI: 10.1590/0101-60830000000214

Navinés R et al. / Arch Clin Psychiatry. 2019;46(6):143-4

There is currently a wide-ranging international debate[1-3] on whether the residency period constitutes a health risk for resident physicians. The importance of this debate is reflected in the rise of resident associations in national and international scientific societies[4], the programming of seminars, workshops and presentations at national and international conferences[5] and the creation of specific care programs for professionals with health problems, including mental health problems[3,6].

For most residents, the period of training in their speciality involves a general level of activation that is stimulating and profitable, and they manage to adapt progressively to the professional environment without major problems. However, in some residents the training period may trigger their stress response, which, if prolonged in time and intensity, prevents adequate adaptation and may lead to psychobiological exhaustion or burnout[1,3].

The term "stress" refers to the state of anti-homeostatic biological activation that occurs when the organism fails to adapt to the demands of its immediate environment[7]. Certain occupations, among them the healthcare professions, are considered "highly stressful" and are associated with elevated sick leave rates[2]. Several studies of stress in resident physicians indicate that this group of professionals is especially vulnerable[2,6]. The risk factors that have been detected in health practitioners are related either to the profession itself, such as attention to serious pathologies, difficulties in communicating with patients/family, long working hours, or to its organization: excessive workload, lack of supervision, lack of participation in organization, lack of incentives, and the difficulty of combining work with family and social life[2]. It is also known that repeated or prolonged stress tends to precede the burnout syndrome, described as a state of dissatisfaction with one's job due to the working conditions[2,7].

Recently, the WHO resolved to include burnout syndrome as an occupational phenomenon in the new version of the international diagnostic classification (ICD-11) (https://www.who.int/mental_health/evidence/burn-out/en/). However, the DSM-V does not consider it as a specific syndrome. Traditionally, burnout has been evaluated at the clinical level using the Maslach Burnout Scale, which measures the three main dimensions of the syndrome: emotional exhaustion, depersonalization, and personal accomplishment. Emotional exhaustion refers to the experience of being emotionally exhausted by the demands of work. Depersonalization values the degree to which respondents recognize attitudes of coldness and distancing from people. Finally, the personal accomplishment dimension evaluates feelings of self-efficacy and personal achievement at work[8].

In a recent systematic review and meta-analysis[9] of 61 cross-sectional and cohort observational studies including more than 22,000 residents from different specialties and countries in America, Asia and Europe, the overall prevalence of burnout evaluated using the Maslach questionnaire was 51.0% (95% CI: 45.0%-57.0%). This prevalence was higher than the rate reported in a previous systematic review and meta-analysis[10] of 26 cross-sectional studies from different countries including almost 5,000 medical and surgical residents evaluated with the same questionnaire, which showed an overall prevalence of 35.7% (95% CI: 26.8%-43.5%).

A wide variety of individual and psychosocial factors can affect burnout rates in resident physicians. Regarding gender and age, the results are contradictory. In the systematic review by Low et al.[9] male gender was a risk factor, as was older age, but in the review by Rodrigues et al.[10] female gender and younger age were reported to be risk factors. Being married or with a partner seems to protect against burnout[11]. Childcare responsibilities may have a humanizing effect, lowering depersonalization scores rather than adding stress[11]. Moreover, it seems that residents in certain cultures experience a lower level of burnout and less emotional exhaustion and depersonalization than others[11]. With regard to personality traits, neurotic and introverted personalities appear to be at the highest risk, and extroversion appears to be a protective factor[12]; residents with "high cooperation" were more prone to emotional exhaustion and those with high "harm avoidance" and "low self-direction" were significantly more prone to depressive states[13]. Several studies have found emotional intelligence to be a strong predictor of well-being during residency and to protect against burnout[14]. The main psychosocial risk factors for the appearance of burnout are excessive work pressure, long hours, feeling of lack of control at work, and lack of supervision[1].

Another widely discussed issue is the difference between specialities, since burnout is more prevalent in surgery and emergency care than in medical specialities[10]. One study that included residents of psychiatry showed a prevalence of 43%[9]. In general, the main factors influencing burnout are first year residency, recent family stressors, and dissatisfaction with the speciality chosen. In the case of residents in psychiatry, the two situations that cause the highest levels of stress are coping with patients' suicidal ideation and aggressiveness[11].

There is also increasing evidence of the benefit for general and mental health of leading a healthy lifestyle, with a certain amount of physical exercise and socialization. One of the factors seen to influence and even predict the appearance of stress and burnout is

Address for correspondence: Ricard Navinés. Hospital Clínic, Universidad de Barcelona, IDIBAPS y CIBERSAM. Villarroell, 170. 08036 – Barcelona, Spain. Telephone: +34 93 2275494.
Email: rnavines@clinic.cat

the decrease in sleep hours, which has been related to an increase in the number of hours of work[15]. In addition, rates of physical exercise tend to fall during residency, even though physical activity has been associated with lower physician burnout and improved personal and professional quality of life[2].

The in-work activities that residents associate with relaxation are the possibility of having time to review clinical notes, to chat with patients, and to study and review articles. Also, spaces where to relax (i.e., offices) and time to talk or comment on patients have been found to lower levels of stress among professionals[16]. Unfortunately, these spaces (both physical and temporal) tend to be in short supply in the workplace. For its part, developing mindfulness skills has been shown to be an important protective factor in several recent studies is[2,10].

In summary, the prevalence of stress and burnout during residence is high. The risk depends on individual factors regarding styles for coping with stressful stimuli, although the most decisive factor appears to be the resident's working conditions. Although the training plan tries to combine the acquisition of clinical, teaching and research skills, it is often very difficult to implement in everyday practice, with high workloads, poor control and supervision, lack of free time and reduced hours of sleep which all make the development of maladaptive responses in residents more likely.

The prevention of burnout symptoms during residency is an issue that remains largely unaddressed, despite its enormous repercussions both at the individual level and in the provision of adequate care to the patients treated.

References

1. Ironside K, Becker D, Chen I, Daniyan A, Kian A, Saheba N, et al. Resident and faculty perspectives on prevention of resident burnout: A focus group study. Perm J. 2019;23. doi: 10.7812/TPP/18-185.
2. Sharp M, Burkart KM. Trainee wellness: Why It matters, and how to promote It. Ann Am Thorac Soc. 2017;14(4):505-12.
3. Meeks LM, Ramsey J, Lyons M, Spencer AL, Lee WW. Wellness and work: mixed messages in residency training. J Gen Intern Med. 2019l;34(7):1352-5.
4. Carrion DM, Gómez Rivas J, Esperto F, Patruno G, Vasquez JL. Current status of urological training in Europe. Arch Esp Urol. 2018;71(1):11-7.
5. Bitran M, González M, Nitsche P, Zúñiga D, Riquelme A. Concern for residents' wellbeing, an issue discussed at the latin american conference on resident education (LACRE) 2017. Rev Med Chil. 2017;145(10):1330-5.
6. Zabar S, Hanley K, Horlick M, Cocks P, Altshuler L, Watsula-Morley A, et al. "I cannot take this any more!" Preparing interns to identify and help a struggling colleague. J Gen Intern Med. 2019;34(5):773-7.
7. Navinés R, Martín-Santos R, Olivé V, Valdés M. Work-related stress: Implications for physical and mental health. Med Clin (Barc). 2016;146(8):359-66.
8. Maslach C, Jackson SE. The measurement of experienced burnout. J Occup Behav 1981;2:99-113.
9. Low ZX, Yeo KA, Sharma VK, Leung GK, McIntyre RS, Guerrero A, et al. Prevalence of burnout in medical and surgical residents: A Meta-Analysis. Int J Environ Res Public Health. 2019;16(9). pii: E1479.
10. Rodrigues H, Cobucci R, Oliveira A, Cabral JV, Medeiros L, Gurgel K, et al. Burnout syndrome among medical residents: A systematic review and meta-analysis. PLoS One. 2018 12;13(11):e0206840.
11. Ishak WW, Lederer S, Mandili C, Nikravesh R, Seligman L, Vasa M, et al. Burnout during residency training: a literature review. J Grad Med Educ. 2009;1(2):236-42.
12. Prins DJ, van Vendeloo SN, Brand PLP, Van der Velpen I, de Jong K, van den Heijkant F, et al. The relationship between burnout, personality traits, and medical specialty. A national study among Dutch residents. Med Teach. 2019;41(5):584-90.
13. Miyoshi R, Matsuo H, Takeda R, Komatsu H, Abe H, Ishida Y. Burnout in Japanese residents and its associations with temperament and character. Asian J Psychiatr. 2016;24:5-9.
14. Cofer KD, Hollis RH, Goss L, Morris MS, Porterfield JR, Chu DI. Burnout is associated with emotional intelligence but not traditional job performance measurements in surgical residents. J Surg Educ. 2018;75(5):1171-9.
15. Söderström M, Jeding K, Ekstedt M, Perski A, Akerstedt T. Insufficient sleep predicts clinical burnout. J Occup Health Psychol. 2012;17(2):175-83.
16. Benson NM, Chaukos D, Vestal H, Chad-Friedman EF, Denninger JW, Borba CPC. A qualitative analysis of stress and relaxationt contributing to burnout in first-year psychiatry and medicine residents. Acad Psychiatry. 2018;42(5):630-5.