

---住院醫師與指導醫師篇

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近年死亡醫師年齡暨性別統計

	2006	2007	2008	2009	4年內
男-死亡人數	129	140	161	137	567
男-平均死亡年齡	73.17	74.7	74.52	76.05	74.63
女-死亡人數	6	4	2	2	14
女-平均死亡年齡	60.67	81.5	71.5	69.5	69.43
全部-死亡人數	135	144	163	139	581
全部-平均死亡年齡	72.61	74.89	74.48	75.96	74.5

資料來源:中華民國醫師聯合會網站





Table 2. SMR and CMR for ages 20-79 (CMR₂₀₋₇₉) for Taiwanese doctors in different specialties, 1990-2006

Specialty	Total number	No. of deaths observed	No. of deaths expected	SMR	CMR ₂₀₋₇₉
All doctors	37 545	1686	5623	0.30**	0.25
Surgeon	4571	161	541	0.30**	0.27
Internist	18 664	1190	3578	0.33**	0.27
Dermatologist	901	35	104	0.34**	0.34
Otolaryngologist	2000	45	217	0.20**	0.22
Ophthalmologist	1584	42	200	0.21**	0.24
Pathologist	414	5	37	0.14**	0.06
Paediatrician	2883	54	273	0.20**	0.16
Psychiatrist	1214	21	111	0.19**	0.15
Radiologist	1076	18	97	0.18**	0.14
Obstetrician	2278	85	303	0.28**	0.23
Orthopaedist	1128	14	102	0.14**	0.10
Anaesthesiologist	832	16	60	0.27**	0.24



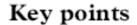


Table 3. Main causes of death in Taiwan in 2000 and the doctor's SMRs compared with the general population of Taiwan

Causes of death	No. of deaths observed	No. of deaths expected	SMR	95% CI
Malignant neoplasm	490	1,234	0.40**	0.36-0.43
Cerebrovascular disease	149	545	0.27**	0.23-0.32
Heart disease	139	212	0.65**	0.55 - 0.77
Accidents	66	552	0.12**	0.09 - 0.15
Diabetes mellitus	69	192	0.36**	0.28 - 0.45
Chronic liver disease	48	287	0.17**	0.12 - 0.22
Kidney disease	31	96	0.32**	0.22 - 0.46
Pneumonia	55	164	0.34**	0.25 - 0.44
Suicide	23	166	0.14**	0.09 - 0.21
Chronic lung disease	32	115	0.28**	0.19 - 0.39
Hypertensive disease	17	4	4.06**	2.36-6.50



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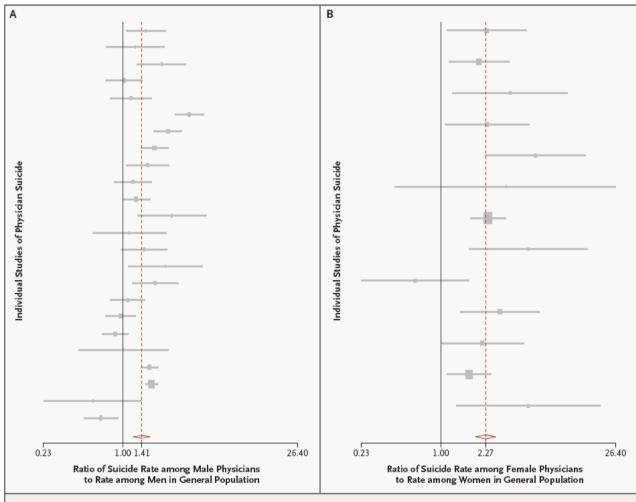


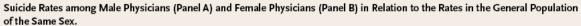
- The mortality rates of Taiwanese doctors with all specialties were much lower than those of the general population.
- Without obtaining the real denominators for different age groups, the age at death does not reflect the real mortality rates.
- Doctors were less likely to die from nearly all causes, including suicide and accidental poisoning.

Occupational Medicine 2011;61:29-32









The size of each box represents the relative size of the study sample, and the horizontal line that intersects the box indicates the 95 percent confidence interval. The dashed red line in each panel indicates the combined estimate. The diamond-shaped box represents the confidence interval. The data are from a meta-analysis by Schernhammer and Colditz.¹



Physician Suicide in Taiwan, 2000–2008: Preliminary Findings

Yi-Ju Pan, 1,2 Ming-Been Lee, 1,3,4 * Chung-Shao Lin3

Research regarding physician suicide in Taiwan is lacking. Using national physician insurance data from January 1, 2000 to April 30, 2008, the present study aimed to explore the association between physicians' suicide and their characteristics, including age, sex, specialties, area of residence, hospital types, and suicide methods. The majority (53.1–70.6%) of suicide cases occurred among physicians in their 40s. More suicides were reported among physicians serving in the community, living in urban areas, and from specialties such as general practice, family practice, psychiatry, and surgery. The leading suicide methods were hanging/suffocation, drowning, jumping from heights, charcoal burning and drug poisoning. In conclusion, physicians committing suicide were likely to be in their 40s, to serve in the community and to live in urban areas. Future efforts should focus on exploring the causes and possible interventions for physician suicide. [*J Formos Med Assoc* 2009;108(4):328–332]



Table 1. Age distributions for definite suicide cases, definite and probable suicide cases, and cases of unspecified causes of death*[†]

Age (yr)	Definite suicide cases $(n = 17)$	Definite and probable suicide cases $(n=32)$	Cases of unspecified causes $(n=108)$
≤30	1 (5.9)	1 (3.1)	2 (1.9)
31–40	2 (11.8)	5 (15.6)	2 (1.9)
41–50	12 (70.6)	17 (53.1)	8 (7.4)
51–60	0 (0)	2 (6.3)	13 (12.0)
61–70	2 (11.8)	4 (12.5)	13 (12.0)
71–80	0 (0)	2 (6.3)	39 (36.1)
≥81	0 (0)	1 (3.1)	31 (28.7)

^{*}Data provided by Taiwan Medical Association; †data presented as n (%).

Table 2. Distributions of hospital types for definite suicide cases, definite and probable suicide cases, and cases of unspecified causes of death*[†]

Hospital type	Definite suicide cases $(n = 17)$	Definite and probable suicide cases $(n=32)$	Cases of unspecified causes $(n = 108)$
Clinics/district hospitals	9 (52.9)	19 (59.4)	69 (63.9)
Regional hospitals	2 (11.8)	5 (15.6)	3 (2.8)
Medical centers	5 (29.4)	5 (15.6)	5 (4.6)
Not practicing	1 (5.9)	3 (9.4)	31 (28.7)

^{*}Data provided by Taiwan Medical Association; †data presented as n (%).



Table 1. Crude suicide rates, crude suicide rate ratios and age-adjusted suicide rate ratios by gender and occupation for white males and females, 26 US states, 1984–92

Gender	Occupation group	Deaths	Person-years	Group rate ^a	Population rate ^a	Rate ratio ^b	SRR ^c (95% CI)
Male	Physicians	181	851 058 282 399	21.3	27.2	0.78	0.80 (0.53–1.20)
Male Female	Dentists Physicians	61 22	186 185	21.6 11.8	27.2 5.7	0.79 2.06	0.68 (0.52–0.89) 2.39 (1.52–3.77)

^aPer 100 000 person-years.

Occupational Medicine 2008;58:25-29

Key points

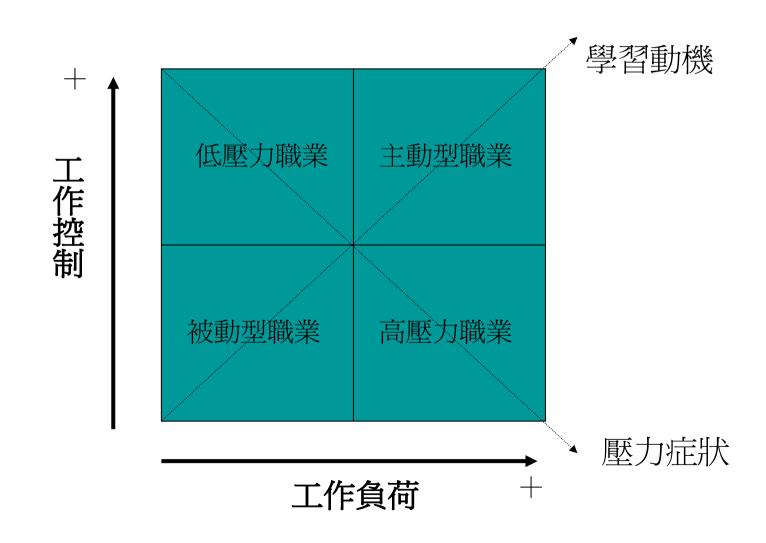
- Rate ratios for suicide in physicians and dentists cannot be approximated by ratios of proportional deaths.
- White female physicians have an elevated suicide rate, but only older white male physicians and dentists have elevated suicide rates.
- White male dentists have a suicide rate which is similar to that for white male physicians.



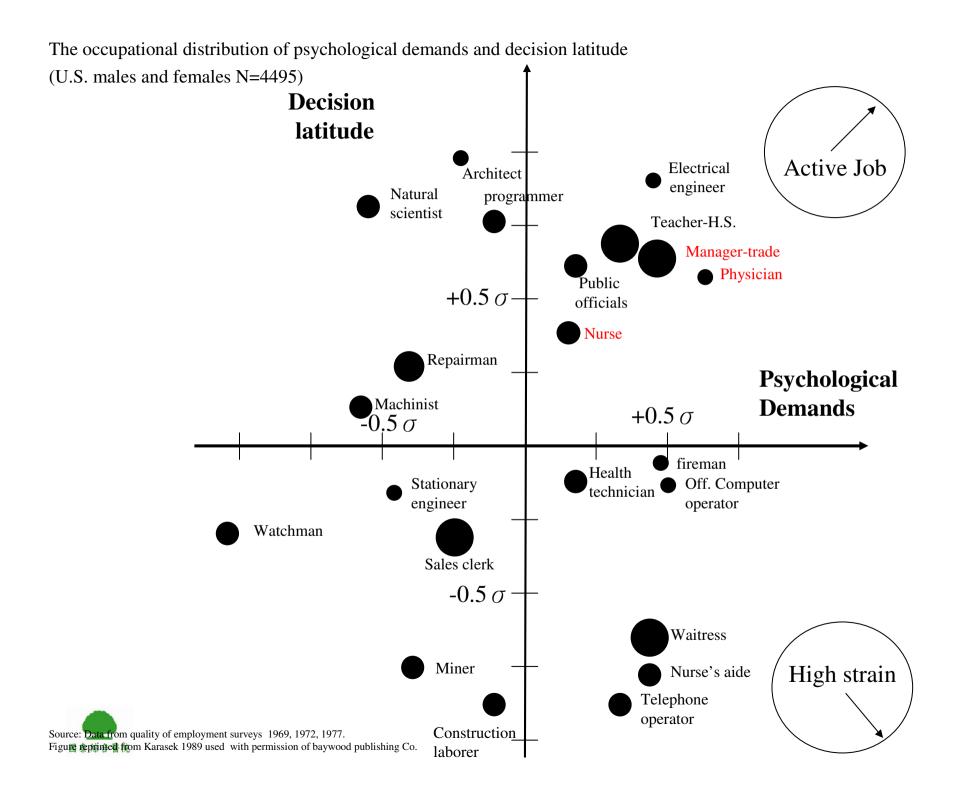
^bGroup rate divided by population rate.

^cSRR = directly standardized death rate ratio.

工作性質的影響: Karasek「控制-負荷模型」







Stress on well-trained physicians

- 社會文化變遷
- 法律問題
- 保險給付方式
- 過多的文書作業
- 收入減少
- 健保規範影響醫師自主能力
- 醫病關係變差
- 病患不合理的期待
- 對應於身為醫師的責任感
- 職場發展與家庭生活的衝突



住院醫師常見的壓力源

- 情境壓力 (例如睡眠剝奪,沉重的工作負擔)
- 專業壓力(例如病患照顧的責任,生涯規劃, 健康照護型態的變遷)
- 個人壓力(例如經濟議題,因應策略技巧不足,家庭問題)



The Context: Residency Training

- Sleep deprivation and fatigue
- Limited time for family/friends and social/recreational activities
- Common obsessive-compulsive style of the house officer
- Emphasis on professional development at the expense of personal growth
- Financial pressures/medical school debts
- Assumption of the responsibilities of marriage and parenting



The Context: Residency Training

- Geographical relocation with loss of friendships and the support of close family
- Transition from the student role to that of physician (responsibility for patient care)
- Difficulty asking for help
- Access to addictive substances



The tradition of working long hours

- Those good old days
- The Men of Steel
- Compulsory triad
- The rite of passage
- Essential to proper learning
- Fiscal consideration



醫師工作時數的計較 (2011/05/10蘋果日報 謝炎堯)

- 限制住院醫師工作時數,尤其是外科系住院醫師,會發生訓練手術和進行手術中斷的不良後果,因此,許多醫院沒有遵守,該委員會就以不承認住院醫師訓練資格處罰。有些醫院則以減少值班醫師人力配置作因應,如此反而影響病人的照顧品質。如果完全遵守,又能聘請到全額住院醫師時,人事費用會增加約為14億至18億美元,必然反映到醫療費用。
- 主治醫師而言,任何文明國家都沒有規定工作時數,而是主治醫師依據醫學倫理,包辦照顧病人的任務,因此,沒有工作時數的限制,當然沒有所謂加班這回事。筆者當年在台大醫院接受住院醫師訓練時,每周工作約為96小時,1970年在現在遭逢砲火攻擊的利比亞密蘇拉達醫院服務時,有數個月全城只有我一個內科系醫師,夜以繼日照顧內科和小兒科病人,沒有把我累死。
- 返國後,負責全台灣唯一的台大醫院加護病房(當時採用日本名稱急救室),工作和《蘋果日報》介紹的現任台大醫院創傷科柯文哲主任類似(2011年5月7日),如今活到74歲,仍然健康,我有足夠的理由批評根據工作時數判定「過勞死」的不當行政作業。



從本土研究看醫師過勞(2011/05/10蘋果日報 林煜軒)

- 筆者擔任實習醫師時期,即有感於此問題的迫切性,故以自己的同學為研究對象,探討值班對身心層面的衝擊。該研究成果已獲得國際知名期刊《STRESS》(壓力研究)接受刊載。
- ···內科病房,平均每周工作時數86.7小時,且每個月需值10班,包含2天的假日班;在值班當天必須從早上7點30分開始工作,至隔日下午5點,共計連續工作33.5小時,沒有任何的補休。此外,上述的工作時數,僅是醫院表定的作息時間…實際工作的時間,超過以上描述。
- Seff的愛普沃斯嗜睡量表 (Epworth Sleepiness Scale) 平均超過10分,這個分數是在嚴重嗜睡疾病,如猝睡症、睡眠呼吸中止症才會出現的狀況。再以心率變異性探討自律神經功能,發現值班時的夜間工作以及內科期間的夜間睡眠,交感神經受到抑制;值班隔天的晚上,副交感神經趨於活躍——這分別相當於吃下高劑量與低劑量的安眠藥史蒂諾斯 (Zolpidem) 後自律神經的改變。
- 超時工作如同酗酒:耐人尋味的是,本篇論文曾投稿至歐洲數本著名的職業醫學期刊,皆被婉拒。其中一本期刊的主編來函指出:「我不相信一位實習醫師訓練,需要這麼多的工作時數;您在論文中所提及的數據,據我所知,從未出現在歐洲任何一家醫院裡。」美國醫學會期刊(JAMA)曾報導,在一個月值4至6班後,醫師表現約等同於血液中0.05%的酒精濃度;或許主編對這篇台灣醫師一個月要值10班感到不可思議,而懷疑了論文的真實性。



The necessity of working long hours

- Benefits for learning
- Benefits for developing professionalism
- Benefits for better continuity of care
- Benefits for better patient satisfaction



Why long work hours?

"You learn how to be a doctor during the day,

but learn to be a doctor at night"



PGY1 醫師深刻感受壓力之程度(一)

工作情境壓力

- 睡眠不足(69.7%)
- 值班時要常常保持警覺(67.4%)
- 負擔過多之文書雜務及行政責任(63.4%)
- 工作時被瑣碎雜事打斷(62.0%)
- 工作過量 (61.6%)
- 隨時在備戰狀態 (58.6%)
- 工作上的付出影響到家庭生活(52.1%)
- 在夜間或清晨接到電話(51.0%)
- 工作時限的壓力(50.0%)

情緒/病患需求壓力方面

- * 害怕做錯事 (55.1%)
- 害怕引起訴訟事件(55.0%)
- 自己的角色被別人不切實際的過高期待(34.6%)



PGY1 醫師深刻感受壓力之程度 (二)

醫學臨床技能方面之壓力

- 摘要病人冗長之過去疾病史(28.3%)
- 掌握病人目前疾病的進展狀況(22.5%)。

親友生病與臨終病患處置之壓力

• 處理臨終病人及其家屬問題(28.1%)

個人因素壓力內容

- 要求醫師在工作上也需做最經濟合算的決定 (42.0%)
- 擔心自己的財務問題(21.2%)





Table 3. Hierarchical regression analysis of predictors to burnout among 555 PGY-1 residents in Taiwan, 2007.

			Standardized coefficient	ts beta and significance	es
Dependent varia	variable: burnout bles	Model 1	Model 2	Model 3	Model 4
Block 1	Gender	0.084	0.080*	0.114**	0.114**
Block 2	Job stress Weekly work-hour		0.358*** 0.296***	0.206*** 0.305***	0.212*** 0.268***
Block 3	Neuroticism Extraversion Openness to experience Agreeableness Conscientiousness			0.068 -0.246*** -0.062 -0.088* 0.016	-0.054 -0.184*** -0.065 -0.057 0.108*
Block 4	Positive affectivity Negative affectivity Problem-focused Engagement Emotion-focused Engagement Problem-focused Disengagement Emotion-focused Disengagement Social support				-0.105* 0.227*** -0.068 -0.057 0.188*** -0.077 0.021
	Adjusted R square R square change F	0.005 0.007 0.323	0.249 0.247 51.371***	0.346 0.104 31.168***	0.392 0.054 20.581***







Practice points

- First postgraduate year (PGY-1) residents perceived their working situations, emotional pressures and demands from patients as their primary sources of stress.
- Residents had the strength of medical professional as exhibited less neuroticism, more positive affectivity and tended to use engagement coping strategies.
- However, high levels of burnout were demonstrated.
 Job stress and long work hours played important roles in
 burnout. Furthermore, introversion, conscientiousness,
 having negative affectivity and using disengagement
 coping also predicted burnout.
- For early identification of residents at risk of burnout, emphasis should be placed on assessing their workrelated stresses and exploring their personal characteristics.



2010; 32: 400-407





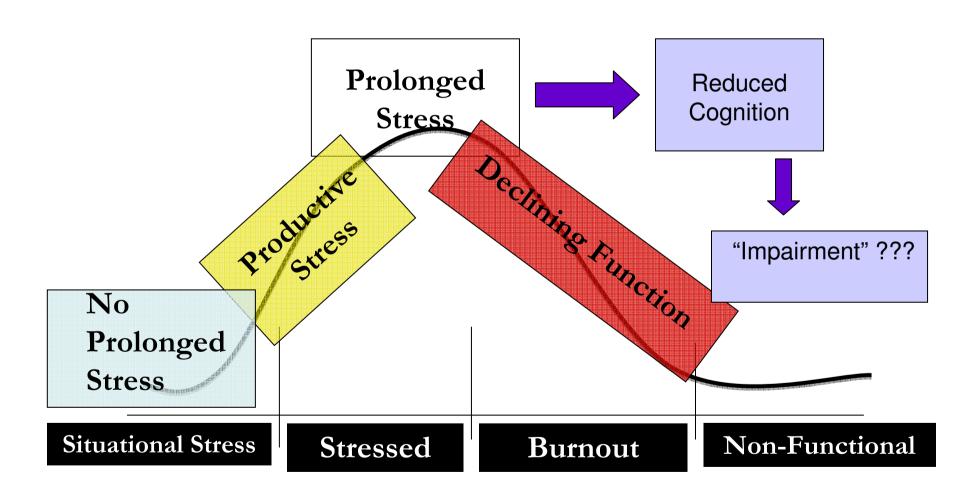
Characteristics of Medical Students that Increase Risk for Burnout

- Perfectionism
- Need for control
- High need for achievement
- Exaggerated sense of responsibility
- Need to please everyone
- Obsessiveness
- Difficulty asking for help
- Excessive, unrealistic guilt
- To reveal emotions=weakness
- Difficulty taking time for oneself





Stress & Productivity





- 研究發現近四成(38%)的 PGY1 醫師經常感受到工作壓力,許多研究已顯示醫師的壓力導致情緒變化包括生氣與憂鬱,影響個人的身心健康,進而妨礙醫療照顧品質,甚至發生醫療疏失因此,如此高比率的PGY1 醫師承受高度的工作壓力是必須重視的
- 目前 PGY1 之訓練,已依相關規定值班以平均不超過三天一班為原則,但本研究也發現 PGY1 醫師自填之工作時數,每週工作時數平均為 56.48±17.96 小時,已低於美國立法規定之每週 80 小時。而每日平均工作時數則為 10.03±2.48 小時,超過之工作時數可能意謂著涵蓋住院醫師必須負責任的工作,額外付出的時間。



醫學教育 2009;13:113 ~ 121



Doctors who teach: Stress

- Further loss of autonomy for consultants
- Increased external policing (e.g. by academic assessors)
- The introduction of a formal record of in-training assessment has increased the burden on consultant trainers
- They must provide objective reports about the trainee's progress, but writing an adverse report and discussing it with the trainee can be stressful.
- The trainer who has been identified as poorly performing carries a heavy burden of responsibility





Doctors who teach: Pros

- Professional status and peer recognition.
- Greater occupational variety and interest.
- Training young doctors to treat a condition seems more productive than simply doing the treating oneself.



Key learning points

Working as a doctor or dentist is stressful.

Working as a teacher or lecturer is stressful.

Doctors and dentists who also teach appear to have lower stress levels than those who do not teach.

More research is needed to explain this finding.



Table 2. Most Meaningful Activity and Allocation of Actual Effort

Area Most			% Tim	e Spent on		
Personally Meaningful	Patient Care	Education	Research	Administration	Nonvisit Care ^a	Total
Patient care	67.1	4.8	10.6	9.5	7.8	99.8
Education	64.0	15.1	3.6	6.7	10.5	99.9
Research	41.7	3.5	38.6	10.1	5.9	99.8
Administration	50.8	5.1	10.8	26.9	6.4	100

^a Includes such activities as returning patient phone calls, writing letters to patients, and checking laboratory results.

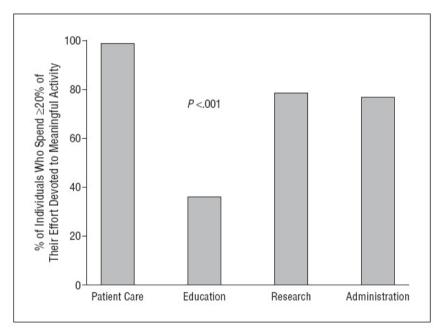


Figure 1. Career fit by activity viewed most personally meaningful. The y-axis shows the percentage of individuals who spend at least 20% of their effort in the activity viewed as most personally meaningful based on whether patient care, education, research, or administration is viewed as the most meaningful activity (x-axis). The results indicate that a smaller percentage of those who view education as the most meaningful aspect of their work spend at least 20% of their time in the activity that they view most meaningful.

Burnout Indices ^a	No. (%)
Emotional exhaustion (range, 0-54)	
Low	209 (45.7)
Moderate	110 (24.1)
High	138 (30.2)
Depersonalization	
Low	334 (72.9)
Moderate	63 (13.8)
High	61 (13.3)
Personal accomplishment	
High	302 (66.2)
Moderate	94 (20.6)
Low	60 (13.2)
Burned out ^b	156 (34)

^a High scores on the emotional exhaustion and depersonalization subscales and low scores on the personal accomplishment subscale are considered indicators of burnout.



^b High score on emotional exhaustion and/or depersonalization subscale (see the "Methods" section).

Career Fit and Burnout Among Academic Faculty

Tait D. Shanafelt, MD; Colin P. West, MD, PhD; Jeff A. Sloan, PhD; Paul J. Novotny, MS; Greg A. Poland, MD; Ron Menaker, EdD; Teresa A. Rummans, MD; Lotte N. Dyrbye, MD

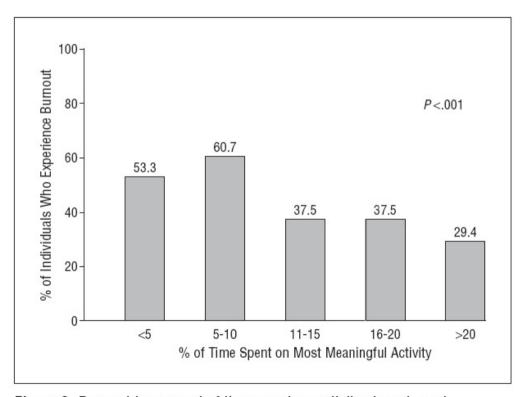


Figure 2. Burnout by amount of time spent on activity viewed most personally meaningful. The y-axis shows the percentage of individuals within each group who experience burnout. The x-axis indicates the amount of time spent in the activity viewed as most personally meaningful.



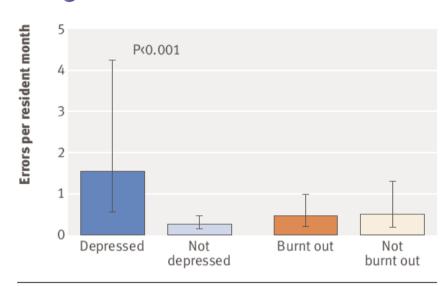


Fig 1 | Rates of medication errors per resident month for depressed compared with non-depressed residents and for burnt out compared with non-burnt out residents. T bars indicate 95% confidence intervals. P value determined using Poisson cluster analysis

WHAT IS ALREADY KNOWN ON THIS TOPIC

Depression and burnout are highly prevalent in doctors in training

Burnout is associated with a higher rate of self reported errors among residents

WHAT THIS STUDY ADDS

Depressed residents in paediatrics were more than six times as likely to make errors in medication as their non-depressed colleagues

Burnout did not seem to be associated with higher rates of medication errors





Risk Factors for Burnout

- Single
- Gender/sexual orientation
- ># of children at home
- Family problems
- Mid-late career
- Previous mental health issues (depression)
- Fatigue & sleep deprivation

- General dissatisfaction
- Alcohol and drugs
- Minority/international
- Teaching & research demands
- Potential litigation



Physicians, burnout, and stress

- Distressed affect
- Impaired cognitive processing
- Elevated frequency of physical symptoms of stress
- Impaired behavioral performance
- Loss of motivation for work
- Interpersonal distress
- Signs of organizational distress



Are you suffering from burnout?

For Emotional exhaustion

- Find yourself emotionally drained from your work
- Feel depleted at the end of the workday
- Feel fatigued when you have to face another day of work
- Find work to be a strain
- Feel burned out from work
- Are frustrated with your work
- Believe that you are working too hard on your job
- Are strained by having to work with people
- Feel as though you are at the end of your rope



Are you

Are you suffering from burnout?

• For Depersonalization

- Act as though you do not have compassion for patients and colleagues and tend to treat them as impersonal objects
- Become more callous toward people as a result of your job
- Find that work seems to be hardening you emotionally
- Act as though your are indifferent about what happens to people at work
- Feel blamed by people at work



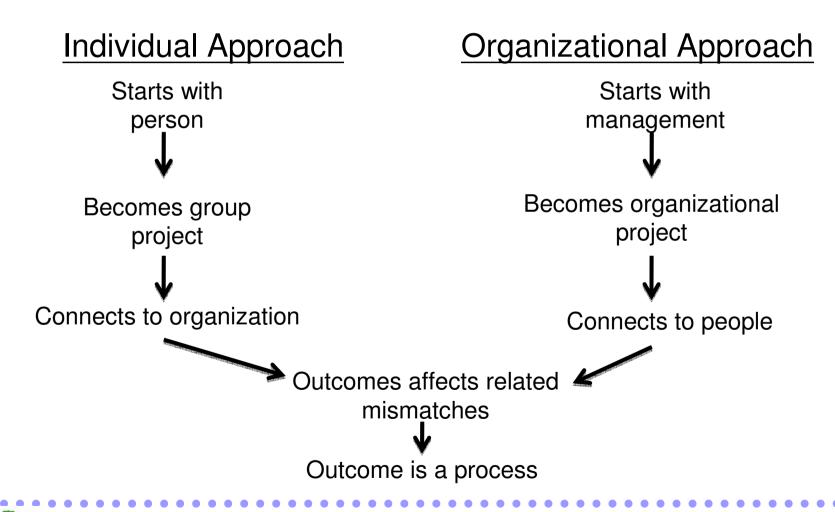
Are you suffering from burnout?

For Diminished sense of personal accomplishment

- Are losing empathy for others at work
- Are losing your effectiveness in dealing with the problems of other people at work
- Question whether your work really makes a difference in the lives of other people
- Are not very energetic
- Have difficulty creating a relaxed atmosphere at work
- Feel exhausted when you work closely with others
- Question whether your really accomplish anything worthwhile at work
- Are losing your ability to remain calm when dealing with emotional problems at work









US Accreditation Council of Graduate Medical Education (ACGME) duty hours guidelines (2003)

- On average 80 weekly work hours, including in-house call duties
- No longer than 24 consecutive work hours but, six extra hours for patient transferring, outpatient clinic, or continuity care allowed
- Reasonable time staying away from the hospital
- A minimum of 10 hours between duties
- On average 1/7 days free from all clinical, educational, or administrative activities

In Europe the European Working Time Directive (EWTD) limits the average weekly work to 48 hours, while allows doctors in training to voluntarily opt out this work time regulation at an individual level



Measures to prevent from overwork

- Arranging floating staff
- Ensuring minimal on-duty sleep hours
- Hiring physician assistants for routines
- Teaching the importance of adequate sleep



Strategies for Preventing Burnout

- 接受「改變」是生活得一部份
- 保持樂觀
- 不要忘記與朋友聯繫,建立支持的系統
- 照顧自己
 - 1. 規則運動,健康飲食
 - 2. 睡得夠
 - 3. 記得要享受休閒



Strategies for Preventing Burnout

- 保持幽默感
- 建立一個嗜好
- 聰明的選擇你想走個科別,也別忘記你也 可以改變你的選擇
- 慢慢朝目標前進
- 需要的時候,不要吝於尋求協助



建議

- 住院醫師也需要休假,記得提醒他們。
- 住院醫師也需要不on-call的時候,提醒他們不要需要給自己下班,不要什麼事都包。
- 主動告知尋求協助的途徑。
- 與教學負責單位密切聯繫。
- 鼓勵能在心靈層面上指引住院醫師的指導醫師。
- 提醒及建立住院醫師在憂鬱或有物質濫用情況時能安全且保有隱私地尋求協助的管道。



處理有問題住院醫師的一些建議

- 住院醫師導師與當科指導主治醫師要密切合作,鼓勵住院醫師參與改變的過程。
- 指定一位指導老師結構性的督導,重新審視 訓練內容,增加回饋指導的時間。





問題住院醫師的個別行動計畫

- 列出三項能增進自我關懷,而你也能在接下來的六個月中執行的方法。
- 列出三項在工作中保有體力與能量的方法。
- 列出一個如果遇到困難,你會想到運用的求 接管道。
- 執行吧!



介入措施--組織與個人兩層面

組織層面上

- 提供溫馨的學習環境
- 增進資深住院醫師與指導老師的指導技巧
- 減少不必要的夜間任務,提供諮商服務機制。

在個人層面上

- 不同訓練階段的專業諮詢
- 透過講授、工作坊,支持團體或個人諮商服務學習壓力調適與正向因應技巧等



- 除了在組織機構上對住院醫師的壓力須檢討 與努力去減少壓力源以外,訓練與強化導師的 諮詢輔導能力,以便及早發掘有困擾的住院醫 師,及給予及時的介入處置可能是現階段最重 要的課題。
- 有效的諮商輔導機制須考量其方便性,可近性與隱私性。所以如能落實導師制度的運作,則 PGY1 住院醫師的工作滿意程度與身心健康是可預期的。



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