

Are doctors happy ‘down under’?

Anthony Scott
Melbourne Institute of Applied Economic and Social Research
The University of Melbourne

*Paper for the International Medical Workforce Collaborative Conference, Edinburgh,
September 2008.*

Abstract

This paper reviews the issues and evidence from Australia on doctors’ morale. There are only a handful of empirical studies that use simple descriptive statistics and measures of association to examine morale (job satisfaction, stress, mental health). Little can be concluded from this literature on the level, trends, determinants or effects of morale, as the studies do not examine causality, and there are currently no longitudinal data to examine trends and changes over time. An economic perspective on morale highlights the need for more data on what the goals of doctors are, what influences them, and how they influence costs, quality, access to health care and health outcomes for patients. In addition, in a world of limited resources it is important to quantify the trade-offs and relative importance of doctors’ objectives. The role of changes in prices charged to patients as a way for doctors to compensate themselves for low morale is also discussed. The lack of literature could be interpreted as meaning that doctors ‘down under’ are, on average, happy. Further research is required to investigate these issues.

Correspondence:

Professor Anthony Scott
Professorial Fellow
Melbourne Institute of Applied Economic and Social Research
The University of Melbourne
Level 7, Alan Gilbert Building
161 Barry Street
Carlton
VIC 3053

P: +61 3 8344 2115; F: +61 3 8344 2111

a.scott@unimelb.edu.au

<http://www.melbourneinstitute.com/research/health/>

Introduction

The morale of doctors raises questions of what it is, how it is defined and why it could be important. Morale is about confidence, sense of purpose and belief in the ability to accomplish tasks, or the common aims or goals of a group or organisation. Morale is often used in a military or team-based context; *esprit de corps* or ‘fighting spirit’. It is therefore concerned with the motivation of individuals or groups to achieve their goals.

An interest in the morale and well-being of doctors by economists may at first seem perplexing. Yet it seems obvious that the level of and changes in the morale of doctors may influence their motivation, behaviour and ability to achieve their goals which in turn can impact on costs, quality, health outcomes, and equity of access to health care. Indeed, if the aim is to design cost-effective policy to change the behaviour of doctors to improve health system efficiency and equity (e.g. encourage doctors to practice in remote areas, encourage the implementation of evidence-base practice, reduce antibiotic prescribing, etc) then it is very important to understand what motivates doctors and what drives their decision-making. An interest in doctors’ morale is therefore a means to an end, not an end in itself, and a careful balance is required between ensuring doctors are happy whilst maintaining an efficient and equitable health care system for the population. However, this balance can often be difficult to achieve and can be costly (e.g. Williams and Buchan, 2006).

Economics provides a useful framework for examining doctors’ well-being. Micro-economic theory is concerned with individuals maximizing objectives or goals (e.g. well-being, utility, satisfaction) subject to the resources available (e.g. time, income), and with the interaction between those who supply services and those who demand them. This raises a number of issues in relation to doctors’ well-being that are of interest to economists and others.

- 1) What are the objectives and goals of doctors? What is it about their lives and their work that determines their satisfaction or utility? What is the relative

- importance of these objectives? How can this be measured? How does it vary between doctors and over time?
- 2) What factors cause changes in the morale of doctors?
 - 3) To what extent does morale influence clinical decisions that determine quality of care and health outcomes, and labour supply decisions that determine access to care (e.g. changes in hours worked, location of work, participation, retirement, specialty choice, public/private sector work).
 - 4) In the presence of limited resources (time and income), what choices and trade-offs are made between these objectives since they cannot all be attained (e.g. between earning an income, and improving patients' and the population's health status)? How high should doctor's morale be? If improved morale is achieved by reducing hours worked, this has implications for access to health care and improving the population's health.

The aim of this paper is to address these questions from an economist's perspective using existing empirical evidence for Australian doctors. A 'rapid' literature review was conducted to identify the main studies on doctors' morale and job satisfaction in the last 5-10 years. As well as free-text searching of Medline and the Social Sciences Citation index, web searches of the Medical Journal of Australia, Australian Family Physician, and the Australian Health Review were conducted. The citations of articles were also searched. The paper focuses on questions (1) and (2), primarily because of the absence of published Australian empirical evidence on (3) and (4).

What are the objectives of doctors?

The objectives of doctors have been discussed in the health economics literature and in the context of defining the contents of doctors' 'utility functions'. The simple economic theory of labour supply suggests that individuals care about consumption of goods and services, but are required to work and earn an income to achieve this. This leads to the

classic trade-off between hours spent at work and hours not spent at work (referred to in the literature as 'leisure'). This provides a framework for examining 'work-life balance' issues. For professionals such as doctors, it is clear that they also care about their patients' health and well-being. This may also be referred to as 'intrinsic motivation', or altruism, and reflects a fundamental interest in the type of work conducted and/or the well-being of others (McGuire, 2000). Workload intensity, reputation, status, autonomy and intellectual satisfaction have also been discussed as objectives (Kristiansen, 1994).

There are different perspectives on what concepts should be measured. Job and life satisfaction, utility, happiness, stress and mental health are all terms that have been used, with each implying a different theoretical construct (if one exist at all) and different empirical measures. Their relationship to a strict definition of 'morale' is often unclear. Each represents an overarching measure, and may contain a number of domains or components. Most take measurements at a specific point in time, rather than cumulative life-time well-being, and so it is import to be aware of transient changes in morale (i.e. a bad day) versus more permanent changes (i.e. a bad year with no prospect of improvement). There are large theoretical and empirical literatures spanning a number of disciplines on each of these measures.

The explicit quantitative measurement of well-being using scales and attitudes can be contrasted with the inference of well-being through observing actual decisions made and the factors that influence them (revealed preferences). Psychologists have focused on the former (e.g. job satisfaction) and have also attempted to directly measure the sources of motivation in decision making using a number of theoretical approaches applied to doctors (Eccles et al., 2005). Economists prefer revealed preference approaches. For example, if more doctors choose surgery over general practice, then it can be inferred that on average surgery must provide the highest utility or satisfaction (e.g. Thornton and Esposito, 2003; Joyce and McNeil, 2006). If pay for performance causes changes in clinical decision-making, then it can be inferred that the level of income is important to doctors.

The main focus of the empirical health services literature for doctors has been on job satisfaction and stress, in parallel with a literature in health economics using revealed preference approaches. Economists are increasingly using measures of job satisfaction and stress in their empirical work (e.g. Shields and Ward, 2001; Scott et al, 2006) as well as developing experimental approaches such as discrete choice experiments (Scott, 2001; Ubach et al., 2003).

Australian empirical evidence

In terms of the broad objectives of doctors, there are a handful of job satisfaction surveys that have been conducted in Australia (Walker and Pirotta, 2007; Harris et al., 2007; McGlone and Chenoweth, 2001; Kluger et al., 2003; Ulmer and Harris, 2002). All of these enable the identification of potential objectives, and correspond closely with international literature on what matters to doctors. Many use the Warr-Cook-Warr Scale of job satisfaction (Warr et al., 1979), which has also been used extensively in the UK (Sibbald et al., 2000).

For example, a recent survey of GPs in metropolitan Melbourne found the most frequently nominated themes were job variety, longitudinal patient relationships, belief in the value of work, and intellectual stimulation (Walker and Pirotta, 2007). Ulmer and Harris (2002) in a survey of rural and urban GPs in New South Wales found that GPs were most satisfied with variety, responsibility, and autonomy. A survey of staff in 96 general practices found similar results for GPs (Harris et al., 2007) as did an earlier survey of GPs in Victoria (McGlone and Chenoweth, 2001).

A number of studies are concerned with 'burnout', stress, and mental health and so focus on only the lower half of the distribution of morale (Bruce et al., 2003; Wilcock et al., 2004; Dunwoodie and Auret, 2007; Holt and Del Mar, 2005; Murfett and Charman, 2006). Schattner et al (2004) identify three groups of doctors. 'Impaired' are those who experience mental illness or substance misuse; 'troubled' are those who are significantly affected by stress and at risk of becoming impaired, and; 'dissatisfied' are the most visible group who complain about the system and its demands and contemplate leaving.

In an earlier study Schattner and Coman (1998) examined the frequency and severity of work stressors and mental health. The most frequently cited sources of stress were related to time pressures. Willcock et al (2004) used the General Health Questionnaire to measure mental health of new medical graduates. Psychiatric morbidity was found to increase between the final year of medical school and the intern year. The AMWAC two longitudinal survey of doctors in vocational training found a decrease in the proportion of doctors with high or very high stress scores between the first and second waves, especially amongst those who had completed vocational training (AMWAC, 2005).

Few of these studies sought to establish representativeness or examine non-response bias. As with the literature from other countries, there is an emphasis on the well-being of GPs' and doctors in specialist training programs, rather than the well-being of specialists. Apart from the AMWAC survey, there were no longitudinal studies and so it was not possible to examine how well-being (or different aspects of this) is changing over time.

A market-based approach to measuring morale

An approach that could be taken relies on a specific feature of the 'market' for doctors' services in Australia, combined with some basic economic theory. The theory is that of compensating wage differentials (Elliott and Murphy, 1986). In a well functioning market where the price of services (in this case doctors services) is freely set, then poor morale or job satisfaction will only ever be a temporary phenomenon. If a doctor is dissatisfied or stressed, then he or she can raise prices or change jobs to either compensate them in monetary terms or increase job satisfaction. The flexibility of doctors being able to charge what the market will bear and practice in any geographic location, combined with the options of different working arrangements (e.g. private practice, salaried in a public hospital, private hospital, or any combination of these) is therefore important for doctors being able to increase their satisfaction and change their working arrangements themselves.¹

¹ There are also examples of such flexibility in the UK where in response to the GP contract introduced in 2004, many GPs 'opted out' of providing out of hours services for patients arguably leading to increases in morale.

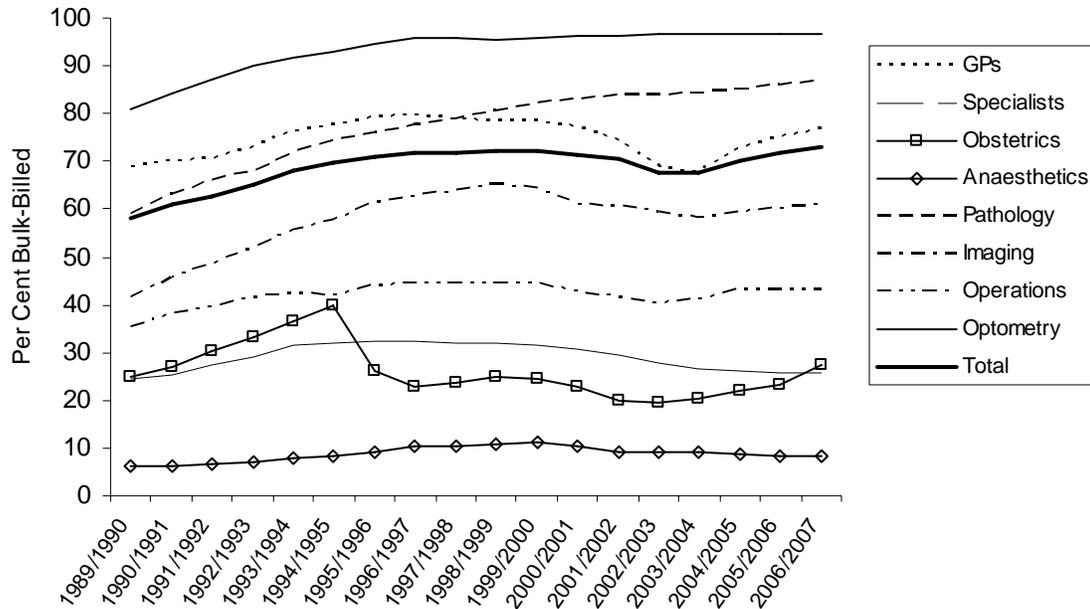
In Australia, GPs and private specialists can charge patients what the market will bear² and so changes in prices and out-of-pocket payments over time, in conjunction with other data, can be used to gauge doctors' well-being. Prices charged influences doctors' earnings, and these prices, because they are set flexibly and there are no price controls or limits on what doctors can charge, will to an extent reflect changes in demand and supply conditions. Doctors who face an increasing workload (and thus feel stress or dissatisfaction) may increase their prices to compensate and to help reduce workload. This assumes that earnings are an important determinant of well-being.

For example, the graph below shows the bulk-billing rate for different types of doctor in Australia. The bulk-billing rate is the proportion of medical services where patients are *not* charged a co-payment, and the doctor receives the Medicare³ fee rebate as full payment for services. Clearly this is influenced by many factors. The key thing to note about this graph is the fall in bulk-billing rates (i.e. rise in prices charged) that began in around 1999. Research has shown that this was due to a reduction in supply, such that both male and female doctors were reducing their hours worked (McRae, 2006; Scott, 2006). There was also a collapse of a main malpractice insurer in 2000 which led to higher prices, and cohort effects of doctors' preferences for a better work-life balance also exacerbated the issue. The ensuing shortage of doctors led to higher prices and lower utilisation (as would be predicted in any economic model). Thus, one interpretation of these changes is that to maintain their morale and well-being, doctors raised their prices and reduced working hours. Other evidence from the period, particularly for GPs, suggested that workloads were increasing, especially 'red tape' and administrative burden and so it could be assumed that morale was falling. These led to government reviews that led to a number of changes to Medicare which were introduced in 2004/5. These changes increased the rebates to doctors and led to increases in the bulk-billing rate and doctors' earnings, thus partly rectifying the situation.

² Of the total price charged by a doctor, a fixed rebate can be claimed either by the patient or doctor. This rebate is set according to the Medicare Benefits Schedule. Patients who are charged about the rebate (schedule fee) therefore pay a co-payment.

³ Medicare is Australia's tax-financed national health insurance scheme providing universal access to hospital services (funded jointly by the Federal government and States) and subsidised access to medical and other services through the Medicare Benefits Schedule.

Figure 1. Bulk-billing rates in Australia, 1989/90 to 2006/7



Source: Department of Health and Ageing Website (accessed July 2008)

There was variation across specialties in bulk-billing rates. GPs seemed to have been affected the most, whilst pathology was not affected at all as bulk-billing rates continued to rise over the period.

What factors cause changes in the morale of doctors?

Identifying the causal determinants of morale is difficult but necessary in order to understand the key drivers of morale and to design effective policies to maintain morale. This requires longitudinal data and the ability to control for wide variety of factors that influence morale. It is also important to note that only some of these factors will be amenable to policy change. The identification of causal determinants also requires a sound structural or theoretical model to disentangle the many relationships between measured variables (e.g. Scott et al., 2006).

A number of the job satisfaction and stress studies mentioned above either ask participants directly what would be required to improve job satisfaction, or seek to measure the association between respondent or other job/system characteristics and job satisfaction or stress. The association between hours worked and job satisfaction, stress and well-being, is consistent across a number of studies (Dunwoodie and Auret, 2007; McGlone and Chenoweth, 2001; Schattner and Coman, 1998; Ulmer and Harris, 2002). Walker and Pirotta (2007) asked metropolitan GPs in Melbourne directly what factors would improve job satisfaction, and the most frequent answers were increased pay, reduced paperwork, and improved administration.

Differences have been found between males and females (McGlone and Chenoweth, 2001) age groups, specialties and doctors practising in different geographic locations. In Australia, there has been a particular emphasis on urban-rural issues (Kamien, 1998; Humphreys et al., 2002; Ulmer and Harris, 2002; Joyce et al., 2003; Hays et al., 2003; Kurzydlo et al., 2005; Thistlewaite et al., 2007). This implies that morale is different at different stages of the life cycle, and that different cohorts of doctors have different goals and objectives, or attach different weights to them compared to older cohorts (Joyce and McNeil, 2006). Little can be done in policy terms to change these types of determinants, although it is clearly important to know how these factors are influencing morale relative to factors which can be influenced by policy. Furthermore, specialty and geographic differences are more likely to reflect the self-selection of doctors into specialties or areas, rather than being a causal effect of the specialty or area themselves. This also applies to observed associations between other job characteristics that can be influenced by doctors (e.g. practice size, team environment, workload etc).

However, findings based on associations or direct questions are problematic as they do not account for reverse causality (e.g. hours worked influences job satisfaction and job satisfaction influences hours worked) nor unobserved factors that may confound or bias the relationship (e.g. doctors' personalities). Many of the above studies only examine bivariate associations and do not control for other factors in a multivariate context. These

issues can be partly overcome by the use of longitudinal data rather than cross-sectional surveys, combined with more sophisticated econometric modeling.

Conclusions.

The studies referred to in this paper reported cross-sectional descriptive statistics, a few examined associations, and one or two reported multivariate analysis of determinants of satisfaction. In short, the extent of literature in this area in Australia is very limited and it is difficult to conclude anything about the level, trends or determinants of morale. The focus in the Australian literature is GPs, with a few studies of medical graduates and trainees. There are few recent published studies of specialists' morale.

There was a notable absence of literature on the effects of morale on costs, quality of care and health outcomes of patients. Although low morale may cause doctors to reduce hours worked, retire early, conduct more non-clinical medical work, there is little evidence about this in Australia. Furthermore, little is known about the trade-offs doctors make between different objectives and which are more important than others. This is important as it determines the effectiveness of policies designed to change behaviour. If income is assumed to be important, but it is not, then financial incentives to encourage doctors to practice in remote areas may have little effect. Techniques such as discrete choice experiments need to be used to help quantify these trade-offs to inform policy design.

Could the absence of literature mean that doctors in Australia are on average happy? The literature suggests a number of hypotheses that could be tested in further research. GPs seem to be the least happy group of doctors and younger doctors in training still work long hours and experience stress although this may be relieved once they qualify. Does the ability of private specialists and GPs to charge patients what the market will bear mean that dissatisfaction and stress can be ameliorated by charging higher prices? The utilisation of specialists is probably much less sensitive to prices than that of GPs, and so the higher price sensitivity may therefore be a constraint on GPs using pricing to fully

compensate them for changes in satisfaction and stress. If this is the case, then in Australia the effect of higher prices is to lower utilisation, so low morale may reduce access to health care for the population, depending on the elasticity of demand. Similarly, junior doctors and specialists working in public hospitals are salaried and so have little flexibility to change their pay or working conditions, and so may experience dissatisfaction and stress more often or for longer periods than private specialists or GPs, or than private specialists who act as consultants (Visiting Medical Officers) in public hospitals.

The prospects of better data collection on morale and the testing of the above issues is good with two new longitudinal surveys of doctors beginning in 2008. The MABEL survey (Medicine in Australia: Balancing Employment and Life; www.mabel.org.au) and the Doctors e-cohort (<http://doctors.e-cohort.net>), both of which are collecting data on job satisfaction and other measures of well-being on large sample of doctors.

References

Australian Medical Workforce Advisory Committee (2005) Career Decision Making by Postgraduate Doctors. AMWAC Report 2005.3, December 2005.

Bruce CT., Sanger MM., Thomas PS, et al. (2003) Factors affecting female or male consultant stress in an Australian teaching hospital. *Medical Journal of Australia*, 179: 174-175.

Dunwoodie DA., Auret K. (2007) Psychological morbidity and burnout in palliative care doctors in Western Australia. *Internal Medicine Journal*, 37: 693-698.

Eccles M, Grimshaw JM, Walker AE, Johnston M, Pitts N. Changing the behaviour of healthcare professionals: the use of theory in promoting the uptake of research findings. *J Clin Epidemiol* 2005;58(2):107-112.

Elliott R., Murphy P. (1986) The Theory of Net Advantages. *Scottish Journal of Political Economy*, 33; 46-57.

Gosden, T., Bowler, I. and Sutton, M. (2000). "How do general practitioners choose their practice? Preferences for practice and job characteristics", *Journal of Health Services Research and Policy* 5(4): 208 – 213.

Government of Ireland (2000). Review Body on Higher Remuneration in the Public Sector, Report No. 38.

Harris, MF., Proudfoot J., Jayasinghe UW., Holton C., Powell Davies GP., Amoroso CL., Bubner TK., Beilby J. (2007) Job satisfaction of staff and the team environment in Australian General Practice. *The Medical Journal of Australia*, 186;570-573.

Hays, R., Wynd, S., Veitch, C. and Crossland, L. (2003). "Getting the Balance Right? GPS Who Chose to Stay in Rural Practice", *Australian Journal of Rural Health* 11: 193 – 198.

Holt J., Del Mar C. (2005) Psychological stress among GPs. Who is at risk and how to reach them? *Australian Family Physician*, 34:599-602.

Humphreys, J.S., Jones, M.P., Jones, J.A. and Mara, P.R. (2002). "Workforce retention in rural and remote Australia: determining the factors that influence length of practice", *Medical Journal of Australia*, 173(10): 472 – 476.

Joyce, C., Veitch, C. and Crossland, L. (2003). "Professional and Social Support Networks of Rural General Practitioners", *Australian Journal of Rural Health* 11, 7 – 14.

Joyce CM., McNeil JJ. (2006) Fewer medical graduates are choosing general practice: a comparison of four cohorts, 1980-1995. *The Medical Journal of Australia*, 185:102-104.

Kamien, M. (1998). "Staying in or leaving rural practice: 1996 outcomes of rural doctors' 1986 intentions", *Medical Journal of Australia*, Sep. 21; 169(6): 293 – 294.

Kluger MT., Townend K., Laidlaw, T. (2003) Job satisfaction, stress and burnout in Australian specialist anaesthetists. *Anaesthesia*, 58;339-345.

Kristiansen I.S. (1994) What is in the doctors' utility function? A theoretical and empirical investigation into what influences doctors decision making. PhD Thesis, University of Tromsø.

Kurzydlo, A.-M., Casson, C. And Shumack, S. (2005). "Reducing professional isolation: Support Scheme for Rural Specialists", *Australasian Journal of Dermatology* 46(4): 242 – 245.

McGlone SJ., Chenoweth IG. (1998) Job demands and control as predictors of occupational satisfaction in general practice. *The Medical Journal of Australia*, 175;88-91.

McGuire T. (2000) Physician agency. In: Newhouse J., Culyer A.J. (eds). *Handbook of Health Economics*. Elsevier, North Holland.

McRae I. (2006) Australian general practice: Where have the GP services gone? *Applied Health Economics and Health Policy*, 5;117-124.

Murfett A., Charman D. (2006) GP wellbeing and general practice issues. *Australina Family Physician*, 35:748-750.

Schattner PL., Davidson S., Serry N. (2004) Doctors' health and wellbeing: taking up the challenge in Australia. *The Medical Journal of Australia*, 181:348-349.

Schattner PL., and Coman GJ.(1998) The stress of metropolitan general practice. *The Medical Journal of Australia*, 169:133-137.

Scott, A. (2001). Eliciting GPs' preferences for pecuniary and non-pecuniary job characteristics, *Journal of Health Economics* 20: 329 – 347.

Scott A., Gravelle H., Simoens S., Sibbald B., Bojke C. (2006) Job satisfaction and quitting intentions. A structural model of British General Practitioners. *British Journal of Industrial Relations*, 44: 519-540.

Scott A. (2006) The productivity of the health workforce. *Australian Economic Review*, 39:312-317.

Shields M.A., Ward M. Improving nurse retention in the National Health Service in England: the impact of job satisfaction on intentions to quit. *Journal of Health Economics* 2001, vol. 20, 677-701.

Sibbald B., Enzer I., Cooper C.L., Rout U., Sutherland V.J. GP job satisfaction in 1987, 1990 and 1998: lessons for the future? *Family Practice* 2000, vol. 17, 364-371.

Thistlethwaite JE., Shaw T., Kidd M., Leeder S., Burke C., Corcoran K. (2007) Attracting health professionals into primary care: strategies for recruitment. Australian Primary Health Care Research Institute, Canberra.

Thornton, J. and Esposto, F. (2003). "How important are economic factors in choice of medical specialty?", *Health Economics* 12: 67 – 73.

Ubach, C., Scott, A., French, F., Awramenko, M. and Needham, G. (2003). "What do hospital consultants value about their jobs? A discrete choice experiment", *British Medical Journal* 326: 1432 – 1437.

Ulmer B., Harris M. (2002) Australian GPs are satisfied with their job: even more so in rural areas. *Family Practice*, 19:300-303.

Walker KA., Pirotta M. (2007) What keeps Melbourne GPs satisfied in their jobs? *Australian Family Physician*, 36:877-880.

Warr P., Cook J., Wall T. (1979) Scales for the measurement of some work attitudes and aspects of psychological well-being. *Journal of Occupational Psychology*, 52:129-148.

Wilcock S., Daly MG., Tennant CC., Allard BJ. (2004) Burnout and psychiatric morbidity in new medical graduates. *The Medical Journal of Australia*, 181;357-360.

Williams S., Buchan J.(2006) Assessing the New NHS Consultant Contract: A something for something deal?. King's Fund, London.