



neurological surgery



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NEUROLOGICAL SURGERY

Background

Neurological Surgery, better known as neurosurgery, is the branch of medicine and surgical specialty, which focuses on the central, autonomous and peripheral nervous systems and supporting structures (skull, spine, meninges, central nervous system [CNS] blood supply). Neurosurgeons provide operative treatment, as well as non-operative therapy, prevention, diagnosis, evaluation, critical care and rehabilitation of disorders of the nervous system. They diagnose problems through physical examination using tools such as magnetic resonance imaging and cranial taxonomy scans. Some neurosurgeons have a special interest in pain management.

Neurosurgery requires manual dexterity and intense concentration when dealing with delicate parts of the nervous system. Not only must neurosurgeons be skilled surgeons, but many of them divide their time between the research lab and operating room.

Profile

Of the 50 participants in the survey, 78 percent are certified by the American Board of Neurological Surgery.

Some of the respondents (76 percent) said they were attracted to neurological surgery while studying medicine, but some also considered other specialties: surgery (98 percent), neurology and general surgery (34 percent), and internal medicine (32 percent). Ninety-four percent of the respondents are male (six percent female) with an overall average age of 49.

Many of the respondents said they are quite pleased with their choice of specialty. Ninety-four percent indicated that they are either very satisfied or somewhat satisfied.

Perspectives

What aspects of neurological surgery are most appealing?

According to the survey, the three most positive aspects of neurosurgery are: the intellectual challenge of the field (34 percent), the technical knowledge (22 percent), and the types of procedures utilized by the specialty (16 percent).

One respondent indicated that, "The marked advancement in diagnostic techniques and surgical approaches is both interesting and stimulating." Another said, "Besides being a challenging speciality, neurosurgery is very rewarding."

What aspects of neurological surgery are least appealing?

Thirty-eight percent of the respondents mentioned having problems with managed care issues. Twenty-eight percent indicated the long hours and workload need for the practice can take its toll.

One neurosurgeon said, "The least appealing aspects of our practice are managed care or medicare paperwork and disappointing surgical results."

Twenty-two percent of the respondents indicated that paperwork and bureaucratic issues are a problem.

What would you advise students to consider carefully before selecting neurological surgery?

Most of the respondents find their careers rewarding. The procedures they perform give patients the ability to function in ways not possible without surgery. Twenty eight percent said that students should consider the time demands and commitment needed for the specialty. One physician commented: "You need to have a keen interest in neurosciences as this is a consuming area"

Other respondents strongly suggested evaluating the long hours and irregular work schedules before deciding on neuro-

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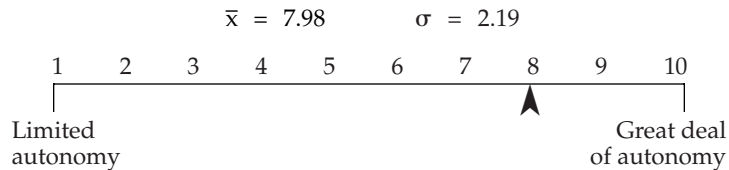
logical surgery especially looking at the intense residency programs. Twenty-two percent of the respondents indicated that students should understand that neurosurgery has a long and/or difficult training program.

CRITICAL FACTORS

Autonomy

Seventy-two percent of the physicians surveyed said they experience a high degree of autonomy in their specialty, while only four percent experience limited autonomy.

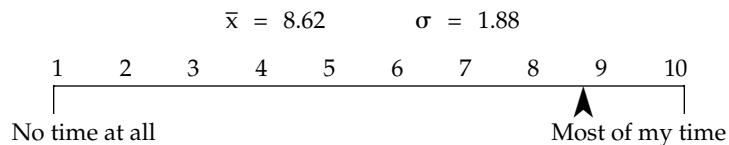
“I work closely with other surgeons but have the flexibility as a solo practitioner to make my own decisions,” said one neurosurgeon.



Caring for Patients

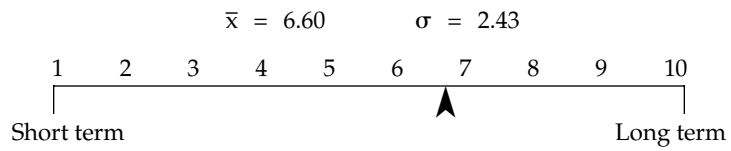
Neurosurgeons devote most of their time seeing and caring for patients. In addressing the serious consequences of neurological problems, their involvement with patients is often intense.

Many of the neurosurgeons surveyed (78 percent) work directly with patients a great deal of the time. One physician said, “Despite HMO regulations, neurosurgery remains a patient care field.”



Continuity of Care

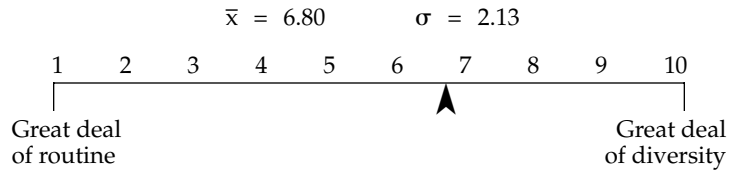
Thirty-eight percent of the neurosurgeons surveyed said they provide long-term care to patients most of the time, while 14 percent said they provide mostly short-term care. One physician stated, "My long term patients are those with lots of musculoskeletal problems as they require significant follow-up."



Diversity

Fifty-six percent of the physicians surveyed feel their work provides a great deal of diversity. Only two percent said their work is mostly routine.

One respondent said, "Each patient is diverse in how we treat them."



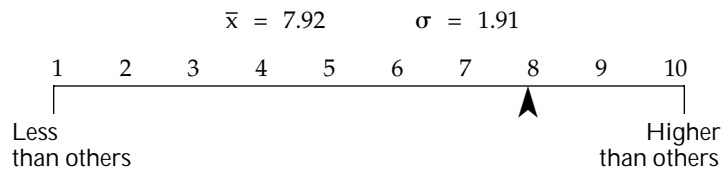
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Income

Seventy-eight percent of the surveyed physicians said they are paid more than other specialists, while 12 percent said their incomes are comparable to others.

One physician commented, "Our income has begun to drop because of managed care and other insurance reimbursement schemes."

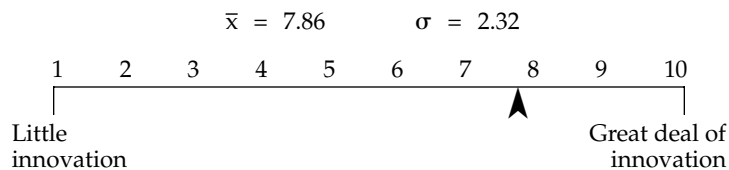
The average pre-tax income for the neurosurgeons surveyed from their 1998 medical practice was \$384,100.



Innovative Thinking

According to the survey, neurosurgeons must think in innovative ways. Sixty-six percent of the respondents said they feel their work requires a great deal of innovation. Only four percent feel it requires very little.

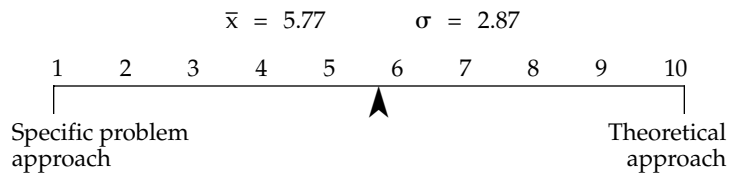
One physician said, "Besides training and CME, one has to be innovative to achieve good goals."



Intellectual Content

According to the survey, neurosurgeons are divided between the “specific problem approach” and the “theoretical approach.” Forty-four percent said they favor the theoretical aspect of their work, while 32 percent said they favor the practical.

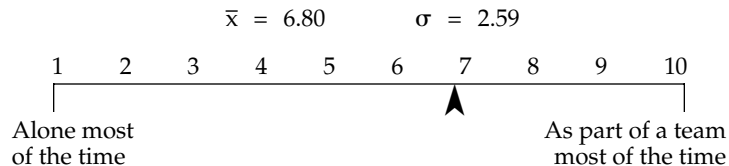
These physicians like the complexity and intellectual challenge of the difficult problems they encounter. Some are attracted to the logic of the anatomy, physiology and integration of the nervous system. In particular, many find the problem solving involved in the localization of lesions to be especially stimulating.



Interacting with Other Physicians

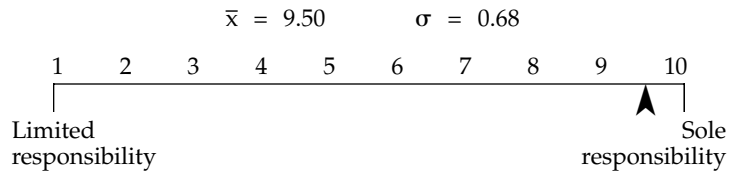
Fifty-two percent of the surveyed physicians said they work as a team most of the time, while eight percent said they work alone most of the time. Neurosurgeons rely on other physicians for referrals, so they try to maintain good working relationships with them.

“I work with nurses, residents and other physicians all the time,” said one respondent.



Responsibility

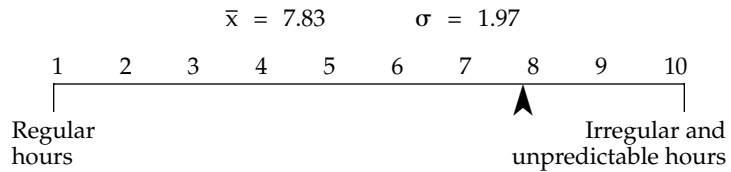
All of the neurosurgeons surveyed said they assume near-total responsibility for their patients. These specialists must be able to accept responsibility for high-risk procedures and deal with it emotionally.



Schedule

Seventy-four percent said they work irregular and unpredictable hours. Nine percent reported that they work regular and predictable hours. Their schedules are erratic and 12- to 14-hour days with early morning starts and late-night calls are normal.

“There is no way to predict my schedule,” explained one physician.

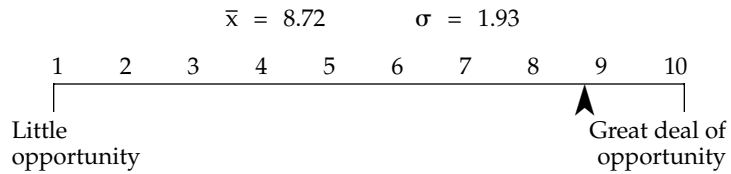


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Sense of Accomplishment

On average, the survey participants feel a strong sense of accomplishment in their work. Eighty-six percent said they have great opportunities to see concrete end results.

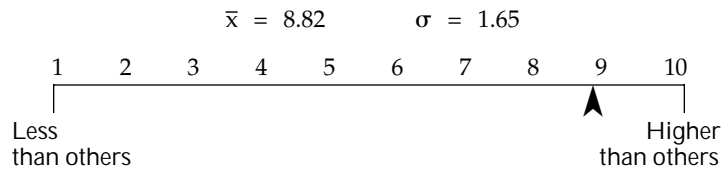
“Either you see, or you don’t see the results right away,” said one respondent.



Status Among Colleagues

Eighty-eight percent of the surveyed physicians feel neurological surgery has a much higher status among colleagues than other specialties.

“Neurosurgeons receive respect from other physicians” said one respondent.



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Patient Characteristics and Types of Illnesses

The neurosurgeons surveyed mostly treat adults.

	Age Group of Patients Average (%)
Infants	1
Children	5
Adults	60
Elderly	34

They treat equal percentages of men and women. Thirty-nine percent of their patients are classified as generally healthy, 35 percent acutely ill, 18 percent chronically ill and 7 percent terminally ill. Respondents practice in hospital setting (48 percent) and managed care settings (40 percent).

The conditions neurosurgeons most commonly treat are:

1. Herniated/ruptured disc
2. Brain tumor
3. Head/spinal cord trauma
4. Stroke
5. Carpel tunnel syndrome

Among the conditions they find most challenging to treat are:

1. Brain tumor
2. Aneurysms
3. Spinal cord problems
4. Surgery
5. Hemorrhage

Malpractice Premiums

The neurosurgeons surveyed paid an average of \$54,000 for malpractice insurance in 1998. This fee varies according to practice setting.

**Training
Requirements**

The American Medical Association's 1999-2000 Graduate Medical Education Directory lists 95 accredited training programs for neurosurgery. Residency programs in the specialty require general surgery in the first postgraduate year, followed by five years of neurosurgical residency training. The residency consists of three to six months of clinical neurology, a minimum of three years of clinical neurosurgery, and 21 or more months of elective training.

The written primary examination of the American Board of Neurological Surgery must be passed for credit toward certification during residency training. At the completion of training, five years is allowed to complete the oral exam to obtain certification by the American Board of Neurological Surgery.

**Professional
Organizations**

American Board of Neurological Surgery
6550 Fannin Street
Suite 2139
Houston, TX 77030-2701
Phone: (713) 790-6015
Fax: (713) 794-0207
Email: abns@tmh.tmc.edu
www.abns.org

American Association of Neurological Surgeons
22 South Washington Street
Park Ridge, IL 60068
Phone: (847) 692-9500
Fax: (847) 692-2589
Email: info@aans.org
www.neurosurgery.org

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The American Board of Neurological Surgery, Inc, Booklet of Information, June 1997.

Mean Scores for Critical Factors

Autonomy	7.98	Manual/Mechanical	
Caring for Patients	8.62	Activities	9.34
Continuity of Care	6.60	Pressure	8.90
Diversity	6.80	Responsibility	9.50
Family/Leisure Time	3.86	Schedule	7.83
Focus of Expertise	9.32	Security	5.06
Income	7.92	Sense of	
Innovative Thinking	7.86	Accomplishment	8.72
Intellectual Content	5.77	Status Among	
Interacting with Other		Colleagues	8.82
Physicians	6.80		

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Exercise

After you have finished the above career option profile, please complete the following exercise:

- ◆ List your top five Critical Factors below;
- ◆ In Column A, list the rating you gave each of these factors in your Briefing Document;
- ◆ In Column B, list the mean scores for each factor as found in the above profile;
- ◆ Subtract the items in Column B from those in Column A and write the remainder in Column C;
- ◆ Total the numbers in Column C. **NOTE:** Ignore + and – signs.

The closer the number at the bottom is to “0,” the more likely it is that this specialty may be a match for you and requires your further investigation. This total alone, however, means very little until you have compared it with those from each specialty profile.

Critical Factors	A (Your Rating)	B (Mean Scores)	C (Differences)
_____	_____	_____	_____
_____	_____	_____	_____
_____	_____	_____	_____
_____	_____	_____	_____
_____	_____	_____	_____
		Total:	_____