

Predictors of pediatric surgeons' career satisfaction: a national survey

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Objective A survey was performed to identify factors for professional career satisfaction and for dissatisfaction.

Methods During General Assembly of CSPS, attendees answered the 37-question form grouped into the following categories: demographic, professional activity and organizational issues, type of service, education, and compensation and status. Data were analyzed using the Pearson χ^2 test ($P < 0.05$).

Results The response rate was 74.5% ($n = 44/59$). The average age was 46 years, and 91% were male. The average participant had 17 years of surgical practice, worked 8.5 hours daily and 208 hours monthly, in children's (49%), university (35%), or community (16%) hospital. Pediatric surgeons were satisfied with professional career (77%), and 88% would chose the same profession again. Patient satisfaction (85%), quality of care (79%), and professional achievements (76%) were rated very high. Dissatisfaction responders pointed at shortage of time for effective communication (69%), excessive administrative work (88%), too many working hours (73%), professional burnout (66%), and technical issues – IT technology (73%) and equipment (79%) out of date or old/unsuitable

facilities (73%). An overall 57% of responders had presented paper on international congresses, and 32% had published paper in indexed journals. Two major concerns about education are insufficient training (61%) and lack of time for continuous education (79%).

Conclusion Pediatric surgeons are satisfied with professional career. Patient care is a leading area of satisfaction. Educational, organizational, technical, and structural issues need improvements. A large pay gap exists between expectations and real income. *Ann Pediatr Surg* 12:77–81 © 2016 Annals of Pediatric Surgery.

Annals of Pediatric Surgery 2016, 12:77–81

Keywords: pediatric surgeons, professional career satisfaction, risk factors for dissatisfaction

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Received 7 September 2013 accepted 8 December 2015

Introduction

Satisfaction with the professional career is one of the most important factors in the work-life balance and consecutively in the overall quality of life. In the past few years, much attention has been given to understand this issue better among pediatric surgeons, primarily to identify factors most strongly associated with professional career satisfaction and to identify risk factors for dissatisfaction. Pediatric surgery has always been considered to be a demanding but highly respected profession. Despite significant work volume, irregular working time, and occupational stress, the profession has always been highly rated among medical students as a top-priority choice for future career. Surprisingly, recent trends show a lack of interest among medical graduates to apply for this position, as well as a tendency among pediatric surgeons to take early retirement. Under the circumstances of a restrictive health budget policy and restrictive employment policy, it is reasonable to expect a shortage of staff in the coming years. Therefore, we conducted this national survey to evaluate the current status of pediatric surgeons in Croatia and to determine their overall professional and personal fulfilment. Our goal was to identify possible areas for improvement to make the profession more rewarding for specialists in their mid-careers, as well as more attractive for recruitment among medical graduates.

Methods

A national survey was conducted during the 2009 General Assembly of Croatian Society of Pediatric Surgeons.

Croatian Society of Pediatric Surgery has 91 members: 72 regular members, 13 honorary members, and six members of other specialities (ENT, urology, oncology). Among 72 regular members, there are 51 active paediatric surgeons, eight retired surgeons, and 13 residents. By society statute, every regular member has a right to take part in the conduct of society affairs, the right to vote, and to be elected. All convention attendees, members of the Croatian Society of Pediatric Surgery, were invited to fill in the 37-question form. Only those paediatric surgeons who were regular members of the society, either residents, active, or retired members, were involved in the study. Participation was voluntary and anonymous. Questions were grouped into the following categories: demographic, professional activity and organizational issues, hospital and service characteristics, education, and compensation, and status. Data were analysed by using the Pearson χ^2 -test. Statistical significance was determined at P value less than 0.05.

The study was approved by the Institutional Review Board Children's Hospital Zagreb.

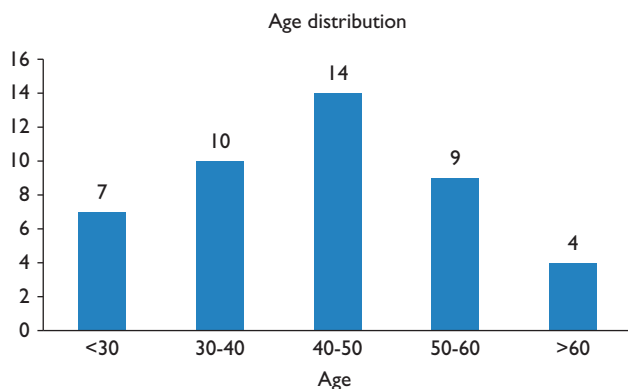
Results

Demographic

The response rate was 74%, and 44 out of 59 assembly attendees filled in the question form. Results are shown in Table 1. The average age of pediatric surgeons in Croatia was 46 years, and 35 out of 59 participants were in the age group 30–60 years (Fig. 1). Overall, 91% of the participants were men. All women were in the age group

Table 1 Demography and satisfaction items as ranked by survey participants

Demographics	
Age (median) (years)	46
Sex	91% male 9% female
Surgical practice (median) (years)	17
Type of practice	49% children hospital 35% university hospital 16% community hospital
Professional and organizational activity	
Work volume	Hours per day=8.5 Hours per week=208 regular + on-call Weeks per year=47
Would chose the same profession again; career and specialty choice	88%
Too much administrative work	88%
Satisfied with estimated quality of patient care	79%
Satisfied with professional activities and working tasks	76%
Excessive clinical workload	73%
Lack of time for communication with patients	69%
Experienced burnout	66%
Chairperson support missing	36%
Education (%)	
Literature available	79
Insufficient research time and continuous education time	79
Insufficient training	61
Presented paper on international congress	57
Published paper in indexed journal	32
Compensation and status (%)	
Dissatisfied with reimbursement	79
Work extra hours for nonmedical institutions/legal, insurance	23
Work extra hours in private practice	9

Fig. 1

Age distribution.

under 40. The average participant had 17 years of surgical practice. Most paediatric surgeons in Croatia worked in children's hospitals (49%) or pediatric surgery departments in university hospitals (35%). Only 16% of the participants worked in community hospitals.

Professional and organizational activity

The average work volume for pediatric surgeons in Croatia was 8.5 h/day, 208 h/month, and 47 weeks/year. Pediatric surgeons were satisfied with the intrinsic factors of profession. Professional activities and working tasks

(76%), patient satisfaction, and reward for helping others (85%) and estimated quality of care (79%) were rated very highly. As much as 88% of the participants would choose the same profession again.

Regarding the sources for dissatisfaction, the participants pointed to the shortage of time for effective communication with patients (69%). Other factors for dissatisfaction were organizational: excessive administrative work (88%) and too many working hours (73%). Lack of support of the departmental chairperson was identified as a factor of dissatisfaction among 36% of the participants. Pediatric surgery is a demanding profession, and 66% of the participants experienced some symptoms/signs of professional burn out (emotional exhaustion, apathy, or saturation) during the last year.

Hospital characteristics and structural issues were very found to be important causes of dissatisfaction among Croatian pediatric surgeons. Technical insufficiencies dominated as the leading cause of dissatisfaction. Most of the hospital buildings in Croatia are more than 40 years old, and despite reconstruction and renovation, 73% of the participants found poor practice conditions to be a reason for dissatisfaction. Availability of new technology and equipment was rated badly (poor or insufficient) by 79% of the participants. Almost three-quarters of the participants qualified the IT equipment as out of date or inappropriate.

Education

During 2008, 57% of the participants presented their papers at international congresses or other professional meetings, and 32% of them published a paper in an indexed journal. Availability of the literature, textbooks, and medical journals was also rated positively (79%). Some reasons for concern, however, still existed. Overall, 61% of the participants scored their training as insufficient. Residents' reasons for dissatisfaction pointed equally negatively toward the training program and curriculum of residency, as well as lack of appropriate mentorship. Lack of protected time for continuous education (79%) was a major issue for dissatisfaction in postgraduate educational activities.

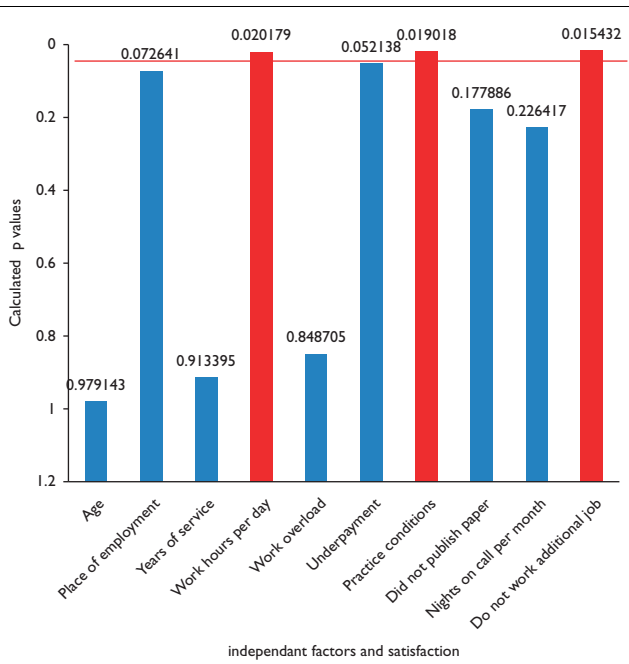
Compensation and status

Overall, 79% of the participants claimed that they were underpaid, 9% of them worked extra hours in private institutions, and 23% of them worked as experts/consultants for other institutions (legal, insurance, educational).

Statistical analysis

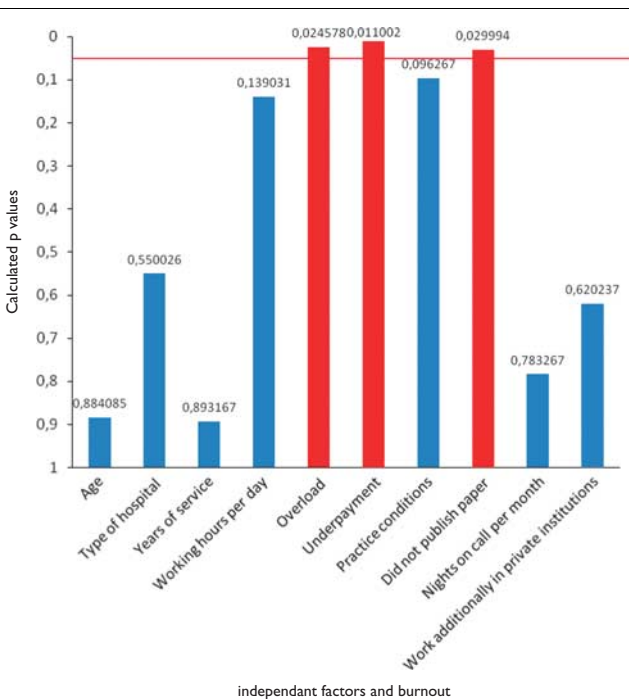
Previous studies identified age, year of service, work volume, nights on call, hospital type, working conditions, and reimbursement as factors independently associated with professional satisfaction, but as factors associated with professional burnout as well. In our study regular working hours ($P = 0.020179$), type of practice ($P = 0.019018$), and single institution employment (no extra job) ($P = 0.015432$) are factors related to professional satisfaction (Fig. 2). Observations on pronounced variables and professional burnout (Fig. 3) demonstrated statistical significance in

Fig. 2



Calculated P values (Pearson χ^2 -test) for independent factors in association with satisfaction (level of significance, $P=0.05$).

Fig. 3



Calculated P values (Pearson χ^2 -test) for independent factors in association with professional burnout (level of significance, $P=0.05$).

correlation with work overload ($P = 0.024578$), underpayment ($P = 0.011002$), and no publishing ($P = 0.029994$).

Discussion

Only few surveys have been conducted among pediatric surgeons to evaluate their satisfaction with professional activities and the work-life balance. Published papers

show that traditional figures have changed. Private life has become as equally important as professional achievements. The trend of feminization among surgeons has been noticed lately. All other issues – legislative, financial, and interpersonal – have become eligible for investigation and improvement. Our study collected a sample of 44 among 72 regular members of Croatian pediatric surgeons. Collected data clearly pointed to a major area of satisfaction, but also highlighted areas that need improvement.

The average age of the participants was 46 years and almost 60% of the participants were in the age group 40–60 years, the most productive and creative period. This data suggest that employment policy is appropriate, and that the present situation provides for a competent service of pediatric surgery in Croatia. Same figures can be found in the reports of Bouchard and Laberge [1] and Katz [2]. M/F ratio showed only 11% of the female pediatric surgeons in our study, but in the group under the age of 40, the recent trend of feminization was evident, as in this group women represent almost 40% of the participants. The same trend has been shown in recent surveys in the USA [2] and the UK [3]. Studies [4–6] among the overall population of surgeons in the USA show approximately the same figures; the proportion of female surgeons varies from 13 to 20%. The reported proportion is significantly lower than the participation of women (50%) in the overall physician population [7,8]. This data confirm traditional notions about surgery as a male profession.

The average work volume/week in Croatia was 52h, which is same as the average working week reported for American physicians [8]. This is slightly less than the average working week of 57h reported for pediatric surgeons in Canada [1], but significantly shorter than that reported for surgeons in the USA (60–65 h/week) [4,6]. American surgeons actually stated a 50-h working week as the desired goal [4]. Croatian pediatric surgeons work 45–47 weeks/year, which is same for pediatric surgeons in Canada [1]. Reported off duty/vacation time for American surgeons [4] is 28 available working days/year, but is effectively taken 20 days/year. The collected data show that working time among countries could differ considerably, whereas the vacation among surgeons in the cited studies is in the same range.

In 76% of the participants, satisfaction with professional activities and daily working tasks were rated high or very high. Studies among pediatric surgeons in Canada [1], USA [2] and UK [3] reported similar figures. Intrinsic factors of satisfaction (reward of helping others, professional activities, decisive nature, intellectual challenge) were found to be the reasons why the vast majority of the participants in our study, as well as a similar proportion of participants in comparable studies [3–5], would choose the same profession again or even recommend specialization to their own children [4,5]. The importance of good interpersonal relationship was rated high among Croatian pediatric surgeons. Recent studies [9,10] demonstrated effective communication and support of the departmental chairperson as crucial for supportive environment.

In contrast, low operative volume and poor task allocation could be a strong cause for dissatisfaction [9]. Major reasons for dissatisfaction in our study included excessive administrative work and too many working hours. Complaints about extensive administrative work and inadequate secretarial support were same among pediatric [1,2], as well as among general surgeons [5,7]. Dissatisfaction due to too many working hours was clearly expressed in the studies by Cannino [2], Troppmann *et al.* [4], and Shanafelt *et al.* [5]. Better control over the schedule and working hours, as well as departmental organization, could probably help in tackling this problem.

In our study, 66% of the participants had experienced some symptoms or signs of professional burn out (emotional exhaustion, apathy, or sad mood) during the last year. The widespread professional and emotional exhaustion was also demonstrated in a survey among Spanish paediatric surgeons [11]. Surveys among American [5,7] and British surgeons [6] showed the presence of professional burn out in a moderate range. Serious professional stress and clinical depression were reported in some studies [6,7]; in addition, these studies demonstrated the demanding nature of surgery.

All the analyzed structural issues (medical facilities, technical support and equipment, and information technology) in our study are in need of improvement. It is well documented that poor practice conditions could be a reason for professional dissatisfaction or relocation [10], whereas we need further investigation to document how poor working conditions influence physician performance and professional score.

Despite favorable figures concerning publishing and conference attending, a strong dissatisfaction with the work conditions for educational activities still persists. The major issue is a lack of protected study time. The factors hindering scholarly or academic development were reported in several studies [2,3,] and research time was rarely a part of the routine working schedule [7]. One of the reasons for serious concern was the fact that more than half of the participants rated their training program as insufficient, and thus its parts, program, and mentorship role should be evaluated and promptly improved. According to some studies, most American and Canadian pediatric surgeons find themselves well prepared at the end of the learning process [12,13,] although almost half of them desire some additional training [12].

Our future plans for improvement are as follows.

Additional training program in minimally invasive surgery must be provided to pediatric surgeons. As laparoscopic techniques have become an integral part of the operative management in virtually every realm of pediatric surgery, the Croatian Society of Pediatric Surgeons organizes training in minimal access surgery for every resident since 2009 to ensure the safe performance of such operations. The purpose of the training guided by Aesculap Academy is to foster the integration of advanced laparoscopic surgical training into the curriculum of the surgery

residency. As the utilization of minimal access procedures increases, residents will more readily acquire the skills necessary to accomplish these operations safely. Basic laparoscopic procedures include laparoscopic cholecystectomy, laparoscopic appendectomy, and diagnostic laparoscopy. All other laparoscopic operations are defined as 'advanced'. Before performing advanced laparoscopic procedures, the resident must be familiar with and experienced in basic laparoscopic skills.

In addition, CSPS manages postgraduate-level scholarships at accredited academic institutions throughout the world. By implementing some of the world's most prestigious and innovative scholarship programs in a competitive and transparent manner, the CSPS provides residents with access to leading institutions such as Graz, Cincinnati, and Strasburg. These programs are critical to promoting mutual understanding and developing competitive skills among residents.

Finally, an improvement of facilities is the next important issue. It has been proven that residents who learn in excellent facilities achieve more and are in a better position to gain the qualifications they need.

Dissatisfaction with the reimbursement continues to be an issue among pediatric surgeons despite substantial employee benefits such as retirement packages, health and disability insurance, and paid vacation time. Salary range for the position determined on national level and lack of bonus-based or commission-based programs diminish the motivation of the surgeons. Financial incentives and stimulation for performance still meet strong political opposition and space for improvement is hence limited. Therefore, one-third of pediatric surgeons rely on sources of extra incomes. Despite the fact that the profession provides prestige and reputation in social status, that three-quarters of the participants would not recommend pediatric surgery to their own children could be an important fact in the proper estimation of occupational give/reward ratio.

Statistical analysis demonstrated the importance of regular working time and proper working conditions. Those who depended on an extra income had a lower rate of satisfaction than did the average surgeon. Excessive workload as a factor associated with burnout in our study underlined the importance of the proper allocation of tasks and responsibilities. Underpayment is a well-known risk factor for professional dissatisfaction and usually acts in synergy with other negative factors. No publishing could be one of the symptoms of low energy, lack of motivation, and poor concentration, as could be features that define burnout.

Conclusion

Current data suggest that proper recruiting policy could provide competent service on national level and achieve the fine balance between fear of surplus among pediatric surgeons as well as ensure immediate employment for new graduates. Intrinsic factors are generally the most important factors for job satisfaction; organizational issues, such as work schedule, planning, task allocation,

and interpersonal relationships, should promote and not suppress the rewarding nature of surgery as profession. Substantial financial investment in the system is necessary for the improvement in technical insufficiencies, and probably the most efficient way to ensure this goal is a more active participation of our professional society in the national healthcare policy. The educational program needs to be improved urgently. The personal involvement of the mentors should be more supportive and helpful and the curriculum should be adjusted to the current EUPSA syllabus. A large pay-gap continues to exist between expectations and the real income. This data could help fostering more realistic expectations but also promote some real actions to improve payment policy.

Acknowledgements

Conflicts of interest

There are no conflicts of interest.

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