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The new generation of family physicians – career motivation, life goals and work-life balance

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Summary

Questions under study: The present study aimed to investigate the differences between future family physicians, and physicians aspiring to other medical specialities, in terms of sociodemographic factors and variables concerning personality factors, career motivation, career success, importance of life goals and work-life balance; further, the stability in career choice of family physicians from medical school through to residency was evaluated.

Methods: Data reported are from four assessments of the Swiss physicians' longitudinal career development study, begun in 2001 (T_1). At T_4, in 2007, 543 residents (76% of the initial sample at T_1) completed a questionnaire concerning their personal and professional goals. The difference between family physicians and specialists was studied by multivariate analyses of covariance adjusted for gender.

Results: Of the study sample, 84 (17%) decided on family medicine, 66% of them as early as medical school or at the beginning of residency. Compared to specialists, more family physicians are married and more have children. Their intrinsic and extrinsic career motivation is lower, their extraprofessional concerns are greater and they rate their objective and subjective career success lower. The favoured models of work-family and work-life balance respectively are part-time oriented.

Conclusion: Future family physicians, both females and males, are less career-oriented. The results suggest that the waning reputation of family medicine and the uncertain development of this medical discipline in the Swiss healthcare system attract less career-oriented applicants. A well-balanced integration of professional and private life is an essential goal for the new generation of doctors; this applies even more to female doctors and family physicians. Considering this trend, the question arises whether the current number of medical school graduates is sufficient to ensure the population's healthcare provision in the future.

Key words: family physicians; career motivation; life goals; work-life balance

Introduction

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The last decade has seen a marked shift away from family medicine to medical specialities in the healthcare systems of most Western countries, especially those which are competition-based [1–6]. The main reasons for the waning interest in family medicine are the low income, status and reputation of family physicians [7–9]. Compared to Canada, the USA, Scandinavia, and the Netherlands [10–15], family medicine is currently not well established as an academic discipline in Swiss medical schools. As reported in several studies, prestigious family medicine faculties, early exposure to patients, longitudinal clinical experiences, and clinical clerkships with community-based physicians during medical school increase students' motivation to choose family medicine as a career [11–14, 16]. Besides the teaching and training conditions in medical school and residency, individual factors play a role in career choice. Data from the British Medical Association 1995 cohort study show that family medicine is chosen more often by female students and students who rate their academic abilities lower and their non-academic abilities as average [17]. While only 18% of the 1995 graduates had chosen family medicine, by 2004 this proportion had increased to 33%. The main reasons for changing career preference were working hours and work-

ing conditions, domestic circumstances and career and promotional prospects [18], arguments that may apply to state-administered health care systems but not for competition-based health care systems that prevail in German-speaking countries.

We have been conducting the first prospective study on career development of young physicians in German-speaking countries, beginning in 2001 [19–21]. The aims of the present study were to focus on study participants who specialise in primary care or in general internal medicine having the career goal of running a family medicine practice. The following issues were investigated: (1) the stability in career choice of future family physicians from medical school through to residency; (2) the differences between physicians who are stable in their career choice and physicians who decide to take up family medicine at a later point, ie during residency, in terms of sociodemographic and career-related factors; (3) the differences between family physicians and physicians aspiring to other medical specialities with regard to sociodemographic factors and variables concerning personality factors, career motivation, career success, importance of life goals and work-life balance.

Methods

Study design, sample development and study sample

The study is an ongoing *prospective survey of a cohort of graduates* of the three medical schools in German-speaking Switzerland (Basel, Bern and Zurich), beginning in 2001 (T1). Subjects were reevaluated after two years in 2003 (T2), after four years in 2005 (T3) and after 6 years in 2007 (T4) via postal questionnaire. By T4 they had worked as residents for five to six years. At T1 711 graduates (out of 1004 subjects addressed) were involved in the study, at T2, 521 residents participated, at T3 572, and at T4 543 (76% of the initial sample at T1).

To ensure participants' anonymity, the returned questionnaires were identified by code only. The respondents sent their addresses to an independent address administration office, to allow follow-up.

Of the 543 study participants, 9 (4 male, 5 female) are not working as physicians. 30 (17 male, 13 female) have not yet decided in which medical speciality they wish to qualify. To investigate the issues of this paper, 504 residents (232 male, 46%; 272 female, 54%) were included in the analyses.

Family medicine

In Switzerland physicians qualified either in "Allgemeinmedizin" (primary care/family medicine/general practitioner) or in "general internal medicine" can run a family medicine practice. As in other countries, family medicine in Switzerland is a board-certified medical speciality like all the other 43 acknowledged specialities and requires a five-year speciality training in internal medicine (obligatory), family medicine (optional), and either surgery, paediatrics, gynaecology, psychiatry or other specialities (optional). WONCA Europe defines general practice/family medicine as an academic and scientific discipline with its own educational content, research, evidence base and clinical activity, and as a clinical speciality oriented to primary care [22]. Family physicians are personal doctors, primarily responsible for the provision of comprehensive and continuing care to every individual seeking medical care irrespective of age, sex and illness. They care for individuals in the context of their family, their community, and their culture; and exercise their professional role by promoting health, preventing disease and providing cure, care, or palliation.

Switzerland has a competition-based health care system. The individual patient chooses the doctor, ie, patients can either visit a family physician first or can directly ask for a consultation with a specialist. In the last decade there has been a trend towards direct consultation of a specialist for each complaint, with the result that minor and everyday clinical problems bypass primary care.

Instruments

The main characteristics of the instruments used are given in table 1. All instruments are self-assessment scales. In the following the constructs measured by the instruments are described:

- Questions concerning socio-demographic data, choice of medical speciality, and career aspired to (family medicine practice, specialist practice, hospital or academic career).
- Sense of Coherence Scale, SOC-13 [23], is a measure of a person's resistance to stress and his/her ability to manage stress.
- Personal Attributes Questionnaire, GE-PAQ, German Extended Personal Attributes Questionnaire [24], is a self-rating instrument for the assessment of gender-role orientation. The Instrumentality (PAQ-I) scale contains instrumental traits (eg "independent", "decisive") that are considered to be socially desirable to some degree in both sexes but stereotypically more characteristic of males. The Expressiveness (PAQ-E) scale contains so-called "feminine" items that describe socially desirable expressive, communal traits (eg "helpful") that are stereotypically more characteristic of females.
- Career Motivation Questionnaire, CMQ [25], consists of 3 scales: Intrinsic Career Motivation CMQ-I (ie enjoyment of and interest in professional activities), Extrinsic Career Motivation CMQ-E (ie striving for promotion, income, prestige) and Extraprofessional Concerns CMQ-EC (ie priorities of family, convenient working hours, job security).
- Occupational Self-Efficacy Expectation Questionnaire (Fragebogen zu beruflichen Selbstwirksamkeitserwartungen (BSW) [26]: The BSW questionnaire is a measure of a person's general occupational self-efficacy expectations. Three items address motivational or competence aspects, and 3 items are inversely formulated to high occupational self-efficacy expectations.
- *Career Success Scale* is a measure of objective career steps consisting of 12 items such as dissertation, completed residency posts, speciality qualifying examination passed, published papers, research projects, number of lectures at conferences, work experience abroad.
- *Subjective assessment of career success* is a measure of one's

own career advancement compared to that of other cohort subjects.

– *Life Goals Questionnaire*, *GOALS* [27], assesses 24 general, long-term life goals pertaining to six major life domains: *intimacy* (close relationships based on mutual trust and affection), *affiliation* (spending time with other people, common activities), *altruism* (acting for the welfare of others), *power* (asserting oneself, seeking social status), *achievement* (improving on oneself, meeting standards), and *variation* (seeking new experiences and excitement). Each goal is rated in regard to *importance* (How important is it for you to reach this goal in your lifetime?). Importance ratings indicate which goals are desirable and valuable for the person and indicate the strength of his/her commitment to a goal.
– *Work-family model*: Six different models of workload distribution between mother and father (mother 100%/father 100%; M 100%/F part-time; M 100%, F does not work; M part-time/F 100%; M does not work/F 100%; M part-time/F part-time).
– *Work-life balance* investigates which of the five different models of work-life balance (career orientation, integration of work and private life, part-time orientation, phasing-out-of-work orientation, three-phase orientation) the participants wish to experience within 5 years.

Statistical analyses

All analyses were carried out with SPSS for Windows, release 12.0. Descriptive statistics are given in terms of counts and percentages, means and standard deviations respectively. Differences between groups of physicians were tested in continuous variables with multivariate analyses of covariance (covariate: gender).

Table 1
Characteristics of the applied instruments.

Dimensions and scales	Number of items	Method of item scoring (Likert-scales)	Method of scale scoring	Reference value (mean) females	Reference value (mean) males	Reliability[1]	Reliability in this study[1]
Personality factors (T_1)							
– Sense of coherence	13	1 (low) – 7 (high)	Sum score divided by number of items	4.96	5.18	0.85	0.84
– Instrumentality	8	1 (low) – 6 (high)	Sum score / number of items	3.50	3.75	0.72	0.74
– Expressiveness	8	1 (low) – 6 (high)	Sum score / number of items	4.63	4.38	0.75	0.74
Career-related factors (T_3)							
– Intrinsic career motivation	8	1 (low) – 7 (high)	Sum score / number of items	5.96		0.70	0.68
– Extrinsic career motivation	8	1 (low) – 7 (high)	Sum score / number of items	4.17		0.76	0.69
– Extraprofessional concerns	8	1 (low) – 7 (high)	Sum score / number of items	4.30		0.72	0.74
– Occupational self-efficacy expectation	6	1 (low) – 5 (high)	Sum score / number of items	3.76		0.78	0.75
Career success (T_4)							
– Index of objective career success	12	1 (low) – 19 (high)	Sum score	–		–	0.69
– Subjective career success	1	1 (low) – 7 (high)		–		–	–
Importance of life goals (T_3)							
– Intimacy	4	1 (low) – 5 (high)	Sum score / number of items	4.60		0.60	0.76
– Affiliation	4	1 (low) – 5 (high)	Sum score / number of items	3.47		0.82	0.85
– Altruism	4	1 (low) – 5 (high)	Sum score / number of items	3.55		0.76	0.82
– Power	4	1 (low) – 5 (high)	Sum score / number of items	2.73		0.85	0.83
– Achievement	4	1 (low) – 5 (high)	Sum score / number of items	4.00		0.68	0.75
– Variation	4	1 (low) – 5 (high)	Sum score / number of items	3.33		0.81	0.76
Work-life balance (T_4)							
– Work-family model	1	nominal					
– Work-life models	5 (1 item per model)	1 (not at all) – 5 (totally)					

[1] Cronbach's alpha

Results

Stability in career choice of future family physicians

At each measurement the participants were asked to assess their aspired-to medical speciality and their aspired-to career (family physician practice, specialist practice, hospital or academic career). At T4, 84 (35 male, 42%; 49 female 58%) residents plan to open a family medicine practice, of whom 50 (60%) will specialise in primary care and 34 (40%) in general internal medicine.

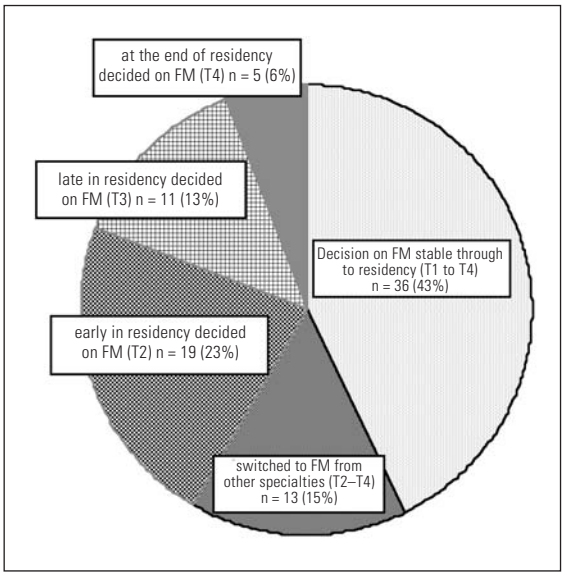


Figure 1

Stability in career choice of future family physicians from medical school through to residency (n = 84).
FM = Family Medicine

As seen in figure 1, of the 84 future family physicians 36 (43%) already intending to run a family medicine practice while at medical school, 13 (15%) switched to family medicine from other specialities (internal medicine specialities, gynaecology & obstetrics, orthopaedic surgery, psychiatry), 19 (23%) did not know their speciality and career in medical school, but made their decision during the first two years of residency, another 11 (13%) decided on family medicine only in their fourth year of residency, and 5 (6%) found their way to family medicine after a five- to six-year residency.

Table 2

Sociodemographic characteristics of future family physicians versus other specialists.

	Family physicians (n = 84) n (%)	Other specialists (n = 420) n (%)
Gender		
– Female	49 (58)	223 (53)
– Male	35 (42)	197 (47)
Age in years		
– mean (SD)	33.59 (2.77)	33.18 (2.09)
– range	30–45	29–47
Current living situation		
– married	37 (45)	132 (31)
– partnership	69 (82)	359 (86)
– partner is a physician	16 (24)	126 (36)
– children	26 (32)	74 (18)

Career-related characteristics of early and late deciders on family medicine

Medical school graduates who aspired to family medicine from medical school through to residency (n = 36) do not seem to differ from those choosing family medicine later in their postgraduate training (n = 48) in terms of age, gender and marital status. However, those who switched from another speciality or decided later on family medicine show significantly lower intrinsic career motivation [mean 5.84 (0.61) *vs* 6.10 (0.43)] and assess their subjective career success as lower [3.50 (1.22) *vs* 4.24 (0.74)] than those participants who were stable in their speciality and career choice from medical school through to residency.

Sociodemographic characteristics of future family physicians and other specialists

As mentioned, 84 study participants are going to work as family physicians. 420 of the study sample aspire to qualify in other specialities and intend to run a specialist practice (n = 103) or apply for a hospital (n = 218) and/or academic (n = 38) career. The distribution of specialities is as follows: 128 (31%) specialist internal medicine, 64 (15%) surgery, 47 (11%) anaesthesiology, 45 (11%) paediatrics, 36 (9%) gynaecology & obstetrics, 36 (9%) psychiatry and 64 (15%) other specialities.

As seen in table 2, future family physicians differ from physicians choosing other specialities and careers insofar as they are more often married, more often have children, and less often have partners who are doctors. There are no apparent differences in terms of gender and age.

Differences between family physicians and other specialists in terms of personality traits, career-related factors, career success, and life goals

Table 3 presents the results of the multivariate analyses of variance for the four dimensions personality factors (assessed at T1), career-related factors (T3), career success (T4) and importance of life goals (T3). Significant differences between future family physicians and other specialists are found in three of the four dimensions. Within the dimension of *career-related factors*, future family physicians differ from other specialists mainly in terms of lower intrinsic career motivation (ie, enjoyment of and interest in professional activities) and lower extrinsic career motivation (ie, promotion, income, and prestige were not so important for them) and wider extraprofessional concerns (ie, they prioritise family, convenient working hours, job security, and leisure time); they also present lower occupational self-efficacy expectation. Differences are also observed in terms of *career success*: objective career steps and subjectively assessed career advancement are sig-

Table 3

Means (SD) of personality and career-related factors, career success and importance of life goals in future family physicians versus other specialists. Results of multivariate analyses of covariance (covariate: gender) (N = 504).

Dimensions and scales	Speciality and career choice (T4)		Multivariate statistics	
	Family physicians (n = 84) Mean (SD)	Other specialists (n = 420) Mean (SD)	$F(df_{effect},df_{error})$	p
Personality factors (T_1)			F(3,461) = 1.28	0.281
– Sense of coherence	4.92 (0.83)	5.06 (0.86)		
– Instrumentality	4.06 (0.65)	4.17 (0.67)		
– Expressiveness	4.95 (0.53)	4.85 (0.58)		
Career-related factors (T_3)			F(4,436) = 7.23	**<0.001**
– Intrinsic career motivation	5.95 (0.56)	6.12 (0.52)		
– Extrinsic career motivation	3.83 (0.86)	4.25 (0.86)		
– Extraprofessional concerns	4.70 (0.96)	4.14 (1.02)		
– Occupational self-efficacy expectation	3.56 (0.71)	3.77 (0.65)		
Career success (T_4)			F(2,482) = 17.64	**<0.001**
– Index of objective career success	4.23 (1.28)	6.09 (2.85)		
– Subjective career success	3.80 (1.12)	4.30 (1.22)		
Importance of life goals (T_3)			F(6,434) = 7.32	**<0.001**
– Intimacy	4.60 (0.48)	4.59 (0.46)		
– Affiliation	3.48 (0.80)	3.61 (0.76)		
– Altruism	3.77 (0.68)	3.62 (0.67)		
– Power	2.55 (0.78)	2.83 (0.78)		
– Achievement	4.04 (0.57)	4.31 (0.50)		
– Variation	3.78 (0.67)	3.72 (0.74)		

T_1 time before graduation T_3 time after four years of residency T_4 time after five/six years of residency

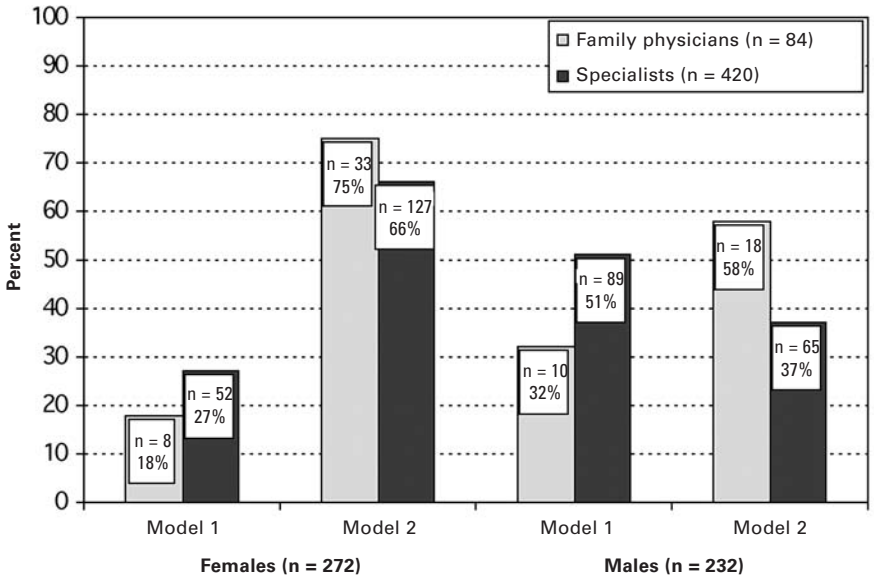
nificantly lower in future family physicians. There are further differences between the two groups in terms of *importance of life goals:* family physicians chiefly show lower values in 'power' (ie, professional influence, asserting oneself, seeking social status) and 'achievement' (ie, improving oneself, meeting standards).

Work-family and work-life balance of family physicians and other specialists

The participants were asked what *model of workload distribution between mother and father* they will adopt if they intend to have or already have children. As shown in figure 2, three quarters of the female family physicians and two thirds of the female specialists prioritise a combination of work and family obligations in terms of both parents working part-time (model 2). Only one of six female family physicians and one of four female specialists prioritise model 1 (the father works full time, mother part-time). Within the male physicians' group future family physicians significantly differ from specialists in terms of a higher percentage of subjects prioritising work-family

Figure 2

Favoured models of workload distribution between father and mother by female and male family physicians and specialists.



Model 1: Father fulltime work, mother part-time work (n = 159)
Model 2: Father and mother part-time work (n = 243)
Four other work-family models (Mother 100% / Father 100%; M 100%, F does not work; M part-time / F 100%; M does not work / F 100%) (n = 102; not shown in figure 2)

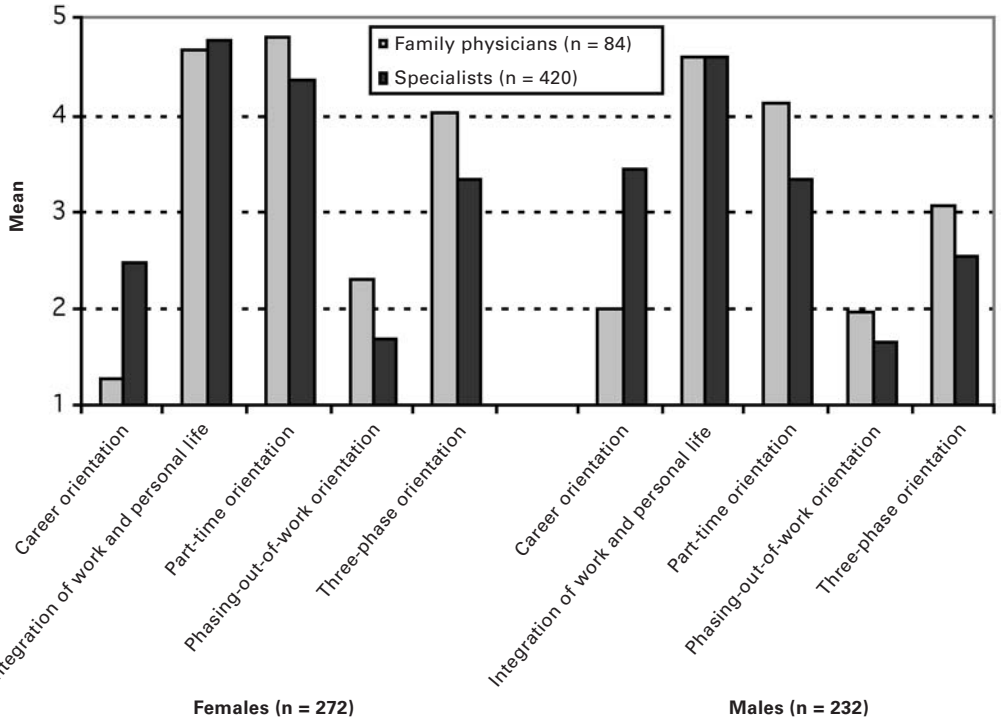


Figure 3

Models of work-life balance aspired to in 5 years by female and male family physicians and specialists.

model 2. Half of the specialists favour model 1. The other four work-family models (mother 100%/father 100%; M 100%/F does not work; M part-time/F 100%; M does not work/F 100%) were considered only by a very few participants (n = 102, 20%), and are therefore not shown in Figure 2.

In a next step the participants answered the question which *model of work-life balance* they wish to adopt in 5 years. As seen in Figure 3, female physicians chiefly favour a balanced integration of work and personal life or a part-time orientation. Female family physicians significantly differ from specialists in terms of less career orientation, higher part-time and three-phase orientation (ie, working full-time, taking family leave and returning to work), and even higher phasing-out-of-work orientation. Male physicians also prefer a well balanced combination of work and personal life; the same significant differences between the work-life models aspired to by family physicians and by specialists can be seen in the other models already described for the female group.

Discussion

This paper is based on data gathered from a prospective survey of residents graduating from three medical schools in German-speaking Switzerland, from 2001 onwards. Subjects were evaluated four times at two-year intervals. The paper focuses on residents' career goals in terms of whether they aspire to become family physicians or to qualify in other medical specialities. Further issues under investigation were career motivation, life goals, and favoured work-life balance in generalists versus specialists. Of n = 504 residents who had decided on a speciality by 2007, 84 aspired to become family physicians while 420 had decided on another speciality.

Career choice

While in our study more female than male physicians aspire to family medicine, the difference is not significant. This gender distribution reflects the distribution in the study sample. Other studies [17, 18, 28, 29] report a higher percentage of female family physicians.

Two thirds of the future family physicians in our study decided on family medicine as early as medical school or in their first year of residency, while a smaller proportion switched from another speciality to family medicine or decided on family medicine only after several years of residency. These results suggest, comparably to findings in other studies [11–14, 16], that experiences in medical school, such as early exposure to patients offered by enthusiastic family medicine tutors, clinical clerkships with community-based physicians and attractive role models, play a decisive role in choosing family medicine for the majority of future family physicians. However, there are also reports [8, 30] that the decline of interest in family medicine is partly due to the fact that few students have the opportunity to observe contemporary models of chronic disease management, which is

needed to ensure high-quality ambulatory care for the large group of patients with chronic diseases in family practices. As a result, students are concerned that they will not be adequately prepared to assume the responsibilities of a family practice. Furthermore, students and residents often witness hospital doctors' deprecatory statements about family physicians' competence. Another factor deterring students and residents from choosing family medicine may be meeting family physician tutors who frequently complain about their heavy workload, administrative burden and lack of leisure time [31].

Our results show that residents who switched from another speciality or decided late on family medicine are driven by lower intrinsic career motivation than the early deciders. This finding may be accounted for by the fact that the late deciders do not feel attached to a particular medical discipline. One hypothesis is that, with growing experience, they realise the value and satisfaction of being a generalist and caring for patients of varying age, sex and illnesses and providing comprehensive continuing care in the context of their family and culture. These residents do not plan their career in a straightforward manner; accordingly they assess their subjective career success at a lower level than subjects of the other group.

Career orientation, life goals and work-life balance in family physicians versus specialists

Looking at family physicians and specialists in terms of sociodemographic characteristics, apparent differences are observed insofar as more family physicians are married and have children. The postgraduate training period in general medicine takes five years compared to six years for most of the other 43 medical specialities accredited in Switzerland. Applicants for general medicine or general internal medicine enjoy greater flexibility than applicants for the other specialities in determining the structure of full- and part-time periods and the chronology of the training posts according to the postgraduate training regulations of the Swiss Medical Association. This means that trainees in general/ internal medicine can take a family break much more easily than if they are involved in a specialist training programme. As reported by Heuss & Hänggeli [32] in 2001, one third of female and six percent of male applicants for the speciality diploma availed themselves of the opportunity for part-time training. Similar findings regarding desire for flexible training are reported in the British Medical Association cohort study of 2006 medical graduates [33]. Most of the part-time training posts fall into the disciplines of internal medicine, psychiatry, gynaecology, paediatrics, and anaesthesiology, disciplines often chosen by future family physicians for one-year training posts.

In terms of career-related factors there are also differences between these two groups. Family physicians rate intrinsic and extrinsic career motivation lower and extraprofessional concerns higher than specialists. These results suggest that family physicians like their jobs but family, friends, leisure activities are equally important to them. As data of focus group interviews with practising family physicians for ten or more years show [34], attitudes to the doctor's professional role have noticeably changed in the last ten years. The former family physician generation often regarded their profession as a vocation, sacrificing themselves for their patients.

Our study results also indicate that future family physicians are less career-oriented, ie show lower extrinsic career orientation. In some prestige specialities there is a high degree of competitiveness, a condition family physicians shy away from. Training conditions in some specialities are highly demanding in terms of working hours; accordingly, trainees complain of neglecting their social life. These considerations are supported by the results of our study on the importance of life goals and favoured work-life balance. If career-related factors do not play such a decisive role in family physicians as is observed in specialists, this is because seeking a high professional status and meeting high standards are not as important. Accordingly, they are often less advanced in their careers than specialist trainees. Looking five years ahead, three-quarters of female family physicians and almost 60% of male family physicians wish to work part-time in the future, ie if they have children, and both partners wish to reduce working hours. There is a significant difference between male generalists and specialists insofar as the latter favour a work-family model in which the male spouse works full time and the female spouse only part-time. Both female groups, family physicians and specialists, favour part-time work for both parents. These results suggest that male physicians who plan a more equal distribution of work and family obligations are more likely to choose family medicine as a career, while female physicians of both groups plan this kind of integration of work and family. As reported for all Western countries [17, 18, 28, 29], there will be more female physicians – generalists and specialists – in the future; this trend must be borne in mind by health politicians when planning the necessary workforce to ensure health care provision for the population.

Some studies indicate that doctors experiencing difficulties in balancing professional and private life are at higher risk of developing burnout symptoms [35–38]. This raises the question whether the trend towards part-time work in the new generation of doctors, especially of family physicians, is a response to the former generation of family physicians' unhealthy overcommitment to work.

Conclusion

In planning the necessary workforce to ensure health care provision for the population, health politicians must bear in mind two important social changes which have a far-reaching impact on the health care system: (1) the increasing number of female doctors who plan to work part-time in the long run, and (2) the trend among both female and male doctors, especially those aspiring to work as family physicians, to pay greater attention to balance in their professional and private lives. Taking these factors into consideration, the number of medical school graduates needs to be increased by a substantial number of applicants, a development already started in the US [39].

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References

1 Buddeberg-Fischer B, Klaghofer R, Stamm M, Marty F, Dreiding P, Zoller M, et al. Primary Care in Switzerland – no longer attractive for young physicians? Swiss Med Wkly. 2006;136:416–24.
2 Joyce CM, McNeil JJ. Fewer medical graduates are choosing general practice: a comparison of four cohorts, 1980–1995. MJA. 2006; 185(2):102–4.
3 Lambert TW, Goldacre MJ, Turner G. Career choices of United Kingdom medical graduates of 1999 and 2000: questionnaire surveys. BMJ. 2003;326(25January):194–5.
4 Lambert TJ, Goldacre MJ, Turner G. Career choices of United Kingdom medical graduates of 2002: questionnaire survey. Med Educ. 2006;40:514–21.
5 Mayorova T, Stevens F, Scherpbier A, van der Velden L, van der Zee J. Gender-related differences in general practice preferences: longitudinal evidence from the Netherlands 1982–2001. Health Policy. 2005;72(1):73–80.
6 Sandy LG, Schroeder SA. Primary care in a new era: disillusion and dissolution? Ann Intern Med. 2003;138:262–7.
7 Walker K. Primary care is dying in the United States: mutatis mutandis. Med Educ. 2006;40:9–11.
8 Whitcomb ME, Cohen JJ. The future of primary care medicine. New Engl J Med. 2004;351(7):710–2.
9 Hasler N. Einkommensverhältnisse der freien Ärzteschaft der Schweiz in den Jahren 2001 und 2002. Schweiz Ärzteztg. 2006;87 (3):87–93.
10 Hyppola H, Kumpusalo E, Virjo I, Mattila K, Neittaanmaki L, Halila H, et al. Evaluation of undergraduate medical education in Finnish community-oriented and traditional medical faculties: a 10-year follow-up. Med Educ. 2000;34(12):1016–8.
11 Haffling AC, Hakansson A, Hagander B. Early patient contact in primary care: a new challenge. Med Educ. 2001;35(9):901–8.
12 Howe A, Ives G. Does community-based experience alter career preference? New evidence from a prospective longitudinal cohort study of undergraduate medical students. Med Educ. 2001;35(4): 391–7.
13 Wiesemann A, Engeser P, Barlet J, Muller-Buhl U, Szecsenyi J. What students and teaching doctors in Heidelberg think about early patient contact and tasks in general practice. Gesundheitswesen. 2003;65(10):572–8.
14 Simpson D, Marcdante K, Morzinski J, Meurer L, Mclaughlin C, Lamb G, et al. Fifteen years of aligning faculty with primary care clinician-educator roles and academic advancement at the Medical College of Wisconsin. Acad Med. 2006;81(11):945–53.
15 Davis AK, Stearns JA, Chessman A, Paulman PM, Steele DJ, Sherwood RA. Family medicine curriculum resource project: overview. Fam Med. 2007;39(1):24–30.
16 Campos-Outcalt D, Senf JH, Kutob R. A comparison of primary care graduates from schools with increasing production of family physicians to those from schools with decreasing production. Fam Med. 2004;36(4):260–4.
17 Sinclair HK, Ritchie LD, Lee AJ. A future career in general practice? A longitudinal study of medical students and pre-registration house officers. Eur J Gen Pract. 2006;12(3):120–7.
18 Jones L, Fisher T. Workforce trend in general practice in the UK: results from a longitudinal study of doctors' careers. Br J Gen Pract. 2006;56:134–6.
19 Buddeberg-Fischer B, Klaghofer R, Abel T, Buddeberg C. Swiss residents' specialty choices – impact of gender, personality traits, career motivation and life goals. BMC Health Serv Res. 2006;6:137.
20 Buddeberg-Fischer B, Klaghofer R, Abel T, Buddeberg C. Junior physicians' workplace experiences in clinical fields in German-speaking Switzerland. Swiss Med Wkly. 2005;135(1-2):19–26.
21 Buddeberg-Fischer B, Klaghofer R, Abel T, Buddeberg C. The influence of gender and personality traits on the career planning of medical students. Swiss Med Wkly. 2003;133:535–40.
22 WONCA Europe. World family doctors. Caring for people. The European Definition of General Practice / Family Medicine. In: WONCA Europe; 2002.
23 Antonovsky A. Unraveling the mystery of health. How people manage stress and stay well. San Francisco: Jossey-Bass; 1987.
24 Alfermann D, Reigber D, Turan J. Androgynie, soziale Einstellungen und psychische Gesundheit: Zwei Untersuchungen an Frauen im Zeitvergleich. In: Bock U, Alfermann D, eds. Androgynie. Vielfalt und Möglichkeiten. Stuttgart: Metzler; 1999. p. 142–55.
25 Abele AE. Karriereorientierungen angehender Akademikerinnen und Akademiker. Bielefeld: Kleine; 1994.
26 Abele AE, Stief M, Andrä MS. Zur ökonomischen Erfassung beruflicher Selbstwirksamkeitserwartungen – Neukonstruktion einer BSW-Skala. Göttingen: Hogrefe; 2000.
27 Poehlmann K, Brunstein JC. GOALS: Ein Fragebogen zur Messung von Lebenszielen. Diagnostica. 1997;43(1):63–79.
28 Lloyd JR, Leese B. Career intentions and preferences of general practice registrars in Yorkshire. Br J Gen Pract. 2006;56:280–2.
29 Tu HT, O'Malley AS. Exodus of men physicians from primary care drives shift to specialty practice. Results from the community tracking study. Washington D.C.: Center for Studying Health System Change. Tracking Report; 2007, June 2007. Report No.: 17.
30 De Maeseneer J. Why does a Medical Faculty need family medicine for international accreditation. Prim Care. 2005;5(11):272–4.
31 Van Ham I, Verhoeven AA, Groenier KH, Groothoff JW, De Haan J. Job satisfaction among general practitioners: a systematic literature review. Eur J Gen Pract. 2006;12(4):174–80.
32 Heuss LT, Hänggeli C. Open access to part-time specialist training – the Swiss experience. Swiss Medical Wkly. 2003;133:263–6.
33 British Medical Association. BMA cohort study of 2006 medical graduates. London: British Medical Association, Health Policy & Economic Research Unit; 2007.
34 Buddeberg-Fischer B, Stamm M, Marty F. Attraktivitätssteigerung der Hausarztmedizin – Ansichten und Vorschläge von praktizierenden Hausärzten. Prim Care. 2007;42-43:639–41.
35 Biaggi P, Peter S, Ulich E. Stressors, emotional exhaustion and aversion to patients in residents and chief residents – what can be done? Swiss Med Wkly. 2003;133:339–46.
36 Goehring C, Bouvier Gallacchi M, Künzi B, Bovier P. Psychosocial and professional characteristics of burnout in Swiss primary care practitioners: a cross-sectional survey. Swiss Med Wkly. 2005;135: 101–8.
37 Luthy C, Perrier A, Perrin E, Cedraschi C, Allaz A-F. Exploring the major difficulties perceived by residents in training: a pilot study. Swiss Med Wkly. 2004;134:612–7.
38 Voltmer E, Kieschke U, Spahn C. Work-related behaviour and experience patterns of physicians compared to other professions. Swiss Med Wkly. 2007;137:448–53.
39 Weiner JP. Expanding the US medical workforce: global perspectives and parallels. BMJ. 2007;335:236–8.

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