

Experiences and attitudes of dietitians during the first compulsory community service year (2003)



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Objectives. This study was undertaken to investigate the experiences and attitudes of dietitians during the first compulsory community service (CS) year (2003), to determine their perception of the success of the year as a whole and to assess whether the knowledge and skills of graduates improved.

Subjects and design. Data were collected by means of an anonymous questionnaire posted to the CS dietitians ($N = 126$). The questionnaire consisted of four sections: general information, demographic and logistical information, professional duties and competencies, and personal experience.

Results. Ninety dietitians returned the completed questionnaire, giving a 71% response. Thirty-nine per cent of dietitians were placed during the first round of allocation, with 48% placed during the third round or after further deliberations. Eighty-eight per cent of the dietitians reported a safe working environment. Full competency was reported by 26% of dietitians for therapeutic nutrition, 47% for food service management and 30% for community nutrition. Only 7% of dietitians found it very difficult to execute their daily duties. At the outset, 55% of dietitians had a positive attitude regarding the year, with this percentage increasing to 67% towards the end of the year. Negative attitudes decreased from 17% to 15%. Ninety-one per cent of dietitians reported that their knowledge improved and 95% reported an improvement in skills. Most dietitians (92%) felt that the CS year was a successful institution.

Conclusions. The majority of dietitians experienced the CS year positively and felt that their knowledge and skills improved. The vast majority of dietitians reported the CS year to be a successful institution.

The Medical, Dental and Supplementary Health Service Professions Amendment Act, No. 89 of 1997, signed into law on 12 December 1997 by Mr Nelson Mandela (State President at the time), enforced compulsory community service (CS) for medical graduates in South Africa. CS for doctors was conceived amid controversy, with the first group of doctors starting their CS in July 1998. Subsequently other health professions have followed suit and on 31 May 2002 a notice appeared in the *Government Gazette* informing dietetic students (in conjunction with students in clinical psychology, environmental health, occupational therapy, physiotherapy, radiography, and speech, language and hearing therapy) that they are required by law and the Department of Health to complete 1 year's remunerated compulsory CS from 1 January 2003.¹ Only after completion of this service are they allowed to register with the Health Professions Council of South Africa (HPCSA), and thus independently practise their profession in this country.

In the apartheid era, intense criticism was focused on inequalities in health and access to health care in South Africa,^{2,3} with numerous studies^{4,5} drawing attention to the issue of the maldistribution of health professionals in this country. The recruitment and retention of professional health workers in rural and underserved areas remains a complex issue. Health personnel cite low levels of job satisfaction, poor working conditions, despondency in the face of the HIV epidemic, unsatisfactory management, and inadequate salaries as underlying their dissatisfaction with working in the public sector.⁶ Determination to develop a more equitable national health care system was central to the new government's health and welfare policies in the Reconstruction and Development Programme (RDP).^{7,8} Consequently, one of the broad policies outlined in the 1997 White Paper for the Transformation of the Health System in South Africa⁹ aims to 'distribute health personnel throughout the country in an equitable manner'. Initiatives have included recruiting doctors

from other countries to provide care in rural areas, CS for a selection of key categories of health personnel, and a rural and scarce skills allowance. CS emerged as a symbol of the commitment of the health department and medical establishment to equity in the health services. Despite these attempts, ratios of public sector health personnel to the population have not improved substantially and for some categories of personnel appear even to be worsening.⁶ The high number of vacant posts (ranging from 13.4% in Limpopo province to 67.4% in Mpumalanga in 2003) is indicative of the challenge faced by the country in improving health personnel ratios.¹⁰ Alarming, the literature points to increasing numbers of skilled personnel migrating abroad, with studies reporting between 20% and 45% of personnel intending to work overseas after completion of their CS year.¹¹

The aim of the DOH in initiating CS has been stated as follows: 'The main objective of CS is to ensure improved provision of health services to all the citizens of our country. In the process this also provides our young professionals with an opportunity to develop skills, acquire knowledge, behaviour patterns and critical thinking that will help them in their professional development.'¹² There are, however, other issues, which it is hoped will be addressed by this policy. These include emigration of qualified health professionals to work in other countries, lack of health professionals in the public service working in rural or peripheral hospitals, training not preparing young health professionals for work in rural South Africa, and the prevalence of health professionals working in the private (as opposed to the public) health sector.¹³

As with other health profession groups, the announcement of compulsory CS for dietitians caused a great deal of concern and apprehension, with tight deadlines for final-year students contributing to general uncertainty and unhappiness at the time. This study was therefore undertaken to investigate the experiences and attitudes of dietitians during the first compulsory CS year, to determine their perception of the success of the year as a whole and to assess whether the knowledge and skills of graduates improved.

Methods

Design

A cross-sectional, descriptive study was carried out in November 2003.

Population and sample selection

The study population consisted of all dietitians who obtained a degree in dietetics in South Africa during 2002, and who were completing their CS year in 2003. A detailed list of registered CS dietitians was

obtained from the Association for Dietetics in South Africa (ADSA) ($N = 131$). Five dietitians were randomly selected to be part of the pilot study. These 5 dietitians were excluded from the final study population ($N = 126$).

Data collection and analysis

An anonymous questionnaire was developed to assess the experiences and attitudes of entry-level dietitians before and after their compulsory CS year. The questionnaire consisted of structured and open-ended questions (37 in total) and was divided into 4 sections, i.e. general information, demographic/logistical information, professional duties/competencies, and personal experience. The questionnaire included an information letter and instruction sheet, clearly explaining the aims of the study and instructions for completion. The efficacy and face validity of the questionnaire and the instruction sheet were tested during a pilot study on 5 randomly selected dietitians from the previously identified study population. Adaptations were made as required. The mailed questionnaires included a pre-paid numbered envelope in order to encourage a better response. The returned questionnaires were separated from the envelopes to ensure the anonymity of the participants. This process was explained to participants in the accompanying information letter. After the deadline for return of the questionnaires had expired, those who had failed to respond (as determined by the numbered envelopes) were reminded telephonically.

All data were processed and analysed by means of the Microsoft Excel XP program, using descriptive statistics. Frequencies were tallied for closed-ended questions. For open-ended questions, similar answers were grouped and frequencies tallied. Pearson's chi-square test (χ^2) was used for selected determinations. Statistical significance was set at $p < 0.05$.

Ethics

The study was approved by the Committee for Human Research of the Faculty of Health Sciences, Stellenbosch University. Respondents were ensured of confidentiality, as response was anonymous and participation was voluntary.

Results

General information

A total of 90 dietitians returned the completed questionnaire (71% response rate). The ages of participants ranged between 22 and 36 years (mean age 23.8 ± 1.99 years). Eighty-nine females and 1 male participated in the study. Participants included dietitians who graduated from all 9 universities in South Africa that offer a dietetics course. Twenty-

five per cent of participants had graduated from Stellenbosch University, followed by graduates from the University of Pretoria (19%), Potchefstroom University for Christian Higher Education (11%), University of Cape Town (9%), University of KwaZulu-Natal (9%), University of the Free State (8%), University of the Western Cape (7%), University of the North (7%) and the Medical University of South Africa (MEDUNSA) (5%).

Seventy-nine per cent ($N = 71$) of dietitians indicated that they received orientation in their new working environment as provided by the various institutions. Of these dietitians, 68% reported that they received orientation from dietitians, while orientation was also conducted by doctors (5%), food service managers (5%), nurses (1%) and a variety of other personnel. The duration of the orientation varied from < ½ day to > 5 days, with only 24% ($N = 17$) of dietitians reporting that they had received orientation for more than 5 days. The majority of participants (53%) indicated that they had to report to a dietitian during their CS year; the rest reported to doctors (15%), superintendents (11%) and a variety of other personnel (21%), including food service managers, pharmacists, hospital managers, human resource managers and occupational therapists. Dietitians indicated that the support and guidance provided by supervisors varied, with 45% of the study population reporting that their supervisor had comprehensive insight into the professional capabilities of the dietitian and what was expected of him/her. Of concern is the fact that 12% of dietitians reported that the person had no insight whatsoever and 8% reported that the person they had to report to was simply not interested. Fifty-nine per cent ($N = 53$) of participants indicated that a qualified dietitian was employed at the institution where they were placed. Participants described 85% of these dietitians ($N = 45$) as being 'approachable'.

Demographic and logistical information

Eighty-three per cent of the CS dietitians ($N = 75$) regarded the placement process as not well organised. Thirty-nine per cent were placed during the first round of allocation, 13% during the second round and 32% during the third round. The remaining 16% of dietitians were only placed after further deliberations, and had to choose from those institutions left on the list. Dietitians were placed in all 9 provinces (Fig. 1), with Mpumalanga receiving most of the placements (27%) and the Northern Cape the least (1%). A statistically significant association was found between the round of allocation and the CS dietitians' attitudes before the start of the CS year ($p < 0.05$). Dietitians were placed at predetermined allocation sites, with many dietitians reporting work in more than one setting (Table I). The majority of dietitians (92%) worked in a hospital setting.

Eighty-eight per cent reported a safe working environment. The remaining 12% felt that the environment

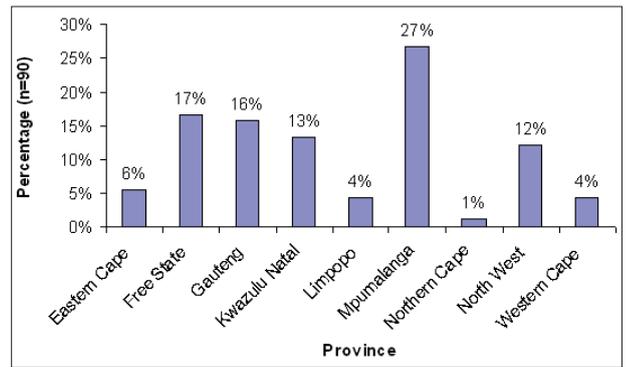


Fig. 1. Placement of CS dietitians (N = 90) by province.

Table I. Distribution of CS dietitians (N = 90) by allocation site*

Allocation site	CS dietitians (%)
Hospital setting	92
Community clinics	43
Food service units	33
Day hospitals	8
Other (including old age homes, farms and health centres)	9

*Many dietitians reported work in more than one setting.

surrounding the institution and the communities they had to visit were not safe. Accommodation was offered by 68% of the CS institutions and 59% ($N = 36$) of the relevant dietitians made use of this offer. Eighty-one per cent ($N = 29$) of these dietitians were satisfied with the accommodation that was offered. The majority of dietitians (65%) spent less than R500 per month on accommodation, with only 5% spending between R2 000 and R3 000 per month for private accommodation. The majority of dietitians (65%) had to travel a distance of less than 5 km between their accommodation and workplace, with only 17% travelling more than 20 km daily.

Professional duties and competencies

During the course of the CS year, 74% of dietitians ($N = 67$) experienced some communication difficulties when interviewing/consulting patients. Of those who reported difficulties, 73% ($N = 49$) reported that interpreters were available to assist them. The majority (56%) reported that their experience varied (a combination of easy and difficult) in terms of executing their dietetic duties. Only 7% of the dietitians found it very difficult to execute their daily duties. Three per cent of participants indicated that they did not work in the field of therapeutic nutrition during their CS year, 11% did no work related to food service management, and 10% did not perform any work related to community nutrition.

Entry-level competencies of dietitians are divided into the three main professional focus areas (i.e. scope of practice) namely therapeutic nutrition, food service

Table II. Help needed and reported incompetence by CS dietitians in therapeutic nutrition, food service management and community nutrition

	Therapeutic nutrition			Food service management			Community nutrition		
	Help needed* (%)	Not competent† (%)	Total (%)	Help needed* (%)	Not competent† (%)	Total (%)	Help needed* (%)	Not competent† (%)	Total (%)
Trauma and sepsis/critical care (N = 49)*	47	4	51	45	6	51	55	0	55
Osteoporosis and endocrine disorders (N = 33)	42	12	54	48	9	57			
Eating disorders (N = 26)	50	4	54						
Allergies (N = 41)	46	8	54						
Inborn errors of metabolism (N = 25)	44	20	64						
Sports nutrition (N = 23)	56	9	65						

* In this category the percentage of dietitians is indicated who reported needing some help or extensive help to execute their duties related to the specific field/topic.

† In this category the percentage of dietitians is indicated who reported they were not competent at all to execute their duties related to the specific field/topic.

(N) represents the number of dietitians who did work during their CS year related to the specific field/topic.

INP = Integrated Nutrition Programme

Setting of specifications (equipment/food products) (N = 33)

Financial management (N = 33)

Implementation of intervention programmes within the INP (N = 20)

Nutrition information system (INP) (N = 29)

Human resource plan (INP) (N = 28)

Financial and administrative system (INP) (N = 26)

management and community nutrition, each consisting of numerous sub-fields or topics of relevance.¹⁴ Participants were asked to select an appropriate description (i.e. fully competent, some help needed, extensive help needed or not competent) for each of the main focus areas as well as the identified sub-fields or topics. In general, full competency for therapeutic nutrition, food service management and community nutrition was reported by the participants at 26%, 47% and 30% respectively.

Full competency in the following therapeutic nutrition fields was reported by more than 50% of participants: diabetes mellitus (92%), obesity (91%), cardiovascular diseases (88%), tuberculosis (81%), oncology (81%), HIV/AIDS (78%), enteral nutrition (72%), paediatrics (68%), burns (68%), diseases of the gastro-intestinal tract and surgery (67%), diseases of the liver, gallbladder and pancreas (64%), total parenteral nutrition (60%), rheumatic disorders (59%), respiratory diseases (57%), renal diseases (53%) and neurological diseases (51%).

Full competency in the following food service management fields was reported by more than 50% of participants: implementation of hygiene (76%), menu planning and adaptations (72%), monitoring client satisfaction (72%), recipe development for specific needs (70%), determining food standards and monitoring implementation (56%), general management responsibilities (56%) and planning/control of food procurement, production and distribution (50%).

Full competency in the following community nutrition fields was reported by more than 50% of participants: disease-specific nutrition support, treatment and counselling (84%), growth monitoring and promotion (79%), nutrition promotion, education and advocacy (76%), promotion, protection and support of breastfeeding (75%), food service management (Integrated Nutrition Programme (INP)) (66%),

Table III. Selected generic and specific skills/outcomes as stipulated by the Professional Board for Dietetics¹⁴

Skills/outcomes	Frequency performed (%)			
	Daily	1 - 2 x/week	Rarely	Never
1 Working independently as a dietitian	93	5	2	0
2 Problem identification and problem solving	79	21	0	0
3 Teamwork in a multidisciplinary health team	52	31	16	1
4 Self-organisation and self-management	92	3	5	0
5 Information management (collection, analyses, organisation, critical evaluation and interpretation of data)	35	35	25	5
6a Oral communication	98	2	0	0
6b Written communication	56	29	15	0
6c Electronic communication	29	20	28	23
7 Provide appropriate education to the community	29	51	15	5
8 Project planning, implementation and monitoring	10	34	43	13
9a Needs situation analyses – individual	42	24	21	13
9b Needs situation analyses – groups	8	32	43	17
10 Adjust/develop intervention strategies	15	36	45	4
11a Planning, implementation, evaluation and documentation of nutrition service delivery – individual	45	28	20	7
11b Planning, implementation, evaluation and documentation of nutrition service delivery – groups	13	39	37	11
12 The ability to promote yourself as a dietitian and make yourself indispensable	63	27	10	0

contribution to household food security (55%) and micronutrient malnutrition control (53%).

The dietitians highlighted certain fields/topics in the three main focus areas for which they did not feel fully competent or not competent at all to perform their duties (reported by more than 50% of participants) (Table II). Additionally, dietitians were asked to report the frequency at which they performed selected generic and specific skills/outcomes based on requirements of the Professional Board for Dietetics with regard to training (Table III).¹⁴

The availability of equipment for execution of dietetic duties was reported as follows: weighing scale (93%), measuring tape (78%), computers (63%), access to a food database computer program (24%) and anthropometric equipment (21%). Nineteen per cent of participants reported the availability of other equipment, e.g. stadiometers, textbooks on nutrition and food models.

Only 20% ($N = 18$) of participants indicated that they were involved in research activities during their CS year. Of these dietitians, 39% indicated that they were fully competent, 50% indicated that they needed help and 11% ($N = 2$) indicated that they were not competent at all to do research.

Personal experience

The attitude of dietitians before and after the CS year was assessed (Fig. 2). At the outset, 55% of dietitians had a positive attitude regarding the CS year, with this percentage increasing to 67% towards the end of the

year. Negative attitudes decreased from 17% to 15% at the end of the year. Seventy per cent of dietitians reported that the initial uncertainty regarding the CS year placement had a negative impact on their emotional wellbeing.

In terms of knowledge and skills, the vast majority of dietitians reported that their knowledge improved (91%), and similarly 95% reported an improvement in skills, ranging from minimal to substantial improvements (Fig. 3).

The vast majority of dietitians (96%) were of the opinion that their work as a dietitian had a positive influence and made a difference in the community in which they had been working. Overall, 92% of dietitians felt that the CS year was a successful institution (Fig. 4). No significant association was found between round of allocation and whether dietitians rated the CS year as a success ($p > 0.05$).

With regard to future career plans, a variety of responses were received, with 26% of dietitians indicating that they intend to work overseas (mainly the UK) on completion of their CS year (Fig. 5).

Discussion

Despite initial apprehension and uncertainty, as well as various challenges and frustrations encountered, the vast majority of dietitians (92%) rated the CS year a successful institution. This finding is better but in line with the positive responses from the first 3 groups to undergo CS (i.e. doctors, dentists and pharmacists),

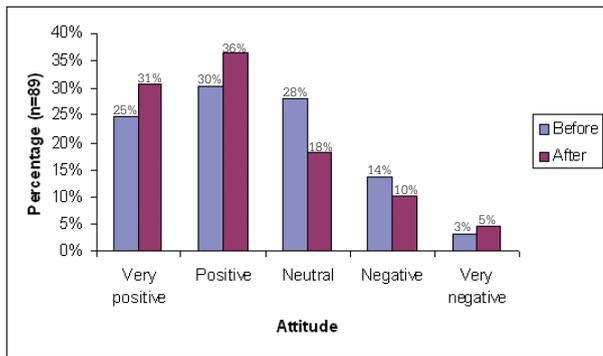


Fig. 2. Attitudes of dietitians (N = 89)* before and after CS year (*where N < 90, not all respondents completed the relevant question).

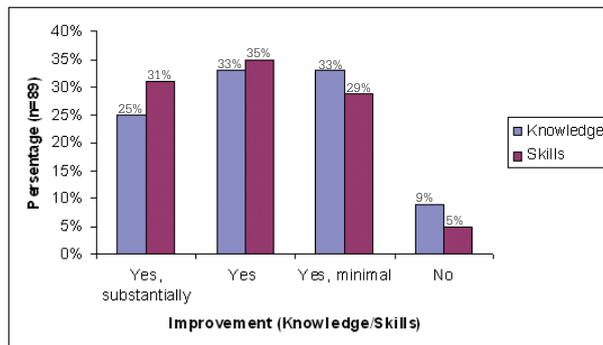


Fig. 3. Perception of dietitians (N = 89)* regarding improvement of knowledge and skills during CS year (*where N < 90, not all respondents completed the relevant question).

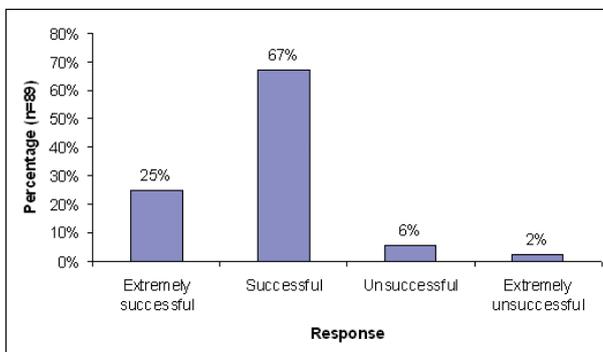


Fig. 4. Success of CS year (N = 89)* (*where N < 90, not all respondents completed the relevant question).

who overall described their experience of the year as positive and worthwhile (doctors at 65% and dentists at 75%).^{11,15,16}

Most dietitians received orientation on arrival at a new institution, which was mostly conducted by dietitians. Almost half (47%) of the participants did not report to a dietitian, but a variety of other personnel, which can in part explain the finding that 12% of supervisors had no insight and 8% showed no interest in terms of dietetic duties and capabilities. CS may prove to foster much-needed insight and knowledge regarding various health professions (including dietetics) that have previously been unrecognised and underutilised.

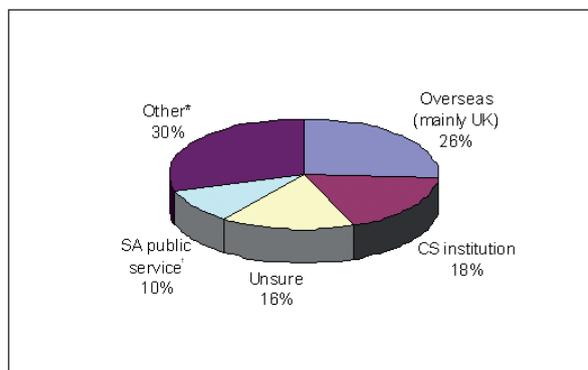


Fig. 5. Intentions of dietitians (N = 90) after CS *Other: including (among others) full-time postgraduate studies and working in the private sector; †Other than CS site).

The allocation process was described as ‘unorganised’ by the majority of participants and was widely criticised by the first group, with notification of placements taking place too late in the year. Just under half (48%) of participants had to enter the third or further rounds of allocation which extended into their final examinations. The process was felt to be unfair, as new posts became available after the second round of applications, and there was inadequate information available about the placement sites. The process was felt to lack transparency, as the criteria used for allocation were not clear. As expected, dietitians who were placed in the first round of allocation were more positive at the beginning of the CS year than those placed at a later stage. Some institutions were unaware that CS dietitians were posted at their institution until their arrival, which added to the confusion. Most of these comments are similar to those reported by the first cohort of doctors, dentists and pharmacists.¹¹ Despite these criticisms, just over half of the dietitians (55%) had a positive attitude at the beginning of the year, with this percentage increasing to 67% towards the end of the year. The first cohort of CS doctors reported the same percentage (55%) of positive attitudes at the beginning of the year, with their attitudes remaining unchanged.¹⁵ The vast majority (96%) were of the opinion that their work as a dietitian had a positive influence and made a difference in the community in which they had been working, which is higher than the findings among doctors (70%)¹⁵ and dentists (63%).¹⁶ Dietitians clearly felt that their contribution to the health of the community was substantial and worthwhile.

Being a predominantly female profession, safety was one of the main concerns of dietitians and their families before commencement of the CS year. It is therefore encouraging to note that the majority (88%) of dietitians reported a safe work environment. The remaining dietitians mostly regarded the environment surrounding the institution and the communities they had to visit as unsafe. These issues need to be addressed to ensure the safety of CS personnel. Most CS institutions offered affordable accommodation that was rated as

satisfactory by the majority of dietitians and that was in most cases within a 5 km radius of the workplace.

Because of the cultural diversity and 11 official languages in South Africa, communication was a concern from the start for the majority of dietitians and turned out to be a problem/frustration for most. In the majority of cases translators were available for assistance, while effective communication remained a big problem for those without assistance. Effective communication remains a challenging issue that impacts on the success of the CS year and strategies to overcome these problems need to be explored.

The majority of dietitians had the opportunity to work in the three main focus areas of dietetics, i.e. therapeutic nutrition, food service management and community nutrition. Many dietitians reported work in a variety of settings (including hospitals, food service units, day hospitals and community clinics), indicating exposure to various aspects and components of the dietetic profession. The finding that few dietitians had exposure to research activities during the CS year is not surprising, as it is not necessarily one of the objectives of CS and most dietitians only engage in research activities later on in their career (if at all).

The majority of dietitians reported full competency in many of the fields/topics related to the three main focus areas of dietetics. Those fields/topics indicated as 'some/extensive help needed' or 'not competent' (Table II) are typically specialty fields where full competence is gained with professional experience and extensive exposure. It is nevertheless advised that academic programme committees take note of these fields/topics to improve competence in these areas as far as possible. Generic and specific skills/outcomes required by the Professional Board of Dietetics with regard to training were applied/performed in varying degrees by the different dietitians (Table III), depending on their unique situation and personal style. Lack of sufficient essential basic equipment in some settings for execution of basic dietetic duties (e.g. weighing scales, measuring tapes, etc.) is a concern and should be addressed.

In terms of knowledge and skills it is encouraging to note that the vast majority of dietitians noted an improvement in knowledge (91%) and similarly an improvement in skills (95%), ranging from minimal to substantial improvements. Perceived substantial improvements were reported by 25% and 31% of dietitians for knowledge and skills respectively. Varying degrees of professional development were also reported for doctors, dentists and pharmacists.¹¹

Just over one-quarter (26%) of dietitians indicated that they planned to work overseas (mainly in the UK) after the CS year, with 28% planning a career in the South African public service. These findings are in line with those on other young health professionals, with reports

that an alarming proportion of between 20% and 45% are planning to work overseas after their CS year.¹¹ These findings are extremely worrying, and bring into question the success of the CS year in terms of slowing down emigration rates of young South African health professionals. It would appear that the CS year merely delays the future plans of health professionals by 1 year.

When comparing the responses of the various professional groups (including doctors, dentists, pharmacists and now dietitians), a number of patterns are notably similar. Despite problems, difficulties and frustrations, the majority felt that they had made a difference and had undergone some professional development, including an improvement in knowledge and skills. Overall, most described their experience of the year as positive and worthwhile.

It needs to be considered that CS professionals are often younger individuals who are relatively inexperienced, and in need of some supervision and support. Various factors impact on the experience, attitude, performance and contribution of health professionals during their CS year, including their resourcefulness as individuals, the context in which they are placed and their education.¹¹ With regard to the latter, the role of the universities is crucial in preparing their graduates appropriately for this year.

Conclusions and recommendations

The majority of dietitians experienced the CS year positively and felt that their knowledge and skills improved. The vast majority of dietitians reported the CS year to be a successful institution and felt they had a positive influence and made a difference in the community in which they had been working.

Recommendations for CS for health professionals have been proposed,¹¹ and from the findings of this study it is clear that they are equally relevant for dietitians. Reid¹¹ and others have recommended that detailed information on CS be made widely available to applicants (including a transparent allocation process) and that health science faculties address the gaps between the skills and attitudes of their graduates, and the realities of the South African health system. Furthermore it is recommended that plans be formulated for the recruitment and retention of health professionals in rural and underserved areas (including strategies besides CS), that rural incentives (financial and non-financial) should be put in place to retain health professionals in areas of need, and that supervision of CS professionals in rural areas needs to be improved.^{11,13} Language barriers and lack of basic equipment were also reported by dietitians, and should be addressed. Further recommendations include

ensuring acceptable, adequate and safe working and living conditions for this predominantly female group. It is advised that this type of study be repeated in subsequent CS dietetic groups to closely monitor changes in attitudes, experiences and practices. The overall strategy of CS should be reviewed at regular intervals to examine whether it is in fact achieving the goal for which it was instituted.^{11,13}

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