

Work Climate Related to Job Satisfaction Among Dutch Nurse Anesthetists

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Finding ways to retain nurse anesthetists in the profession to meet the increasing demands of the health-care system is of paramount importance. The present study investigates the relationship between work climate and job satisfaction among Dutch nurse anesthetists. A questionnaire was distributed to Dutch nurse anesthetists to assess their perceptions of their work climates, and their levels of job satisfaction. Multiple regression analyses were performed to obtain the predictive value of work climate for job satisfaction. All of the work climate characteristics had statistically significant correlations to job satisfaction, and explained

20% of the variance in job satisfaction. To achieve a higher level of job satisfaction among nurse anesthetists, it is necessary to improve some essential work climate characteristics, such as: (1) making the nurse anesthetist feel an important part of the organization's mission statement, (2) discussing progress at work, (3) giving recognition for delivered work, (4) encouraging development, and (5) providing sufficient opportunities to learn and to grow.

Keywords: Job satisfaction, nurse anesthetist, work climate.

The job of a Dutch nurse anesthetist is comparable to that of a nurse anesthetist or a registered nurse anesthetist in many countries. Dutch nurse anesthetists work in anesthesia departments under the direct and indirect supervision of an anesthesiologist. An anesthesiologist is always present in the vicinity of the operating theater (operating room) or in direct phone contact, readily available for immediate help if required. However, although Dutch nurse anesthetists never solely perform inductions of anesthesia, they do perform maintenance of and emergence from anesthesia by themselves. They stay with their patients for the entire procedure, constantly monitoring important body functions and independently modifying the anesthetic agents when required to ensure maximum patient safety and comfort.

The role of the nurse anesthetist is becoming increasingly important in the Dutch healthcare system. Kluger and Bryant¹ recently demonstrated that a well-educated nurse anesthetist on the care team is essential for good outcomes. It follows that finding ways to retain trained nurse anesthetists in the profession is vital for the overall success of the system. One way of achieving this goal is by the anesthesia team pursuing a positive work climate, one that stimulates job satisfaction among nurse anesthetists. Whether or not nurse anesthetists enjoy their jobs is greatly influenced by a combination of the characteristics of the environment and the job, and by personality variables.²

Several different definitions are used for “work or organizational climate.”^{3,4} Work climate can be seen as the underlying principles, values, and norms of an organization.⁵ Work climate in this study includes the perceptions of Dutch nurse anesthetists of the internal work environment, situations, and circumstances in the anesthesia department, with specific focus on achieving maximal potential. Studies have found a relationship between a positive work climate and responsibility, job demands, social relations, the quality of communication, and the organizational identity and engagement.^{4,6}

In practice, it is important to create the right work climate by providing the essential job resources that effectively buffer the negative aspects of the job and stimulate the nurse anesthetist's motivation.⁷⁻⁹ Job resources refer to the physical, organizational, and social aspects of the job that help in achieving work goals, reducing job demands, and stimulating personal growth, learning, and development.⁸ Motivating nurse anesthetists to the utmost is about realizing their full potential,³ and the work climate can be seen as an indication of how well the organization is realizing its full potential.⁴

The attractiveness of the work climate is evaluated by how nurse anesthetists perceive their environments and by their personalities.^{4,5,10,11} Any working person prefers environmental characteristics that are desirable to him or her (eg, opportunity for personal control, skill use, interpersonal contact, variety, a valued social position).¹² The extent to which people's perceptions of their environment

and the organizational standards match their preferences is responsible for their job satisfaction.¹³

Several environmental factors are associated with subjective well-being, such as the opportunity for personal control (also referred to as decision latitude or self-determination), the opportunity to use one's skills, externally generated goals, variety, environmental clarity (the opposite of role ambiguity), the opportunity for interpersonal contact, and a valued social position.^{3,12} Negative subjective perceptions of these objective work stressors have a negative influence on health^{5,14} and job satisfaction.^{10,15,16}

Over the past decade, a considerable amount of work has been published about stress and job satisfaction among anesthesiologists, but less attention has been paid to the processes influencing job satisfaction among nurse anesthetists. As with other service professionals, nurse anesthetists share many occupational stressors, but they also have environmental work factors that set them apart: the proximity to suffering and death, the emotional and physical needs of patients, and pressures to perform consistently and optimally under changing conditions and expectations.

Any anesthetic technique can result in morbidity or mortality, and a malpractice claim can be the result of a bad outcome despite the provision of optimal care. Nurse anesthetists have to deal with fatigue, unpredictable work variables, threats of litigation, pressures regarding competency, the need for sustained vigilance, and isolation from their anesthesia colleagues.¹⁷⁻¹⁹ Feelings of loneliness and helplessness in difficult clinical situations are important factors that have been shown to increase stress in anesthesiologists.²⁰ Furthermore, the work environment for nurse anesthetists has some unique and stressful ergonomic factors. These include noise pollution (alarms, ventilators, suction apparatus, telephones, and intercoms), long working hours due to unpredictable surgical procedures, exposure to radiation, exposure to infection, uncomfortable chairs, poorly designed work spaces (lack of direct daylight, visual challenges caused by darkness, and use of lasers and monitors).^{17,19}

Over the last 20 years, the Gallup Institute, headquartered in Washington, DC, performed 2 major studies examining the difference between employees who are successful and those who fail after the optimization of personnel management.²¹ The Gallup researchers developed a questionnaire to examine the match between employees and their work by studying important work climate factors. According to the Gallup poll, work climate can be measured by 12 different factors:²¹

[W]hat emerged are the 12 elements of work life that define the unwritten social contract between employee and employer. Through their answers to the dozen most important questions and their daily actions that affected performance, the workers were saying, 'If you do these things for us, we will do what the company needs of us'.

These 12 elements are in accordance with motivation-

al models such as the Two Factor Theory of Herzberg,²² the Job Characteristics Model,²³ and the Revised Causal Model of Job Satisfaction.² These models emphasize the importance of autonomy, use of skills and knowledge, and social interactions, which also can be recognized in Gallup's 12 elements.²¹ The Gallup studies proved that a positive work climate can result in highly engaged teams, with an average of 18% more productivity and 12% more profitability than disengaged teams.²¹ The negative relationship between burnout (opposite of engagement)²⁴ and job satisfaction is well-known from other studies.^{25,26}

The primary objective of the present study was to investigate the relationship between work climate and job satisfaction among Dutch nurse anesthetists from data gathered through an online questionnaire, which included Gallup's 12 elements.²¹ We also set out to determine which work climate characteristics relate to job satisfaction.

Materials and Methods

- *Design and Sample.* After approval by the Medical Ethical Committee of the Catharina Hospital, Eindhoven, the Netherlands, the study was launched at the annual Dutch national congress of nurse anesthetists held in January 2007 by the Nederlandse Vereniging van Anesthesiemedewerkers (NVAM), or Dutch Society of Nurse Anaesthetists. Every participant of the congress received an invitation to fill out the online questionnaire, which sought sociodemographic information and also included the 12 work climate elements of the Gallup questionnaire. In addition, to promote and expand the study as well as to include those who did not attend the congress, individual letters of invitation were sent to every member of the NVAM. As well, information was published in the *Dutch Journal of Nurse Anesthetists*, and all the chairs of the anesthesia departments of all Dutch hospitals were informed. The online questionnaire was closed 3 months after the launch, in April 2007.

- *Demographics.* Sociodemographic information was recorded: age, gender, percentage of full-time employment worked, number of years practicing anesthesia since certification, number of training days per 5-year period, type of hospital, presence of student nurse anesthetists, sickness absence (absenteeism), and perceived general health.

- *Sickness Absence and Perceived General Health.* The self-reported incidence of sickness absenteeism during the previous year was analyzed by coding the answers as follows: 0 days (0), 1 to 6 days (1), 7 to 14 days (2), 15 to 28 days (3), 1 to 2 months (4), 3 to 7 months (5), and more than 7 months (6). Every nurse anesthetist scored his or her own perceived general health on a 5-point scale (ranging from 1 for very bad to 5 for very good). This self-rating of health has also been used in other studies.^{26,27}

- *Job Satisfaction.* Job satisfaction was measured as satisfaction with the job, satisfaction with the organization,

Rate the following questions between 1 (never) and 7 (always)	1	2	3	4	5	6	7
1. I know what my chief expects from me at work.	<input type="checkbox"/>						
2. I have all the tools and materials to do my job optimally.	<input type="checkbox"/>						
3. I can do that which I'm best at in my daily job.	<input type="checkbox"/>						
4. I received recognition or praise for delivered work during the last week.	<input type="checkbox"/>						
5. My chief appreciates me as a person.	<input type="checkbox"/>						
6. My development is encouraged.	<input type="checkbox"/>						
7. My opinion does count at work.	<input type="checkbox"/>						
8. The hospital's mission statement gives me the feeling that my job is important.	<input type="checkbox"/>						
9. My colleagues are eager to deliver quality at work.	<input type="checkbox"/>						
10. I have a "best friend" at work.	<input type="checkbox"/>						
11. I talked to someone during the last 6 months regarding my progression at work.	<input type="checkbox"/>						
12. My work provides me with sufficient opportunities to learn and grow.	<input type="checkbox"/>						

Figure. Work Climate Questionnaire According to the 12 Elements of the Gallup Institute¹²

and satisfaction with the department's atmosphere; each aspect was rated on a 4-point scale. Previous studies support the usefulness of using global measures of job satisfaction in single-shot surveys that assess the cognitive component of satisfaction.^{26,28}

- *Work Climate.* The Gallup questionnaire was originally developed after a meta-analysis of 105,680 employees working in 2,528 organizational units, of which 531 units were in the healthcare sector (but not specifically in anesthesia departments). Regression analyses were conducted to determine the predictive value of work climate for job satisfaction (Cronbach $\alpha = .90$) and for productivity (Cronbach $\alpha = .90$). Work climate was found to predict 66.96% of the variation in job satisfaction and 83.72% of the variation in productivity.

The questionnaire contained 12 items (Figure): 1: expectations; 2: instruments & tools; 3: using best capabilities; 4: recognition; 5: appreciation; 6: encourage development; 7: opinion; 8: mission statement; 9: quality work; 10: best friend; 11: progress; and 12: learning & growing. In this study, these items were rated on a 7-point Likert scale, ranging from never (1) to always (7), and the points were subsequently totaled (range, 12 to 84 points).

- *Data Analysis.* Hierarchical multiple regression and partial correlation analyses (using SPSS 16.0 statistical software, SPSS Inc, Chicago, Illinois) were performed to obtain predictors for job satisfaction. $P < .05$ was considered statistically significant. The reliability of the 2 variables—work climate ($\alpha = .84$) and job satisfaction ($\alpha = .72$)—was analyzed.

Results

Of 2,000 Dutch nurse anesthetists, 923 returned the questionnaire (46% response rate). However, 41 failed to complete it entirely and were excluded from further study,

leaving 882 questionnaires (431 women and 451 men). Most of the nurse anesthetists (89.2%) were between 25 and 54 years old, with a peak in the age range of 45 to 49 years (21.2%). Most of the respondents (68.7%) were considered experienced because they had worked for more than 5 years as nurse anesthetists.

Perceived general health had a significant correlation ($r = .20, P < .01$) with work climate and job satisfaction ($r = .17, P < .01$). There was no relationship between sickness absenteeism and work climate, or between sickness absenteeism and job satisfaction. Sickness absence was frequently seen on a short-term basis. More than 50% of the participants had no sickness absenteeism during the immediate preceding year; 34.7% missed 1 to 6 days of work due to illness, 5.9% missed 7 to 14 days, 3.2% missed 15 to 28 days, 0.9% missed 1 to 2 months, 1.2% missed 3 to 7 months, and 0.7% missed more than 7 months in the previous year. The demographic items "percent of employment" ($r = .12, P < .01$) and "training days" ($r = .17, P < .01$) had the strongest correlation with work climate (Table 1).

- *Predictors for Job Satisfaction.* A hierarchical multiple regression analysis was performed between the demographics "sickness absence" and "perceived general health" to test the predictors of job satisfaction. In step 1 of the regression analysis, demographic items were included; in step 2, sickness absence and perceived general health were included; and finally, in step 3, variables of the work climate were included (Table 2). Demographic variables explained 2% of the variance in job satisfaction in step 1. In step 2, 5% of the variance was explained by sickness absence and perceived general health. Finally, 20% of the variance in job satisfaction was explained by work climate (step 3). Our hypothesis was confirmed: work climate is positively

Variable	Mean	SD	1	2	3	4	5	6	7	8	9	10	11
Age	5.71	1.98	1.00										
Gender	0.49	0.50	-0.28 ^a	1.00									
% of employment	2.87	0.62	-0.00	-0.33 ^a	1.00								
Years since certification	3.80	1.78	0.80 ^a	-0.22 ^a	-0.06	1.00							
Training days	2.45	1.18	-0.16 ^a	-0.09 ^a	0.17 ^a	-0.22 ^a	1.00						
Academic hospital	0.13	0.34	-0.02	0.03	-0.04	-0.07 ^b	0.04	1.00					
Anesthesiology residents	0.46	0.50	-0.12 ^a	0.05	0.03	-0.11 ^a	0.03	0.40 ^a	1.00				
Sickness absence	0.70	0.04	0.06	0.04	-0.04	0.02	-0.03	-0.02	-0.04	1.00			
General health	4.11	0.68	-0.08 ^b	-0.02	0.05	-0.06	0.04	0.01	-0.01	-0.05	1.00		
Work climate	4.14	0.85	-0.07 ^b	-0.02	0.12 ^a	-0.08 ^b	0.17 ^a	-0.04	-0.05	-0.03	0.20 ^a	1.00	
Job satisfaction	2.79	0.55	-0.01	0.01	0.01	-0.01	0.06	-0.04	0.11 ^a	-0.01	0.17 ^a	0.50 ^a	1.00

Table 1. Mean, Standard Deviation (SD), and Correlations Among Variables (N = 882)

Scoring key: Age (y): < 20 (1), 20-24 (2), 25-29 (3), 30-34 (4), 35-39 (5), 40-44 (6), 45-49 (7), 50-54 (8), 55-59 (9), and > 60 (10); Gender: men (0), women (1); % of employment: < 50 (1), 50-75 (2), 76-100 (3), and > 100 (4); Certification (y): < 1 (1), 1-5 (2), 6-10 (3), 11-15 (4), 16-20 (5), and > 20 (6); Trainings days per 5 years: 0-5 (1), 6-10 (2), 11-15 (3), and more than 15 (4); Academic hospital: yes (1), no (0); Anesthesiology residents: yes (1), no (0); Job satisfaction: 1 = totally disagree, 2 = disagree, 3 = agree, and 4 = totally agree.

^a P < .01.

^b P < .05.

related to job satisfaction ($\beta = .48, P < .001$; see Table 2).

To determine which work climate characteristic had the highest correlation for job satisfaction, a partial correlation that controlled for “percent of employment,” “training days,” “sickness absence,” and “perceived general health” was performed (Table 3). All work climate characteristics showed statistically significant correlations with job satisfaction.

Discussion

This study demonstrated a positive relationship between work climate and job satisfaction among Dutch nurse anesthetists. The importance of a positive work climate has been demonstrated previously in studies showing that work climate has a high correlation with performance,^{15,16} as well as job turnover (intention).^{6,10,11,29}

Higher levels of job satisfaction can be achieved when work climate characteristics that have a high correlation for job satisfaction are frequently present (mean work climate value ≥ 4). In this study, 5 work climate characteristics (“recognition,” “encourage development,” “mission statement,” “progress,” and “learning & growing”) showed a relatively high correlation with job satisfaction, but a mean work climate value below 4. By focusing on these 5 characteristics, there is potential to increase the job satisfaction among Dutch nurse anesthetists.

In our study, the work climate characteristic “received recognition or praise for delivered work” had a mean value of 3.38. Other studies found “lack of recognition” a

Variable	Step 1 β	Step 2 β	Step 3 β
Academic hospital	-0.10 ^a	-0.10 ^a	-0.07 ^b
Anesthesiology residents	0.15 ^c	0.15 ^c	0.12 ^c
Sickness absence		0.01	0.01
General health		0.17 ^c	0.08 ^b
Work climate			0.48 ^a
Adjusted R^2	0.02	0.05	0.27
F	9.10 ^c	11.52 ^c	64.71 ^c
(df/df)	(2/873)	(4/871)	(5/870)

Table 2. Hierarchical Regression Results With Job Satisfaction as Outcome Variable (N = 882)

^a P < .01.

^b P < .05.

^c P < .001.

contributory factor for low levels of job satisfaction.^{17,30,31} In our study, a lack of recognition, work climate characteristic number 4 (see Figure), can be due to several reasons, some of which may be very specific but not strictly exclusive to Dutch nurse anesthetists. They include the following: (1) The general public is not very familiar with the nurse anesthetist profession; (2) nurse anesthetists have little interaction with other healthcare professionals because they perform their duties in an operating theater that is not accessible to

Variable	Mean	SD	1	2	3	4	5	6	7	8	9	10	11	12	13
Expectations	5.81	1.05	1.00												
Instruments & tools	5.22	1.02	0.36 ^a	1.00											
Using best capabilities	4.62	1.05	0.35 ^a	.51 ^a	1.00										
Recognition	3.38	1.37	0.12 ^a	.28 ^a	.37 ^a	1.00									
Appreciation	4.17	1.53	0.22 ^a	.31 ^a	.37 ^a	.49 ^a	1.00								
Encourage development	3.59	1.52	0.10 ^b	.23 ^a	.30 ^a	.52 ^a	.60 ^a	1.00							
Opinion	4.10	1.40	0.21 ^a	.29 ^a	.34 ^a	.42 ^a	.63 ^a	.58 ^a	1.00						
Mission statement	3.37	1.41	0.11 ^b	.26 ^a	.31 ^a	.41 ^a	.45 ^a	.48 ^a	.50 ^a	1.00					
Quality work	4.63	1.24	0.24 ^a	.26 ^a	.33 ^a	.25 ^a	.31 ^a	.30 ^a	.32 ^a	.29 ^a	1.00				
Best friend	3.94	1.75	0.10 ^b	.13 ^a	.16 ^a	.14 ^a	.13 ^a	.10 ^b	.13 ^a	.14 ^a	.18 ^a	1.00			
Progress	3.28	1.75	-.01	.09 ^c	.14 ^a	.36 ^a	.33 ^a	.46 ^a	.31 ^a	.28 ^a	.20 ^a	.24 ^a	1.00		
Learning and growing	3.57	1.46	0.09 ^b	.31 ^a	.31 ^a	.47 ^a	.42 ^a	.64 ^a	.42 ^a	.43 ^a	.34 ^a	.13 ^a	.49 ^a	1.00	
Job satisfaction total	2.79	0.55	0.14 ^a	.31 ^a	.36 ^a	.36 ^a	.37 ^a	.38 ^a	.37 ^a	.32 ^a	.29 ^a	.11 ^b	.18 ^a	.37 ^a	1.00

Table 3. Mean, Standard Deviation (SD), and Correlations Controlled for Training Days, % of Employment, General Health, and Sickness Absenteeism Among Work Climate Variables and Job Satisfaction (N = 882)

^a $P < .001$; bivariate, 2-tailed.

^b $P < .01$; bivariate, 2-tailed.

^c $P < .05$; bivariate, 2-tailed.

many care providers; and (3) there is a lack of legal backup and recognition.

The inclusion of the work of nurse anesthetists in the organization's mission statement is known to give them the feeling that their role is important.^{21,32} However, this work climate characteristic had a mean value of only 3.37 in our study. Our questionnaire did not include questions about acknowledging the work of nurse anesthetists in the hospital's mission statement. A low mean score either indicates that there is limited communication within the organization, or there are few nurse anesthetists and their work is not recognized as being important enough to be included in the organization's mission statement. Several studies stress the importance of the organization's support,^{30,31} supportive leadership and teamwork,⁴ and feelings of belongingness and identity,⁴ for maintaining a positive work climate.

The work climate characteristic "possibilities to discuss progress at work" had a mean value of 3.28, and can be compared with feedback. This could be indicative of the fact that nurse anesthetists perform their work somewhat solo and cannot oversee the total patient care process in the hospital. Feedback about their performance is possible via the anesthesiologist and by audit results and postoperative care data (eg, pain, nausea, and complication levels). In the Dutch system, this feedback has limitations because an anesthesiologist is not always physically present in the room during the maintenance of anesthesia, and postoperative indicators are not always available. In the Job Characteristics Model, Hackman and

Oldham²³ described the essence of structuring the work to achieve high internal motivation, high job satisfaction, and high work effectiveness. A core job characteristic necessary to reach this stage is, for example, feedback from the job, which provides nurse anesthetists with information about the actual results of their work activities. Feedback functions also as one of the core resources for handling stress.³³ Further research is required to determine which kind of feedback is required and is of specific value to a nurse anesthetist.

Work stress models such as the Demand and Control Model of Karasek³⁴ and the extended-version Demand & Resources Model described by Demerouti³⁵ have expressed the importance of decision latitude. This has to do with using one's acquired knowledge and skills, and with being allowed to make a decision. Eisenberger et al,³⁶ via their General Interest Theory, related the importance to work climate of decision latitude using skills and knowledge. They stated that intrinsic motivation is increased if a work climate is created that contains tasks (content and context) that are relevant for the needs, wants, and desires of the employee. A lack of decision latitude will void this internal motivation, which is often measured as job satisfaction.³²

The low mean scores of the characteristics "encourage development" and "opportunities to learn & grow" (3.59 and 3.57, respectively) can possibly be explained by the limited career opportunities. This is especially the case if a Dutch nurse anesthetist has no nursing degree. The latter is not an absolute requirement in the Netherlands,

as it is possible to go directly from senior high school to a 3-year bachelor course to become a nurse anesthetist. However, the only alternate career opportunities for these nurse anesthetists are in management, education, and business sales.

Any limitation of future career development, often referred to as job insecurity, is one of the stress-related risks.^{8,9,35} Many studies support the relationship between job satisfaction and job development,^{30,31,37} decision latitude, and the challenging aspects of the job.^{10,16} These work climate characteristics are comparable to some job resources (to stimulate personal growth, learning, and development),^{8,9} which are crucial for increasing job satisfaction.^{20,34,38,39} Further studies are necessary to determine the relationship between work climate, job resources, and demands.

Some studies have found a significant difference between the work climate of physicians and nurses working in a Quality Certificate Accredited (QCA) hospital.^{5,11,40} Nurse anesthetists working in QCA hospitals evaluated their work climate more often in positive terms. In our study, “quality” is one of the work climate characteristics that determine job satisfaction. Our questionnaire did not contain questions to establish a relationship between work climate and accreditation of hospitals.

The work climate characteristic “instruments & tools,” including information, materials, and environmental space, played a significant role in job satisfaction. According to others, safety and information, in particular, play key roles in anesthesia. Providing the necessary information will decrease the number of medical errors and consequently increase the safety climate.⁴¹ The sharing of information between nurse anesthetists and anesthesiologists increases job satisfaction and team effectiveness.^{4,41,42} However, the relationship between safety and job satisfaction is not fully established. As stress models show, an increase in safety results in a decrease of stress.⁸ This would mean that safety acts as a stress factor and not as a resource that buffers stress by increasing job satisfaction. Further study is necessary to determine the relationship and causality between safety climate (eg, information), job satisfaction, and stress.

A small but significant negative correlation was found between age and work climate, but there was no correlation with gender. Other studies about work climate do not show relationships to age or gender.²⁸ In this study, several control variables—sickness absence, perceived general health, type of hospital, and presence of anesthesiology residents—were used. Several studies found that companies with a more positive work climate had reduced absenteeism.^{21,43} This was not confirmed in our study, although perceived general health was significantly positively related to work climate and job satisfaction.

Well known is the relationship between stress (and thus health) and the work environment. Kristof et al⁴⁴ in-

roduced the term *fit for the job*, which was defined as a match of perceptions of work environment, personal competence, well-being and standards (organizational). Different types of person-environment fits were described, including a fit between person and job, person and organization, and person and group. Person-environment fit did influence job satisfaction, organizational commitment, turnover intention, well-being, and performance. Maybe this explains the role of sickness absenteeism and perceived general health on the relationship of work climate and job satisfaction.

• *Limitations.* This study has several limitations. First, our study has a cross-sectional self-report design. Therefore, conclusions about causality cannot be drawn, and levels of work climate and job satisfaction cannot be explained. Second, work climate was measured through self-reports, which are subject to a number of biases. Furthermore, transient mood states and personality traits can interfere with outcome measures because they interact with perceptions of one’s own work approach and environment.^{13,45} Third, nurse anesthetists who suffer from strain or burnout are likely to produce reduced turnover.^{6,46} This self-selection process allows comparatively satisfied nurse anesthetists to remain in the job, whereas those who changed jobs (and occupations) were less satisfied. This bias effect is called the survivor effect. Fourth, the role of these strain and burnout variables on the relationship between work climate and job satisfaction was no part of this study. Nevertheless, it would be interesting to explore their possible interaction on the relationship between work climate and job satisfaction.

A final limitation is that the response rate of this study (46%) was low compared with a clinical trial, and one can debate whether the perceptions reported in this study reflect those of the total population of Dutch nurse anesthetists. However, this response rate is comparable to the 38% to 53% response rates found in other anonymous multisite surveys of hospital-based nursing personnel.¹¹ Possible reasons for nurse anesthetists not responding were conveyed by the supervisors of the anesthesia departments and included the following: not interested, questions too personal, and no time.

Conclusions

In conclusion, this study measured the relationship between work climate and job satisfaction among Dutch nurse anesthetists. The work climate questionnaire was focused on perceiving the maximal job satisfaction and productivity of nurse anesthetists. As such, work climate can be seen as an indicator for how well the organization is realizing the full potential of its employees.

Many of our work climate characteristics are analogous with those job resources that play an important role in preventing burnout and increasing job satisfaction. For an organization to strive for a higher level of job satisfaction

among its nurse anesthetists, it is necessary to influence the essential work climate characteristics. Support from supervisors (head nurse anesthetists) can be helpful in creating a positive work climate, and ultimately a higher level of job satisfaction, by adjusting negative perceptions.

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