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Contents

Thrice Monthly Volume 12 Number 4 February 6, 2024

EDITORIAL

- 671 Tenosynovitis of hand: Causes and complications
Muthu S, Annamalai S, Kandasamy V
- 677 Early antiplatelet therapy used for acute ischemic stroke and intracranial hemorrhage
Buddhavarapu V, Kashyap R, Surani S

MINIREVIEWS

- 681 Postoperative accurate pain assessment of children and artificial intelligence: A medical hypothesis and planned study
Yue JM, Wang Q, Liu B, Zhou L
- 688 Application and mechanisms of Sanhua Decoction in the treatment of cerebral ischemia-reperfusion injury
Wang YK, Lin H, Wang SR, Bian RT, Tong Y, Zhang WT, Cui YL

ORIGINAL ARTICLE

Clinical and Translational Research

- 700 Identification and validation of a new prognostic signature based on cancer-associated fibroblast-driven genes in breast cancer
Wu ZZ, Wei YJ, Li T, Zheng J, Liu YF, Han M

Retrospective Study

- 721 Rehabilitation care for pain in elderly knee replacement patients
Liu L, Guan QZ, Wang LF
- 729 Effect of early stepwise cardiopulmonary rehabilitation on function and quality of life in sepsis patients
Zheng MH, Liu WJ, Yang J
- 737 Influence of initial check, information exchange, final accuracy check, reaction information nursing on the psychology of elderly with lung cancer
Jiang C, Ma J, He W, Zhang HY
- 746 Experience of primary intestinal lymphangiectasia in adults: Twelve case series from a tertiary referral hospital
Na JE, Kim JE, Park S, Kim ER, Hong SN, Kim YH, Chang DK

Observational Study

- 758 Perceived stress among staff in Saudi Arabian dental colleges before and after an accreditation process: A cross-sectional study
Shaiban AS

META-ANALYSIS

- 766 Comprehensive effects of traditional Chinese medicine treatment on heart failure and changes in B-type natriuretic peptide levels: A meta-analysis
Xia LL, Yang SY, Xu JY, Chen HQ, Fang ZY

CASE REPORT

- 777 Mechanical upper bowel obstruction caused by a large trichobezoar in a young woman: A very unusual case report
Scherrer M, Kornprat P, Sucher R, Muehlsteiner J, Wagner D
- 782 Accidental placement of venous return catheter in the superior vena cava during venovenous extracorporeal membrane oxygenation for severe pneumonia: A case report
Song XQ, Jiang YL, Zou XB, Chen SC, Qu AJ, Guo LL
- 787 Gestational diabetes mellitus combined with fulminant type 1 diabetes mellitus, four cases of double diabetes: A case report
Li H, Chai Y, Guo WH, Huang YM, Zhang XN, Feng WL, He Q, Cui J, Liu M
- 795 Clinical experience sharing on gastric microneuroendocrine tumors: A case report
Wang YJ, Fan DM, Xu YS, Zhao Q, Li ZF
- 801 Endoscopic retrograde appendicitis treatment for periappendiceal abscess: A case report
Li QM, Ye B, Liu JW, Yang SW
- 806 Hemichorea in patients with temporal lobe infarcts: Two case reports
Wang XD, Li X, Pan CL
- 814 Monomorphic epitheliotropic intestinal T-cell lymphoma with bone marrow involved: A case report
Zhang FJ, Fang WJ, Zhang CJ
- 820 Inetetamab combined with tegafur as second-line treatment for human epidermal growth factor receptor-2-positive gastric cancer: A case report
Zhou JH, Yi QJ, Li MY, Xu Y, Dong Q, Wang CY, Liu HY
- 828 Pedicled abdominal flap using deep inferior epigastric artery perforators for forearm reconstruction: A case report
Jeon JH, Kim KW, Jeon HB
- 835 Individualized anti-thrombotic therapy for acute myocardial infarction complicated with left ventricular thrombus: A case report
Song Y, Li H, Zhang X, Wang L, Xu HY, Lu ZC, Wang XG, Liu B
- 842 Multiple paradoxical embolisms caused by central venous catheter thrombus passing through a patent foramen ovale: A case report
Li JD, Xu N, Zhao Q, Li B, Li L

- 847** Rupture of a giant jejunal mesenteric cystic lymphangioma misdiagnosed as ovarian torsion: A case report
Xu J, Lv TF
- 853** Adenocarcinoma of sigmoid colon with metastasis to an ovarian mature teratoma: A case report
Wang W, Lin CC, Liang WY, Chang SC, Jiang JK
- 859** Perforated gastric ulcer causing mediastinal emphysema: A case report
Dai ZC, Gui XW, Yang FH, Zhang HY, Zhang WF
- 865** Appendicitis combined with Meckel's diverticulum obstruction, perforation, and inflammation in children: Three case reports
Sun YM, Xin W, Liu YF, Guan ZM, Du HW, Sun NN, Liu YD

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Observational Study

Perceived stress among staff in Saudi Arabian dental colleges before and after an accreditation process: A cross-sectional study

Amal S Shaiban

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Abstract

BACKGROUND

Accreditation processes are extensively employed to guarantee the quality of higher education institutions. However, this process can potentially generate a stressful atmosphere for staff, thus impacting their ability to perform optimally under pressure.

AIM

To examine the knowledge of the National Commission for Academic Assessment and Accreditation (NCAAA) and its effects on perceived stress among dental college staff before and after the program accreditation process.

METHODS

The present cross-sectional questionnaire-based study included 300 employees from three dental colleges. The same employees had to fill out the questionnaire 1 mo after the NCAAA process.

RESULTS

Approximately 51.33% of the included employees believed that NCAAA is essential to attract quality students to join the program before and after the program. A total of 44.67% felt that their stress was high before, and 31.33% had low stress levels before and after NCAAA. These findings were statistically significant ($P \leq 0.05$).

CONCLUSION

NCAAA raised the prestige of the institution and specific programmes and increased prospects to attract better students, staff, and money, according to the employees. In addition to their needed teaching, research, and other service responsibilities, this work requires a tremendous amount of faculty effort and may cause them stress.

Key Words: National Commission for Academic Assessment and Accreditation; Accreditation process; Perceived stress; Staff

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Core Tip: National accreditation raised the prominence and prestige of the institution and specific programmes and increased prospects to attract better students, staff, and money, according to the employees. The concept of accreditation has evolved into a culture that emphasises ongoing enhancement through the utilisation of standards-based approaches and data-driven decision-making. In addition to their required teaching, research, and other service responsibilities, this work requires a tremendous amount of faculty effort and may cause them stress. Sufficient provisions must be taken at the university level.

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INTRODUCTION

Accreditation is a selective process in which an institution or programme engages to enhance its academic standards and guarantee the quality of the educational process[1,2]. As a result of the phenomenon of globalisation in the realm of higher education, universities are displaying a growing interest in attaining a commendable position in international rankings. In this pursuit, the certification procedure is recognised as a potential means to help achieve this objective[3,4]. Accreditation processes are extensively employed techniques that guarantee the quality of higher education institutions. The impacts of accreditation span several dimensions of higher education, encompassing enrolment rates, academic standing and global integration, research and advancement, and the calibre of instruction and career prospects[3,5].

In Saudi Arabia, colleges of medicine and dentistry and other higher education institutions did not require accreditation prior to 2004[6]. Rapid growth in postsecondary institutions led to the need for a government organisation to ensure quality in higher education[7,8]. All colleges must now be accredited by the National Commission for Academic Assessment and Accreditation (NCAAA), founded by the Council of Higher Education in 2005[9]. The NCAAA was founded in Saudi Arabia to set academic accreditation and assessment standards and accredit postsecondary institutions and programmes. The Commission is dedicated to implementing a strategic approach that promotes, facilitates, and assesses the quality assurance procedures of higher education institutions, with the aim of ensuring that the standards of learning and institutional management are on par with the most esteemed global benchmarks[9].

All health care organisations must continuously upgrade and enhance their performance in areas that affect patient care to maintain and obtain accreditation. They must also give staff members training and direction to assist the hospital in operating more efficiently[10,11]. Denial of accreditation can cost the institution cash, jobs, and reputation as a safe and reliable health care provider. An organisation's personnel are responsible for maintaining these records; therefore, the accreditation site visit may result in a period of extreme stress and an increase in effort due to the accreditation's potential outcomes[12]. Workplace stress is intensively investigated since it is linked to numerous poor individual and organisational effects, such as cardiovascular disease, diabetes, depression, loss of motivation, and absenteeism[13-15].

The evaluation conducted by the commission plays an essential part in ensuring the sustainability of the health care organisation, preserving the job stability of its personnel, and shaping the public's impression of the institution. However, it is important to acknowledge that this process can potentially generate a stressful atmosphere for staff, thus impacting their ability to perform optimally under pressure. Employees at institutions play an essential part in achieving accreditation and improving performance; hence, it is crucial to investigate the effects of national academic accreditation (NCAAA) commission site visits on these individuals. Additionally, it is crucial to research how these workers respond to perceived stress during periods of increased workload and performance pressure to help organisations take appropriate action to support staff in managing work stress, minimise psychological and physiological effects, and maintain job satisfaction and employee retention. Thus, the present study aimed to examine the knowledge of NCAAA and its effects on perceived stress among dental college staff before and after the program accreditation process.

MATERIALS AND METHODS

Study setting

The present cross-sectional questionnaire-based study was performed in accordance with the principles of the Helsinki Declaration from January to May 2023[16]. After obtaining approval from the Institutional Review and Ethical Committee, the study was conducted among 300 randomly selected employees from three dental colleges to complete questionnaires assessing their perception of stress and its effect on their well-being before and after the accreditation process. The included employees received a folder containing a cover letter explaining the study, an informational form,

the consent form, and the study questionnaire. The same employees had to fill out the questionnaire 1 mo after the NCAAA process was completed.

Sample size calculation

The sample size was calculated by using G-Power software, Version 3.1.9.4. The sample size determination was based on the response rate. At a 5% level of significance and 95% power, a sample size of 300 was obtained.

Study tools and data collection

The survey was designed to explore the subjective experience of stress, and participants were needed to complete pre- and post-surveys to assess their perception of stress and its impact on their well-being prior to and after a visit from the Commission. We employed a closed questionnaire consisting of 20 items using Lawshe's approach to assess content validity. The reliability of the study was further confirmed using a test-retest procedure conducted with a sample of 20 participants who shared similar demographic characteristics[17]. The obtained kappa coefficient of 0.9 suggests a high level of reliability. A Likert-type scale was developed with the intention of including several elements, including emotions, interpersonal interactions, physical complaints, and cognitive functioning[18]. A total of 300 individuals who were enrolled in three different dental colleges were requested to assess their subjective experience of job satisfaction, general stress levels, quality of sleep, levels of anxiety and depression, and the amount of time dedicated to preparation ahead of their visits. During the previsit survey, the participants were requested to provide their most precise responses to the questions in relation to the forthcoming Joint Commission visit. The postvisit survey was distributed to the designated participants approximately 1 mo following the commission site visit. Participants were presented with checkboxes and were instructed to select a single alternative for each question. They completed the questionnaire of 20 items and returned it to the principal investigator.

Statistical analysis

The data were entered and analysed using SPSS for Windows, Version 28.0. (Armonk, NY: IBM Corp.) Confidence intervals were set at 95%, and a P value ≤ 0.05 was considered statistically significant. The responses of strongly agree and agree and responses for strongly disagree and disagree were combined. The McNemar test was applied to compare the pre- and post-questionnaires.

RESULTS

The study included 300 employees from three dental colleges. Approximately 51.33% of the included employees believed that NCAAA is essential to attract quality students to join the program before and after the program. Approximately 50% agreed that NCAAA increases opportunities for enhancing research and publications in the college; however, 30.67% disagreed both before and after the process. A total of 52.33% agreed that the costs and efforts of the accreditation process outweighed the benefits for faculty before and after the process. Regarding the benefits for administrative staff, 47.33% and 4% agreed and disagreed, respectively, that costs and efforts of the accreditation process outweighed the process pre- and post-NCAAA. However, 38% disagreed after the process. These findings were statistically significant ($P \leq 0.05$) (Table 1).

Approximately 39% of participants felt that the time investment was low both pre- and post-NCAAA. Approximately 35.33% felt that the time investment by administrators was high, and 33.33% felt that the time investment in NCAAA was low before and after the process. Approximately 44.67% felt that their stress was high before and 31.33% had low stress levels before and after NCAAA. These findings were statistically significant ($P \leq 0.05$) (Table 2).

Approximately 30% and 28% agreed and disagreed that the NCAAA was less rigorous and stressful than expected before and after the process, respectively. Approximately 37.67% and 38% agreed and disagreed that high-stress levels in faculty were directly involved in the pre- and post-accreditation processes, respectively. Approximately 49.67% agreed that they were mentally and physically relieved after the accreditation process ended. However, 30.33% disagreed after the NCAAA process was over. These findings were statistically significant ($P \leq 0.05$) (Table 3).

DISCUSSION

Due to globalisation, internationalisation, and global competition, university access has expanded, as has societal demand for higher education. Globalisation removed borders between countries, allowing wealthy nations to sell their expertise to emerging nations and increasing university competitiveness. To attract students, preserve their current status, and enhance their productivity in the current era of global competition, universities have begun implementing many strategies to demonstrate their calibre[19,20]. The assessment of a higher education institution's calibre is considered a measure of institutional efficacy and the provision of high-quality education. Consequently, universities employ many approaches to ensure the assurance of quality for their institutions and programmes[21,22].

Accreditation is becoming more widespread worldwide as national and international institutions seek quality as a reliable quality assurance mechanism; consequently, those who have actively participated in accreditation processes around the world must be recognised[23]. There is limited information on the effects of such methods and practices on dental college personnel who keep such data after academic accreditation. Thus, the present study's findings are derived

Table 1 Comparison of pre- and post-commission knowledge, *n* (%)

Question	Pre	Post		McNemer χ^2 value	P value
		Agree	Disagree		
National academic accreditation enhances University's status and prestige	Agree	120 (40)	32 (10.67)	29.53	0.1
	Disagree	94 (31.33)	54 (18)		
National academic accreditation enhances the colleges status and prestige	Agree	130 (43.33)	20 (6.67)	2.7	0.05 ^a
	Disagree	10 (3.33)	140 (46.67)		
National academic accreditation is essential to attract quality national and international faculty	Agree	154 (51.33)	12 (4)	0.57	0.2
	Disagree	8 (2.67)	126 (42)		
National academic accreditation is essential to attract quality students to join the program	Agree	154 (51.33)	31 (10.33)	0.45	0.03 ^a
	Disagree	23 (7.67)	92 (30.67)		
National academic accreditation increases opportunities for enhancing research and publications in the college	Agree	150 (50)	21 (7)	3.87	0.02 ^a
	Disagree	37 (12.33)	92 (30.67)		
National academic accreditation assures program to be more rigorous in meeting international and national standards	Agree	164 (54.67)	23 (7.67)	0.92	0.16
	Disagree	16 (5.33)	97 (32.33)		
National academic accreditation supports an environment of collaboration across departments and committees in the college	Agree	139 (46.33)	47 (15.67)	4.87	0.01 ^a
	Disagree	27 (9)	87 (29)		
National academic accreditation process helps improve the clinical and lab, and other facilities in the college	Agree	44 (14.67)	21 (7)	54.67	0.47
	Disagree	105 (35)	130 (43.33)		
National accreditation alone is sufficient for ensuring a quality program, and international accreditation is not required	Agree	121 (40.33)	78 (26)	28.87	0.12
	Disagree	23 (7.67)	78 (26)		
The benefits of national academic accreditation for faculty outweigh the costs and efforts of the accreditation process	Agree	157 (52.33)	26 (8.67)	2.43	0.05 ^a
	Disagree	15 (5)	102 (34)		
The benefits of national academic accreditation for administrative staff outweigh the costs and efforts of the accreditation process	Agree	142 (47.33)	32 (10.57)	8.2	0.002 ^a
	Disagree	12 (4)	114 (38)		

^aStatistically significant difference.

from an analysis that involves an assessment of data collected on perceived stress among employees of a dental institute in 2023, both prior to and subsequent to a review conducted by the NCAAA commission.

In our study, more than half of the participants believed that NCAAA is essential to attract quality students to join the program before and after the program and that it increases opportunities for enhancing research and publications in the college. More than half of the faculty and most of the administrative staff agreed that the costs and efforts of the accreditation process outweighed the benefits for faculty before and after the process. The aforementioned approaches have evidently heightened the faculty and administrative staff's level of consciousness and awareness regarding quality matters in dental education. The enhanced level of knowledge has led to a more discerning evaluation of the educational procedures within the college[23]. The Sharp study stressed that high academic standards cannot be achieved solely by high-quality teaching. However, one important objective of quality assurance was to produce quality graduates[24]. Another 2023 study by Bougherira *et al*[19] concluded that employees thought that NCAAA accreditation improved all practices, out of which the highest impact was on learning outcome practices[25]. Our findings are consistent with those of Al Mohaimeed *et al*[20] and Lightbody[21], who conducted similar studies on Saudi Arabian and Australian colleges.

Table 2 Comparison of pre- and post-commission attitudes, n (%)

Question	Pre	Post		McNemer χ^2 value	P value
		High	Low		
In your opinion, the time investment in national academic accreditation by faculty was	High	92 (30.67)	57 (19)	5.31	0.01 ^a
	Low	34 (11.33)	117 (39)		
In your opinion, the time investment in national academic accreditation by administrators was	High	106 (35.33)	29 (9.67)	13.03	0.01 ^a
	Low	65 (21.67)	100 (33.33)		
The resources which the college needed for national academic accreditation	High	70 (23.33)	79 (26.33)	0.09	0.3
	Low	84 (28)	67 (22.33)		
The overall impact of the accreditation process on faculty stress level	High	112 (37.33)	44 (14.67)	0.19	0.3
	Low	39 (13)	105 (35)		
What was your level of involvement in the national academic accreditation process	High	58 (19.33)	93 (31)	3.9	0.02 ^a
	Low	67 (22.33)	82 (27.33)		
During your participation in the accreditation process, your stress level was	High	134 (44.67)	25 (8.33)	6.125	0.05 ^a
	Low	47 (15.67)	94 (31.33)		

^aStatistically significant difference.**Table 3 Comparison of perceived stress regarding the commission, n (%)**

Question	Pre	Post		McNemer χ^2 value	P value
		Agree	Disagree		
Overall, the national academic accreditation process (online and visit) was less rigorous and stressful than expected	Agree	90 (30)	52 (17.33)	3.5	0.03 ^a
	Disagree	74 (24.67)	84 (28)		
You noticed high-stress levels in faculty directly involved in the accreditation process	Agree	113 (37.67)	72 (24)	67.12	0.05 ^a
	Disagree	1 (0.33)	114 (38)		
You felt mentally and physically relieved after the accreditation process ended	Agree	149 (49.67)	91 (30.33)	86.09	0.05 ^a
	Disagree	1 (0.33)	59 (19.67)		

^aStatistically significant difference.

A large number of participants felt that the time investment was low both pre- and post-NCAAA. Approximately one-third felt that the time investment by administrators was high before and after the process. Almost half of the faculty members felt that their stress was high before, and only one-third declared that they had low stress levels before and after NCAAA. Less than half of the participants agreed and disagreed that the NCAAA was less rigorous and stressful than expected before and after the process. A significant number of employees agreed that their high stress levels were directly related to the accreditation process. Almost half of the employees agreed that they were mentally and physically relieved after the accreditation process ended[26,27]. Similar findings have been noted in a recent 2018 study conducted on the Jordanian population, which indicated that hospital accreditation is a process associated with significant stress among healthcare providers in both hospitals before and after an NCAAA survey site visit[28]. Our results are also in agreement with the study by Elkins *et al*[9], who concluded that increased stress may be significantly related to increased symptoms of depression and anxiety, psychosomatic health problems, decreased job satisfaction, and interpersonal relationships. These are significant factors that affect health, job stress, and the requirement for resources to handle increased stress during the commission site visit procedure[29]. The duration of the stressors associated with the site visit may also be a factor in perceived stress, as employees' workload includes harmonising curriculum and instruction with shared standards, data collection, and analyses of programmatic and unit-wide data. The primary source of stress for hospital personnel was preparation for hospital accreditation visits; the threat of medical or dental malpractice lawsuits was a

secondary source of stress[21,22]. These situations can be addressed by engaging senior faculty in the preparation process, by expanding the team, or by training staff on how to measure quality at different levels[20,21]. Since such processes are frequently conducted, previous concerns should be paid attention to be better prepared to not repeat errors again[21,22]. Furthermore, staff members who are involved in the NCAAA process are unable to focus on their primary responsibilities and are diverted from their research schedules, thereby affecting their tenure or promotion, and the extensive work needed for accreditation is not always considered in promotion criteria[27-29]. Wilson-Hail *et al*[30] in 2019 examined faculty perceptions of the Council for the Accreditation of Educator Preparation process for accreditation of their teacher education programmes and concluded that the staff must be appreciated for their intensive work and institutions must allocate adequate and realistic resources for the entire process. Universities may therefore take this into account at their level. One of the study limitations was a small sample size. We recommend further studies to take up larger groups of segregated sample size as different employees have different roles and levels of participation in an accreditation process.

CONCLUSION

National accreditation raised the prominence and prestige of the institution and specific programmes and increased prospects to attract better students, staff, and money, according to the employees. The concept of accreditation has evolved into a culture that emphasises ongoing enhancement through the utilisation of standards-based approaches and data-driven decision-making. In addition to their needed teaching, research, and other service responsibilities, this work requires a tremendous amount of faculty effort and may cause them stress. Sufficient provisions must be taken at the university level.

ARTICLE HIGHLIGHTS

Research background

Accreditation processes are extensively employed to guarantee the quality of higher education institutions. However, this process can potentially generate a stressful atmosphere for staff, thus impacting their ability to perform optimally under pressure.

Research motivation

With many medical and dental institutions now focusing on different ranking systems as metrics of academic excellence, a race is underway regarding the position of the institutions and organizations. To achieve these ranks, institutions adopt for different accreditation processes. During this process, the employees have to go through immense pressure and workload and hence we assessed their stress levels.

Research objectives

The present study aimed to examine the knowledge of the National Commission for Academic Assessment and Accreditation and its effects on perceived stress among dental college staff before and after the program accreditation process.

Research methods

A cross-sectional survey pre- and post-survey was conducted with the help of a validated questionnaire.

Research results

This study showed high stress during the accreditation process and low stress levels before and after the accreditation process.

Research conclusions

There is tremendous amount of stress involved during the accreditation process. Proper training and wellness programs should be conducted by the institutions for their employees.

Research perspectives

We should have employees well-being program throughout the year for their mental health condition since it will help them to maintain work life balance and cope up with the day to day stress.

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