



## ORIGINAL ARTICLE

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## Utilization of therapies for stress management in Chilean clinical dental students.

**Abstract:** Dental students suffer greater stress than the rest of the university population. In general, most health students seek little assistance to help them cope with stress. The aim of this study is to evaluate the use of therapies to manage stress in Chilean clinical dental students. A cross-sectional study was conducted nationwide; this report is a secondary data analysis. The study population was dental students in clinical years (4<sup>th</sup> and 5<sup>th</sup>) of 5 Chilean dental schools: Antofagasta, Valparaíso, Viña del Mar, Concepción, and La Frontera. This paper reports the use of therapies for stress management during the past six months considering four options: medical/psychiatric, psychological, self-medication and alternative. Tabulation and analysis were done in STATA 10/SE. Three hundred thirty-seven students were surveyed, 54.01% were men and 64.99% were in fourth year, with an average age of 22.94±2.04. The 48.07% of students have used any of the four types of therapies; women and fourth-year students use more any form of therapy with 53.30% ( $p=.037$ ) and 48.86% ( $p=.694$ ), respectively, than men and fifth year students. About half of the students have used some form of therapy to manage stress in the last six months; of the students that received therapy, the percentage of women was significantly higher.

**Keywords:** *Dental students; Stress, Psychological; Education, Dental.*

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### INTRODUCTION.

Work and university study are inherently stressful activities. Stress can lead to an adaptive or maladaptive response depending on the way it is faced, accepted and dealt with by students<sup>1</sup>.

Within health sciences dental practice is considered one of the professional activities that causes one of the highest levels of anxiety<sup>2</sup>. This is because dental students must face the usual stress of university studies in addition to the stress caused by dental practice<sup>3</sup>. Consequently, it is thought that this group of students suffer more stress than the rest of the population<sup>4</sup>. Comparatively, dental students suffer more stress than medical students<sup>2,5,6</sup>.

It has been documented that the largest increases in stress levels of dental students are associated with transi-

tions between the stages of basic science, preclinical and clinical<sup>7</sup>. The most significant increase in stress occurs during their transition into the clinical stage<sup>8</sup>.

Stress is associated with depression, anxiety, substance abuse, decreased work efficiency and “burnout syndrome”<sup>8</sup>. Students with higher levels of stress, depression and burnout have dysfunctional coping styles<sup>9</sup>; this is a worrisome situation because more than half of dental students have dysfunctional strategies<sup>5</sup>.

Despite the above, research shows that students in the health sciences rarely seek help for managing stress<sup>10</sup> and burnout<sup>11</sup>. In the United States only 3 out of 10 medical students seek help for distress for fear of: stigma, violation of privacy and discrimination<sup>10</sup>. Unfortunately, the management of stress by dental students has been little

explored in Chile and there are no reports at a national scale. The aim of this study is to evaluate the use of therapies to manage stress in Chilean clinical dental students.

## MATERIALS AND METHODS.

This report is a secondary analysis of a cross-sectional study conducted nationwide in a group of universities that belong to the “Scientific National Association of Dental Students” (ANACEO, for its acronym in Spanish), detailed in the previously published protocol<sup>12</sup>. An invitation was made to the 14 universities participating in ANACEO, five of which agreed to take part in this study. The project was evaluated and approved by the Bioethics Committee of the School of Dentistry at Universidad de Concepción, approval number C.I.Y.B. N°03/14. Students participated after signing informed consent.

Population of the study was composed of fourth and fifth year dental students at Universidad de Antofagasta, Valparaíso, Viña del Mar, Concepción and La Frontera, who were permanently taking care of patients as part of their curricular activities. Students who were not regularly attending clinics were excluded.

The study did not consider sampling techniques since our aim was to include as many students as possible at a national scale.

The following sociodemographic variables were considered in the study: age, gender, course level, burnout syndrome, coping strategies, perceived stress, vocational satisfaction and the use of therapies for stress management. The use of therapies to control stress was addressed with four dichotomous questions (Yes/No), considering the last 6 months. Questions were asked by the researchers

according to 4 therapeutic possibilities: *Have you consulted a physician/psychiatrist because of your stress? Have you consulted a psychologist because of your stress? Have you self-medicated in order to control stress? Have you started any alternative therapy to deal with stress?*

Data collection was conducted in person through the application of questionnaires.

Participants also signed informed consent forms given by representatives of each university participating in ANACEO.

Data were tabulated and coded according to the respective protocol. For this study, the analysis included an exploration of the data using descriptive statistics: means with their standard deviations, frequency distribution and percentage. Statistically significant differences by gender and course level were determined with chi square, considering  $p < .05$ . Tabulation and analysis were performed using STATA/MP 13 (STATA Corp., TX, USA).

## RESULTS.

Six hundred and thirty-five students were invited to participate. Of them, 345 accepted the invitation, accounting for a 54.3%. Eight incomplete questionnaires regarding the variables of interest of this report were eliminated, so the analyzed sample consisted of 337 students. The 54.01% were men and 64.99% were in fourth year, the characterization of the population is shown in Table 1.

The 48.07% of students have used any of the four types of therapy; one type only, 25.52%; two types, 13.65%; three types, 5.93%; and 2.97% used the four types of therapies. The 53.30% of women versus 41.94% of men

**Table 1.** Characterization of participating dental students by gender, course level and age.

Group	4 <sup>th</sup> year	5 <sup>th</sup> year	General
Men	63.23% (98)	37.37% (57)	155
Women	66.48% (121)	33.52% (61)	182
Age (years)	22.52±1.95	23.72±1.96	22.94±2.04
Total	64.99% (219)	35.01% (118)	337

**Table 2.** Distribution of types of therapies for stress management by gender.

Therapy	Men	Women	p-value
Medical/Psychiatric	13.55%	14.29%	.846
Psychological	11.61%	16.48%	.202
Self-medication	14.84%	30.77%	.001
Alternative	29.03%	32.42%	.503
At least 1	41.93%	53.30%	.037

**Table 3.** Distribution of types of therapies for stress management by course level.

Therapy	4 <sup>th</sup> year	5 <sup>th</sup> year	p-value
Medical/Psychiatric	15.98%	10.17%	.142
Psychological	16.89%	9.32%	.058
Self-medication	24.20%	22.03%	.654
Alternative	31.51%	29.66%	.726
At least 1	48.86%	46.61%	.694

have used any of the types of therapy ( $p=.037$ ). The distribution for each type of therapy according to gender is shown in Table 2.

The 48.86% of fourth year students versus 46.61% of fifth year have used any of the types of therapy ( $p=.694$ ). The distribution for each type of therapy according to course level is shown in Table 3.

## DISCUSSION.

Dental students experience stress more often than the general population<sup>4</sup> and with greater intensity (distress)<sup>7</sup>, directly affecting their health and performance. However, there is little information about the strategies used to cope with stress and whether these are adequate.

In the present study it was observed that about half of the students used some kind of therapy to manage stress. This figure is higher than previously reported with respect to medical students, where only a third of the students sought help to manage stress<sup>10</sup>.

However, that figure seems a small proportion considering the high stress levels described in this population<sup>13</sup>.

This can be explained if we consider stress as a usual

phenomenon in the training process of dental students, as well as an indicator for effort or efficiency<sup>14</sup>. Students have the feeling that stress goes hand in hand with success in their studies. This conception may influence their decision of seeking help, seeing stress as something common and usual in the dental program, even desirable.

In the present study it was observed that women were increasingly more likely to use some type of therapy to deal with stress. This may be explained because women are generally most affected by stress than men<sup>15,16</sup>.

A tendency for 4<sup>th</sup> year students to use more therapies than their 5<sup>th</sup> grade peers was observed. This tendency was mild and no statistically significant. This difference may be due to fact that 4<sup>th</sup> year students have higher levels of stress<sup>14,17</sup> when facing their transition into the clinical stage, event described as the transition point that dramatically increased the stress levels<sup>3,7,8,18,19</sup>.

This would be associated with a threefold increase in the prevalence of depression and suicidal ideation<sup>20</sup>. Also 4<sup>th</sup> year students experience their peak of musculoskeletal disorders as they start actual patient care, having an increased number of clinical hours<sup>21</sup>, which in turn could

increase the discomfort caused by stress.

It was observed that nearly a third of 4<sup>th</sup> year students sought help from a health care provider, compared with only 2 out of 10 of 5<sup>th</sup> year. This is consistent with the highest levels of stress affecting 4<sup>th</sup> year students mentioned above. As a result, treatment options such as alternative therapy or self-medication would be considered insufficient to deal with such levels of stress.

Self-medication is listed as one of the most commonly chosen options, this may be due to the fact that dental students in clinical stage have some knowledge of pharmacology, and they feel they are able to choose an effective drug to treat their condition.

The main reasons for health students not seeking help to deal with stress is the associated stigma, violation of privacy and discrimination<sup>10,11</sup>.

These data support the fact that participants in this study address the problem without seeking help from third parties (self-medication). This is also consistent with the study by Guille *et al.*<sup>22</sup>, where 3 out of 4 medical students preferred to find a solution on their own.

This situation becomes even more important because

students also favor to keep an ideal image of their professional role over their mental health<sup>23</sup>.

Among the limitations of this study is the non-inclusion of all dental schools in Chile and the low response rate, so that representativeness of the Chilean reality is limited. Despite the above, this is the first report conducted at a national scale (from north to south) that addresses this critical situation.

The study provides important information to dental schools about the mental health of their students. It is recommended that universities develop preventive and remedial strategies to address this situation.

Future experimental studies are needed to determine the most effective stress management therapies that could be used by dental students, as there is no conclusive evidence on the subject<sup>24</sup>.

## CONCLUSION.

About half of the students have used some form of therapy to manage stress in the past six months, focusing mainly on self-medication and alternative therapy. The use of these therapies is significantly higher in women.

## Utilización de terapias para manejar el estrés en estudiantes de odontología chilenos en etapa clínica.

**Resumen:** Los estudiantes de odontología sufren mayor estrés que el resto de la población universitaria. En general los estudiantes del área de la salud recurren escasamente a ayuda para enfrentar el estrés. El objetivo de este trabajo es evaluar la utilización de terapias para manejar el estrés en estudiantes chilenos de odontología en etapa clínica. Se realizó un estudio de corte transversal con alcance nacional, este corresponde a un análisis secundario de datos. La población en estudio fueron estudiantes de odontología en período de clínica (4<sup>to</sup> y 5<sup>to</sup> año), de 5 Universidades: de Antofagasta, de Valparaíso, de Viña del Mar, de Concepción y de La Frontera. Para el presente estudio se reportan la utilización de terapias para manejar el estrés durante los últimos seis meses

considerando cuatro opciones: médico/psiquiátrico, psicológico, automedicación y alternativo. La tabulación y análisis se hizo en STATA 10/SE. Se encuestaron 337 alumnos, 54.01% correspondió a hombres y el 64.99% a cuarto año, con una edad promedio 22.94±2.04. Un 48.07% ha utilizado alguno de los cuatro tipos de terapia consultadas, las mujeres utilizan en mayor proporción alguna forma de terapia con el 53.30% (p=.037), así como los alumnos de cuarto año con un 48.86% (p=.694), en comparación a los hombres y alumnos de quinto año respectivamente. Aproximadamente la mitad de los estudiantes han utilizado alguna forma de terapia para manejar el estrés en los últimos seis meses, siendo significativamente superior en mujeres.

**Palabras clave:** *Estudiantes de odontología, Estrés psicológico, Educación odontológica.*

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