

Article

# Gender, age, year of course and faculty: factors influencing the risk of eating disorders

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**Abstract:** Background: The passage through university, as a complex experience, can heighten personal susceptibility to eating disorders. The objective of this research is to determine how gender, age, year of course, and center or faculty can influence the risk of an eating disorder among university students. Method: A transversal and descriptive study with a probabilistic sample of 516 Spanish students from 26 university degrees is performed, by administering the Inventory Eating Disorder-Reference criterion (EDI-3-RF) to the students. Results: It was found that the female students enrolled in second-year grades presented a greater obsession with thinness and body dissatisfaction, that the male students did more physical exercise to control their weight, and that those under 20 years and the students from both the Health and Law Faculties presented greater bulimic behavior. Conclusions: It is necessary to implement preventive measures adapted to the university students.

**Keywords:** eating disorder; gender; age; university degree.

## 1. Introduction

The passage through university for many young people represents a complex experience, in which they will encounter stressors that heighten their susceptibility to suffering mental health problems [1,2]. The scientific evidence suggests that both the particular characteristics of the life cycle and the demands of university life (heavier academic workload, adaptation to changes in the social support network, greater autonomy, responsibility) increase the probability of problems emerging which, if not properly treated, can be converted into a clinical disorder [2,3].

In this sense, Eating Disorders (ED) are unknown to university students who are, in fact, a high-risk population, due to all the changes that happen to them in life at the start of university [3–6].

The scientific literature has established that over 60% of university students perceive their image in an erroneous way, overestimating their Body Mass Index (BMI) [7–9]. This dissatisfaction with body weight accompanied by slimming diets constitutes one of the main risk factors of Eds [10–14].

In relation to gender, epidemiological studies have consistently made clear that EDs are more common among women than among men [12,14,15]. In this sense, Martínez-González, L. et al. [16] found a prevalence of risk in the university population of 19%, which was higher among women. However, the impact of these EDs was also found to affect the male population [12,15,17].

Although the masculine and feminine risk profiles for an ED differ, they also arise due to pressure of the ideal of beauty. In the case of men, this ideal is muscular and not slimness, however, it also leads them to ED risk behaviors, such as: the use of steroids, high consumption of laxatives, desire for greater muscular mass, dietary complements, diet and excessive sports activity [4,18–20].

Sepúlveda et al. [3] signaled some significative gender-related differences in risk behavior. For example, vomiting was present in 9.6% of men as opposed to 16% of women and the use of laxatives to control weight stood at 10.6% among boys and 14.5% among girls [21]. Other studies, such as the one by Lameiras et al. [22] with university students from the Autonomous Community of Galicia (Spain), affirmed that women showed higher levels of concern, due to weight and body image, and they resorted to diets to reach the ideal weight. Franco et al. [12] found that the three risk behaviors reported to a greater extent among women were the compensatory behaviors, the use of slimming products, and binge eating, and among the men, compensatory behaviors, binge eating, and exercise to burn calories.

In relation to age, González-Carrascosa et al. [4] pointed out that the start of these disorders is habitually at prepubescent ages and early adolescence, with higher percentages of prevalence appearing among young adults, who form the majority of the university population. An epidemiological study carried out by the Asociación contra la Anorexia y la Bulimia (ACAB) [Association against Anorexia and Bulimia] and Andersen [23] with universities (18-25 years old) from the Catalan Autonomous Community (Spain), confirmed that 11.48% presented a high risk of suffering from an ED, while 6.38% could have been suffering from it at that time. There appears therefore to exist a significant proportion of university students at-risk of developing an ED in the future. As much is also confirmed in the results of work completed at the Autonomous University of Madrid by Sepúlveda et al. [3] in which 14.9% of men and 20.8% of women presented a high risk of suffering an ED.

Although the social pressure is more intense at the adolescence stage, the cult of the body is therefore maintained at all stages of life. This has meant that EDs are increasingly present at early ages and are maintained at the same time at more advanced ages [4,14,24].

If the influence of the year of the course on which students enroll is analyzed, then the scientific literature establishes that the early years of university, especially the very first, constituted a critical period for the onset of pathological or disordered eating patterns. The increase in independence and responsibilities, as well as questions over personal identity contributed in part to the pathological eating patterns [25].

Increased weight, by more than two-thirds, occurred among first-year students, during their first semester [26–28]. It is mainly body mass that tends to be added, on average, by more than 1% [5,25]. There are also studies that report weight gain and increased body mass among students throughout the different university courses [25].

With regard to the selection of university qualification or degree, it could be influenced by pre-existing eating disorders. Personality traits, motivations and lifestyles correlate with the choice of a future profession [29,30]. In other words, there is usually a higher impact on risk factors among young university students from degrees within the area of Health, such as Nutrition, Dietetics, Physical Education, Nursing and Medicine, where physical appearance and concern for health are very important [10,17].

Bo et al. [29] pointed out that the students enrolled on Nutrition and Dietetics showed a high prevalence of ED (specifically, one fifth) and those with pre-existing pathological eating patterns were especially inclined to enroll on Health Sciences courses such Dietetics and Nutrition. A European survey reported that 12.8% of students of Dietetics and Nutrition presented an earlier or a current ED, such as anorexia nervosa, bulimia nervosa or binge-eating disorder [31]. Along these same lines, Rocks et al. [32] and Toral et al. [17] found that the students of Nutrition and Dietetics showed a double prevalence of the psychological characteristics and behavior often associated with EDs in comparison with students from other degrees.

Other studies, such as the one by Peña et al. [14] showed that students with greater susceptibility to develop an eating disorder were those enrolled on Business Administration, followed by Law. In turn, Cancela and Ayán [33] found that physical inactivity and eating disorders had a significant prevalence among the students enrolled on Primary School Teaching and Nursing.

In relation to students of Primary School Teaching, some works showed that they have distorted attitudes and knowledge of the etiology of obesity, balanced nutrition and dietary regimes, and that

the women especially presented risk factors such as inappropriate weight control techniques (use of laxatives and vomiting) [18,34].

Considering the aspects previously pointed out, the objective of this investigation will be centered on determining the extent to which gender, age, the year of the course, and the faculty influence the risk of university students suffering an ED.

## 2. Materials and Methods

A transversal, descriptive study of a population was designed through a survey with a probabilistic sample [35]. Different methodological aspects of the study were then collected such as the sample characteristics, the instrument, the procedure, and the analysis that was undertaken.

### 2.1. Sample

The investigation was carried out at the University of Burgos (Spain) during the academic year 2015/16. The sample was formed of 516 students taken from a population of 6,277 students. A random stratified sample was carried out for the selection of the participants among the 26 degrees taught at the seven centers or faculties of the University. The sample was calculated using the formula for finite stratified samples, with a confidence level of 95.6% and an error margin of 4%.

In all, 42.8% of the sample were men (N = 240) and 57.2% were women (N = 276), with an average age of 21.7 (SD = 4.1). 75% of the students were from Burgos and the province, 12% from the other Spanish provinces and 13% were from other countries (China, Mexico, and France). 37.1% of the students were enrolled in their fourth year, 28.5% in the second year, 21.7% in the third year, and 12.7% in the first year. The sociodemographic data are shown in Table 1, grouped under center or faculty.

**Table 1.** Frequency and percentage of students by center

Center or Faculty	Frequency	Valid Percentage
Sciences	42	7.5
Law	67	11.9
Economics	67	11.9
Education	120	21.4
EPS_Milanera	38	6.8
EPS_Rio vena	110	19.6
Humanities and communication	53	9.4
Labor relations	17	3.0
Health	47	8.4
<b>Total</b>	<b>561</b>	<b>100</b>

Note: EPS: *Escuela Politécnica Superior* [Higher Polytechnic School]

The average height of the 516 students was 1.78 meters (SD = 0.06) for the men and 1.64 meters (SD = 0.06) for the women. The actual average weight for the men was 74.51 kilos (SD = 9.98) and 58.61 kilos (SD = 8.81) for the women. The ideal weight of the students was 73.29 kilos (SD = 7.80) (1.22 kilos less

than their average actual weight), and 55.11 kilos (SD = 6.25) for the female students. The body mass indexes of the men and the women were 23.28 (SD =2.79) and 21.77 kilos (SD = 2.94), respectively.

## 2.2. Instrument

Two instruments were used: one designed ad hoc to collect sociodemographic data (gender, age, residence, faculty, degree and the year of the course on which enrolled) and another standardized instrument, the Eating Disorder Inventory-Reference criterion (EDI-3-RF) of Garner [36].

The EDI-3-RF consists of a brief self-administered questionnaire on the risk of developing an ED, based on dietary concerns, body weight, stature, and the presence of extreme behaviors to control weight [36]. The inventory is formed of three scales of risk:

1. Drive for thinness (DT): a scale with 7 items that measure the drive for thinness, worry over food, and an intense fear of gaining weight. This scale is a good predictor of the appearance of binge eating and the development of an ED. The range of direct scores is from 0 to 20, where 12 is the critical value (situation of real risk of an ED) [18].

2. Bulimia (B): a scale of 8 items used to evaluate patterns of binge eating as a response to negative emotional states, constituting a risk factor. The range of direct scores runs from 0 to 32, and the critical values are between 5 and 8, in accordance with the Body Mass Index (BMI) of each individual.

3. Body Dissatisfaction (BD). Includes 10 items that evaluate dissatisfaction with the general shape of the body and with the size of specific parts that cause extraordinary concern among people with EDs (e.g., stomach, hips, thighs and buttocks).

The range of direct scores runs from 0 to 40. This scale has a qualitative range: 0-6 low, 7-27 medium, 28-40 high body dissatisfaction.

In addition, the instrument includes socio-demographic questions, records of weight of the individual and five behavioral questions that examine the presence of extreme behaviors to control weight. In particular, they are: (a) presence of binge eating, range of direct scores 0-5, critical score between 2 and 5; (b) induced vomiting or purges, range of direct score 0-5, critical score between 1 and 5; (c) use of laxatives, range of direct score 0-5, critical score between 1 and 5; (d) physical exercise as a means of losing or controlling weight, range of direct scores between 0-5, critical score 5; (e) weight loss of nine kilos or more during the last six months, dichotomous Yes/No question, critical score Yes [36].

The responses were grouped into two categories to facilitate the analysis, which were: No Risk (when the response to each one of the questions was outside the criteria of pathology) and Risk (when the responses to each of these questions indicated a risk of suffering an ED).

In relation to the reliability of the instrument, García et al. [18] analyzed the internal consistency through the Cronbach's alpha statistic, which yielded a value of 0.91, a reliability level that was considered excellent [37].

## 2.3. Procedure

The collection of data was carried out during the months of November and December 2015. The questionnaire was administered by researchers with previous training, the application of which was possible thanks to the disinterested collaboration of teachers from the different centers in which the 26 degree courses were taught. One of the researchers visited the classrooms, gave information on data confidentiality and requested the informed consent of the participants. The administration time of the questionnaire fluctuated between 15 and 30 minutes. The criteria for the selection of the class and therefore the students who would be administered the questionnaires was random.

## 2.4. Data analysis

The data were processed with the statistical program SPSS (version 23). Having confirmed the normality of the sample and its equality of variance, parametric techniques were chosen.

A descriptive analysis of the variables under study was performed using frequency tables and percentages. Likewise, contingency tables were used to observe the relations between categorical variables with the Chi-squared statistic, using the significance level of  $p < .05$ . The Student-t test was used to test the hypothesis for the two independent samples (with Levene's test for equality of variances) and a one-way ANOVA test with the post hoc Bonferroni test for more than two groups. The effect size was calculated for each of the significant differences (d of Cohen).

Gender, age, course year, and center or faculty constituted the Independent Variables. Two categories (man-woman) in relation to the variable gender were used for data collection. Three categories were used for the age variable: 20 years or less, 21-to-25 years, and 26 years or over. Four categories were used for the year of the course: 1. First year of the course; 2. Second year of the course; 3. Third year of the course; 4. Fourth year of the course. And nine categories were considered for the variable center (Table 1). The results of the EDI-3-RF on the three scales of risk (DT, B and BD) and the five behavioral questions (binge eating, vomiting, laxatives, physical exercise, loss of weight), constituted the Dependent Variables.

### 3. Results

The results were drawn from the impact of the sociodemographic and academic Independent Variables (IV) on the Dependent Variables (DV) previously described for the study.

#### 3.1. Differences as a function of gender

With regard to the values of the central tendency and the dispersion of the scores on the three scales of risk, the mean average both for Drive for Thinness (DT) (women  $M = 7.25$  and  $SD = 5.63$ ; men  $M = 4.72$  and  $SD = 4.40$ ) and Body Dissatisfaction (BD) (women  $M = 11.61$  and  $SD = 8.11$ ; men  $M = 7.83$  and  $DT = 6.61$ ) was higher among women, a difference that was significant in both cases ( $p < .000$ ). An effect size was obtained (Cohen d index) considered as moderate (.500 and .510 respectively) as it was located between  $.50 \leq d \leq .79$ . So, in the present study there is a rather small risk that the differences between the two groups are due to chance [38]. On the Bulimia (B) scale, the two measures (men and women) were similar (women  $M = 4.35$  and  $SD = 4.25$ ; men  $M = 4.32$  and  $SD = 4.16$ ,  $p = .938$ ).

Contingency Tables were applied to examine the qualitative range of the Body Dissatisfaction (BD) scale and to analyze its relation with gender. As reflected in Table 2, higher levels of BD, both high and moderate, were observed among women than among men, which showed a significant difference ( $p < .000$ ).

**Table 2.** Results of contingency tables as a function of gender for the qualitative range of the Body Dissatisfaction (BD) scale

			Gender		
			Man	Woman	Total
Body Dissatisfaction		Count	117	100	217
(BD). Qualitative	Low (0 - 6)	% within Gender	48.8%	31.2%	38.7%
range		Count	119	210	329
	Moderate (7 - 27)	% within Gender	49.6%	65.4%	58.6%
		Count	4	11	15
	High (28 -40)	% within Gender	1.7%	3.4%	2.7%
		Count	240	321	561
<b>Total</b>		<b>% within Gender</b>	<b>100%</b>	<b>100%</b>	<b>100%</b>

In relation to the presence of risk factors -binge eating, vomiting, use of laxatives, physical exercise, and weight loss-, significant differences were only found for the men ( $p < .005$ ) (Tables 3 and 4).

**Table 3.** Percentages of students presenting pathological behavior due to excess physical exercise

			Gender		
			Men	Women	Total
During the past 3 months, how frequently have you exercised for 60 minutes or more to control your weight?	No risk	Count	225	316	541
		% of total	40.1%	56.3%	96.4%
	Risk	Count	15	5	20
		% of total	2.7%	0.9%	3.6%
<b>Total</b>			<b>42.8%</b>	<b>57.2%</b>	<b>100.0%</b>

**Table 4.** Chi-squared tests for frequency of physical exercise.

	Valor	gl	Asymptotic Significance (2 tails)	Exact Significance (2 tails)	Exact Significance (1 tails)
Pearson's Chi-squared	8.795 <sup>a</sup>	1	.003		
Continuity correction <sup>b</sup>	7.483	1	.006		
Likelihood function	8.876	1	.003		
Fisher's exact test				.005	.003
Linear by linear association	8.779	1	.003		
Num. of valid cases	561				

Note: a. 0 cells (.0%) have a lower expected count than 5. The minimum expected count is 8.56.

### 3.2. Differences as a function of age

The average score of the students under 20 years old on the Bulimia (B) scale was over the average score for the students over 26 years old (Table 5), in a significant way ( $p < .011$ ).

**Table 5.** Descriptive statistics of the DT, B, and BD scales as a function of age

Age in three categories		Drive for Thinness (DT)	Bulimia (B)	Body Dissatisfaction (BD)
M		6.65	4.77	10.61
n	20 years old or less	218	218	218
SD		5.455	4.585	8.068

	M	5.82	4.25	9.84
21 to 25	n	302	302	302
years old	SD	5.182	4.087	7.414
	M	6.12	2.66	7.83
26 years old	n	41	41	41
or more	SD	5.129	2.254	7.956
	<b>M</b>	<b>6.17</b>	<b>4.34</b>	<b>9.99</b>
<b>Total</b>	<b>n</b>	<b>561</b>	<b>561</b>	<b>561</b>
	<b>SD</b>	<b>5.291</b>	<b>4.215</b>	<b>7.733</b>

Note. M: Mean; SD: Standard Deviation

Likewise, the analysis of multiple comparisons after the Bonferroni statistical test tested the existence of significant relations between scale B and the groups at extreme ends of the age scale; the results for the students under 20 years old and over 26 years old were in favor of the first group ( $p < .010$ ), in other words, in favor of the younger students. The effect size can be considered as moderate ( $d = .584$ ) [38].

No significant differences were observed on the DT and BD scales as a function of age, nor for the presence of binge-eating, vomiting, use of laxatives, physical exercise, and weight loss. Nevertheless, the age range with higher percentages for all types of behavior was between 20 and 25 years old, except for the behavior of binge-eating where the age range was extended from under 20 years old to people over 26 years old.

### 3.3. Differences as a function of the year of the course

The average scores of the students enrolled on the 2<sup>nd</sup> year of the course ( $M = 11.61$ ;  $SD = 8.1$ ) on the scale of Body Dissatisfaction (BD) were above the average scores for the 3<sup>rd</sup> year ( $M = 9.00$ ;  $SD = 7.28$ ), and the difference was significant ( $p < .016$ ). The analysis of the multiple comparisons after the application of the Bonferroni statistic pointed to relations of significance between the results of the BD scale and belonging to the second and to the third year of the course, in favor of the students enrolled on the second year of the course ( $p < .029$ ), with a small effect size ( $d = .338$ ). These students therefore presented significantly higher levels of body dissatisfaction.

No significant differences were observed, as a function of the course, in the other two scales, DT and B, nor for the five behavioral symptoms (binge eating, vomiting, laxatives, physical exercise, and weight loss).

### 3.4. Differences as a function of the center or faculty

Significant differences were observed between centers on the Bulimia scale (B) ( $p < .004$ ) (Table 6), in favor of the students from the faculties of Law ( $p < .021$ ) and Health ( $p < .013$ ) with a small effect size ( $d = .070$ ). No significant differences were observed, in accordance with the center for the other two scales, DT and BD.

**Table 6.** Results of the ANOVA test for the three scales (DT, B, BD) as a function of the center

		Quadratic			
		gl.	mean	F	Sig.
Drive for thinness (DT)	Between groups	8	21.587	.769	.631
	Within groups	552	28.090		
	Total	560			
Bulimia (B)	Between groups	8	50.221	2.903	.004
	Within groups	552	17.300		

	Total	560			
Body	Between groups	8	55.073	.920	.499
Dissatisfaction	Within groups	552	59.861		
(BD)	Total	560			

Significant differences were only found between the five behavioral symptoms for the presence of binge eating ( $p < .011$ ), in relation to the Faculty of Health, with 40.4% of students, followed by the Faculty of Law with 38.8% of students (a small effect size,  $d = .075$ ).

#### 4. Discussion

The purpose of this investigation was to estimate the extent to which gender, age, course year, and center or faculty of study had some influence on the risk of university students developing an ED.

The results as a function of *gender* showed that, although women scored higher than men on the three scales of risk, the significative differences were found for Drive for Thinness (DT) and Body Dissatisfaction (BD). These results coincided with other works [3,4,12,14,18,22,39], thereby supporting the theory that the female population is subjected to greater social pressure. Equally remarkable is that no significative differences were found between men and women for bulimic behavior (scale B). This finding may be related with the results obtained by García et al. [18], who reported significantly higher scores for bulimic behavior among men. These authors proposed no explanation for that result, which they qualified as unexpected, although they pointed to a significant increase in BD and Eating Disorders (ED) among men from western countries [23].

Moreover, significant differences were only found for practicing physical exercise among the five behavioral symptoms. In particular, men presented risks of excessive physical exercise as a form of controlling their weight. This point is notable, as authors such as Bo et al. [29] and González-Carrascosa et al. [4], also pointed out that sport is one of the compensatory behaviors used by men suffering from some sort of ED, especially anorexia nervosa.

With regard to the differences as a function of *age*, the students under 20 years old were the ones who presented a more acute problematic (bulimic) behavior than the older students. These results were similar to those of Sáenz et al. [6] who observed a greater risk of ED among university students under 19 years old.

Although there were no significative differences in the presence of binge eating, vomiting, use of laxatives, physical exercise, and weight loss, the highest percentages for age were between 20 and 25 years, except for the behavior of binge eating where it was extended to 26 years old or over. In this sense, Toro in 2000 pointed out that 4.5% of the population between 12 and 25 years needed specialized assistance, alerting the health authorities to the susceptibility of people within that age range. García et al. [18] also found high risks among students older than 25 years old, suggesting the need to implement strategies of prevention and intervention that covered broader age groups than the standard ones. Equally, Cooper and Goodyer [40] evaluated the concern over weight and body image among girls of different ages and they concluded that despite the concerns over body form and appearance that arise at the start of adolescence, the behaviors relating to eating disorders occurred much later [13].

As a function of the year of the *course* in which the student was enrolled, it was observed that the students in the second year presented significantly higher body dissatisfaction than those in the third year. Students are normally between 18 and 20 years old, in the second year of the course, and students younger than 20 years old have greater dissatisfaction with their bodies, which may possibly be related to their phase of growth in life [4,14]. On the other hand, body dissatisfaction was accompanied by negative emotions that might be responsible for a bulimic type of ED among the students under 20 years old observed in this work and that adds to the risk of suffering an ED. These results are similar to those of Gropper et al. [25], which point out that the first years of university are

a critical period for the development of an ED [41]. The increase of independence and the responsibilities, as well as concern over their own identity contribute in part to the development of eating pathologies [2].

Differences were found as a function of the *study center* between the students enrolled at the Faculty of Health Sciences (Occupational Therapy and Nursing Degrees) and at the Faculty of Law (Law; Political Science and Public Management Degrees; double Degree in Law and Administration and Business Management). In particular, they showed a greater tendency to think of uncontrolled attacks of binge eating and a higher tendency to indulge in them (scale B).

From among the five behavioral questions, the students from these two faculties only showed a greater presence of binge eating.

These results reinforce the results found in the literature [10,17], in so far as a higher risk of ED was attributed to the students from Health Sciences, as a consequence of greater concern for health and physical appearance. It would be necessary to investigate whether the students in this study presented pathological EDs prior to their entry into university, which might moreover be a reason for their choice of this area of study [29].

The results referring to the students from the Faculty of Law were congruent with those obtained by other authors such as Peña et al. [14] who found a higher percentage of students at risk of ED following the Business Administration and Law Degrees. Perhaps the students of those degrees considered that they were under greater pressure than on other degree courses, due to the ideals of beauty that have traditionally been attributed to students on courses such as Law and Administration and Business Management. Nevertheless, investigation will have to continue to analyze the causes that underlie these results.

## 5. Conclusions

In conclusion, university students and, in particular, those from the University of Burgos presented significantly higher drives for thinness and greater body dissatisfaction than the men. In turn, this body dissatisfaction was significantly more present among students enrolled in the second year of the degree course. The men, in addition, practiced significantly more physical exercise as a form of controlling their weight and the younger students under 20 years old and those from the Faculties of Health Sciences and Law presented a significantly higher bulimic and binge-eating behaviors.

The data obtained in this study, as well in other previous ones [13,18,22,25,42] reinforce the hypothesis that the female gender, at an age within the limits of early adolescence, the first year of the degree courses, and certain university qualifications constituted factors that can influence the appearance or the continuance of risk-related patterns of eating, which can turn into EDs. In consequence, these results determine the need to implement measures that are specifically adapted to university students that permit the promotion of healthy eating habits, improving the perception of their body image and reducing the obsessive concern over thinness. As García et al. [18] pointed out, although maximum risk is reached during adolescence, the levels observed among university students are sufficiently important to propose these sorts of interventions. In addition, these symptoms are relatively stable during the university period [43,44].

Fortunately, recent systematic revisions and meta-analyses have demonstrated theoretical and methodological advances in the field of the prevention of EDs. The calculations of the latest meta-analyses suggest that at present over half (51%) of preventive interventions reduce the risk factors and somewhat over a quarter (29%) reduce the prevalence and the incidence of present and future eating pathologies [45].

Finally, the limitations of this research are principally related with the EDI-3-RF inventory, as a self-administered questionnaire in which some of the responses could have been both false positive and false negative. With regard to future investigations, the need to develop ED-related awareness-raising measures within the context of the University of Burgos and the evaluation of their benefits are both proposed.

**Author Contributions:** For research articles with several authors, a short paragraph specifying their individual contributions must be provided. The following statements should be used “Conceptualization, M.-C.E.-L., M.-A.M.-M., M.-Y.G.-A. and M.-B.M.-G.; methodology, M.-C.E.-L., M.-Y.G.-A. and M.-A.M.-M.; software, M.-B.M.-G. and F.L.-O; validation, M.-Y.G.-A. and E.M.-V.; formal analysis, M.-B.M.-G. and F.L.-O.; investigation, M.-C.E.-L., M.-A.M.-M., M.-B.M.-G. and E.M.-V.; resources, M.-Y.G.-A. and M.-A.M.-M.; data curation, F.L.-O.; writing—original draft preparation, M.-C.E.-L., M.-B.M.-G., M.-Y.G.-A. and M.-A.M.-M.; writing—review and editing, M.-C.E.-L., M.-A.M.-M. and E.M.-V.; visualization, M.-C.E.-L. and M.-B.M.-G.; supervision, M.-C.E.-L., M.-Y.G.-A. and M.-A.M.-M.; project administration, M.-A.M.-M. All authors have read and agreed to the published version of the manuscript.

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