130 - QUALITY OF LIFE, BODY MASS INDEX AND PERSONALITY ASPECTS OF SELECTED INDIVIDUALS IN THE VALE DOS SINOS REGION, RS, BRAZIL.

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INTRODUCTION

The World Health Organization (THE WHOQOL GROUP, 1995), when defining quality of life as individuals' perception of their position in life in the context of the culture and value systems in which they live in relation to their goals, expectations, standards and concerns, shows the different aspects of this variable and encourages studies that focus on the factors that moderate vulnerability throughout human development. This perspective corroborates with the paradigm adopted lately by the World Health Organization and by renowned researchers on collective health for the definition of health, which emphasizes the dynamic, subjective and contextual characteristics implied in the subject's assessment of his well-being. The current criteria for determining the health concept refute the idea that it is regarded as the absence of diseases or as an arbitrarily devised ideal norm and establish the need for risk factors assessment and protection that influence the subject's perception of his conditions and personal attributes.

Within health-related questions, population surveys show a dramatic increase in obesity in Brazil in the last three decades. Comparing data collected in the Brazilian territory in 1995 and 1997, we observe that the prevalence of obesity increased from 8 to 13% in women, from 3 to 7% in men and from 3 to 15% in children. This scenario may become more serious in the next few years due to the rapid growth of cases among children and adolescents. According to the Pan American Health Association (Associação Pan-Americana de Saúde - OPAS), the prevalence of obesity in children and adolescents in Brazil has increased 240% in the last 2 decades (SOCIEDADE BRASILEIRA DE ENDOCRINOLOGIA E METABOLOGIA, 2006).

Studies show that the risks for getting sick and dying of diseases such as hypertension, diabetes, infarction, stroke and cancer increase progressively at a Body Mass Index (BMI) of 25 or above (BRASIL, 2003; INSTITUTO NACIONAL DO CÂNCER, 2006). Body Mass Index (BMI), also known as Quetelet index and recognized as international standard for assessing obesity level, is defined as a person's weight in kilograms divided by height in meters squared (Kgm^{-2}) (HEYWARD; STOLARCZYK, 2000).

In this scenario, with the possibility of developing prophylactic intervention projects related to the physical and emotional health of these individuals, it is necessary to point out the multidimensional character of this study's research object and highlight the relevance of assessing the subject's perception of his quality of life, as well as the effect of this construct's mediator variables. In the psychological area, it is especially important to investigate the influence of willingness variables (personality characteristic and emotional health status) on the participants' well-being (BERLIM; FLECK, 2003).

Therefore, we aimed at comparing emotional conditions (anxiety, depression, vulnerability and psychosocial maladjustment and quality of life to the BMI of residents in Vale do Sinos, RS.

METHODOLOGY

In this investigation, 585 subjects between 18 and 80 years old, living in the Vale do Sinos Region, were selected by convenience. Subjects were first contacted in person or by phone in order to schedule assessments. Those participants, who could not go to the place where data were collected, were transported by vehicles provided by the Centro Universitário Feevale.

To assess BMI in the height variable, a stadiometer with an accuracy of 0.1cm was used and body mass was determined through a Cauduro mechanical balance scale to 100g. This study used the BMI classification from WHO, which is: low weight ($BMI<18.5\ Kgm^{-2}$), normal weight ($BMI =18.5$ e $= 24.9\ Kgm^{-2}$), overweight ($BMI =25$ e $= 29.9\ Kgm^{-2}$),obesity degree 1 ($BMI =30$ e $= 34.9\ Kgm^{-2}$), obesity degree 2 ($BMI =35$ e $= 39.9\ Kgm^{-2}$) and obesity degree 3 ($BMI =40\ Kgm^{-2}$).

The quality of life, individuals' perception of their position in life in the context of the culture and value systems in which they live in relation to their goals, expectations, standards and concerns (THE WHOQOL GROUP, 1995), was assessed through WHOQOL-100, instrument that assesses six domains (physical, psychological, level of independence, social relationships, environment and spirituality). Each domain is comprised of facets that are evaluated by four questions, totaling 24 facets and an overall facet that includes overall assessment questions on quality of life (G1 - How would you rate your quality of life?, G2 - How satisfied are you with your quality of life?, G3 - In general, how satisfied are you with your life? And G4 - How satisfied are you with your health?).

The emotional conditions were assessed by the Adjustment, Emotional and Neuroticism Factorial Scale (Escala Fatorial de Ajustamento Emocional/Neuroticismo - EFN) which assesses the factors vulnerability (N1), psychosocial maladjustments (N2), anxiety (N3) and depression (N4). The vulnerability dimension assesses the way a subject tends to go through suffering caused by not being accepted by others and it includes items about self-esteem, insecurity and dependence from others. It comprises typical symptoms of dependent and avoidant personality disorder (Cronbach's *alpha*: 0.89; *eigenvalue*: 19.20). The psychosocial maladjustments dimension measures indicators of aggressiveness, hostility, tendency for manipulation and social negligence, atypical or risky sexual behaviors, high levels of alcohol consumption and the recurring need for attention. It comprises typical symptoms of anti-social and borderline personality disorders (Cronbach's *alpha*: 0.82; *eigenvalue*: 5.12). The anxiety dimension comprises somatic, cognitive and emotional symptoms related to anxiety, irritability, sleep disorders, panic and phobia (Cronbach's *alpha*: 0,87; *eigenvalue*: 4.35). The depression dimension assesses indicators of mood alterations , hopelessness and suicidal ideation (Cronbach*'s alpha*: 0,87; *eigenvalue*: 3.09). The scale is indicated for individuals over 17 years old.

The ANOVA with Scheffe Post Hoc was used in the data analysis in order to detect diferences among the variables.

RESULTS

As observed in table 1, normal weight (eutrophic) subjects, when compared to the overweight ones, reported more satisfaction with their quality of life (G2) ($p<.005$). Such result was also observed in the subjects classified as obese ($p<.05$). Our society shows the idea spread by the media that being thin means being healthy. Therefore, people base their quality of life on being thin. This reinforces the stereotype of quality of life associated with physical health. It is important to stress that the concept of quality of life used in this study refers to the interviewees' subjective perception of their lives.

Regarding the subjects' satisfaction with their health (G4), the eutrophic ones reported more satisfaction than the overweight and obese ones ($p<.01$). The same result was verified when overweight subjects were compared to obese ones ($p<.01$). Naturally, the higher the obesity level, the more critical people get about the quality of their health status. However, we identified the difficulty these people show to change the established overweight or obesity status. There is criticism over the physical status, however, these people are emotionally unable to change their eating habits, as we see in the following data on personality aspects.

Table 1 - Distribution of frequency, mean, standard deviation, F test and significance level of the results obtained according to BMI classification and its connection with EFN levels (n=585).

WHOQOL	CLASSIFICATION	N	AVERAGE	S.D.	F	SIG.
	Eutrophic	269	3.68	0.81		
G2	Overweight	195	3.46	0.80	5.31	.005
	Obese	117	3.46	0.80		
	Eutrophic	269	3.66	0.94		
G4	Overweight	195	3.42	0.85	16.81	.000
	Obese	117	3.07	0.99		

Analyzing the subjects' emotional condition, there was no significant difference on psychosocial maladjustments (N2). It is reported that obese people keep adequate social integration, remaining in social life, actually using it as an integration factor. Nevertheless, as it is shown in table 2, eutrophic subjects are less vulnerable (N1) (p<.001) and less depressive (N4) (p<.01) when compared to overweight and obese subjects. It is reported that the extroverted behavior of the obese, which makes their social life easier, covers emotional suffering that makes them more vulnerable and depressive. When compared to obese subjects, eutrophic ones were less anxious (N3).

Table 2 - Distribution of frequency, mean, standard deviation, F test and significance level of the results obtained according to BMI classification and its connection with WHOQOL questions (n=585)

EFN	CLASSIFICATION	N	AVERAGE	S.D.	F	SIG.
	Eutrophic	271	67.09	23.32		
N1	Overweight	196	73.51	26.66	5.23	.006
	Obese	118	74.27	26.15		
	Eutrophic	271	67.84	22.51		
N3	Overweight	196	71.88	27.26	7.27	.001
	Obese	118	78.55	29.15		
	Eutrophic	271	42.09	16.76		
N4	Overweight	196	46.23	17.80	7.46	.001
	Obese	118	49.73	23.84		

CONCLUSION

We have concluded that the lower the weight related to height, the more satisfied the subjects are with their health and quality of life. Conversely, as body mass increases, the tendency to vulnerability, anxiety and depression also increases. It is observed that, no matter whether obesity is caused by emotional or physical factors, there is a correlation between weight gain and intrapsychic suffering. This suffering can be caused by emotional trauma or social criticism developed by the culture that values the young and thin image. Dobrow, Kamenetz, and Devlin (2002) point out that obesity has been associated with other psychiatric disorders, especially with depression. The authors refer that the understanding about the functioning of these mechanisms may help in the management of obese subjects by influencing healthy lifestyles that lead to a greater physical and psychological well-being. However, the study carried out by Cataneo, Carvalho, and Galindo (2005) with a sample of 10-12 year-old children did not find statistically significant difference between obesity and emotional disorders, showing the possibility that they are produced by the frustration relationship established with the social environment and the inability to manage conflicts emotionally. It is important to understand that people will only get motivated to lose weight when feeling emotionally balanced. Otherwise, they will keep obese or vary from diet periods or back to obesity. Either way brings high emotional distress.

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QUALITY OF LIFE, BODY MASS INDEX AND PERSONALITY ASPECTS OF SELECTED INDIVIDUALS IN THE VALE DO SINOS REGION, RS, BRAZIL.

ABSTRACT

The present descriptive study aims at comparing emotional conditions (neuroticism levels) and quality of life and BMI of selected individuals from the Vale do Sinos Region, Rio Grande do Sul, Brazil. Participated in the study 585 subjects between 18 and 80 years old selected by convenience for this study. The ANOVA with Scheffe Post Hoc was used in the data analysis in order to detect differences among the variables. In order to assess BMI, in the height variable, a stadiometer with an accuracy of 0.1cm and body mass through Plenna digital scale to 100g were used. Quality of life was assessed through WHOQOL-100 and emotional conditions through the Adjustment, Emotional and Neuroticism Factorial Scale (Escala Fatorial de Ajustamento Emocional/Neuroticismo - EFN) , which assesses the factors vulnerability, psychosocial maladjustment, anxiety and depression. It was observed that eutrophic subjects, when compared to overweight ones, showed more satisfaction with their quality of life (G2) (p<.005). This result was also observed in subjects classified as obese (p<.05). Regarding the subjects' satisfaction with their health (G4), the eutrophic ones reported more satisfaction than the overweight and obese ones (p<.01). Analyzing the subjects' emotional conditions, it was verified that eutrophic subjects, when compared to overweight and obese ones, were less vulnerable (N1) (p<.001), and less depressive (N4) (p<.01). When compared to obese subjects, the eutrophic ones were less anxious (N3). It was concluded that, the lower the body mass related to height, the more satisfied subjects are with their health and quality of life. Conversely, as body mass increases, the tendency to vulnerability, anxiety and depression increases too. Key words: Quality of Life, Body Mass Index, Personality

QUALITÉ DE VIE ET INDICE DE MASSE CORPORELLE ET ASPECTS DE PERSONNALITÉ D'INDIVIDUS SÉLECTIONNÉS À LA RÉGION DU "VALE DO SINOS"

RÉSUMÉ

La présente étude de caractéristique descriptive a eu pour but comparer les conditions émotionnelles (niveaux de neurasthénie) et qualité de vie, à l'IMC d'individus sélectionnés à la région du « Vale dos Sinos » . Ont été étudiés 585 sujets de 18 à 80 ans, résidents au « Vale dos Sinos », RS, sélectionnés par convenance. Pour détecter les différences entre les variables, nous avons utilisé pour l'analyse des données, l'ANOVA avec Post Hoc de Scheffé. Pour évaluer l'IMC, dans la variable taille, nous avons utilisé un stadiomètre avec précision de 0,1 cm, et la masse corporelle, par la balance digitale marque Plenna, à la précision de 100g. La qualité de vie a été évaluée à travers le WHOQOL-100, et les conditions émotionnelles par l'Échelle Factorielle d'Ajustement Émotionnel/Neurasthénie - EFN, qui évalue les facteurs vulnérabilité, dérèglement psychosocial, anxiété et dépression. Nous avons observé que les sujets eutrophiques ont présenté plus de satisfaction en rélation à leur qualité de vie (G2) (p<.005), comparativement à ceux qui ont un surpoids. Tel résultat a été aussi observé par rapport aux sujets classifiés comme obèses (p<.05). En ce qui concerne la satisfaction des sujets en rélation à la santé (G4), les eutrophiques ont démontré plus de satisfaction que les sujets lourds et obèses (p<.01). Le même résultat a été constaté quand les sujets porteurs de surpoids ont été comparés aux obèses (p<.01). En faisant l'analyse des conditions émotionnelles des sujets, on a constaté que les sujets eutrophiques, comparés aux porteurs de surpoids et obèses, se sont présentés moins vulnérables (N1) (p<.001), et moins dépressifs (N4) (p<.01). Comparés aux sujets obèses, les eutrofiques se sont présentés moins anxieux (N3). Nous avons conclu que, plus la masse corporelle est petite en rélation à la stature, plus satisfait sont les sujets avec leur santé et qualité de vie. De l'autre côté, quand la masse corporelle augmente, augmente la tendance à la vulnérabilité, anxiété et dépression. Mots-clés : Qualité de vie. Indice de masse corporelle. Personnalité.

CALIDAD DE VIDA E ÍNDICE DE MASA CORPORAL Y ASPECTOS DE PERSONALIDAD DE INDIVIDUOS SELECCIONADOS EN LA REGIÓN DEL VALO DO SINOS, RS.

RESUMEN

El presente estudio de característica descriptiva tuvo como objetivo comparar las condiciones emocionales (niveles de neurosis) y calidad de vida con el IMC de individuos seleccionados de la región del Vale dos Sinos. Fueron estudiados 585 sujetos, de 18 a 80 años, residentes en la región del Vale dos Sinos, seleccionados por conveniencia. Se utilizó en el análisis de los datos la ANOVA, con *Post Hoc de Scheffé* para detectar diferencias entre las variables. Para evaluar el IMC, en la variable *estatura,* se usó un estadiómetro con precisión de 0,1 cm, y la masa corporal a través de balanza digital marca Plenna, con precisión de 100 g. La calidad de vida fue evaluada a través del WHOQOL-100 y las condiciones emocionales por la Escala Factorial de Ajustamiento Emocional/Neurosis - EFN que evalúa los factores vulnerabilidad, desajuste psico social, ansiedad y depresión. Se observó que los sujetos eutróficos, cuando comparados a los con sobrepeso, presentaron más satisfacción (G2) (p<005). Tal resultado fue, también, observado en relación a los sujetos clasificados como obesos (p<05). En lo que se refiere a la satisfacción de los sujetos en relación a la salud (G4), los eutróficos demostraron más satisfacción que los sujetos con sobrepeso y obesos. (p<01). El mismo resultado fue constatado cuando los sujetos con sobrepeso fueron comparados a los obesos (p<01). Analizándose las condiciones emocionales de los sujetos, se constató que los sujetos eutróficos cuando comparados con los de sobrepeso y obesos, se presentaban menos vulnerables (N1) (p<001), y menos depresivos (N4) (p<01). Al ser comparados con los sujetos obesos, los eutróficos se presentaron menos ansiosos (N3). Se concluye que cuanto menor sea la masa corporal en relación a la estatura, más satisfechos están los sujetos con su salud y calidad de vida. Por otro lado, cuando la masa corporal aumenta, aumenta la tendencia a la vulnerabilidad, ansiedad y depresión. Palabras-clave: Calidad de vida. Índice de masa corporal. Personalidad.

QUALIDADE DE VIDA, ÍNDICE DE MASSA CORPORAL E ASPECTOS DE PERSONALIDADE DE INDIVÍDUOS SELECIONADOS NA REGIÃO DO VALE DO SINOS, RS.

RESUMO

O presente estudo de característica descritiva teve como objetivo comparar as condições emocionais (níveis de neuroticismo) e qualidade de vida com o IMC de indivíduos selecionados da região do Vale do Sinos. Foram estudados 585 sujeitos, de 18 e 80 anos, residentes na região do Vale do Sinos, RS, selecionados por conveniência. Utilizou-se na análise dos dados a ANOVA com *Post Hoc de Scheffé* para detectar diferenças entre as variáveis. Para se avaliar o IMC, na variável estatura, utilizou-se um estadiômetro com precisão de 0,1cm e a massa corporal, através de balança digital marca Plenna, com precisão de 100g. A qualidade de vida foi avaliada através do WHOQOL-100 e as condições emocionais pela Escala Fatorial de Ajustamento Emocional/Neuroticismo - EFN que avalia os fatores vulnerabilidade, desajustamento psicossocial, ansiedade e depressão. Observou-se que os sujeitos eutróficos quando comparados aos com sobrepeso apresentaram mais satisfação em relação à sua qualidade de vida (G2) (p<.005). Tal resultado foi, também, observado em relação aos sujeitos classificados como obesos (p<.05). No que se refere à satisfação dos sujeitos em relação à saúde (G4), os eutróficos demonstraram mais satisfação do que os sujeitos com sobrepeso e obeso (p<.01). O mesmo resultado foi constatado quando os sujeitos com sobrepeso foram comparados aos obesos (p<.01). . Analisando-se as condições emocionais dos sujeitos, constatou-se que os sujeitos eutróficos quando comparados aos com sobrepeso e obesos, apresentam-se menos vulneráveis (N1) (p<.001), e menos depressivos (N4) (p<.01). Ao serem comparados com os sujeitos obesos, os eutróficos apresentaram-se menos ansiosos (N3). Concluiu-se que quanto menor for a massa corporal em relação à estatura, mais satisfeito estão os sujeitos com a sua saúde e qualidade de vida. Por outro lado, quando a massa corporal aumenta, aumenta a tendência à vulnerabilidade, ansiedade e depressão.

Palavras-chave: Qualidade de vida. Índice de massa corporal. Personalidade.