



**FIGURA 1. VISUALIZACIÓN DE LA ACTIVIDAD FÍSICA DE UN PACIENTE EN LA APLICACIÓN METS**

protegida con contraseñas, y los datos se almacenan de forma segura.

METS es una plataforma abierta a investigadores interesados en incluir e-TI y monitorización remota en intervenciones encaminadas a aumentar la actividad física y, tanto la aplicación como la página web, están disponibles gratuitamente para pacientes.\* Desarrollar herramientas como METS, e incluirlas en estudios interdisciplinarios, podría mejorar la generación de estrategias para resolver el problema del sedentarismo en México y en el mundo.

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\* <http://ubisalud.cs.buap.mx/mets/>

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#### Referencias

1. Medina C, Janssen I, Campos I, Barquera S. Physical inactivity prevalence and trends among Mexican adults: results from the National Health and Nutrition Survey (Ensanut) 2006 and 2012. *BMC Public Health*.

2013;13:1063. <https://doi.org/10.1186/1471-2458-13-1063>

2. Shamah-Levy T, Ruiz-Matus C, Rivera-Dommarco J, Kuri-Morales P, Cuevas-Nasu L, Jiménez-Corona ME, et al. Encuesta Nacional de Salud y Nutrición de Medio Camino 2016. Resultados Nacionales. Cuernavaca, México: Instituto Nacional de Salud Pública, 2017.

3. Thornton JS, Frémont P, Khan K, Poirier P, Fowles J, Wells GD, et al. Physical activity prescription: a critical opportunity to address a modifiable risk factor for the prevention and management of chronic disease: a position statement by the Canadian Academy of Sport and Exercise Medicine. *Br J Sports Med*. 2016;50(18):1109-14. <https://doi.org/10.1136/bjsports-2016-096291>

4. Richards J, Hillsdon M, Thorogood M, Foster C. Face-to-face interventions for promoting physical activity. *Cochrane Database Syst Rev*. 2013;9:CD010392. <https://doi.org/10.1002/14651858.cd010392>

5. Foster C, Richards J, Thorogood M, Hillsdon M. Remote and web 2.0 interventions for promoting physical activity. *Cochrane Database Syst Rev*. 2013;9:CD010395. <https://doi.org/10.1002/14651858.cd010395>

6. Bali R, Troshani I, Goldberg S, Wickramasinghe N. *Pervasive Health Knowledge Management*. New York, Springer, 2013. <https://doi.org/10.1007/978-1-4614-4514-2>

7. Menaspá P. Effortless activity tracking with Google Fit. *Br J Sports Med*. 2015;49(24):1598. <https://doi.org/10.1136/bjsports-2015-094925>

#### Attitudes toward medicinal marijuana in metropolitan Monterrey, Mexico

Dear editor: Due to the great controversies about the subject, the objective was to know the public opinion about the legalization of the medicinal (MM) and recreational marijuana RM. For that, a survey was applied in the metropolitan area of Monterrey, Nuevo Leon, Mexico. Individuals were randomly selected from June to July 2016 and verbal consent was obtained. The instrument was composed of three sections and has been previously described.<sup>1</sup> Responses were trichotomized: agreed (levels 1 and 2), neither agreed - nor disagreed (level 3) and disagreed (levels 4 and 5) and the results were expressed as percentages. Differences between

groups were analyzed with a Chi-square test and association with a Spearman correlation.

202 individuals were surveyed, the average age was 35 years, 61% were females, 3.4% had elementary, 4.4% secondary, 26.6% high-school, 49.8% bachelor and 15.8% post-graduate level of education. Overall, 66.5% agree with legalization of MM, 78.6% consider that it is safe when consumed responsibly and 39.8% consider that legalization will increase rates of delinquency. The latter was different according to the level of education. The 39.8% consider that legalization will undermine efforts against drugs and 23.4% consider that people that support legalization of MM are consumers of drugs. There was a significant difference by level of education (table I). A positive association was found between those who self-reported having received formal education about MM and the opinion about the acceptance of legalization and the safety in its use (table II). On the other hand, 25.8% support legalization of RM, 44.3% consider that it is safe when used responsibly and 41.3% consider that its legalization for any use will increase rates of delinquency. There was a significant difference by level of education in those that consider that RM is safe when it used responsibly. A negative association was found between the level of education and the opinion about safety in its use; and also a negative association between the age and "support for legalization" and "the safety in the use of RM". 49.1% reported having received formal education regarding MM or RM, 44.8% know some person that uses marijuana to treat some illness and 35.2% know some person that consumes RM. A negative association was found between the educational level and the opinion: "those who support the legalization are likely drug users".

Support for legalization of MM is similar to a previous study in

**Table I**  
**ATTITUDES TOWARD MEDICINAL AND RECREATIONAL MARIJUANA IN METROPOLITAN AREA OF MONTERREY, NUEVO LEÓN, MÉXICO, 2016**

Attitude	Total (%)	Gender (%)		Level of study (%)	
		Male	Female	Basic	College
<b>Medicinal marijuana (MM)</b>					
In my opinion the use of MM should be legal					
Agreed	66.5	73.68	63.71	62.9	70
Neither agreed-nor disagreed	16.3	10.53	18.55	17.1	14.6
Disagreed	17.2	15.79	17.74	20.0	15.4
X <sup>2</sup> (p value)		2.34 (p=0.13)		1.10 (p=0.29)	
MM is safe when used responsibly					
Agreed	78.6	80.52	78.23	78.9	78.3
Neither agreed-nor disagreed	13.4	11.69	14.51	11.1	15.5
Disagreed	8.0	7.79	7.26	10.9	6.5
X <sup>2</sup> (p value)		0.28(p=0.60)		0.3 (p=0.86)	
I think that legalization of MM will increase criminal rates					
Agreed	39.8	36.36	41.94	44.3	37.4
Neither agreed-nor disagreed	25.9	27.28	25.00	32.8	22.1
Disagreed	33.8	36.36	33.06	22.9	40.5
X <sup>2</sup> (p value)		0.76(p=0.38)		6.69 (p=0.04)	
Legalization of MM will undermine the efforts against drugs					
Agreed	39.8	38.96	40.32	45.7	36.6
Neither agreed-nor disagreed	27.4	29.87	25.81	31.4	25.2
Disagreed	32.8	31.17	33.87	22.9	38.2
X <sup>2</sup> (p value)		0.02(p=0.89)		3.00 (p=0.08)	
People that support legalization of MM are drug consumers					
Agreed	23.4	24.68	22.58	32.9	18.3
Neither agreed-nor disagreed	21.9	24.67	20.16	27.1	19.1
Disagreed	54.7	50.65	57.26	40.1	62.6
X <sup>2</sup> (p value)		0.11(p=0.74)		5.92 (p=0.02)	
<b>Recreational marijuana (RM)</b>					
In my opinion the use of recreational of RM should be legal					
Agreed	25.9	29.87	23.39	27.1	25.2
Neither agreed-nor disagreed	24.9	18.18	29.03	24.3	25.2
Disagreed	49.2	51.95	47.58	48.6	49.6
X <sup>2</sup> (p value)		1.26(p=0.26)		0.10 (p=0.75)	
RM is safe when used responsibly					
Agreed	44.3	48.05	41.94	55.7	38.2
Neither agreed-nor disagreed	19.4	18.18	20.16	17.1	20.6
Disagreed	36.3	37.77	37.90	27.1	41.2
X <sup>2</sup> (p value)		0.73(p=0.39)		6.50 (p=0.01)	
Legalization of marijuana will increase criminal rates					
Agreed	41.3	41.56	41.13	42.9	40.5
Neither agreed-nor disagreed	26.4	28.67	25.00	28.6	25.2
Disagreed	32.3	29.87	33.87	28.6	34.4
X <sup>2</sup> (p value)		0.02(p=0.89)		0.80 (p=0.77)	

The survey was applied in the Medical area of Universidad Autónoma de Nuevo León and the vicinity of the Rectory building from June to July 2016

Mexico (64%),<sup>2</sup> lower than in Israel (78%) and higher than in Norway (53%).<sup>3</sup> Our results show that few individuals support legalization

of RM (25%), which is higher than a previous study in Mexico (10%)<sup>2</sup> but much lower than a recent study in USA.<sup>4</sup> The major public support

**Table II**  
**ASSOCIATION BETWEEN ATTITUDES TO MEDICINAL AND RECREATIONAL MARIJUANA**  
**AND SOCIODEMOGRAPHIC VARIABLES. MONTERREY, NUEVO LEÓN, MÉXICO, 2016**

Attitude	Gender	Age	Education	Had received education MM	Know someone who uses MM	Know someone who uses RM
Medicinal marijuana						
In my opinion the use of MM should be legalized	-0.084	-0.112	0.072	0.153*	0.065	-0.012
MM is safe when used responsibly	-0.013	0.022	0.072	0.156*	0.077	0.138
I think that legalization of MM will increase criminal rates	0.058	0.114	-0.073	0.037	0.041	0.066
Legalization of MM will impair efforts to combat drugs	-0.014	0.079	-0.116	-0.090	0.029	0.114
People that support legalization of MM are drug consumers	-0.062	-0.042	-0.210*	-0.018	0.062	0.054
Recreational marijuana						
In my opinion the use of RM should be legalized	-0.007	-0.146*	-0.060	0.015	-0.049	0.160*
RM is safe when used responsibly	-0.064	-0.229*	-0.141*	-0.092	-0.069	0.078
The legalization of marijuana for any use will increase criminal rates	-0.017	0.134	-0.078	0.021	-0.032	-0.065

\*p<0.05

Spearman correlation

The survey was applied in the Medical area of *Universidad Autónoma de Nuevo León* and the vicinity of the Rectory building from June to July 2016

for legalization of MM versus RM in Mexico is consistent with other Latin-American countries.<sup>5</sup>

The positive association between “to have received formal education about marijuana” with “support for legalization of MM” and with “safety when used responsibly” highlight the importance and the need of education about MM and RM.

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## References

1. Moeller KE, Woods B. Pharmacy Students' Knowledge and Attitudes Regarding Medical Marijuana. *Am J Pharm Educ.* 2015;79(6):85. <https://doi.org/10.5688/ajpe79685>
2. Parametría. Mexicanos mantienen oposición a la legalización de la mariguana [internet]. Ciudad de México: Parametría, 2013 [cited 2017 Jan 3]. Available from: [http://www.parametria.com.mx/carta\\_parametrica.php?cp=4572](http://www.parametria.com.mx/carta_parametrica.php?cp=4572)

3. Sznitman SR, Bretteville-Jensen AL. Public opinion and medical cannabis policies: examining the role of underlying beliefs and national medical cannabis policies. *Harm Reduct J.* 2015;12:46. <https://doi.org/10.1186/s12954-015-0082-x>

4. Swift A. Support for Legal Marijuana Use Up to 60% in U.S [Internet]. Washington DC: Gallup News, 2016 [cited 2017 Jan 3]. Available from: <http://www.gallup.com/poll/196550/support-legal-marijuana.aspx>

5. Mendiburo-Seguel A, Vargas S, Oyanedel JC, Torres F, Vergara E, Hough M. Attitudes towards drug policies in Latin America: Results from a Latin-American Survey. *Int J Drug Policy.* 2016;41:8-13. <https://doi.org/10.1016/j.drugpo.2016.10.001>

## Body image perception and associated cognitive factors among elderly

*Dear editor:* In view of the publications that have observed a high prevalence of dissatisfaction with their image among elderly individuals, it is important to consider that biopsychosocial factors interfere in the perception that the elderly have of their image and that this can interfere in the quality of life of individuals.

Understanding body image can be defined as a multidimensional

construct that individuals make about their physical attributes due to the complex involvement of biopsychosocial factors that influence the way people think, feel and behave in relation to the characteristics of their body.<sup>1</sup>

In this context, and knowing that the perception of body image can influence the adoption of behaviors directly related to the way they perceive themselves externally, this study sought to evaluate, among elderly people living in the city of Campina Grande/Paraíba/Brazil and attended by Family Health Strategy, the perception of the body image and the cognitive factors that influence its construction.

The nine silhouetted scale of Stunkard and colleagues<sup>2</sup> was used to evaluate the perception of body image among the elderly, and those who identified their current silhouette as they would like to have were considered satisfied with the body image. To obtain information regarding cognitive factors, we used variables related to cognitive impairment, depression and memory.