**University of North Carolina Perceived Message Effectiveness Scale**

**(UNC PME Scale)**

* **Protocol**
	+ **Description**
		- These self-administered questions ask adolescents or adults about their perceptions of the effectiveness of tobacco control messages. Responses are used to assess a message’s potential effectiveness and guide message selection for health warnings.
		- This measure was developed as part of P50CA180907 from the National Cancer Institute and FDA Center for Tobacco Products (CTP).
	+ **Specific Instructions**
		- These questions can be asked of any adolescent or adult, regardless of tobacco use status. The respondent is shown a message and then asked three questions about it.
		- The three questions can then be repeated for each additional message shown.
		- For other tobacco products, substitute other tobacco product name, such as “makes me concerned about the health effects of vaping”.
	+ **Protocol**
		- This message…

1. makes me concerned about the health effects of smoking.

1=Strongly disagree

2=Somewhat disagree

3=Neither agree nor disagree

4=Somewhat agree

5=Strongly agree

2. makes smoking seem unpleasant to me.

1=Strongly disagree

2=Somewhat disagree

3=Neither agree nor disagree

4=Somewhat agree

5=Strongly agree

3. discourages me from wanting to smoke.

1=Strongly disagree

2=Somewhat disagree

3=Neither agree nor disagree

4=Somewhat agree

5=Strongly agree

* + **Protocol (alternate version)1**
		- How much does this message…

1. make you concerned about the health effects of smoking?

1=Not at all

2=Very little

3=Somewhat

4=Quite a bit

5=A great deal

2. make smoking seem unpleasant to you?

1=Not at all

2=Very little

3=Somewhat

4=Quite a bit

5=A great deal

3. discourage you from wanting to smoke?

1=Not at all

2=Very little

3=Somewhat

4=Quite a bit

5=A great deal

 **1**PME measures tend to show positive skew. Using this alternate version with a unipolar (“not at all” to “a great deal”) rather than a bipolar (“strongly disagree” to “strongly agree”) response scale may help to reduce positive skew.

* **Administration**
	+ **Personnel and Training Required**
		- None
	+ **Equipment Needs**
		- None
	+ **Requirements**
		- **Major equipment**
			* No
		- **Specialized training**
			* No
		- **Specialized requirements for biospecimen collection**
			* No
		- **Average time of greater than 15 minutes in an unaffected individual**
			* No
	+ **Mode of Administration**
		- Self-administered questionnaire
	+ **Lifestage**
		- Adolescents, Adults
	+ **Participants**
		- Adolescents (12-17), Adults (aged 18 or older)
* **Source**
	+ **Source**
		- Baig, S. A., Noar, S. M., Gottfredson, N. C., Boynton, M. H., Ribisl, K. M., & Brewer, N. T. (2019). UNC perceived message effectiveness: Validation of a brief scale*.* *Annals of Behavioral Medicine, 53*(8), 732-742*.*
	+ **General References**
		- Baig, S. A., Noar, S. M., Gottfredson, N. C., Lazard, A. J., Ribisl, K. M., & Brewer, N. T. (2021). Message perceptions and effects perceptions as proxies for behavioral impact in the context of anti-smoking messages. *Preventive Medicine Reports*, *23*, 101434.
		- Baig, S. A., Noar, S. M., Gottfredson, N. C., Lazard, A. J., Ribisl, K. M., & Brewer, N. T. (2021). Incremental criterion validity of message perceptions and effects perceptions in the context of anti-smoking messages. *Journal of Behavioral Medicine, 44*(1), 74-83.
		- Boynton, M., Sanzo, N., Brothers, W., Kresovich, A., Sutfin, E. L., Sheeran, P., & Noar, S. M.(2022). Perceived effectiveness of objective elements of vaping prevention messages among adolescents. *Tobacco Control*, doi: 10.1136/tobaccocontrol-2021-057151. Online ahead of print.
		- Cornacchione Ross, J., Lazard, A. J., King, J. L., Noar, S. M., Reboussin, B. A., Jensen, D., & Sutfin, E. L. (2021). Responses to pictorial vs. text-only cigarillo warnings among a nationally representative sample of young adults. *Tobacco Control,* doi: 10.1136/tobaccocontrol-2020-056288. Online ahead of print.
		- Hall, M. G., Saffer, A. J., & Noar, S. M. (2019). A secondary audience’s reactions to The Real Cost advertisements: Results from a study of US young adult smokers and susceptible non-smokers. *American Journal of Preventive Medicine*, *56*(2S1), S57-S64.
		- Noar, S. M., Kelley, D. E., Boynton, M. H., Morgan, J. C., Hall., M. G., Mendel, J. R., Ribisl, K. M., & Brewer, N. T. (2018). Identifying principles for effective messages about chemicals in cigarette smoke*.* *Preventive Medicine, 106*, 31-37.
		- Noar, S. M., Rohde, J. A., Horvitz, C., Lazard, A., Cornacchione Ross, J., & Suftin, E. L. (2019). Adolescents’ receptivity to e-cigarette harms messages delivered using text messaging. *Addictive Behaviors, 91*, 201-207.
		- Rohde, J. A., Noar, S. M., Sheldon, J. M., Hall, M. G., Kieu, T., & Brewer, N. T. (2022). Identifying promising themes for adolescent vaping warnings: A national experiment. *Nicotine & Tobacco Research, 24*(9), 1379-1385.
* **Measure**
	+ **Measure Name**
		- UNC Perceived Message Effectiveness (PME) Scale
	+ **Definition**
		- Judgments about a message’s potential to change important antecedents of behavior or behavior itself.
	+ **Purpose**
		- To efficiently evaluate the potential effectiveness of tobacco control messages
	+ **Keywords**
		- Tobacco, smoking, vaping, message development, message testing, health communication, effects perception, online survey
* **Publications**
	+ Jebai, R., Asfar, T., Nakkash, R., Chehab, S., Ben Romdhane, H., & Maziak, W. (2021). Examining the effect of waterpipe specific pictorial health warning labels among young adults in Lebanon and Tunisia: Protocol of a factorial experiment study design. *Contemporary Clinical Trials Communications*, *23*, 100797. <https://doi.org/10.1016/j.conctc.2021.100797>
	+ Gantiva, C., & Beccassino, L. (2021). Impact of images and text designs on the effectiveness and reactance to graphic health warnings on cigarette packages in Colombia. *International Journal of Health Promotion and Education*, 1-10. <https://doi.org/10.1080/14635240.2021.1989612>
	+ Parvanta, C., Hammond, R. W., He, W., Zemen, R., Boddupalli, S., Walker, K., Chen, H., & Harner, R. N. (2022). Face Value: Remote facial expression analysis adds predictive power to perceived effectiveness for selecting anti-tobacco PSAs. *Journal of Health Communication*, *27*(5), 281-291. https://doi.org/10.1080/10810730.2022.2100016
	+ Stevens, E. M., Keller-Hamilton, B., Mays, D., Unger, J. B., Wackowski, O. A., West, J. C., & Villanti, A. C. (2021). Optimizing Images for an E-Cigarette Messaging Campaign: Liking and Perceived Effectiveness. *International Journal of Environmental Research and Public Health*, *18*(24). https://doi.org/10.3390/ijerph182412989
	+ Villanti, A. C., LePine, S. E., West, J. C., Cruz, T. B., Stevens, E. M., Tetreault, H. J., Unger, J. B., Wackowski, O. A., & Mays, D. (2021). Identifying message content to reduce vaping: Results from online message testing trials in young adult tobacco users. *Addictive Behaviors*, *115*, 106778. <https://doi.org/10.1016/j.addbeh.2020.106778>