

A Collaborative Asthma and Healthy Homes Training To Improve Well-Being of Families Living with Asthma in South Texas

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PURPOSE

To assess the impact of a dual asthma and Healthy Homes educational training on well-being of families living with asthma.

BACKGROUND

Asthma is a widespread leading chronic disease and public health problem that has increased in the past two decades in the United States and Texas.^{1, 2} Childhood asthma rates are highest among minorities, and among those who reside in low-income communities.³

METHODS

This study utilized the healthy homes training approach, integrated pest management and identification of asthma triggers, as well as, teaching asthma case management to decrease the incidence of asthmatic episodes in identified families living with asthma.

- An outreach dual training using the healthy homes module combined with asthma education was implemented.
- A training and pre and post test were performed.
- An asthma management questionnaire was applied to 108 family participants who had a child 5-12 years of age with asthma in Hidalgo County, Texas.
- Certified promotoras identified, trained and administered the survey to parents.

RESULTS

Asthma management and healthy homes knowledge, attitudes and practices significantly improved after the implementation of the dual training program.

- There exist considerable differences in the percentage of correct answers among the questions before the trainings.
- Nine out of 14 questions showed a significant improvement in their knowledge after the training.

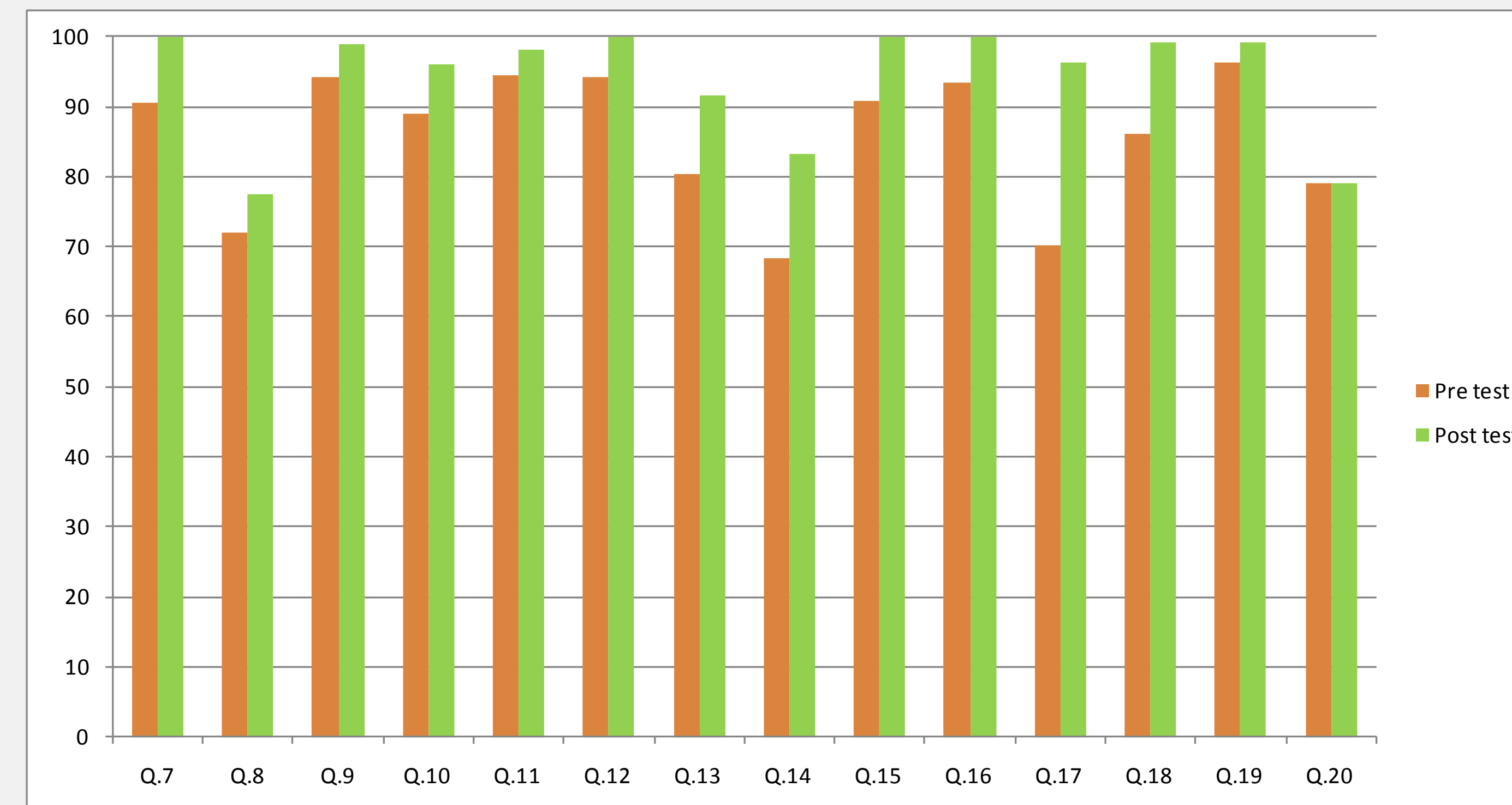
Characteristics of the Respondents		
Gender	Male	5 (4.6%)
	Female	103 (95.4%)
Race	White	6 (5.6%)
	Hispanic	102 (94.4%)
Insurance	Yes	33 (32%)
	No	75 (68%)
Have an Asthmatic Child	Yes	78 (72%)
	No	30 (28%)
Previously Received Asthma Education	Yes	24 (22%)
	No	84 (78%)

Changes in Responses				
		True	False	p value
Q.7	Pre test	95	10	p=.002
	Post test	105 (10)	0	
Q.10	Pre test	12	96	p=.036
	Post test	4 (2)	104 (10)	
Q.12	Pre test	99	6	p=.031
	Post test	105 (6)	0	
Q.13	Pre test	21	86	p=.008
	Post test	9 (3)	98 (15)	
Q.14	Pre test	34	73	p=.004
	Post test	18 (6)	89 (22)	
Q.15	Pre test	98	10	p=.002
	Post test	108 (10)	0	
Q.16	Pre test	99	7	p=.016
	Post test	106 (7)	0	
Q.17	Pre test	75	32	p=.000
	Post test	103 (29)	4(1)	
Q.18	Pre test	92	15	p=.000
	Post test	106 (14)	1	

Survey Questions

7. TRUE	FALSE	Mold can cause asthma attacks.
8. TRUE	FALSE	A home is a shelter from the wind, animals or insects, sun, cold or hot air, and dust.
9. TRUE	FALSE	The 7 principles of Healthy Homes are: dry, clean, ventilated, pest-free, safe, contaminant free and maintained.
10. TRUE	FALSE	Dust and moisture are normal and do not cause any health problems.
11. TRUE	FALSE	The use of chemical products in the home can be dangerous.
12. TRUE	FALSE	Second hand smoke is directly linked to asthma.
13. TRUE	FALSE	Mold does not cause any health problems.
14. TRUE	FALSE	Having fresh air circulate in the home is not important.
15. TRUE	FALSE	Eco-friendly products are healthier for cleaning purposes.
16. TRUE	FALSE	Dust mites live in carpets, mattresses, clothing and stuffed toys.
17. TRUE	FALSE	80% of human exposure to pesticides occurs inside the home.
18. TRUE	FALSE	Our home is the place where many accidents can occur, such as falls, poisonings, fires, burns, choking, drownings, and accidents due to fire arms among others.
19. TRUE	FALSE	Paint that contains lead can cause neurological damage and learning problems.
20. TRUE	FALSE	Keeping a house well maintained is not important for the health of the inhabitants of the home.

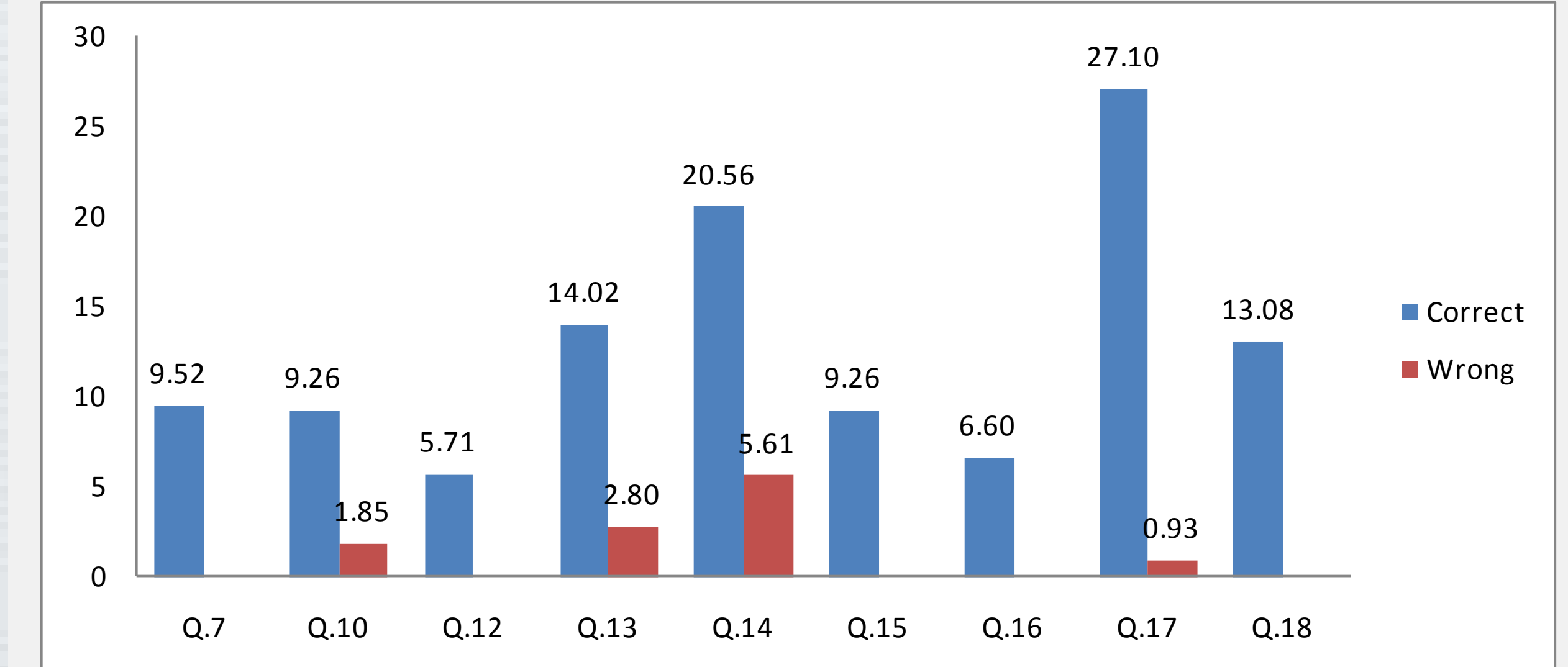
% of Respondents Who Provided Correct Answers



Respondents' Test Scores

TEST	N	Mean Score	SD	P value
Pre-test	93	11.65	1.43	P<.001
Post-test	93	12.54	0.83	

Knowledge Improvement (% of Respondents Who Changed Answers)



DISCUSSION

This study aims to assess the impact that the dual education had in the *colonias*. Our findings indicate that the majority of the heads of household can improve their knowledge about asthma and healthy homes with adequate training in a short period of time.⁴

CONCLUSION

- This study suggests that *colonia* families living with asthma benefit from an integrated training approach to decrease the risk of more asthmatic episodes due to current household conditions.
- There is a need to promote asthma and healthy homes through educational interventions for children and their families in the Texas-Mexico border *colonias*.

References

1. Mitchell E.A. Asthma epidemiology: clues and puzzles. *Pediatr Pulmonol Suppl.* 1999;18:3-5
2. Macintyre S. and Ellaway A. (2003). "Neighborhoods and Health: An Overview." In Kawachi I and Berkman LF (Eds.). *Neighborhoods and Health* (pp. 20-42), Oxford University Press.
3. Lin JY, Bhalla N, King R. Training medical students in bag-valve-mask technique as an alternative to mechanical ventilation in a disaster surge setting. *Prehosp Disaster Med.* 2009;24(5):402-406.
4. Krieger, J. K., Takaro, T. K., Allen, C., Song, L., Weaver, M., Chai, S., et al. (2002). The Seattle-King County healthy homes project: implementation of a comprehensive approach to improving indoor environmental quality for low-income children with asthma. *Environmental Health Perspectives*, 110 Suppl 2, 311-322.