

## **Effectiveness of an online education program to improve knowledge and attitudes about mandated reporting for early childhood care and education providers**

**Carlomagno Panlilio, PhD<sup>1</sup>, Chengwu Yang, MD PhD<sup>2</sup>, Nicole Verdiglione<sup>3</sup>, Richard Fiene, PhD<sup>1</sup>, Erik Lehman<sup>1</sup>, Robert Hamm, PhD<sup>3</sup>, Leigha McNeil<sup>1</sup>, & Benjamin Levi, MD PhD<sup>1</sup>**  
*Penn State University<sup>1</sup> New York University<sup>2</sup> University of Oklahoma<sup>3</sup>*

Early experiences of adversity such as abuse are associated with serious short- and long-term negative consequences (Anda et al., 2006; Fantuzzo et al., 2011; Manly et al., 2001; Pears et al., 2008). Though 0–5 year olds account for 46% of the >680,000 children identified annually as victims of maltreatment (U.S. DHHS, 2017), early care and education (ECE) providers report just 0.6% of these. To the extent this inactivity indicates underreporting, it emphasizes ECE providers' crucial role for protecting young children from abuse.

Among the barriers to reporting suspected abuse (Alvarez et al., 2004; Dinehart & Kenny, 2015), one key obstacle is the lack of evidence-based training. A recent IOM report (2014) specifically identified the need to examine the efficacy of mandated reporter education programs. Two small studies looked at in-person training for ECE providers (McGrath et al., 1987; Khan et al., 2005), and one evaluated an online curriculum (Kenny, 2007); but none evaluated scalable interventions. The present study examined the efficacy of a scaled online educational program previously shown in a randomized controlled trial (n=741) to improve knowledge and attitudes about reporting suspected abuse (Mathews et al., 2017).

### **Methods**

The present study employed a single group pretest-posttest design to measure changes among 5379 participants from Pennsylvania (see Table 1) regarding *knowledge* about ECE providers' responsibilities to report suspected abuse (23 items, correct/incorrect), and *attitudes* toward reporting suspected abuse (13 items, 7-point Likert scale). Created specifically for ECE providers, the *iLookOut* online learning program employs an interactive, video-based storyline where learners take the role of an ECE provider faced with decision points on how to respond to indicators of potential abuse. Resource files provide information about child abuse, and guidance about when to report. For this Phase 2 open enrollment trial, ECE providers could access the

*iLookOut* learning program through publicly available websites, but participants were not actively recruited. Participants provided informed consent prior to the registration/pre-test, and earned 3 hours of professional development credit by completing the learning program, post-test, and evaluation. No other incentives or remuneration were provided.

### **Results**

One-way repeated measures ANOVA were conducted to compare the effects of *iLookOut* participation on pretest and posttest measures of knowledge and attitude. There was a significant effect for knowledge: Wilks'  $\lambda = 0.508$ ,  $F(1,5433) = 5256.964$ ,  $p < 0.001$ ; partial  $\eta^2 = 0.492$  and attitude: Wilks'  $\lambda = 0.576$ ,  $F(1,5432) = 4000.369$ ,  $p < 0.001$ ; partial  $\eta^2 = 0.424$  (see Fig. 1). A Rasch IRT model was also employed to examine item-level difficulty. Subsequent analyses will examine differential item functioning based on demographic variables.

### **Discussion**

Results from this study yielded the similar efficacy and effect sizes as did the initial randomized controlled trial of *iLookOut*. They also demonstrate the feasibility of scaling an evidence-based, online mandated reporter training. Providing ECE providers open access to such training could help identify and prevent maltreatment of young children. A 5-year randomized controlled trial is currently underway (1-R01-HD088448-02) to evaluate the impact of *iLookOut* on actual reporting practices of ECE providers.

## References

- Alvarez, K. M., Kenny, M. C., Donohue, B., & Carpin, K. M. (2004). Why are professionals failing to initiate mandated reports of child maltreatment, and are there any empirically based training programs to assist professionals in the reporting process? *Aggression and Violent Behavior, 9*, 563 – 578.
- Anda, R. F., Felitti, V. J., Bremner, D., Walker, J. D., Whitfield, C., Perry, B. D., Dube, S. R., & Giles, W. H. (2006). The enduring effects of abuse and related adverse experiences in childhood. *European Archives of Psychiatry and Clinical Neurosciences, 256*, 174 – 186.
- Dinehart, L., & Kenny, M. C. (2015). Knowledge of child abuse and reporting practices among early care and education providers. *Journal of Research in Childhood Education, 29*, 429 – 443.
- Fantuzzo, J. W., Perlman, S. M., & Dobbins, E. K. (2011). Types and timing of child maltreatment and early school success: A population-based investigation. *Children and Youth Services Review, 33*, 1404 – 1411.
- Institute of Medicine (2014). *New directions in child abuse and neglect research*. Washington, DC: The National Academy Press.
- Kenny, M. C. (2007). Web-based training in child maltreatment for future mandated reporters. *Child Abuse & Neglect, 31*, 671 – 678.
- Khan, A., Rubin, D. H., & Winnik, G. (2005). Evaluation of the mandatory child abuse course for physicians: Do we need to repeat it? *Public Health, 119*, 626 – 631.
- Manly, J. T., Kim, J. E., Rogosch, F. A., & Cicchetti, D. (2001). Dimensions of child maltreatment and children's adjustment: Contributions of developmental timing and subtype. *Development and Psychopathology, 13*, 759 – 782.
- Mathews, B., Yang, C., Lehman, E. B., Mincemoyer, C., Verdiglione, N., & Levi, B. (2017). Educating early childhood care and education providers to improve knowledge and attitudes about reporting child maltreatment: A randomized controlled trial. *PLoS ONE, 12*, 1 – 19.
- McGrath, P., Cappelli, M., Wiseman, D., Khalil, N., & Allan, B. (1987). Teacher awareness program on child abuse: A randomized controlled trial. *Child Abuse & Neglect, 11*, 125 – 132.
- Pears, K. C., Kim, H. K., & Fisher, P. A. (2008). Psychosocial and cognitive functioning of children with specific profiles of maltreatment. *Child Abuse & Neglect, 32*, 958 – 971.
- U.S. Department of Health & Human Services, Administration for Children and Families, Administration on Children, Youth, and Families, Children's Bureau. (2017). *Child Maltreatment 2015*. Available from <http://www.acf.hhs.gov/programs/cb/research-data-technology/statistics-research/child-maltreatment>

Table 1

*Demographics for the study sample (n=5379)*

|                                   | %    |
|-----------------------------------|------|
| Ethnicity                         |      |
| Black/African-American            | 19.5 |
| White                             | 71.4 |
| Hispanic                          | 5.2  |
| Asian                             | 1.6  |
| Native Hawaiian/Pacific Islander  | .1   |
| American Indian/Alaska Native     | .4   |
| Other                             | 1.8  |
| Parent/guardian                   |      |
| Yes                               | 60.2 |
| Prior mandated reporter training  |      |
| Yes                               | 74.4 |
| Work setting                      |      |
| Rural                             | 17.9 |
| Suburban                          | 45.2 |
| Urban                             | 36.9 |
| Education level                   |      |
| Below High School                 | .7   |
| High School or GED                | 31.9 |
| Child Development Associate (CDA) | 10   |
| Associate's Degree                | 14.8 |
| Bachelor's Degree                 | 31.6 |
| Masters or Doctoral               | 11   |
| Gender                            |      |
| Female                            | 90.5 |
| Age                               |      |
| 18 - 29                           | 39.4 |
| 30 - 44                           | 28.8 |
| >44                               | 31.8 |
| Primary job responsibilities      |      |
| Teacher/caregiving staff          | 64.2 |
| Early intervention specialist     | 1.4  |
| Support staff                     | 4.8  |
| Director/Assistant Director       | 10   |
| Other                             | 19.7 |

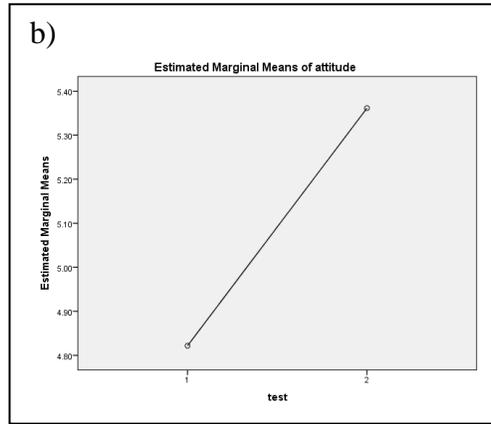
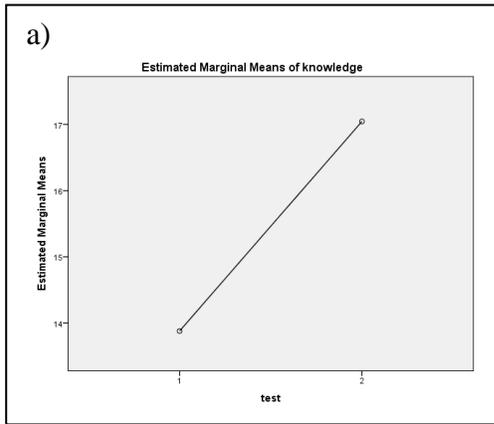


Figure 1. Mean difference between pre- and post-test on knowledge (a) and attitude (b) items. Significant at  $p < 0001$ .