

# Comparison of Unhealthy Eating and Weight Control Behaviors Measures: Timeline Followback vs. Ecological Momentary Assessment

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# Unhealthy Eating and Weight Control Behaviors

- Unhealthy eating and weight control behaviors (UEWCB) contribute to weight gain, obesity, and compromised emotional health.
- UEWCB are prevalent in Mexican-American women.
- Appropriate measurement approaches of UEWCB in Mexican-American women with low levels of acculturation, socioeconomic status, and health literacy are unknown.

# Behavioral Measurement Approaches

- **Timeline Followback (TLFB) method**
  - A retrospective measurement
  - Experimenter administered
  - Little is known about the merits in women with low levels of literacy, socioeconomic status, and acculturation
- **Ecological Momentary Assessment (EMA) method**
  - Recording behaviors in real time
  - Recordings made on an electronic device within short intervals after the occurrence of a target event or signal
  - Psychometric information in culturally and ethnically diverse populations is generally lacking

# Cross-Cultural Adaptation

- Cultural adaptation
  - Experiential equivalence and concept equivalence
- Cultural norms and values influencing reporting context
- Technology
  - Skill and literacy

# Purpose

- Determine correspondence between the Timeline Followback (TLFB) and ecological momentary assessment (EMA) measurement of UEWCB in MA women with low acculturation, socioeconomic status, and health literacy.

# Methods

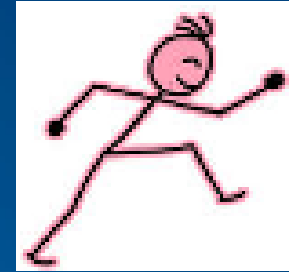
- Design: Secondary data analysis
- Participants: 60 Women of Mexican origin from rural farm worker families living in upstate New York
  - 18 – 45 years old
  - Non-English speaking
  - Low socioeconomic status
  - Low health literacy

# Measures

- Nine UEWCB that were translated to culturally specific behavioral terms were measured
  - Based on four development studies
  - Behaviors focused on form rather than function
- For example:
  - Binge eating = Eat & Eat
  - Laxatives, diuretics = Powders, teas

# Measurement Approaches

- Ecological momentary assessment (EMA):
  - Cell phone application utilizes icon interface with audio prompts
  - 14-day interval of event and signal triggered recordings
  - Signals 3X/day were set to match participant schedule
  - Project provided Android phone with cellular access
- Timeline Followback (TLFB):
  - Administered by a Spanish speaking data collector
  - After completing the EMA





# Phone App.

To play the text out loud on any page, press the speaker symbol



Select the scale to start recording your behavior

**Diet**

**Eat & Eat**

**Powders**

**Drinks**

**Vomiting**

**Alcohol**



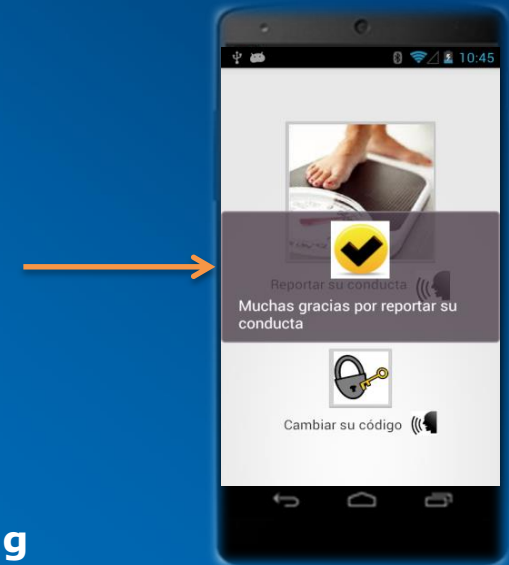
**Exercising**

**Pills**

**Tea**

**Drops**

**Smoking**



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# 14-Day Prevalence of UEWCB: EMA

	EMA (N=55)		TLFB (N=60)	
	N	%	N	%
Dieting**	51	92.7	52	86.7
Eat & Eat**	43	78.2	28	46.7
Drinks**	18	32.7	19	31.7
Teas**	13	23.6	8	13.3
Pills	10	18.2	1	1.7
Powders	7	12.7	4	6.7
Drops	4	7.3	0	0.0
Cigarette use	1	1.8	0	0.0
Vomiting episodes	0	0.0	0	0.0

\*\*  $p < .01$ ; 5 women have recorded behaviors less than 7 days.

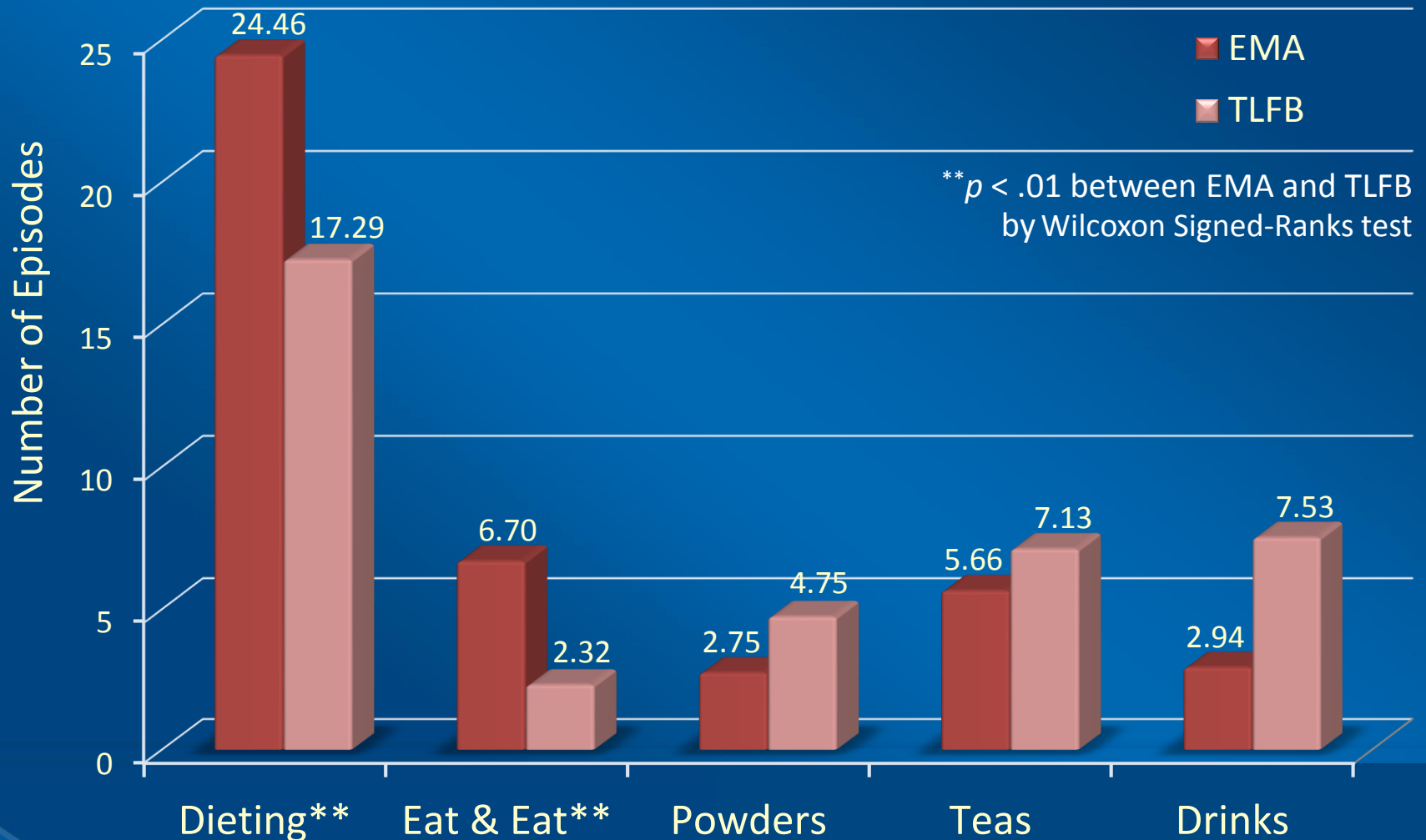


# Episodes of UEWCB over 14 days

	EMA <sup>†</sup>		TLFB <sup>†</sup>		<i>Spearman rho</i>
	Mean	Range	Mean	Range	
Dieting	24.46 (17.4)	1 – 60.7	17.29 (9.1)	1 – 39	0.61**
Eat & Eat	6.70 (5.6)	1 – 55	2.32 (1.4)	1 – 7	0.37**
Diet drinks	2.94 (2.1)	1 – 7	7.53 (7.0)	1 – 28	0.58**
Teas	5.66 (5.6)	1 – 19	7.13 (6.0)	1 – 14	0.55**
Powders	2.75 (3.7)	1 – 11	4.75 (3.9)	1 – 9	0.35**
Pills	1.78 (1.0)	1 – 4.3	8.00 ( – )	8	
Drops	1.83 (1.0)	1 – 3			
Cigarette use	1.17 ( – )	1.2			

<sup>†</sup>Only for those who had reported behaviors over 14-day; \*\* $p < .01$

# Episodes of UEWCB Between EMA & TLFB



# Conclusions

- Findings of this study are consistent with other studies with literate, native speaking populations.
- TLFB method may underrepresent UEWCB prevalence & frequency in this population due to the cultural norms and social desirability in reporting negative behaviors to interviewer.
- EMA may be more feasible and appropriate approach to measure UEWCB in women with low levels of acculturation, literacy, and socioeconomic status.

**Thank you for your attention!**



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