

Three Suicide Prevention Trainings:  
Six-Month Effects on Suicide Prevention  
Knowledge, Attitudes and Behavior

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## Suicide Prevention Training

- QPR and Response- short trainings (~2 hrs)- knowledge, identification, referral.
- ASIST- 2 day training- intervention skills
- Modest prior research evidence, mostly attitude and knowledge change.
- Wyman (2008)- QPR- beh change not > than control, but small-medium pre to post
- Asetline (2004) – SOS. Exp. 1.6x less-likely to attempt than controls

## Theory

- Public health surveillance model- preparing community members to identify and refer at-risk youth → lower suicidal bx
- Gatekeeper communication model- building on any "natural gatekeeping," trusted, emotionally skilled adults.
- Social learning theory underlies trainings- knowledge, attitude change, and modeling and rehearsal of key behaviors (ASIST)

## Research Questions

- Aggregating across 3 trainings, what is the change from pre to post-training, and pre to follow-up of attitudes, efficacy, knowledge and behavior?
- Do the 3 trainings differ in degree of change?
- Does change from pre to post training in attitudes, efficacy, and knowledge predict change in 6 month prevention behavior?

## Methods

- Quasi-experimental 3 group design.
- Dillman's TDM mail-survey procedures used- response rate 57%.
- Measures adapted from Wyman (2008), factor analyzed to shorten instruments.
- Analysis- paired t-test, regression residualized change scores computed, one-way ANOVA.

## Sample

- Resp vs non-resp: No diff on gender, highest degree, or pre-training scores.
- N= 126. 44% Male, 56% Female.
- 84% white. Avg age = 45 y.o. (SD=10.7)
- 25% MH clinicians, 49% teachers.
- 60% RESPONSE; 22% QPR; 18% ASIST.
- No diff on age, more women in ASIST.
- At pre-training, A & Q > R on prvntn scores.

Table 1. Comparison of Pretest (T1), Posttest (T2), and Six-Month Follow-Up test (T3) Change

Variable	Training Evaluation				Posttest Tests		ANCOVA by Training
	Obs. Mean	Post. Mean	Follow-up	T2 vs. T1	T3 vs. T1	11-Month Change	
<b>Attitudes (Standard)</b>							
Prevention Preparation	3.9	4.2	3.8	0.3***	0.3***	34	A > Q > R
Prevention Efficacy	3.9	4.4	4.0	0.5***	0.1***	30	A > R
Knowledge Test	41.0	35.1	35.0	-5.9***	-6.0***	38	ns
<b>Behavior variables</b>							
Crises (number of times)	2.7	1.1	2.7	1.6***	0.0	0.1	A > Q > R
# Prevention Behaviors	1.7	1.1	1.9	0.6***	0.2*	0.2	A > R
Refused for help	1.1	1.1	1.1	0.0	0.0	0.0	ns
Edgar made wrong of drug	2.1	1.2	2.1	0.9***	0.4	0.4	A > Q > R
Ask about suicide	3.2	3.4	3.8	0.2	0.6	0.6	ns

ns = NS, \*p < .05, \*\*p < .01, \*\*\*p < .001. A = ASIST, Q = QPR, R = RESPONSE

## Results: Effectiveness

- Large, enduring changes in attitudes.
- Small changes in knowledge.
- Small-med. changes in 3 of 4 behaviors.
- 2 beh (Ask suic., Prev. Int) exceed Wyman (2008) control group change
- 6 of 7 variables ASIST > QPR or RESP
- 5 of 7 variables RESP < QPR or ASIST

## Results: Active Ingredients

12 tests- 2 sig (p < .05), 2 non-sig trend

- Δ in Prep & efficacy → Δ in ask Suicide (p < .05), medium size effects
- Δ in efficacy → Δ in Interventions (p < .10)
- Δ knowledge neg. assoc with Δ beh (p < .10)

## Discussion

- All 3 trainings effective, esp- attitudes
- More modest effects on prevention beh.
- ASIST exceeds QPR & Response.
- Modest evidence Δ in Prev. Prep and efficacy predicts Δ in prevention behavior

## Discussion 2

- Besides longer and interv. focused, ASIST includes modeling and beh. rehearsal.
- Next grant- test QPR- plus- w/ role play
- Question of population specific training- ethnicity, gender, occupation.
- Need for more rigorous eval of outcome- large N studies to show effects on help-seeking, attempts, completed suicides.

## Postscript- Validity of TES

TES eval items- not correlated with t1-t3 change on attitude, knowledge or Behavior variables. All 5 items correlated ~.3 w/ t1-t2 change Prev Prep.

TES to t/u items- 8 significant corr in 49 pairwise tests

TES items	BEHAVIORS				ATTITUDES		KNOWLEDGE
	4Prev Beh	4Prep Beh	4ASK Beh	4PREV Beh	4Prev Prep	4Prev Effic	
Scale 5 items	0.06	0.06	0.23	0.05	0.20*	0.18	+0.11
Inter knowl	0.00	0.05	0.04	0.03	0.09	+0.02	+0.07
Inter readiness	0.03	-0.03	-0.04	-0.09	0.15	0.11	+0.23*
Use learning	0.19	0.05*	0.25*	0.21	0.20*	0.20*	0.23
Inter hip seek	0.09	0.07	0.27	0.04	0.17	0.22*	+0.15
Knowl dec sul	0.02	-0.02	0.02	-0.03	0.17	0.11	-0.05

TES items= tes7,12,13,14,15. \*p < .05

Table 1. Comparison of Pre-test (T1), Post-test (T2), and Six-Month Follow-Up test (FU) Changes

Variable	Training Evaluations				Paired <i>t</i> Tests				ANOVA by Training T1 to FU Change		
	Pre-Train		Post-Train		Follow-up		Pre vs. Post			Pre vs. FU	
	<i>M</i>	<i>SD</i>	<i>M</i>	<i>SD</i>	<i>M</i>	<i>SD</i>	<i>t</i>	<i>Cohen's d</i>		<i>t</i>	<i>Cohen's d</i>
<i>Attitude Variables</i>											
Prevention Preparation	3.9	1.5	5.6	0.9	4.9	1.2	18.4***	1.4	9.1***	.74	A & Q > R
Prevention Efficacy	3.9	1.4	5.4	1.0	4.9	1.0	16.4***	1.3	9.7***	.80	A > R
Knowledge Test	61.0	26.1	75.0	23.6	67.1	24.0	5.8***	.56	2.3*	.24	ns
<i>Behavior variables</i>											
Counts (number of times)											
4 Prevention Behaviors	2.7	1.1			2.7	1.0			0.9	0.1	A > Q & R
Referred for help	1.7	1.1			1.9	1.3			2.1*	0.2	A > R
Likert-scale rating of freq.											
Ask about Suicide	2.1	1.2			2.5	1.3			2.9**	0.4	A > Q & R
Preventive Interventions	3.2	1.4			3.8	1.3			4.2***	0.4	ns

N = 126; \**p* < .05, \*\**p* < .01, \*\*\**p* < .001; A = ASIST; Q = QPR; R = RESPONSE.

Table 2. Partial Correlations of Pre to Post Training Attitude & Knowledge Change to Follow-up Behaviors controlling for Pre-training Behavior Score.

Pre - Post Training Change	<i>Follow-up Score of Behavioral Measures</i>					
	Counts		Likert Scale			
	Behaviors	Referrals	Ask	Prevention	Suicide	Intervention
Prevention Preparation	-0.06	-0.07	0.27*	-0.10		
Prevention Efficacy	0.03	0.03	0.27*	0.26 <sup>T</sup>		
Knowledge Test	-0.20 <sup>T</sup>	-0.12	-0.04	-0.09		

<sup>T</sup> *p* < .10, \* *p* < .05

# Postscript- Validity of TES

TES eval items- not correlated with t1-t3 change on attitude, knowledge or Behavior variables. All 5 items correlated ~.3 w/ t1-t2 change Prev Prep.

TES to f/u items- 8 significant corr in 49 pairwise tests

TES items	-----BEHAVIORS-----					ATTITUDES		KNOWLEDGE
	<u>Counts</u>		<u>Likert Scale</u>			Prev	Prev	Know
	4Prev	Refer	Ask	Suic	Prev	Prep	Effic	Test
Scale 5 items	0.06	0.06	0.13	0.05	0.20*	0.18	-0.11	
Incr knwlg	0.00	0.05	0.04	0.09	0.09	-0.02	-0.07	
Incr readiness	0.03	-0.03	-0.04	-0.09	0.15	0.15	-0.20*	
Use learning	0.15	0.20*	0.23*	0.21	0.27*	0.27*	0.03	
Incr hlp seek	0.09	0.07	0.17	0.06	0.17	0.22*	-0.15	
Knwlg dcr sui	0.02	-0.02	0.12	-0.03	0.17	0.11	-0.08	

TES items- txs7,12,13,14,15. \*p<.05