

Results of Transformative Life Skills (TLS) Evaluation

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Educators have increasingly begun to recognize the importance of emotional regulation skills to effective learning and academic success (Zins, Bloodworth, Weissberg and Walberg, 2007; Lopes and Salovey, 2004; Greenberg et al., 2003). Research conducted over the past two decades has confirmed that students' emotional state affects attention, which in turn influences learning, memory, and behavior (Ohman, Flykt and Esteves, 2001).

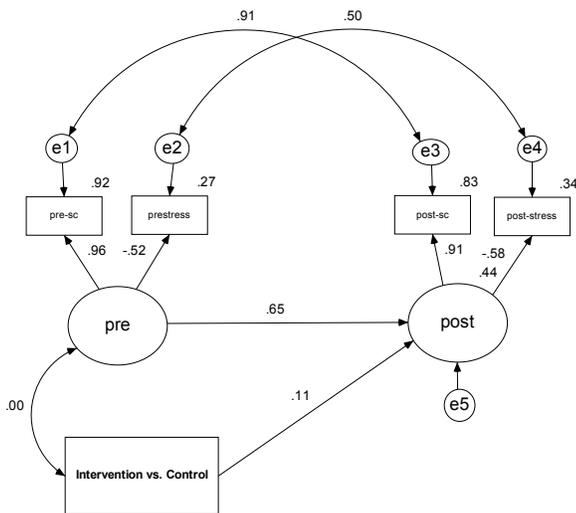
Overview of Transformative Life Skills Program

The Transformative Life Skills (TLS) program is 18-week school-based intervention designed to reduce stress and increase adolescents' adaptive coping skills. The TLS curriculum is delivered in 15-minute lessons (3x lessons per week) in a whole group instructional format. Lessons provide students with direct instruction and practice in the use of meditation, yoga, and progressive relaxation techniques. Below we present the results of two randomized trials of TLS in school settings. Effect sizes (η^2) can be interpreted as .01 = small effect, .06= medium effect, and .14 = large effect.

Study 1

TLS was implemented in 18 classrooms ($n = 512$) in a highly-diverse inner-city high school in California. Classrooms were randomly assigned to treatment or business-as-usual conditions. We examined whether participating in TLS resulted in significant changes in student perceived stress and self-control and the degree of social validity and treatment acceptability among students and teacher participants.

Finding 1: ITT analyses using a Structural Equation Modeling (SEM) approach revealed a significant overall benefit for students receiving TLS. Obtained effect sizes were comparable to other high-cost/high intensity prevention programs.



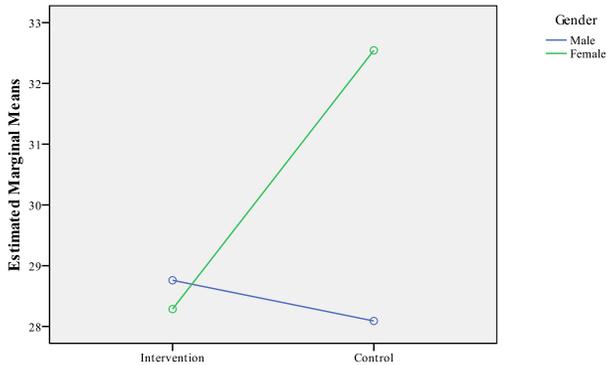
Model Fit Statistics

chi=1.256, df=1, $p=0.262$

CFI=0.999, RMSEA=0.021, TLI=0.992

Finding 2: Females participating in TLS experienced significantly lower levels of Perceived Stress $F(3,136) = 4.93, p < 0.05, \text{partial } \eta^2 = .035$.

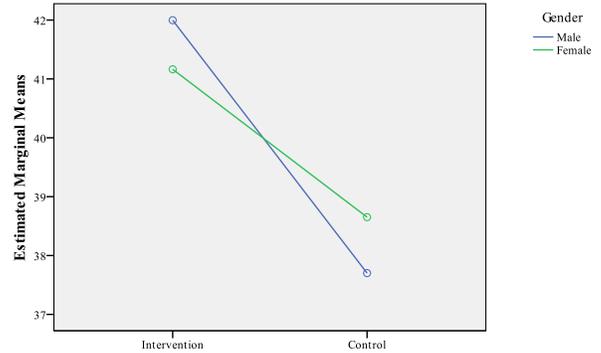
Estimated Marginal Means of Post Perceived Stress Summary



Implication: Perceived stress is an important modifiable risk factor during adolescence. High levels of stress predict the onset of depression, anxiety, substance abuse, delinquency (Compas et al., 1993; 2001; Macleod et al., 2004; Siddique & D’Arcy, 1984; Van Praag, De Kloet, & Van Os, 2005; Windle, 1992) and the development of unhealthy dietary practices and disordered eating (Jenkins et al., 2005). TLS significantly reduced perceived stress among females and closed the well-known ‘gender gap’ in the experience of environmental stressors.

Finding 3: Both males and females participating in TLS experienced significant improvements in Self-Control $F(3,134) = 8.61, p < 0.05, \text{partial } \eta^2 = .061$.

Estimated Marginal Means of Post Self Control Summary



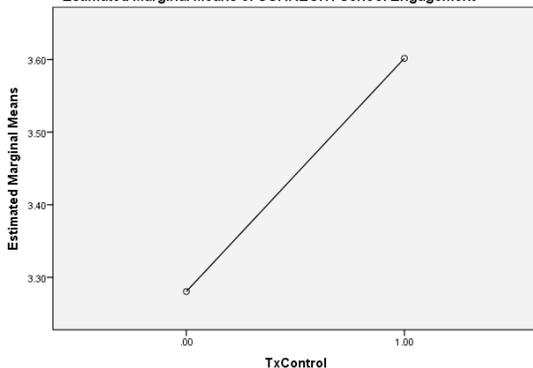
Implication: Self-control, which includes the ability to inhibit behavior, follow rules, and control impulsive reactions, is a modifiable mediator of growth in academic and social-emotional competence. Duckworth & Seligman (2005) found scores on Tangney’s Self-Control Scale (employed in this study) was a *better* predictor of student grades, standardized test scores, and attendance than IQ. TLS significantly improved adolescent self-control among both males and females participating in the intervention.

Study 2

TLS was implemented with 159 students in grades 6 (n=88) and 9 (n=71) in a diverse charter school in California. Classrooms were randomly assigned to treatment or wait-list control conditions. We examined whether participating in TLS resulted in significant changes in variables relevant for education, violence prevention, and mental health promotion.

Finding 1: Students participating in TLS reported significantly greater levels of school engagement $F(1,100) = 5.95, p < 0.05, \text{partial } \eta^2 = .056$. There were no significant differences on the basis of grade, race, or gender.

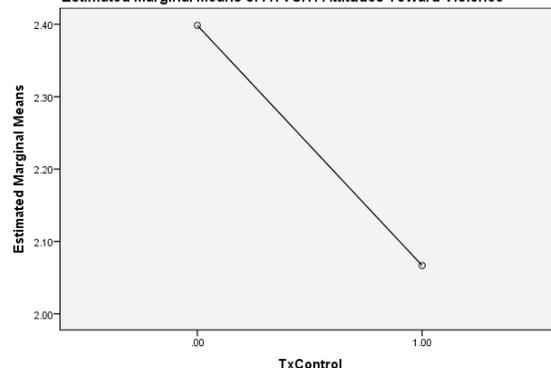
Estimated Marginal Means of SCHNEG.1: School Engagement



Implication: School engagement is a modifiable protective factor predicting future academic success and preventing school drop out (Kindermann, 2007). In a relatively short period of time (1 semester) students participating in TLS were significantly more engaged in school regardless of their actual academic skills or achievement.

Finding 2: After adjusting for prior exposure to violence, students participating in TLS reported significantly lower attitudes towards violence $F(1,71) = 5.90, p < 0.05, \text{partial } \eta^2 = .077$.

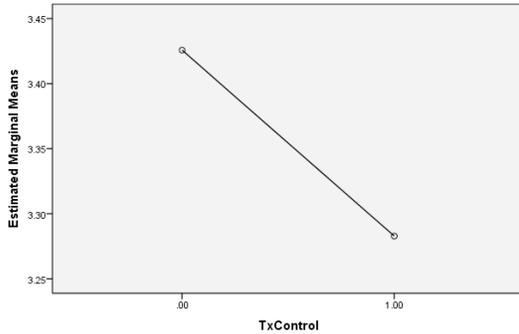
Estimated Marginal Means of ATVS.1: Attitudes Toward Violence



Implication: Exposure to familial and community violence can undermine the development of key emotion regulation skills and desensitize youth attitudes regarding the acceptability acts of aggression and violence behavior (Osofsky, 1995; Eisenberg, 2000). Participating in TLS significantly altered youth’s attitude towards violence who viewed it as a less acceptable way to respond to frustration.

Finding 3: After controlling for prior exposure to violence and overall negative affect, students in the control group had more limited emotional awareness as compared to students participating in TLS. This effect was substantial though borderline statistically significant $F(1,71) = 3.67, p = 0.059, \text{partial } \eta^2 = .049$.

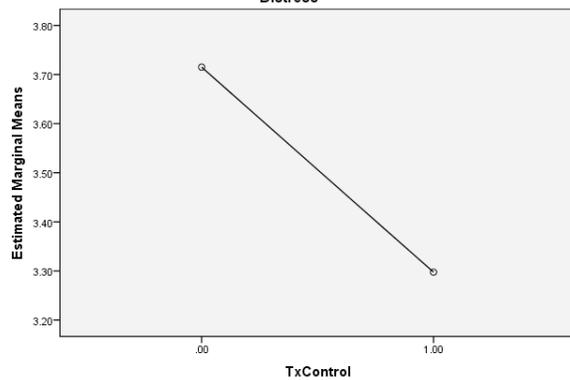
Estimated Marginal Means of DERS_AWARE.1: Emot Regulation: Lack Emotional Awareness



Implication: Emotional awareness is a key prerequisite for the application of emotion regulation; which is a core skill underlying the development of social competence and prevention of psychopathology in youth and adolescence (see Zeman et al., 2006 for a review). Youth who participated in TLS developed greater levels of emotional awareness as compared to students in the control group.

Finding 4: After controlling for overall negative affect, students in the control group had more limited tolerance for distress as compared to students participating in TLS. This effect was substantial though borderline statistically significant $F(1,102) = 3.54, p < 0.06, \text{partial } \eta^2 = .034$.

Estimated Marginal Means of TOLERANCE.1: DisTol: Limited Tolerance for Distress



Implication: The inability to tolerate distress has been linked to a variety of serious risk factors including alcohol, drug, and tobacco use, self-injury, suicidal attempts, eating disorders (Zvolensky et al., 2010; Corsophine et al., 2007), and social problem solving deficits (Nock & Mendes, 2008). Students participating in TLS had greater levels of distress tolerance as compared to students in the control group.

Social Validity & Acceptability: Participant Feedback

In addition to surveys, we also asked teachers and students to tell us about their experiences participating in TLS. Across all studies, both students and teachers reported that TLS was a beneficial and socially valid practice. Below is a representative listing of feedback we have received to date.

Student Feedback	Teacher Feedback
<p>“I really like the TLS program. It helps a lot to calm me down and helps me refocus for class. It clears my mind of distractions and helps me focus on the importance of simple things.”</p> <p>“Since the TLS program, I have used the breathing methods I have learned when I am upset. It really helps to calm me down.”</p> <p>“I really like the meditation that we do. I think that it calms me down, focuses me, and really makes my whole day a lot better.”</p> <p>“I like how they teach you skills and stretches that you can use whenever you want.”</p> <p>“ This class is very cool and helps a lot. I wish the class were longer though.”</p>	<p>“I am seeing the beneficial effects of TLS on my students; I feel inspired to apply this in my life.”</p> <p>“The quiet meditation seems to work especially well.”</p> <p>“I think it’s a great program overall, and wonderful to expose the kids to it.”</p> <p>“ I appreciate stepping back for a moment to take on a role as co-learner rather than teacher.”</p> <p>“Something I can use for myself and for my students on Thursday.”</p> <p>“Helped me! Made me more aware of my own feelings and thoughts. Calmed me way down!”</p>

“Make it last longer (maybe even have a real class) more days doing it.” – Student, ECHS

“I think it has made me think of how I can control myself better in bad situations and think of ways to relax better.” – Student, ECHS

“I like the fact that we can stop whatever is going on at the time and just come to a peaceful mind state afterwards.”

“I like how it takes away stress, or rather, how it helps me take away the stress. This program is helping me deal with nervousness.”

“I think it’s very good for me cause it’s really help me clear out my mind and forget all the bad things and start over. And it really help me calm down when I am sad or stress out. I love every part of it because I been going through a lot in my life and this program make me feel good when I close my eyes and take a deep breath.”

“I loved the positive, calm and flexible approach to today’s training. I’ve come away from it with some new ideas of how might use this in the classroom, and enough training to feel reasonably confident leading it on my own. I also appreciated the ever-needed reminder to take care of myself.”

“I appreciated the whole presentation. I learned, and I had refreshing physical activity. The idea of implementing this regime district-wide is great – I hope it comes to fruition. I also appreciated the intellectual connection BK made between the physical and emotional condition – very humane!”

“Really showed me how it is realistic in the classroom. Calm, peaceful way to unwind after class.”

“Very simple practices that I can do.

“Felt nurtured. Taking care of myself first! Want to apply to myself and my class.”

“I really liked how it was immediately useful. It can be applied today.”

“Relevant, useful, practical; created HOPE!”

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