

The effects of an expressive writing self-help strategy among first year undergraduates



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Purpose

- Examine the efficacy of an emotional disclosure expressive writing (EW) intervention on study participants' mental and physical health and salivary cortisol levels.



Background

- Prevalence of psychological disorders is greater among university students than among their community counterparts (Hussain, Guppy, Robertson & Temple, 2013)
- First year undergraduates find the transition to college stressful
- Despite access to mental health services, many express concerns about the stigma, privacy, and anonymity in seeking counseling (Hussain et al., 2013)
- Students from disadvantaged groups, such as first-generation students and economically disadvantaged, are more likely than peers to drop out (ACT, 2017).

Interventions for College Students

- Large-scale review of 83 controlled interventions
- Interventions focused on student outcomes r/t social and emotional skills, self-perceptions, and emotional distress
- Skill-oriented programs (e.g., mindfulness training) and cognitive-behavioral techniques (e.g., EW) that included supervised practice appeared to be optimally effective in helping students deal with emotionally-focused issues (Conley, Durlack, & Dickson, 2013)

EW for College Students' Transition

- EW, whether focused on negative stressful emotions or positive gratitude-focused emotions, beneficial for adjustment among transitioning undergraduates (Booker & Dunsmore, 2017)
- Paucity of published literature describing EW as intervention to help *at-risk* undergraduates transition to college

What is EW?

- Therapeutic intervention in which individuals write about deepest thoughts & feelings about traumatic, stressful, or emotional life events for 15 – 20 minutes on 3 – 4 consecutive days (Pennebaker & Beall, 1986; Pennebaker & Evans, 2014).
- Most commonly used EW method comes from the original work (Pennebaker & Beall, 1986)
- Study reported here two-group design
 - Intervention group wrote about stressful, emotional or traumatic experiences
 - Control group wrote about neutral trivial topics

Selected Benefits of EW in College Students

- Fewer health center visits (Pennebake & Beall, 1986)
- Less depression symptom severity (Sloan, Feinstein, & Marx, 2009)
- Improved self-esteem (Mum, 2014)
- Decreased self-criticism (Troop, Chilcot, Hutchings, & Varnaite, 2012)
- Decreased intrusive thoughts (Boals, 2012)
- Improved psychological, social, and physical health (Yang, Tang, Duan, & Zhang, 2015).
- In females, less sleep difficulty and less body-focused upward social comparison relative to control participants (Arigo & Smyth, 2011)
- Lower physiological measures of stress among first year college students (Ramler, Tennison, Lynch, & Murphy, 2016).

Stress in College Students

- In the 2017 American College Health Association (ACHA) - National College Health Assessment Survey II (ACHA-NCHA-II)
- 50% of student respondents reported academics represented traumatic or very difficult situations to handle
- 34% cited stress as a factor influencing their individual academic performances within the preceding 12 months.

Variables for Study Reported Here

- Quality of life for first year students transitioning to college
- Quality of life defined as subjective assessment of health and well-being that encompasses physical, mental, emotional, and social domains of life (Healthy People 2020, 2010)
- This study focused on physical and mental components of quality of life measured by SF-36v2 survey (Ware, 2015)

Research Questions

- 1. What are the effects of an EW intervention on the physical and mental health of first-year college students as measured by the SF-36v2 survey (Ware, 2015)?
- 2. What are the effects of an EW intervention on salivary cortisol?
- 3. What stressful or traumatic experiences are described by first year undergraduates?

Recruitment & Sample

- Convenience sample of 39 came to Day 1 meeting
- 32 completed study – all in experimental group finished, whereas 7 in control group did not complete writing; similar findings in EW intervention studies (Lancaster, Klein, & Heifner, 2015).

Descriptive Statistics of Total Sample

Race	N (%)
African American/Black	3 (9.4)
Asian	2 (6.3)
Bi-/Multi-Racial	6 (18.8)
Caucasian/White	18 (56.3)
Hispanic/Latino	3 (9.4)
Academic Area of Interest*	
BIO/BUS/PSYCH/CFS	12 (37.5)
NUR/CS/MUS	6 (18.8)
Undecided/Varying	14 (43.8)
Stress Management Strategies**	
Exercise	(43.8)
Music	(18.8)
Television	(6.3)
Writing	(6.3)
Napping	(6.3)

Procedure

- Day 1
 - Consent signed
 - Saliva sample obtained for cortisol
 - Demographic survey
 - SF-36v2 (Ware, 2015) Pre-test
 - Assigned experimental (EW) group or control neutral writing (NW) group
 - Received writing journal, pen, plain envelope with either EW or NW prompt
 - Wrote for 20 minutes – timed

Writing Prompts

- EW experimental group - write continuously about their deepest thoughts and feelings related to a single or multiple stressful or traumatic experience.
- Neutral writing (NW) control group prompted to write about a neutral topic e.g., a nature scene or walking directions to a common place on campus.
- Both groups
 - Write continuously
 - Not worry about spelling or grammar
 - Reminded the writings would *not* be read by the researchers

Day 2, 3, 4

- Met at same place, same time 6-9 pm
- Received plain envelope with EW or NW prompt
- Timed for 20 minutes
- Day 4 reminded to return in 3 weeks for posttest

3 Week Posttest

- Met same place, same time
- Saliva sample for cortisol
- Posttest SF-36v2 (Ware, 2015)
- Received thanks and movie ticket
- 32 completed writing, saliva, posttest

One Year Follow-up

- Qualtrics exit survey

Instruments

- Salivary cortisol
- Demographic survey
- SF-36v2
 - Physical Component Summary Score
 - Mental Health Component Summary Score
- Exit survey

Results

- Three separate Split-Plot Analyses of Variance (ANOVAs) to determine effects of EW versus NW across two-time periods (i.e., pre-intervention and three-week post-intervention).
 - Quality of life
 - SF-36v2 Physical Component Summary [PCS] scores)
 - SF-36v2 Mental Component Summary [MCS] scores)
 - Salivary cortisol levels
 - Descriptive statistics and qualitative thematic analysis used, respectively, to analyze Likert scale responses and open-ended narratives on exit survey.

Descriptive Statistics of Physical and Mental QOL for Total Sample

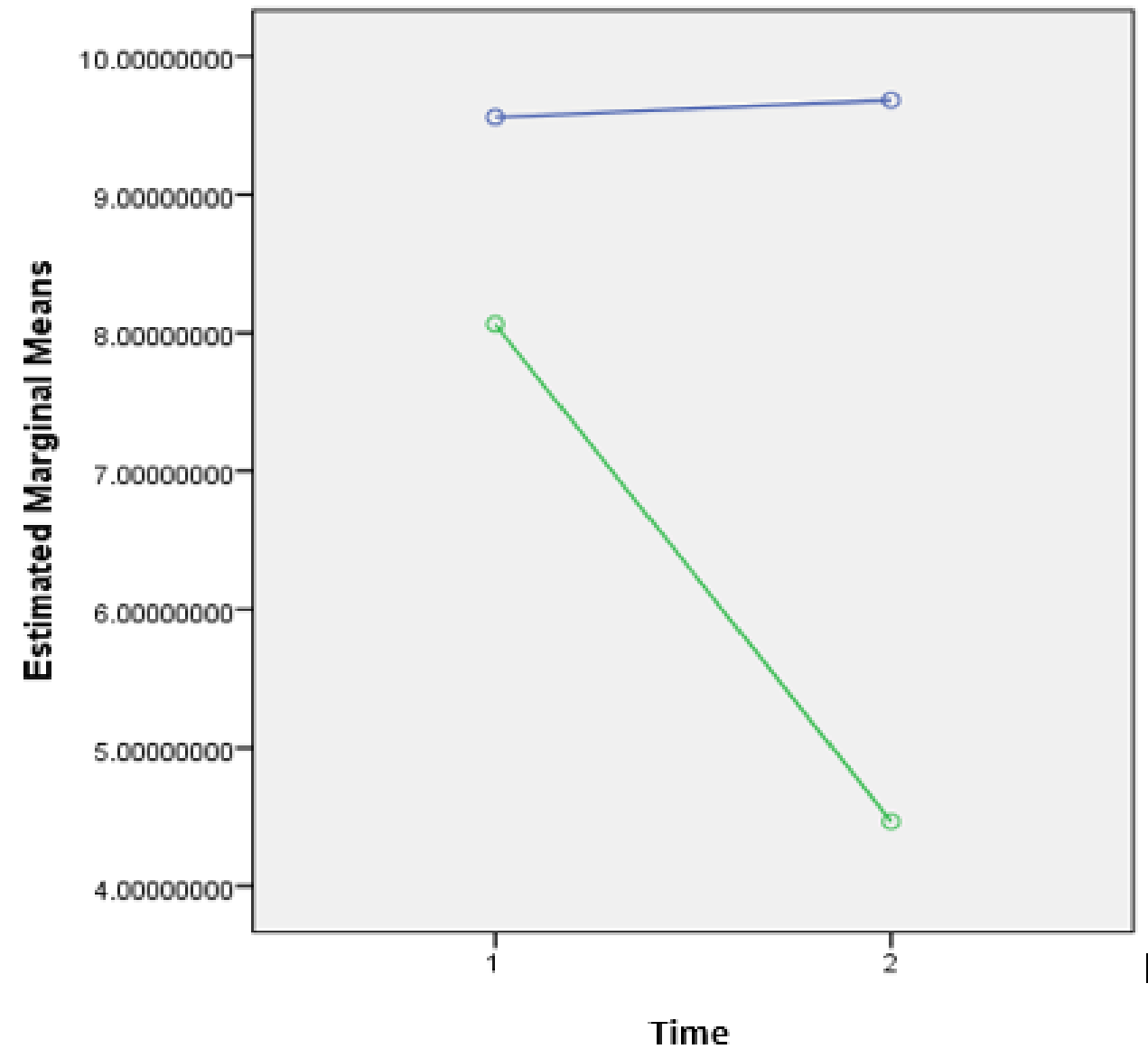
N = 32						
Variable	Time 1			Time 2		
	M (SD)	Range		M (SD)	Range	
PCS	55.26 (5.35)	21.77		55.57 (4.86)	20.38	
MCS	39.04 (13.82)	48.77		42.72 (12.83)	50.17	

PCS = Physical Component Summary Score

MCS= Mental Component Summary Score.

Cortisol Means at Pre-Posttest

Figure 3. Estimated Marginal Means of Cortisol at Pre-Posttest

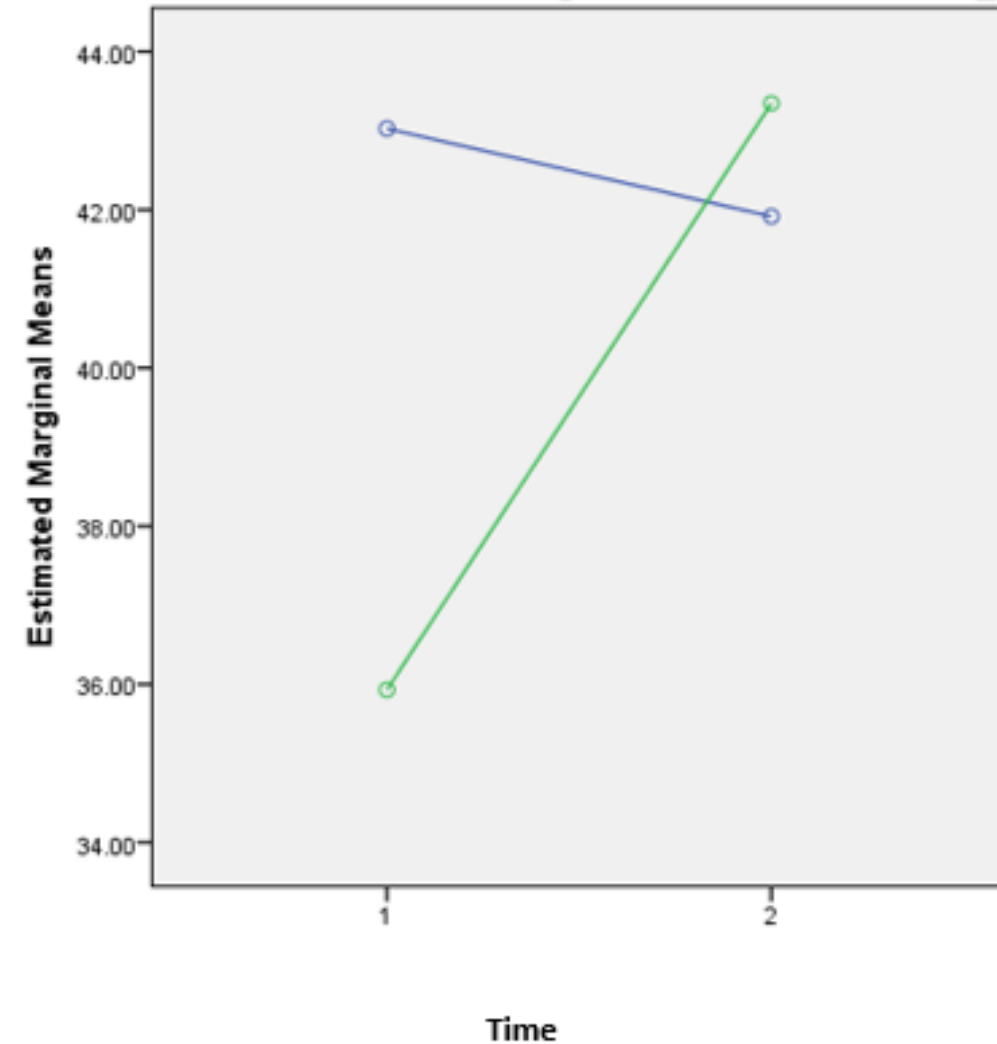


Control group

Experimental group

Physical Component Summary Score at Pre- Posttest

Figure 2. Estimated Marginal Means of Physical Component Summary Score at Pre- Posttest

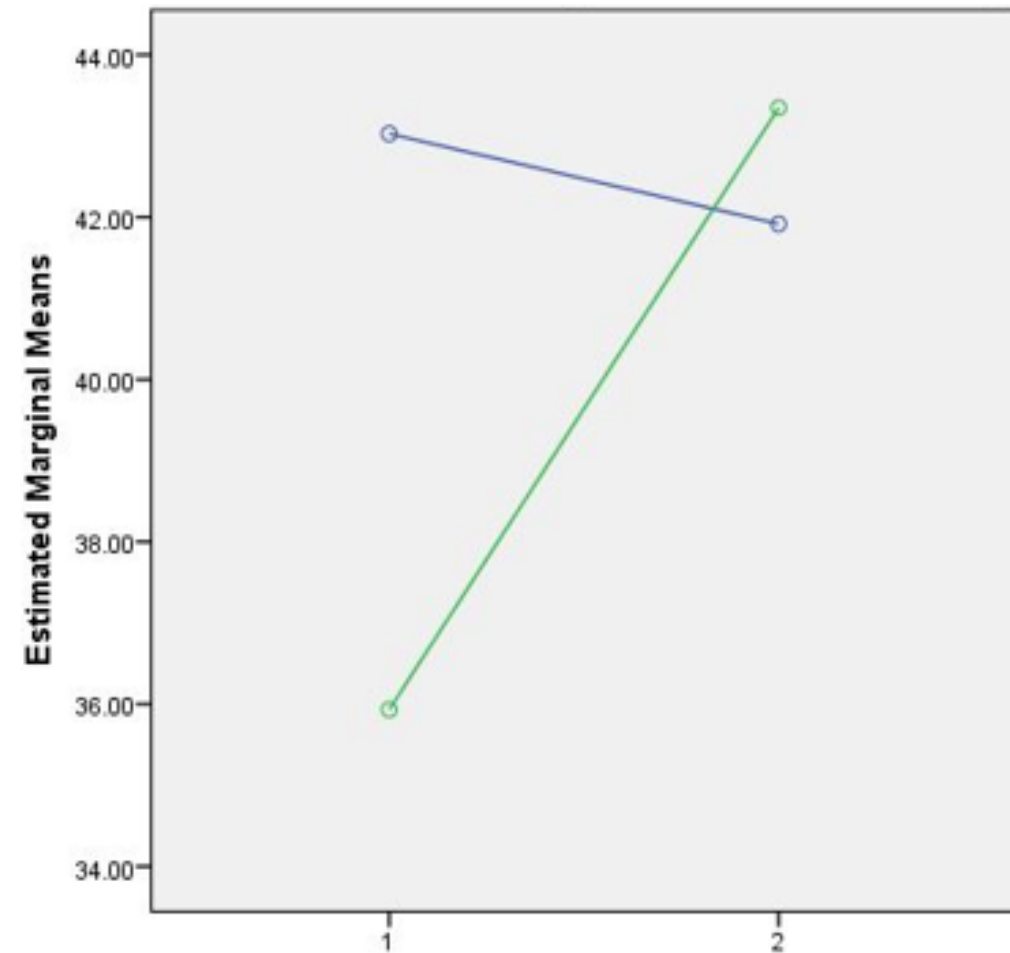


Control group

Experimental group

Mental Component Summary Score at Pre- Posttest

Figure 3. Estimated Marginal Means of Mental Component Summary Score at Pre-Posttest



Control group

Experimental group

Exit Survey Frequencies

- 14 surveys returned; response rate 44%
- Four-point Likert scale
- “Writing about my deepest thoughts and feelings related to a stressful or traumatic event was helpful” – 71%
- “My time as a participant was enjoyable.” - 86%
- “I would tell a friend to take part in a study where one writes about his/her stressful or traumatic.” 77%

Narrative Responses

- Analyzed using thematic analysis (Nowell, Norris, White, & Moules, 2017)
- Dominant themes
 - Death of a family member
 - Transitioning from home to college

Discussion .

- Trend toward lower cortisol levels and higher mean MCS scores from pre- to 3-week posttest when compared to the control group
- No significant effect of the EW intervention on the main variables of physical health, mental health and cortisol level, relative to those same levels for control group participants
- Unexpected contextual factors
- No known adverse affects

Limitations

- Small sample size
- One geographic location
- Use of convenient sample
- No exclusion criteria for excessive physical activity, medications, certain health problems known to affect cortisol levels
- No screening for engagement in other health promotion activities

Conclusion

- First year undergraduates may represent vulnerable population with significant physical and mental health problems including underlying traumatic experiences
- Adds to the body of literature on EW as a self-help intervention among first year undergraduates
- EW feasible, low-cost, accessible self-help intervention for first year undergraduates dealing with stressful or traumatic experiences who may be unwilling or unable to engage in other self-help strategies
- Further research - effectiveness of expressive writing on broader subset of healthy college students, particularly those at risk for developing deleterious effects of high stress and poor physical and mental health outcomes