University of Cyprus

ACT as a "weapon of choice" for health-related problems

Maria Karekla, Ph.D.[1]
Eleni Karayianni, Psy.D. [1]
& Ioannis Kareklas, Ph.D.[2]
[1]Department of Psychology, University of Cyprus
[2]Washington State University

actHealthy

mkarekla@ucy.ac.cy

Empirical basis of ACT

- Increasing number of clinical trials
  - Uncontrolled clinical trials
  - Randomized clinical trials
- Meta-analyses comparing ACT to CBT, CT, TAU, SD, waitlist, other control conditions
  - General focus

ACT and Health-Related Conditions

- Growing number of studies in areas related to health:
  - Cancer
  - Chronic pain
  - Epilepsy
  - Smoking cessation
  - Stress and burn out
  - Obesity and weight loss, cravings management
  - Irritable bowl syndrome
  - Diabetes
  - Substance abuse
  - Chronic illness
  - High risk sexual behavior
  - Arthritis
  - Brain injury
  - Osteoarthritis
  - Multiple Sclerosis
  - Fibromyalgia
  - Headaches
  - Chronic skin picking
  - Infertility stress
  - Lupus
  - Pediatric Sickle Cell
  - Physical activity
  - Tinnitus distress
  - Cystic Fibrosis

Evidence-Based Treatment for Chronic Pain

Present meta-analysis: Work in progress

- Purpose
  - Efficacy of ACT specifically for health-related problems
  - Explore EBT status with regards to areas other than chronic pain

Method

- Database Search:
  - ACT listserve and website
  - PubMed/Medline
  - PsychInfo
  - PsychIndex
  - Scopus
  - Cochrane Library
  - Cochrane Central Register of Clinical Trials
  - Google Scholar
- Papers 2000+

Criteria

Inclusion	Exclusion
At least one ACT based treatment or treatment component	Studies not comparing ACT to either a control or other treatment
Random or consecutive assignment of participants	Studies without data necessary to compute effect sizes (e.g., M, sd).
Active or inactive control group	Reviews, books, manuals- anything without original data
Human participants	
Published in English	
Independent data (not same data published in more than one papers)	
Post-intervention and not necessarily follow-up, data were provided	

Included studies

Study	Pub. Year	Problem	Total N	Control Type	Outcome Measures
Bond & Bunce	2000	Work stress	90	Waitlist	GHQ, BDI, IJM, IJS, PI
Gutierrez et al	2004	Work Stress	40	Control-distraction	Sick leave utilization, medical leave util., LSQ
Flaxman et al	2010	Work Stress	107	SIT & Waitlist	GHQ
Tapper et al	2009	Eating	62	No intervention	BMI, GHQ, BPAT, DEBQ, EEQ, BES, AAQ2
Pearson et al	2012	Eating	73	Waitlist	EDI-2, MAC-S, PEWSS, EAT26, AAQ2, AAQW
Gregg et al	2007	Diabetes	81	Education	HbA1c, Diabetes case profiles, AADQ
Forman et al	2007	Weight issues	98	No intervention	PFS, FCQ-SV, Chocolate consumption
Lillis et al	2009	Weight Issues	87	Waitlist	GHQ, ORWELL, WSQ, BMI
Alberts et al	2010	Weight Issues	19	Dietary program	Weight, GFCQ, Participation check, BMI
Hendrickson et al	2013	Weight Issues	95	Educational video	BMI
Hooper et al	2012	Weight Issues	54	Use any technique	Chocolate intake, deal with cravings , taste test
Niemeier et al	2012	Weight Issues	21	None	BMI, EI, AAQW, DTS, Treatment Acceptability
Weineland et al	2011	Weight Issues	39	TAU	BMI, EDE-Q, SBEQ, BSQ, WHOQOL-BREF, AAQW
Lundgren et al	2008	Epilepsy	28	Supportive tx	WHOQOL, SWLS, PWI
Lundgren et al	2006	Epilepsy	28	Supportive tx	Seizure freq., seizure index, WHOQOL-BREF, SWLS
Lundgren et al	2008	Epilepsy	18	Yoga	WHOQOL-BREF, SWLS
Metzler et al	2000	High Risk Sex Beh	147	TAU	attitudes t/w condom scale, AAQ, new STDs
Bricker et al	2013	Smoking Cessation	222	Website	FTND, 30-day prevalence cessation
Hernandez-Lopez et al	2009	Smoking Cessation	81	CBT	Smoking related info, FTND, AAQ, CO
Gifford et al	2004	Smoking Cessation	76	NRT	FTND, BDI, BAI AIS, CSQ, CO, POMS, STWS, TCQ, WAI
Hooper et al	2013	Smoking Cessation	49	Waitlist	# of cigarettes
Mo'tamedi et al	2012	Headache	30	Medical TAU	McGillPQ-SF, MIDAS, STAIT
Dahl et al	2004	Pain	19	Medical TAU	GHQ, AAQ, DAS
Buhrman et al	2013	Pain	76	Online forum & Waitlist	Tolerance of pain, experienced pain aftershock
Bransetter-Rost et	2009	Pain	103	Read Constitution	CPAQ, HADS, MPI, PIRS scale, QOLI
Hayes et al	1999	Pain	32	Attention placebo	COPE, WBSI, AAQ, values, pain tolerance, pain rating
Paez-Blarrina et al	2008	Pain	30	Told about the experiment to help study	Tolerance of pain, believability of reason given, CSAQ

Results

- Report mean post treatment ES comparisons between ACT and control groups (not taking into consideration pre scores).
- In order to avoid violating the meta-analytic assumption of data independence, only one primary outcome was coded for each study.
- The fixed-effects assumption was violated since homogeneity was significant and so random-effects were used in the analyses.
- Mean effect size (ES=.55) of treatment (ACT vs. control) was high and significant (95% CI [.35,.74], $p<.001$), suggesting higher effects of the third wave treatments in comparison to control on the primary outcome measures assessed in each study.

Moderators- Categorical

- Type of ACT treatment (Full ACT packet vs some components included)
- Type of Control group (active treatment control vs. inactive control)
- Sponsorship
- Continent where study was run
- Type of Problem studied
- Type of population studied
- Compensation received for participating in the study
- Therapist type (e.g. student vs. professional vs. mix)
- Type of sessions (e.g. individual vs. group vs. web-based)

Moderators- Categorical

- The between class effect was significant for the following categorical moderators:
  - Type of Problem studied (this was marginally significant p=.053) so we re-run the analysis categorizing the type of problem as chronic pain (had the largest number of studies vs other).
    - This was significant Q=5.83, df=1,20, p= .02.
    - Mean ES was higher for chronic pain studies (MES= 1.04) compared to all other type of problem studies (MES= 0.45)
- Between class effects were not significant (p>.05) for:
  - Type of ACT treatment
  - Type of Control group
  - Sponsorship
  - Continent where study was run
  - Type of population
  - Compensation received for participating in the study
  - Therapist type
  - Type of sessions

Moderators- Continuous

- Gender (Proportion of females included in the study)
- Age of participants included in the study
- Length of treatment
- Number of treatment sessions
- Date of publication

Moderators- Continuous

- The between class effect was significant for the following continuous moderators:
  - Gender: $Q= 4.91$, df (1,18), $p<.05$
- Between class effects were not significant ($p>.05$) for:
  - Age
  - Length of treatment
  - Number of treatment sessions
  - Date of publication

Discussion

- In this meta-analytic review, we were interested to examine the effectiveness of ACT in comparison to control groups for the treatment of health related problems.
- As hypothesized ACT did present with high effect sizes compared to controls, suggesting that overall ACT is a viable treatment option for health related problems.
- Only type of problem and gender were found to be significant moderators.
  - ACT is considered to be an empirically supported treatment for chronic pain conditions and indeed ES were higher when the study examined chronic pain relative to other health problems
  - However, more studies have been conducted with chronic pain rather than with other conditions.
  - This finding needs to be further explored, especially in association with the outcome measures (specific, general, QOL) utilized in each study.

Discussion- Limitations

- A number of limitations should be considered when interpreting the findings.
- Only post-data ESs for one primary outcome measure were assessed here.
- In the future:
  - Change over pre-treatment should also be examined.
  - More than one outcome measures or summary ESs from various outcomes

Thank you