



Acceptance and Commitment Therapy
ACT
"To prevent stress and promote health"

Psychological Treatment of Youth under Stressful
Conditions – A Pilot Evaluation of the Impact of ACT in an
Adolescent Group

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OVERVIEW

- ⦿ Earlier research on this group intervention
- ⦿ Presentation of the study:
Acceptance and Commitment Therapy (ACT),
"To prevent stress and promote health"
Psychological Treatment of Youth under Stressful
Conditions
- A Pilot Evaluation of the Impact of ACT in an
Adolescent Group
- ⦿ Future development and research

EARLIER RESEARCH ON THIS GROUP INTERVENTION

WHY THIS ACT INTERVENTION?

- ◉ Psychological ill-health has increased with 200-300% since the beginning of the 80s.
- ◉ The problem is well documented **BUT** very little research is done about what to do about it.

WHY THIS COURSE?

SvD



Oliver Lukunku och Alex Nelgard går i åtta på Hagsåterskolan i södra Stockholm. De är båda helt i
... och snackar på rasterna, ... De är för ... ungdomar mår

**Young, healthy and depressed
- a Swedish mystery**

många jämför ... för ... därför. För
det är "helt sjukt" om svenska ... ungdomar mår ... psykiskt i
vårt barnvänliga land. Vi börjar med att fråga fyra ungdomar i Hagsåtra om
hur de ser på livet.

De allra flesta mår utmärkt, men svenska barn och ungdomar skattar sin psykiska hälsa lägst av
alla skolungdomar i Norden och lägre än många länder i övriga Europa också. Detta visar

SUMMARY OF RESEARCH ON THIS ACT-FORMAT

SUMMARY

- ◉ 230 students in two different secondary schools were randomized to either control- or ACT intervention group.
- ◉ 115 students got the ACT-course, 9 hrs (3 hrs x 3)
- ◉ The aim of the intervention was to increase the student's capability to cope with stress and to prevent psychological and physical illness

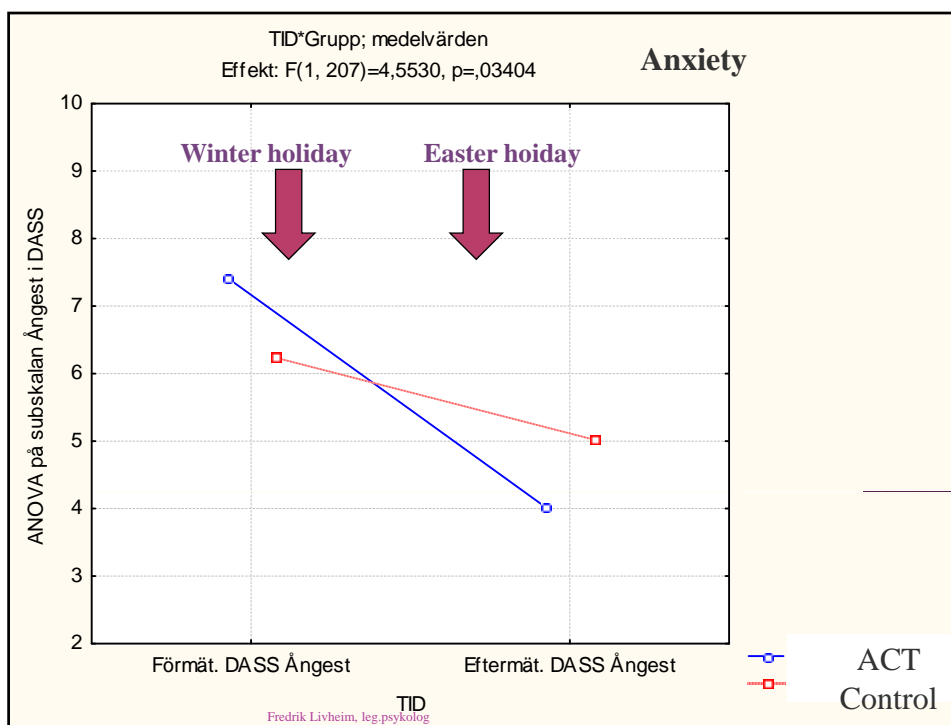
DID THE ACT-INTERVENTION WORK?

DID THE ACT-INTERVENTION WORK?

- ◉ Results two weeks after intervention:
Significant decrease of anxiety and higher levels of functioning within biggest area of problem in life.
- ◉ 88% of the students were satisfied or very satisfied with the course.

COMMENTS ON POST MEASURE

- ◉ **Boy 17 year Intervention group**
I really dig the CD hard. Thanks for it, it has helped me tremendously. This course has thanks to the exercises given me more insight about myself, my values. Almost like seeing myself from an another perspective. I have understood the meaning of being depressed, to fall into the vicious circle and how one can get out of it. Clean versus dirty discomfort: to understand that has given me greater self control.
- ◉ **Boy 16 year Intervention group**
◉ Excellent and extremely interesting course. I wish more of the time in school was used to necessary courses like this. That would make going to school so much more exciting and interesting.
- ◉ **Boy 16 year Intervention group**
I opened up in the beginning, did the CD a couple of days, but oh no. I do not notice any results, and believe me, if I answer more positively on this questionnaire it is not due to the course. Constructive critic? Give up, give us pills against the stress!



RESULTS ONE YEAR AFTER INTERVENTION

Interaction effects [group] x [time] in favour of the ACT-group. Results are based only on data from one school due to low return rates.

Significant interaction effects:

○ Better general health

Measured by General Health Questionnaire (GHQ). Effect size , 0.14
Cohen's D

○ Less stress

Measured by Perceived Stress Scale (PSS), Effect size 0.16 Cohen's D

Interaction effect on trend level:

○ Improved psychological flexibility

Measured by Acceptance and Action Questionnaire (AAQ 8)

COMMENTS ONE YEAR LATER

◉ Boy 19 years Intervention group

I have approximately as much to do now as when the course started, yet I fell less stressed now. I do not know if it is because I have taken part in this course or not, I believe mainly it depends on that I have started to accept things I cannot control over much more.

◉ Girl 17 years Intervention group

I have not used the CD, I don't seem to take me that time. But the course has made me realise that the world does not end if something takes too much time or if there is something I do not manage to finish. NO STRESS!

◉ Boy 18 years Intervention group

The CD is very good! I still use it. I have not become a bit better at doing homework, but due to the course I now i feel so much better. I do accept that I do not always manage everything, but do what I have time to. One thing at a time.

◉ Girl 18 years Intervention group

It has been a good and interesting experience! Still of immediate importance. I experience an improvement of myself.

RESULTS TWO YEARS AFTER INTERVENTION

Interaction effects [group] x [time] in favour of the ACT-group.

Significant interaction effects:

- ◉ Less stress
- ◉ Less Anxiety
- ◉ Improved cognitive processing
- ◉ Improved general health
- ◉ Improved psychological flexibilit.

THE BACKGROUND OF THE STUDY

- ◉ The “ACT at work” (Bond & Bunce, 2000) format was developed and adapted to suit a younger population in Sweden, by Livheim (2004).
- ◉ A two year follow-up study was done by Jacobsson and Wellin (2006).
- ◉ Does the intervention work for those with clinical levels of ill health as well?
- ◉ Does it work with course leaders with no prior training in ACT?
→ this pilot evaluation of ACT in a clinical group

THE SITUATION IN SWEDEN - STRESS

The second largest health problem of the Swedish population today is psychological ill-health. In some further years, it is expected to be the very largest problem in the Swedish society.

The self-reported mental health in Sweden is rapidly getting worse, especially among “young adults” (18-24 years). It has been doubled or tripled during the period 1988/89 – 2001 (Swedish National Institute for Public Health, 2005; 2006).

The amount of people on long-term sick leave and early disability pension is one of the highest in the world (in 2002 14% of the working-age population). This is an enormous cost for society.

The most common symptoms these people reported were pain in the neck, shoulders, and back, as well as diffuse stress related symptoms such as fatigue.

THE SITUATION IN SWEDEN – STRESS & YOUTH

- ◉ During the last 10-20 years, several reports have shown that it is getting more common among Swedish youth to feel depressed, be worried, have sleeping problems, and be in pain (Bremberg, 2006).
- ◉ Common problems among the young adults are anxiety, worry, pain and problems with sleep. Some studies indicate that young women are an especially vulnerable group when it comes to mental ill-health (Stockholm County Council, 2003).
- ◉ The ill-health and the stress are also observed in younger groups than before, and it increases (The Children's Ombudsman, 2005).

THE SITUATION IN SWEDEN - SCHOOL

- ◉ Every third Swedish school must develop a better ability to discover students in need of special support and to provide for these needs (SNAE, 2007).
- ◉ In 2006, 33% stated that they always or often feel stressed in school (46% of the women, 21% of the men).
- ◉ The level of experienced stress increased with age.
- ◉ The most common reason to feel stress was an experience of intense work load in combination with high demands from oneself, school or parents.
- ◉ The stressors that the Swedish students reported were also lack of control, poor social support, role conflicts, and work overload.
- ◉ Preventive efforts of health or stress management could facilitate for youth in school.

ACT intervention is such a preventive effort.

ACT AS AN ALTERNATIVE – MOTIVATION FOR THE PROJECT IN THE SPECIFIC SETTING

- ◉ Efforts for stress related problems are traditionally given when difficulties are experienced, and individual destructive patterns are set.
- ◉ An approach that may avert this development is to provide preventive measures by teaching health management techniques early in life, for example in school.
- ◉ For society, it is relatively economical to use general preventive health treatment, if compared to selective measures that society has to provide for, if psychological problems in the population as a whole are not counteracted at an early stage.

ACT AS AN ALTERNATIVE – MOTIVATION FOR THE PROJECT IN THE SPECIFIC SETTING

- ◉ Vulnerability in adolescence...
- ◉ Reports of increasing stress and ill-health in the young population...
- ◉ Reports of difficulties to get hold of the problems in school...
- ◉ The knowledge we have about preventive measures and their effects...

...all motivate preventive measures in order to try to avert the development of ill-health among youth.

THE PURPOSE

1. Examine the impact of the intervention by self report measures.
2. Examine the impact of the intervention in a clinical group.
3. Examine the difference between a new 12-hour version of ACT and an earlier 9 hour version.
4. Assess the self report measures used.
5. See if and how the intervention worked with ACT trainers new to ACT.

THE INTERVENTION

- ◉ 12 hours = 4 sessions 3 hours each
- ◉ Manual based
- ◉ Given app. every second week during 8 weeks
- ◉ Self practise between sessions, both by mindfulness CD and tasks
- ◉ Different group leaders
- ◉ Leaders educated at the same time as giving ACT intervention
- ◉ Different setting (school - clinical)

SESSION ONE

Stress, the language and acceptance

- 1) Establish a good contact between the group leader and the participants (an alliance)
- 2) Generate “creative hopelessness” in order to open up for new strategies
- 3) Make participants view control as part of the problem
- 4) Create defusion from linguistically rules and to propose acceptance as an alternative

SESSION TWO

Life values and obstacles

- 1) Repeat the last session and the tasks and exercises done between the sessions
- 2) To identify life values and inquire in what extent the participants live according to these values – use “the life compass”
- 3) To identify barriers in the way of the ideal life and the life the participants actual life

SESSION THREE

Goals and psychological flexibility

- 1) Repeat the two last sessions and the work with the tasks at home
- 2) Break down valued directions and obstacles to goals and concrete actions
- 3) Learn about and experience the observing self
- 4) Create psychological flexibility

SESSION FOUR

Compassion and to continue on ones own

- 1) Repetition of the three earlier sessions and the work done at home for this session
- 2) Mindfulness meditation on compassion
- 3) Togetherness – confirmation in communication
- 4) Decision-making
- 5) Summary and to continue on ones own

METHOD

A pre- and post evaluation of the participants' self-reported well-being, psychological flexibility, levels of depression, anxiety and stress, their general mental health, and the alcohol consumption was done.

No control group.

PARTICIPANTS

The total group had 38 participants
- 25 women (66%)
- 13 men (34%)

15-18 years old
Mean age = 16.76

The 38 participants formed **five groups** who received the intervention under different conditions, some in **school** and some in **open ward psychiatric clinics**. The groups received the intervention separately with different group leaders.

Formed 2 groups: student and clinical group.

THE GROUPS

The clinical group

11 participants

All women

M age = 16.45

The student group

27 participants

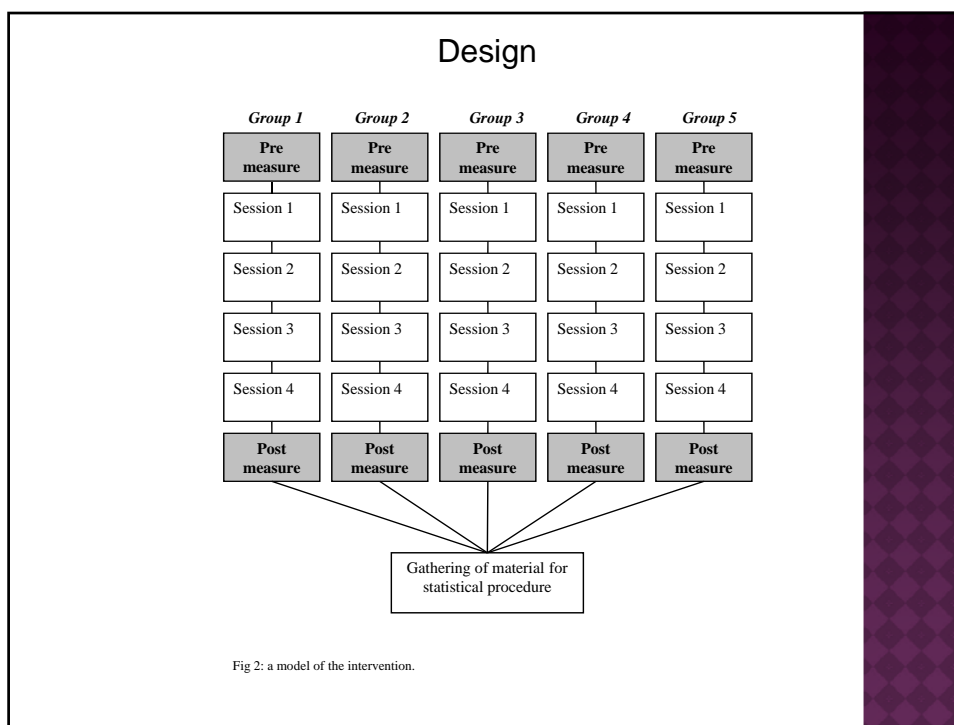
14 women

13 men

M age = 16.89

”REFERENCE GROUP”

Groups of students who had received ACT intervention by Livheim (2004) were used as reference groups in the later discussion and analysis of the results.



THE SELF REPORT MEASURES

The Beck Depression Inventory (**BDI**; Beck et al, 1979) 21 item scale, Swedish version

Acceptance and Action Questionnaire, second version (**AAQ-2**; Hayes, Strosahl et al 2004; translation by Parling & Lundgren) Swedish version, 10 items

The Satisfaction With Life Scale (**SWLS**; Diener, Emmons, Larsen & Griffin, 1985) Swedish version, 5 items

Perceived Stress Scale (**PSS**; Cohen, Kamarack & Mermelstein, 1983) Swedish version, a 14 items

Depression, Anxiety and Stress scale (**DASS**; Lovibond and Lovibond, 1995) Swedish version, a 21 items

RESULT - overview

- Changes
- Correlations
- Level of satisfaction
- Comparisons w. earlier intervention

CHANGES BETWEEN PRE- AND POST-MEASURE

The variables:

- | | |
|-------------------------------------|---|
| a) Subjective well-being | by SWLS |
| b) Psychological flexibility | by AAQ |
| c) Experienced stress | by PSS and stress subscale in DASS |
| d) Depression/Anxiety/Stress | by DASS total scale |
| e) Depressive tendencies | by BDI and depression subscale in DASS |
| f) Anxiety | by anxiety subscale in DASS |
| g) Alcohol consumption | by measures from can.se |

CHANGES

- **The student group** changed regarding:
 - More psychological flexibility
 - Less stress (PSS)
 - Less stress (subscale of DASS)
 - More subjective well being
- **The clinic group** changed regarding:
 - More psychological flexibility
 - Less stress (PSS)
 - Less depression, anxiety and stress (DASS)
 - Less depression (subscale of DASS)
 - More subjective well being

Table 1
Descriptive statistics (Mean (M), Standard Deviation (SD), and number of participants (N)) for all measures in the total group, the student group and the clinic group, at pre- and post-intervention.

Measure	Group	M (SD) pre-	M (SD) post-	N
Motivation	Whole	5,26 (1,40)	-	35
	Student	5,22 (1,50)	-	27
	Clinic	5,38 (1,06)	-	8
Livheim's psychological flexibility	Whole	4,17 (1,27)	4,87 (1,19)**	35 (pre)/38 (post)
	Student	4,37 (1,24)	4,89 (1,25)*	27
	Clinic	5,50 (1,20)	4,82 (1,08)*	8 (pre) / 11 (post)
Alcohol consumption	Whole	2,97 (1,44)	2,82 (1,49)	35 (pre)/38 (post)
	Student	2,85 (1,46)	2,74 (1,38)	27
	Clinic	5,38 (1,41)	3,00 (1,79)	8 (pre) / 11 (post)
SWLS	Whole	23,55 (6,42)	24,97 (5,61)*	38
	Student	25,48 (5,17)	26,15 (5,70)	27
	Clinic	18,82 (6,94)	22,09 (4,37)	11
AAQ	Whole	45,37 (11,97)	48,74 (10,71)**	38
	Student	47,96 (12,25)	50,44 (11,00)*	27
	Clinic	39,00 (8,81)	44,55 (4,78)*	11
PSS	Whole	28,53 (10,03)	22,37 (9,57)**	38
	Student	26,52 (9,14)	20,56 (9,89)**	27
	Clinic	33,45 (10,82)	26,82 (7,36)*	11
DASS total	Whole	17,79 (13,04)	13,45 (12,30)**	38
	Student	15,30 (12,69)	12,04 (12,77)	27
	Clinic	23,91 (12,33)	16,91 (10,79)*	11
DASS depression	Whole	5,16 (4,82)	4,37 (4,87)	38
	Student	4,19 (4,68)	4,30 (5,33)	27
	Clinic	7,55 (4,50)	4,55 (3,75)*	11
DASS anxiety	Whole	4,50 (4,24)	3,13 (3,47)	38
	Student	4,15 (4,23)	2,85 (3,48)	27
	Clinic	5,36 (4,34)	3,82 (3,48)	11
DASS stress	Whole	8,13 (5,55)	5,95 (5,00)**	38
	Student	6,96 (5,36)	4,89 (4,86)*	27
	Clinic	11,00 (5,14)	8,55 (4,55)	11
BDI	Whole	10,67 (9,56)	8,94 (11,53)	30 (pre)/ 33 (post)
	Student	10,78 (9,85)	8,56 (12,33)	27
	Clinic	9,67 (8,14)	10,67 (7,47)	3 (pre) / 6 (post)
GHQ	Whole	7,84 (3,59)	9,00 (3,25)**	38
	Student	8,41 (3,72)	9,52 (3,30)*	27
	Clinic	6,45 (2,94)	7,73 (2,90)	11

*significant change from pre- to post measure at $p < .05$ level
 **significant change from pre- to post measure at $p < .01$ level

DISCUSSION

CHANGES

- ◉ Based on the sizes of the changes, the intervention seemed to have both *larger* impact and affect *several* variables in the clinical group than in the student group
- ◉ No clinical level of depression or anxiety in the student group?

Correlations

Not a correlation study at first hand...

There were medium to strong correlations between all the self-report questionnaires in the evaluation, and the correlations were in accordance with previous findings in the psychological literature.

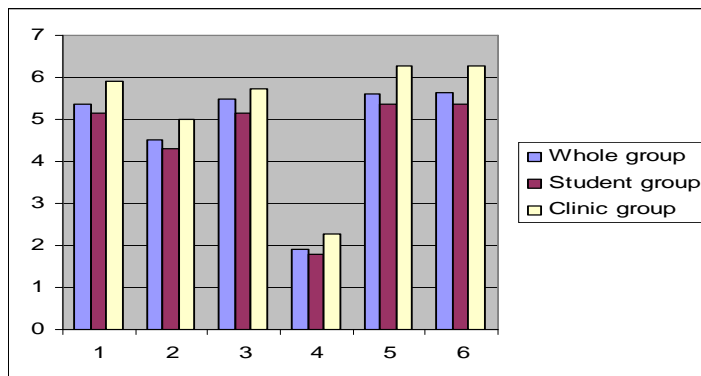
May contribute to evaluation of the Swedish AAQ?

Table 2
Correlations between the measures before intervention

Measure	GHQ	DASS tot	DASS dep	DASS anx	DASS stress	PSS	SWLS	AAQ	BDI	Motivation	Psych flex	Alcohol
GHQ	1	-.743(**)	-.740(**)	-.589(**)	-.653(**)	-.640(**)	.586(**)	.658(**)	-.736(**)	.105	.472(**)	-.035
DASS total		1	.895(**)	.863(**)	.913(**)	.790(**)	-.642(**)	-.762(**)	.854(**)	.029	-.375(*)	-.145
DASS depression			1	.672(**)	.719(**)	.697(**)	-.669(**)	-.707(**)	.873(**)	-.089	-.437(**)	-.144
DASS anxiety				1	.680(**)	.641(**)	-.541(**)	-.643(**)	.708(**)	.038	-.166	-.241
DASS stress					1	.760(**)	-.513(**)	-.685(**)	.704(**)	.115	-.373(*)	-.031
PSS						1	-.654(**)	-.795(**)	.792(**)	.097	-.550(**)	-.177
SWLS							1	.702(**)	-.783(**)	.066	.468(**)	.061
AAQ								1	-.844(**)	-.087	.654(**)	.380(*)
BDI									1	-.012	-.458(*)	-.166
Motivation										1	.057	-.054
Psych flex											1	.259
Alcohol												1

** Correlation is significant at the 0.01 level (2-tailed).
 * Correlation is significant at the 0.05 level (2-tailed).

Level of satisfaction (scale 1-7)



1. How valuable do you consider the sessions?
2. How valuable do you consider the mindfulness CD?
3. What grade do you give the course as a whole?
4. How many times a week did you practise to the CD?
5. I would participate in the course again (if I hadn't taken it already).
6. I would recommend the course to my friends.

DISCUSSION

Satisfaction

- In summary, the participants were very satisfied with the course.
- In general, the clinic group responded a little bit higher on every question that investigated how valuable they considered different parts of the intervention and the level of satisfaction.
- The level of satisfaction is high enough to contribute to the motivation of developing the method.

COMPARISONS OF THE RESULTS OF THE 12-HOUR INTERVENTION WITH THE 9-HOUR INTERVENTION

There are four variables from this current evaluation that can be compared to Livheim's 2004 study.

- ◉ Quality of life
- ◉ Subjective stress (PSS)
- ◉ Depressive tendencies
- ◉ Anxiety
- ◉ Stress (DASS)

The comparisons made here are not statistically evaluated!

Figure 2
 Mean values for the five subgroups at pre and post intervention

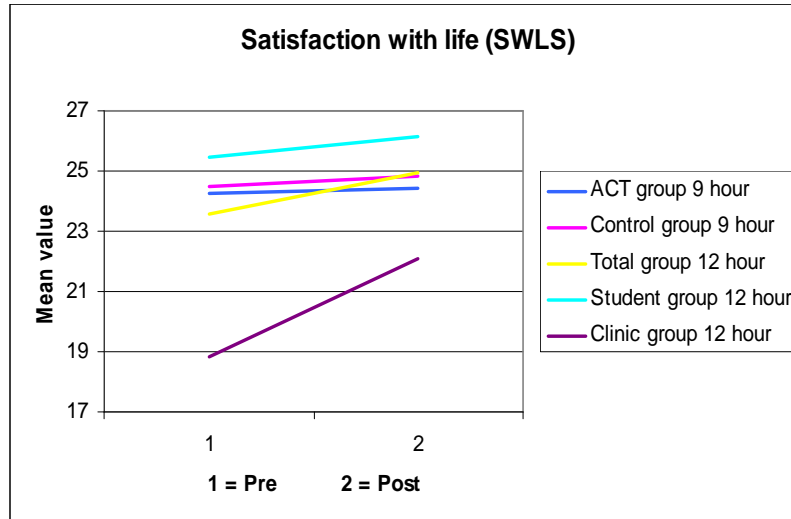


Figure 3
 Mean values for the five subgroups at pre and post intervention

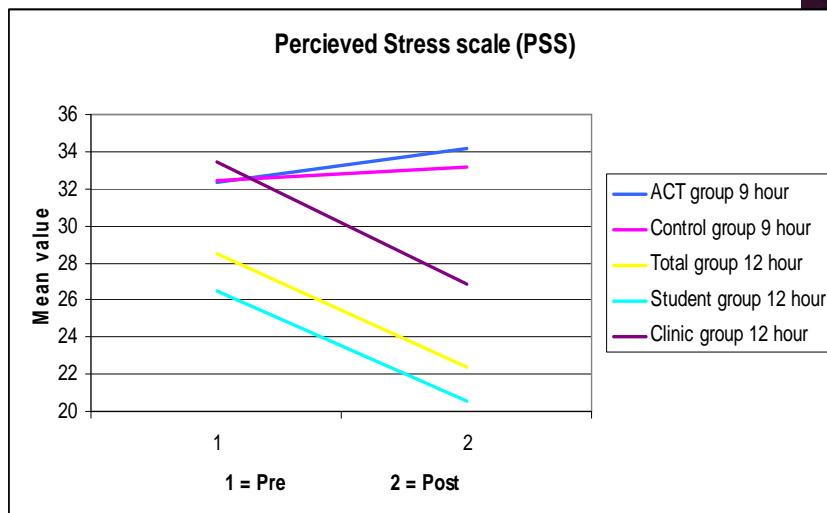


Figure 4
 Mean values for the five subgroups at pre and post intervention

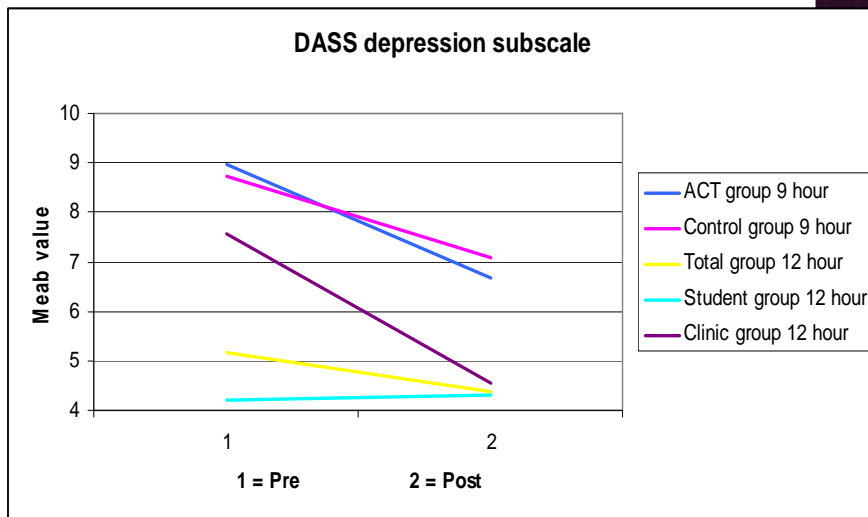


Figure 5
 Mean values for the five subgroups at pre and post intervention

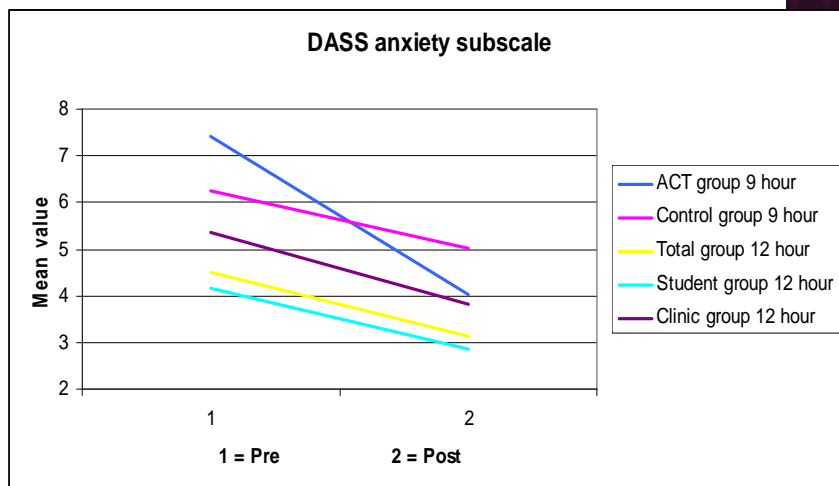
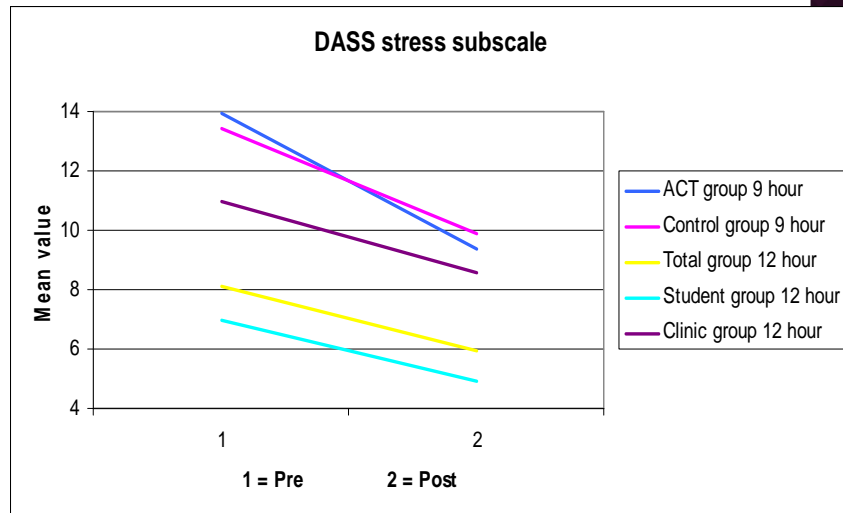


Figure 6
Mean values for the five subgroups at pre and post intervention



DISCUSSION

Comparisons with the reference group

- 12-hour intervention in comparison to the 9-hour RCT intervention.
- By the comparisons of the studies, the current 12-hour format gave greater impact than the 9-hour intervention.
- The results indicate that the intervention provided **positive results** in the 12-hour as well as in the 9-hour format, despite that the **group leaders had no previous experience of delivering ACT**. In the 9-hour intervention, the group leader had extensive experience of the method.

DISCUSSION

SUMMARY

- ◉ a global positive outcome - preliminary support for that this ACT intervention is purposeful in the clinical population
- ◉ ...as well as replicating previous results of ACT for student adolescents
- ◉ further research in clinical adolescent groups needed to evaluate this intervention more specifically
- ◉ on the societal level, it might be economical to deliver primary prevention measures, but needs more evaluation

LIMITATIONS OF THE STUDY

- ◉ Few participants
- ◉ The design – no RCT
- ◉ The selected self report measures?
- ◉ Effects of different group leaders
- ◉ Group leaders new to ACT
- ◉ ...

Future development and research

WHAT HAS BEEN DONE SO FAR?

- ◉ 100 group leaders are trained (until 2009)
- ◉ 6 new instructors are being trained
- ◉ Manual and workmaterial is ready
- ◉ A homepage is existing
- ◉ 5 new RCTs are on their way
- ◉ An internet version is being planned
- ◉ Collaboration with school doctors and other

MORE GROUP LEADER EDUCATIONS

- ◉ Courses are given by Stockholm County Council and Karolinska institutet.
- ◉ 4 sessions á 6 hours (total of 24 hours)
- ◉ Group leaders are giving an own group while learning the method.
- ◉ Group leaders are leading groups two and two.
- ◉ Group leaders are recruiting groups themselves.
- ◉ Group leaders need written permission from their nearest boss.

To become group leader

Written questions on:

- ◉ Get out of your mind and into your life
- ◉ " Acceptance and Commitment Therapy: An Experiential Approach to Behavior Change"
- ◉ Film one of the sessions given.

Future research

Future research

- ◉ RCT for young people with psychological problems and risk use or drug abuse within child and youth psychiatry.
- ◉ RCT for young people with psychological problems and risk use or drug abuse within Institutional Care
- ◉ RCT, replication of the protocol "Acceptance and Commitment Therapy: Experiential Adolescent Group by Louise Hayes & Julie Rowse for 14 year old students
- ◉ RCT, replication of the prevention study from 2004 & 2006 for 16-18 year old students
- ◉ Testing of a format for Iphone

Thank you!

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