

Craving Change™

The Roots of Craving Change Inc.



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Craving Change is a structured licensed program developed by a clinical psychologist and registered dietitian that teaches allied health care professionals to incorporate cognitive-behavioral strategies into group and individual practice with patients who struggle with what they eat, when they eat, and how much they eat. The cognitive-behavioural approach used in the program is considered an essential pillar for eating changes for health and disease management. The reality is that few programs have access to adequate psychological expertise to meet the needs of the tremendous proportion of people who struggle with their eating. Craving Change is one of the sole programs that teach non-psychologist professionals how to help fill that gap, and is the most widely used cognitive-behavioural program for problematic eating in Canada.

What does “cognitive-behavioural” mean, and why does Craving Change use it?

The most prolific and researched psychological interventions for understanding and changing behaviour are rooted in the “cognitive-behavioural” model. This model examines the thoughts and emotions that underlie and directly impact behaviour, and it is the gold standard for interventions in countless health care settings including mental health and disease management. Interventions based on this model have been repeatedly demonstrated as effective in individual and group interventions, and in long and short-term service delivery models.

Historically, behavioural therapies were defined and researched first. Behavioural modification techniques are somewhat action-oriented, including self-monitoring and goal setting, stimulus control, and reward systems. They have been identified in well-established research for decades as significant components of successful weight management programs. Cognitive techniques are more “abstract” in nature, examining patterns of thoughts including beliefs and expectations and exploring their impact on emotions and behaviours. Cognitive interventions include stress management, cognitive restructuring, and thought-stopping. Current practice generally involves a blend of the two approaches, “cognitive-behavioural”. Cognitive-behavioural strategies target factors that research has clearly identified as playing a critical role in obesity and weight management and the self-management of chronic disease (Bynre et al, 2004, Ellis et al, 2004, Hollis et al, 2007, Niemeier et al, 2007, O’Rourke et al, 2005, Stahre, 2005).

Not surprisingly, recommendations for the incorporation of this model into clinical interventions have been observed across several medical conditions, across several countries. For instance, diabetes (the Canadian Diabetes Association Clinical Practice Guidelines for Diabetes Prevention and Management, 2008), obesity (CMAJ Canadian clinical practice guidelines on the management and prevention of obesity in adults and children, 2006, Australian Clinical Practice Guidelines for the Management of Overweight and Obesity in Adults, 2004, and Cochrane database Systemic Review, Shaw et al, 2005), depression and coronary heart disease (American Heart Association, 2008), hypertension and ICD recipients (Canadian Association of Cardiac Rehabilitation and Cardiovascular Disease Prevention, 3rd Edition), and insomnia (Silversten et al, 2006).

What's the difference between cognitive-behavioural *therapy* (CBT) and a cognitive- behavioural *approach*?

Depth. Cognitive-behavioural *therapy* requires specialized psychotherapy training for most non-psychologist professionals. That is, professions such as social work and clinical nutrition must meet specialized training and experience criteria set by their provincial colleges to incorporate psychotherapy into their practice (Ontario College of Social Work, 2008, Alberta College of Dietitians, 2011).

However, numerous professions currently use a cognitive-behavioural *approach* and strategies in their practice. This involves drawing on cognitive-behavioural theory and techniques for education and general interventions, and is now applied in a variety of allied health care professions including occupational therapy and physiotherapy (Donaghy et al, 2008), nursing (Freeman, 2004), and pharmacy (Ahmad et al 2010).

What is stepped care?

Stepped care is a model of service delivery first articulated in the disordered eating literature that attempts to address the significant chasm between demand for professional services and supply of specialized professionals. In the area of problematic eating, demand for services far outstrips supply (Loeb et al, 2000). Stepped care argues that a general intervention offered by non-specialists will help a significant number of people. Those requiring further services afterwards can be referred on for more specialized care. In other words, “start with the simplest, least intrusive and least costly treatment” (Wilson et al, 2000). Craving Change™ is stepped care in action.

A 2012 randomized controlled study published in JAMA demonstrated that a stepped-care intervention produced clinically meaningful weight loss over 18 months at less cost than a standard behavioural weight loss intervention (Jakicic et al, 2012).

Are manualized programs popular? Are they appropriate in health care?

Yes, other highly credible programs have led this charge. For instance, the [Stanford Chronic Disease Self-Management Program \(CDSMP\)](#) is a manualized program that has achieved worldwide recognition and implementation, with clearly beneficial outcomes over two decades of research. The goal of the CDSMP is to improve the physical and emotional health of patients while reducing health care costs.

The [Changeways](#) program based out of Vancouver has been offering manualized materials for professionals and clients for evidence-based mental health interventions since 1993. The program has been offered extensively across Canada and internationally. The group program for depression management is now the most widely used group protocol for depression in Canada.

What is the current status of research on the Craving Change program?

As reviewed the curriculum, format, and theoretical basis of Craving Change is based on decades of research.

The co-founders of Craving Change Inc, Dr. C. Cannon, R.Psych and W. Shah, RD, partnered with faculty at the University of Calgary to undertake one of the few published studies to examine a manualized cognitive-behavioural group intervention for subclinical disordered eating. The research demonstrated positive outcomes in cardiac rehabilitation, hypertension, high cholesterol and diabetes patients. Specifically, the program resulted in a decrease in disordered eating behaviours, increased eating self-efficacy, and lower shame and guilt (von Ranson, Stevenson, Cannon & Shah, 2010). Self-efficacy is one of the strongest known predictors of health behaviour change.

Several sites across Canada are collecting outcomes in their settings. Due to their commercial interest in Craving Change, the co-founders are not involved in this process to avoid a perception of bias. To date, three organizations across Canada representing both urban and rurally based Primary Care Networks and Family Health Teams have shared their data with Cannon & Shah. Data from all three reported high levels of patient engagement (high attendance, low attrition, high satisfaction). Two of the sites have provided quantitative analyses on the Eating Self-Efficacy Scale showing significant improvement after attending a workshop. These gains are maintained at follow-up (one site measured follow up at 3 months, the other at 6 months). Please see attached.

If your site is interested in consulting with Craving Change Inc on a research project, please contact us, we would love to collaborate with you!

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What is Eating Self-Efficacy?

Self-efficacy refers to the belief that you a) have certain skills, and b) are confident that you can use those skills when needed.

Eating-self efficacy as defined by Glynn & Ruderman (1986) refers to one's confidence to abstain from overeating in the presence of negative affect, and in socially acceptable circumstances.

Negative Affect

e.g. “How difficult is it to control your overeating when you feel upset?”

Socially Acceptable Circumstances

e.g. “How difficult is it to control your overeating around holiday time?”

Eating Self-Efficacy Scale (ESES)

Table I. ESES

For numbers 1-27 you should rate the likelihood that you would have difficulty controlling your overeating in each of the situations listed on the next pages, using this scale:

1	2	3	4	5	6	7
No difficulty controlling eating		Moderate difficulty controlling eating			Most difficulty controlling eating	

For example, if you thought you had great difficulty controlling your eating when you are at parties, you might complete an item specifying parties this way:

Overeating at parties 1 2 3 4 5 ⑥ 7

Please complete every item.

Please complete every item.

How difficult is it to control your

1. Overeating after work or school
 2. Overeating when you feel restless
 3. Overeating around holiday time
 4. Overeating when you feel upset
 5. Overeating when tense
 6. Overeating with friends
 7. Overeating when preparing food
 8. Overeating when irritable
 9. Overeating as part of a social occasion dealing with food—like at a restaurant or dinner party
 10. Overeating with family members
 11. Overeating when annoyed
 12. Overeating when angry
 13. Overeating when you are angry at yourself
 14. Overeating when depressed
 15. Overeating when you feel impatient
 16. Overeating when you want to sit back and enjoy some food
 17. Overeating after an argument
 18. Overeating when you feel frustrated
 19. Overeating when tempting food is in front of you
 20. Overeating when you want to cheer up
 21. Overeating when there is a lot of food available to you (refrigerator is full)
 22. Overeating when you feel overly sensitive
 23. Overeating when nervous
 24. Overeating when hungry
 25. Overeating when anxious or worried
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von Ranson, Stevenson, Cannon & Shah Eating Behaviors, Vol 11 (2010)

- 60 adults with chronic health conditions attended a two-session cognitive-behavioural tools class.
- This class was a precursor to Craving Change™.
- Participants reported significantly decreased eating pathology, increased eating self-efficacy, and decreased shame and guilt.

Outcome research conducted independently and shared with Craving Change Inc in 2015*

Site 1. Alberta urban Primary Care Network (PCN)

- 197 patients
- Program taught over 4 classes
- Eating Self-Efficacy Scale (ESES) + descriptive questions

Site 2. Northern Ontario Family Health Team (FHT) – one city and one small town site

- 52 patients (data reported only for patients who had 100% attendance)
- Program taught over 3 classes
- ESES + descriptive questions

* These sites requested that their organization names be removed when sharing their data summaries. If you would like to speak directly with these teams, please let us know and we'd be happy to connect you with their permission.

Site 3. Southern Ontario Family Health Team urban site

- Over 100 patients
- Program taught over 3, 4, or 6 sessions
- Site developed their own questionnaire

Site 1. AB Primary Care Network ESES scores

Participants who completed the questionnaire at both Baseline and 4 weeks:

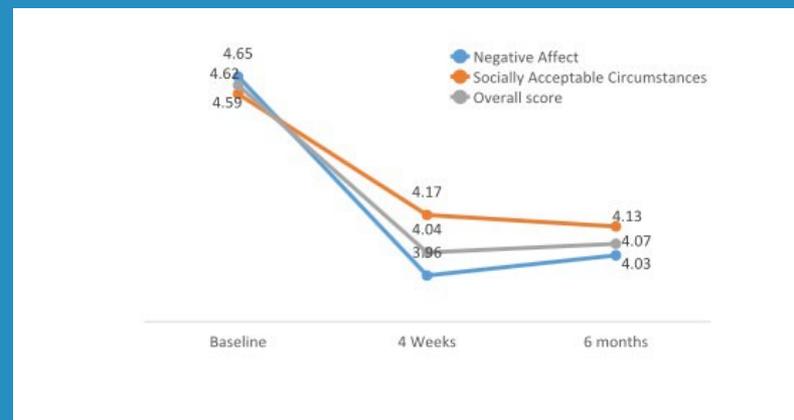
Total N	No. improved or sustained in Socially Acceptable Score	No. improved or sustained in Negative Affect Score	No. improved or sustained in Overall self-efficacy Score
197	138 (70%)	146 (74%)	148 (75%)
p-value	P<0.01*	P<0.01*	P<0.01*

*paired samples t-test, significant mean difference between baseline and 4 weeks when p<0.05

Participants who completed the questionnaire at both Baseline and 6 months:

Total N	No. improved or sustained in Socially Acceptable Score	No. improved or sustained in Negative Affect Score	No. improved or sustained in Overall self-efficacy Score
54	33 (61%)	38 (70%)	39 (72%)
p-value	P<0.01*	P<0.01*	P<0.01*

*paired samples t-test, significant mean difference between baseline and 6 months when p<0.05



“Paired-samples t-tests were conducted to compare self-efficacy scores in baseline and 4 weeks surveys as well as scores in baseline and 6 months surveys. There were significant differences in the self-efficacy scores for Overall score, Socially Acceptable score, as well as Negative Affect score between baseline and 4 weeks survey results, and between baseline and 6 months survey results.

The results suggest that after attending the Craving Change™ program, most participants are better able to control eating in both Socially Acceptable and Negative Affect scenarios, and these benefits are sustained over time. (bolding added)

Although the assumptions for paired-samples t-tests were met, the low response rate at 6 months may be a potential limitation due to non-response bias. However, independent-samples t-tests show that the participants who did complete the 6 months survey and those who did not complete the 6 months survey have no significant differences in their scores at baseline and at 4 weeks.”

Site 2. Northern ON Family Health Team ESES scores

	Mean ± SD	Difference in Mean	P-Value
Pre-Program vs. Post-Program (n=52)			
Pre-Program	116.04 ± 25.69	-18.51	0.0000*
Post-Program	97.53 ± 26.32		
Pre-Program to 3-months Post-Program (n=48)			
Pre-Program	116.73 ± 26.21	-27.61	0.0000*
3-months Post-Program	89.12 ± 32.56		
Post-Program vs. 3-months Post-Program (n=48)			
Post-Program	98.66 ± 26.61	-9.53	0.0244*
3-month Post-Program	89.12 ± 32.56		
*Statistically significant (<i>p</i> -value < 0.05) SD= Standard Deviation			

“The mean of ESES scores at pre-program, post-program and three-month post-program were compared (Table 2). Differences in mean ESES scores between pre-program and post-program (-18.51; $p=0.0000$), pre-program and three-month post-program (-27.61; $p=0.0000$), and post-program and three-month post-program (-9.53; $p=0.0244$) were found to be statistically significant.”

“Mean scores for individual questions on the ESES were examined to identify ESES score trends from pre-program to post-program and from post-program to three-month post-program (Table 7). Questions regarding overeating around holiday time, when feeling upset, when tempting food is in front of you, and when hungry had the highest mean scores at pre-program. These mean scores decreased at post-program and further decreased at three-month post-program. Overall, mean scores for each question decreased from pre-program to three-month post-program. At three-month post-program, mean scores for each question were below 5.0.”

Question: How difficult is it to control your overeating...	Pre-Program (Mean ± SD)	Post-Program (Mean ± SD)	3-month Post-Program (Mean ± SD)
1. After work or school	4.6±1.81	3.8±1.80	3.5±2.09
2. When restless	4.6±1.50	3.8±1.30	3.7±1.79
3. Around holiday time	5.7±1.28	5.0±1.28	4.4±1.87
4. When you feel upset	5.1±1.77	4.0±1.61	4.0±1.89
5. When tense	4.7±1.66	3.7±1.49	3.6±1.62
6. When with friends	4.8±1.51	4.2±1.47	3.9±1.63
7. When preparing food	3.8±1.86	3.3±1.58	2.7±1.78
8. When irritable	4.5±1.81	3.5±1.58	3.4±1.87
9. As part of a social gathering	4.9±1.58	4.5±1.50	4.3±1.85
10. With family members	4.5±1.68	4.1±1.44	3.9±1.46
11. When annoyed	4.6±1.69	3.4±1.64	3.2±1.68
12. When angry	4.3±1.73	3.6±1.74	3.1±1.62
13. When angry at yourself	4.6±1.78	3.8±1.95	3.1±1.62
14. When depressed	4.9±1.79	4.0±1.70	3.7±2.04
15. When you feel impatient	4.0±1.63	3.3±1.60	3.7±2.14
16. When you want to sit back and enjoy some food	4.8±1.44	4.2±1.29	3.0±1.65

17. After an argument	4.2±1.76	3.5±1.70	3.9±1.77
18. When you feel frustrated	4.5±1.67	3.7±1.72	3.3±1.86
19. When tempting food is in front of you	5.6±1.26	4.8±1.45	3.3±1.81
20. When you want to cheer up	4.7±1.51	3.8±1.57	4.5±1.61
21. When refrigerator is full	4.7±1.47	4.2±1.35	3.7±1.85
22. When overly sensitive	4.5±1.76	3.6±1.73	3.8±1.60
23. When nervous	3.8±1.78	3.2±1.54	2.7±1.59
24. When hungry	5.3±1.19	4.6±1.36	3.8±1.70
25. When anxious or worried	4.3±1.91	3.8±1.78	3.3±1.78

Site 1. Alberta Primary Care Network Descriptive Data

Of the Craving Change™ programs offered over four sessions, 70% attended three or more classes.

Satisfaction with content	Strongly agree & Agree	Neutral	Strongly disagree & Disagree
I learned something new about my choices around eating.	98%	2%	1%
The content met my expectations.	88%	11%	1%
I can use the information that was presented in my daily life.	99%	1%	0%

Suggestions for improvement – four themes reported

- The most common theme (16%) suggested offering more sessions, 8% said to offer follow-up.
- The other two reported themes related to class scheduling and room noise.

Site 2. Northern ON Family Health Team Descriptive Data

- Offered the Craving Change™ program over 3 sessions.
- 73% attended all sessions

Identified Themes	Number of Participants (%)
Gain awareness, insight, strategies, knowledge	19 (36.5)
Control eating, gain self-control or will power	14 (27)
Lose weight	6 (11.5)

Please comment on what you liked about how the facilitator(s) led the group:	
Knowledgeable Personable Easy to understand/clear	"Easy to listen to, easy to understand, made the information relatable." "Kept the group focused on topic! Allowed time for discussion. Very positive person with the right demeanour to facilitate this type of workshop."
What was the best part of the workshop?	
Group Learning/Setting Course Material Shift of Thinking	"Refreshing shift of thinking of not thinking 'what we eat but 'why'." "Sharing ideas with other group members. Getting strategies to help change behaviour." "Great material to read. Many situations to consider and problem solve together. Listening to others who are struggling also."
What changes would you suggest making to the workshop? What would you like to see more of? Less of?	
No changes	"None, I thought it was the right length of time, right amount of information, easy to understand." "You are doing a great job! No changes needed!"
Follow up Length	"I would like to see more possible follow up i.e. goal setting, etc." "A little more time would have been good. There is so much to learn and the time seemed shorter but is a great workshop." "Maybe more time with a second part of food choices."
Would you recommend this workshop to others? Why? Why not?	
Awareness Beneficial Informative	"Definitely, especially to people who are diabetics, people with high blood pressure, high blood cholesterol, obesity or any other health issues or addictions." "Yes definitely. It was very beneficial and I learned a lot. I have a lot of tools to use." "Yes. Makes you more aware of what you are doing with your eating...emotional vs. physical."

Site 3. Southern Ontario FHT Urban

Table 2. Mean Scores on Individual Question of the Craving Change Workshop Questionnaire (Pre vs Post)

Variables	n	Mean \pm SD / %		Difference	95% CI	p value
		Pre	Post			
I am confident that I can control my problematic eating when						
Angry	112	3.0 \pm 1.43	3.8 \pm 0.84	-0.84	(-1.11, -0.57)	<0.0005
Stressed	111	2.4 \pm 1.31	3.5 \pm 0.90	-1.14	(-1.40, -0.88)	<0.0005
Bored	112	2.4 \pm 1.16	3.6 \pm 0.92	-1.19	(-1.43, -0.94)	<0.0005
Tired	110	2.8 \pm 1.23	3.8 \pm 0.83	-0.98	(-1.24, -0.72)	<0.0005
Total	108	10.6 \pm 3.90	14.8 \pm 2.76	-4.20	(-5.01, -3.40)	<0.0005
I am confident I can control my problematic eating						
After school/work	78	2.9 \pm 1.21	3.8 \pm 0.91	-0.94	(-1.26, -0.61)	<0.0005
Around holidays	104	2.2 \pm 1.10	3.5 \pm 0.87	-1.23	(-1.45, -1.02)	<0.0005
When around friends	111	2.8 \pm 1.12	3.7 \pm 0.84	-0.85	(-1.07, -0.62)	<0.0005
When around family	113	3.0 \pm 1.15	3.7 \pm 0.85	-0.77	(-1.01, -0.53)	<0.0005
When preparing food	112	3.2 \pm 1.14	3.9 \pm 0.85	-0.74	(-0.97, -0.51)	<0.0005
When at a party/event	108	2.6 \pm 1.19	3.4 \pm 1.00	-0.88	(-1.14, -0.62)	<0.0005
When hungry	110	2.3 \pm 1.11	3.4 \pm 1.05	-1.06	(-1.33, -0.80)	<0.0005
When tempting food is in front of you	111	2.1 \pm 0.98	3.2 \pm 0.94	-1.15	(-1.39, -0.92)	<0.0005
When there is a lot of food available to you	112	2.5 \pm 1.11	3.4 \pm 0.95	-0.88	(-1.13, -0.63)	<0.0005
Total	74	23.6 \pm 6.46	32.1 \pm 5.75	-8.53	(-10.25, -6.80)	<0.0005
How you feel today						
I understand why I eat the way I do.	99	3.4 \pm 1.01	4.3 \pm 0.65	-0.97	(-1.18, -0.76)	<0.0005
I understand how my emotions influence my current eating behaviours.	100	3.5 \pm 1.03	4.4 \pm 0.64	-0.89	(-1.13, -0.65)	<0.0005
I understand how the time of day influences my current eating behaviours.	99	3.6 \pm 1.04	4.4 \pm 0.69	-0.84	(-1.06, -0.62)	<0.0005
Total	98	10.5 \pm 2.62	13.2 \pm 1.60	-2.78	(-3.33, -2.22)	<0.0005

Site 3. Southern Ontario FHT Urban Descriptive Data

- 88.6% attend all sessions of the program
- “57% of our patients who completed the post questionnaires make some positive change in their eating behaviour”

Summary

- There is improved eating self-efficacy in people who attended Craving Change™ workshops. Improvements were maintained at follow-up (3 months or 6 months).
- This data was collected by different teams working independently. People attended programs at different sites, facilitated by different workshop facilitators. This suggests that Craving Change™ has been successful in knowledge translation and dissemination to health care professionals and workshop attendees.
- Engagement with the program is high, with a minimum of 70% of enrolled participants attending at least 3 of 4 classes.
- Open-ended questions about improving the program suggest attendees want “more” Craving Change™.