CABCAA

A Practical Counselling Model to facilitate change in Children, Adolescents and Adults

The CABCAA model presents a simplified picture of how people function. It is a unifying Model, which takes into consideration various psychological theories. This simplified conceptual model can be schematically presented to the client to facilitate awareness and understanding of their present functioning. Children as young as eight are able to understand their behavioural patterns. The model has two stages: a developmental stage, and an action stage. It is a working model useful for facilitating counselling of children and adults especially in shifting locus of control and modifying a dysfunctional self-theory.

Introduction

All people have personal frameworks or theories, which they use as they struggle to predict and control their environment. These implicit theories derive from perceptual sets, automatic thoughts and cognitive maps, interacting with emotions. They have been collected since childhood, through a process of adaptation. Sometimes, in the process of adaptation, a dysfunctional theory about 'self', or parts of the self, is developed, which may result in self-defeating behaviours and the need for therapeutic intervention.

The aim of the therapeutic intervention is to investigate the impaired 'self theory' and to provide the client with the means to modify the dysfunction and to develop a functional, rational framework. To effectively intervene in this way the therapist requires a model of human psychological processes and behaviours that is both practical in its application and theoretically verifiable.

As no single psychological theory fully explains the complexity of human behaviour, an effective working model may need to incorporate a variety of psychological theories. It was on this premise that the 'CABCAA Model' was developed.

The Model integrates concepts from social learning theory (Bandura 1982), cognitive development (Flavell & Ross, 1981), theories on emotions and cognition (Izard, Kagan & Zajonc, 1984), cognitive behaviour therapy (Beck 1976), rational emotive therapy (Ellis 1961), self-concept theories and research (Markus & Wurf, 1987), findings on self-fulfilling prophecies (Jussim, (1986) and more recently on research concerning the retention and intrusion of memories on present behaviour (van der Kolk 1991, 1994).
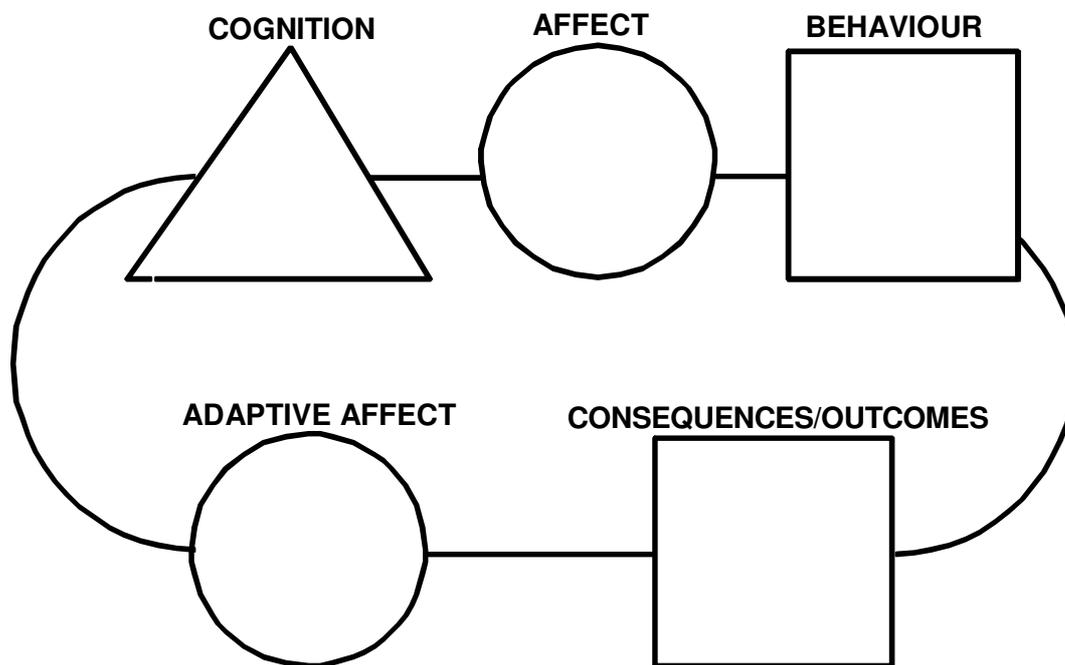
The CABCAA Model

CABCAA is an acronym for Cognition, Affect, Behaviour, Consequences, and Adaptive Affect. The 'Model' provides a simplified framework that links these facets of experience schematically. It postulates that there is an interactive process between the individual and the environment. This interactive process results in the development of schemas or "Tracks" which consequently become dynamic forces that determine future behaviour.

This is a practical model which deals with a range of factors affecting human behaviour not just thoughts and feelings. By incorporating consequences of behaviour in the model it permits the inclusion of interpersonal and cultural factors affecting the individual. The client can then gain awareness and understanding of the range of factors influencing behaviour. It is acknowledged that there are all kinds of parallel processes where thinking, feeling and behaviour are occurring simultaneously. Representation of the process has been simplified to enable clients to analyse and sensitise themselves to their "Tracks".

In the CABCAA Model the clients are confronted by a pictorial representation of the cyclical nature of their patterns of behaviour. The linear approach helps clients clarify their cognitions, feelings and behaviours. The critical element of the model is the focus on the process which enables the client to understand how these factors interact and influence outcomes. Figure 1 illustrates the fundamental concepts of the model.

Figure 1.

CABCAA – THE TRACK

COGNITION AFFECT BEHAVIOUR

ADAPTIVE AFFECT CONSEQUENCES/OUTCOMES

ELEMENTS OF THE CABCAA MODEL

COGNITION - Internal programs formulated through past experiences; **AFFECT** - feelings stimulated from cognition; **BEHAVIOUR** - self presentation motivated by cognition and affect; **CONSEQUENCES** - environmental response and outcome of behaviour; **ADAPTIVE AFFECT** - affect contingent on consequences which shapes cognition and is held in memory. The five elements are linked together to form a cyclic pattern of functioning.
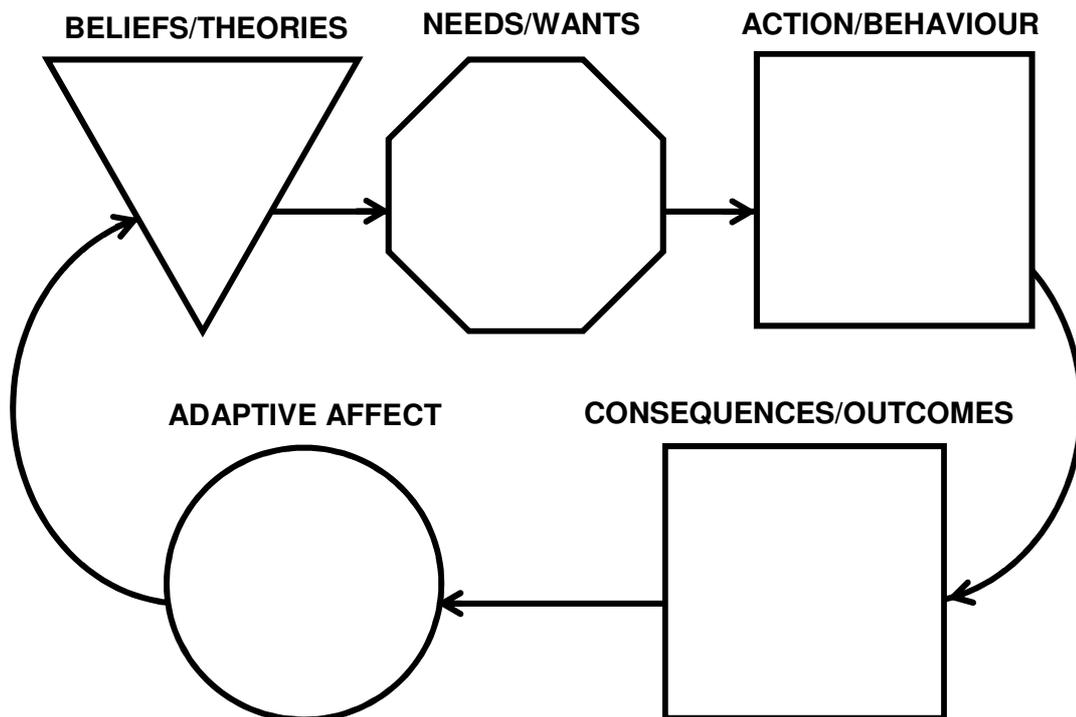
STAGES OF THE MODEL.

There are two stages of the model:

- The developmental stage
- The action stage

A schematic representation of the developmental stage is in Figure 2.

Figure 2.

CABCAA - DEVELOPING TRACKS

BELIEFS/THEORIES   NEEDS/WANTS   ACTION/BEHAVIOUR

ADAPTIVE AFFECT   CONSEQUENCES/OUTCOMES

ELEMENTS OF DEVELOPMENTAL TRACK.

In the absence of cognition, the beginning point is Needs. A need motivates action, which has a consequence. The consequence in turn has an emotional/sensory effect which shapes cognition and is held in memory. Adaptation occurs through various learning processes. Mediational concepts are formed simultaneously with adaptation.

For example, a baby feels hungry (needs food), which motivates it to cry. The environment (care-givers) responds by feeding the baby. The effect for the baby is physical satisfaction.
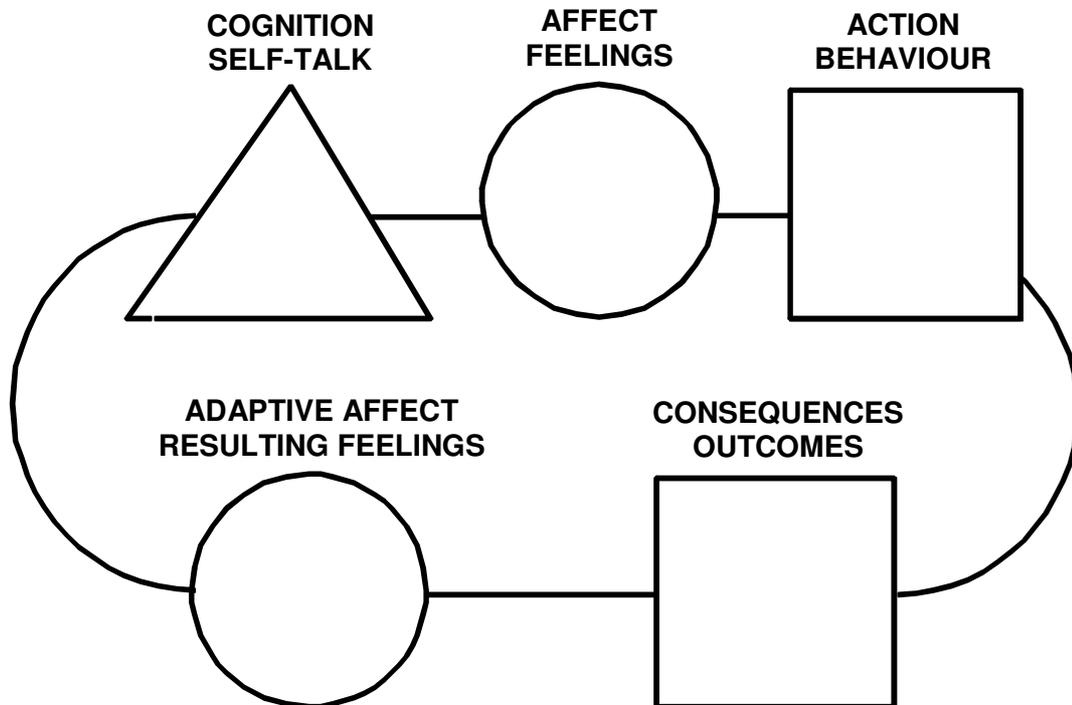
In the absence of cognitive patterns, a baby's behaviour is motivated by basic survival needs. Initially the behaviour consists of inborn reflexes such as crying. The response from the environment (consequence) has an effect (emotional, sensory, physical) on the child. The consequence also provides feedback on the success or failure of the action to get the particular need met.

The outcome and the emotional effect of the outcome lead to evaluations of self-worth (e.g., I'm capable); evaluation of mastery of performance (e.g., I can do it); outcome expectancy of such performance, including environmental responses (I will succeed and they will approve of me) and the emotional state aroused by such outcomes, resultant feeling (e.g., satisfaction). These experiences are stored in our memory system as Tracks.

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Stage two is the overt response or action stage represented in Figure 3.

Figure 3.

CABCAA – ACTION TRACK

**COGNITION
SELF-TALK**

**AFFECT
FEELINGS**

**ACTION
BEHAVIOUR**

**ADAPTIVE AFFECT
RESULTING FEELINGS**

**CONSEQUENCES
OUTCOMES**

ELEMENTS OF THE ACTION TRACK

There may or may not be an awareness of the self-talk. There usually is awareness of the feeling state. Feelings together with self-talk motivate behaviour. Generally we engage in behaviour that will dissipate the feelings (negative reinforcement operates). The consequences/outcome and resulting feelings are evaluated to confirm our self-talk.

Behaviour is motivated by the affect and cognitions pertaining to the activated Track. If the consequences are as predicted, then the existing Track is validated. If, however, the consequences are not as predicted, then cognitive dissonance results. This is resolved by, making either attributions that will maintain the status quo, or by modifying the existing Track.

During this stage the adaptive affect has the potential to change (reframe) the existing Tracks when the outcome predicted does not eventuate. However, because the attributions made are guided by the existing Tracks, outcomes are usually perceived as validating these Tracks. Thus a circular pattern is maintained and change is minimal unless awareness of this process is gained and monitored.

A simplified schematic representation of the process by which the developed Tracks are projected in the present and maintained is shown in Figure 4.

Figure 4.

BELIEF MAINTENANCE PROCESS

**COGNITION
MEMORY STRUCTURE**   **ACTION TRACK**

LEARNED TRACK
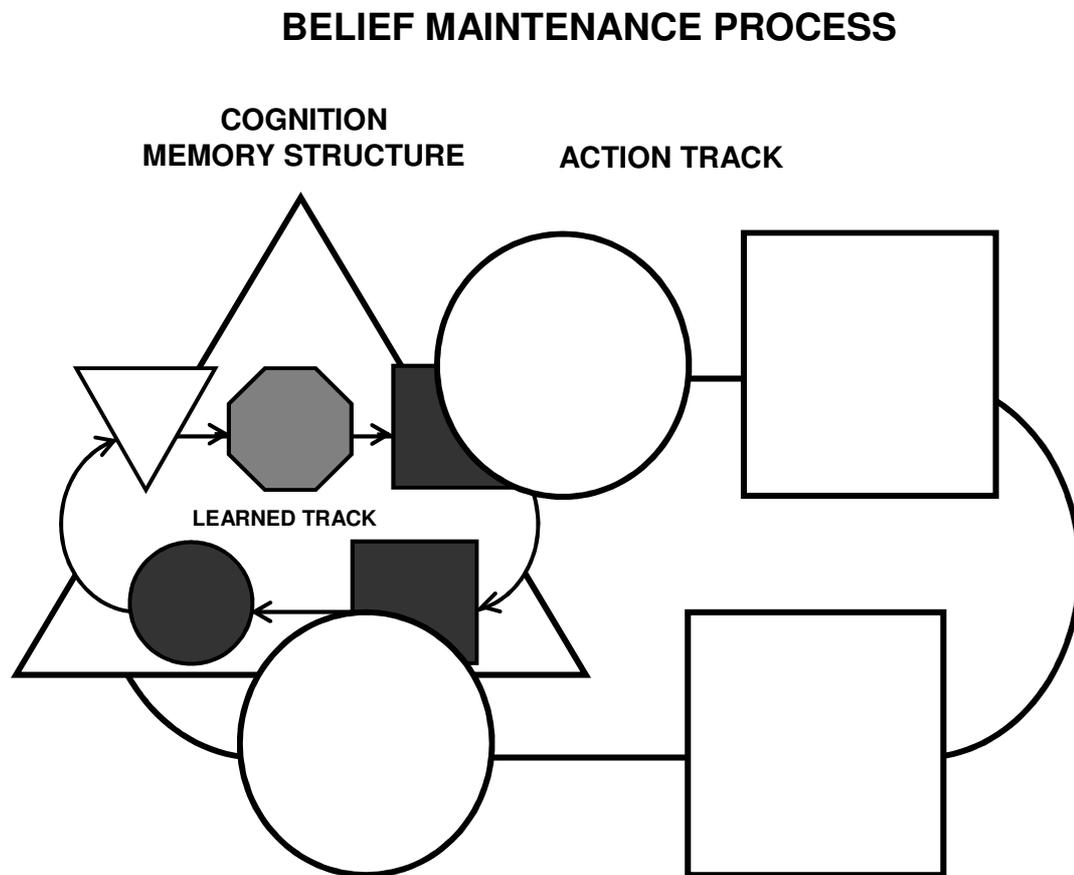
Cognition - internal programs formulated through past experiences; **Affect** - stimulated from cognition; **Behaviour** - self-presentation motivated by cognition and affect; **Consequences** - expectations generated from internal programs; **Adaptive Affect** - feeling contingent on the expectations imagined.

A current event activates a memory structure (Track). The individual may become aware of experiencing the emotion pertaining to that Track. Cognitions connected to the structure may be simultaneously activated, but are usually outside conscious awareness. This Track is used as the criterion for the evaluation of the present and prediction of the future.

Attention is focused on information that is congruent with the existing Track. Any incongruent information is either ignored or attributed to circumstances that will maintain the status quo. In this way we project the internal reality about a situation and rehearse covertly (self-talk) the experience as though it is happening as predicted. This rehearsal maintains and intensifies the feeling state.

Current research in the area of Post-Traumatic Stress (van der Kolk, McFarlane & Weisaeth 1996) support the notion that past adaptation to situations dominate the responses that we make to our environment in the present.

Our responses to life situations are motivated by internal Tracks learned mostly in early childhood, especially Tracks pertaining to the self.

Presenting the CABCAA Model to clients

Take the clients through in the following way:

I am going to give you a quick lesson in psychology to help you understand what motivates to behave the way we do. I am going to take you back to basics:

All living organisms have one main biological purpose for their existence. That purpose is to survive as an individual and to survive as a species. If our survival is threatened either physically or emotionally then the threat is brought to our attention by the experience of pain. This pain can be physical or emotional depending on what the threat is. Both physical or emotional pain tells us that our chemical equilibrium (homeostasis equilibrium) has been upset and we need to do something about it.

Draw the hexagon and write **NEEDS/WANTS** on the top (as below) then ask the client/s what they think the basic needs are – you fill in the rest and write them in the hexagon.

DEVELOPING TRACKS
NEEDS/WANTS

FOOD
WATER
OXYGEN
SHELTER
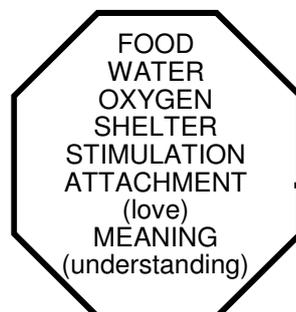STIMULATION
ATTACHMENT(love)
MEANING
(understanding)
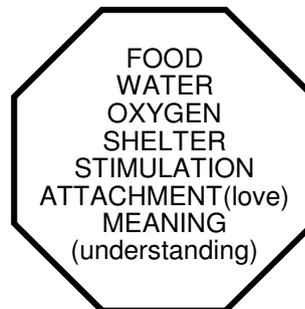
In order to get our needs met we take action, i.e. we do something about it - we emit a behaviour. For example; if a baby needs food he/she will cry.
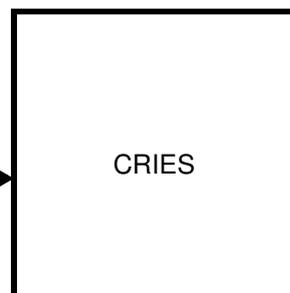
Following draw the square and title it **ACTION/BEHAVIOUR**.
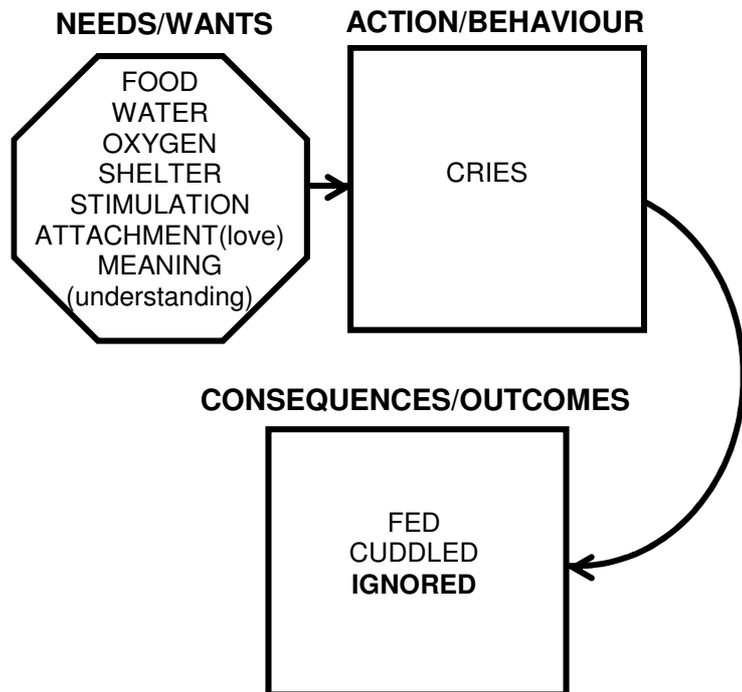
DEVELOPING TRACKS
NEEDS/WANTS   ACTION/BEHAVIOUR

FOOD
WATER
OXYGEN
SHELTER
STIMULATION
ATTACHMENT
(love)
MEANING
(understanding)

CRIES

Crying is a reflex response that a baby automatically does to alert the care giver (environment) know that the organism is out of balance or in pain. The environment responds and so provides a consequence to the behaviour. The consequence provides the child with information about the acceptable behaviour (in that family) she must perform in order to have her needs met. The consequence may be that the child is picked up and fed or is left there and ignored. If the child is ignored the imbalance in the organism becomes greater and consequently the need becomes more intense.
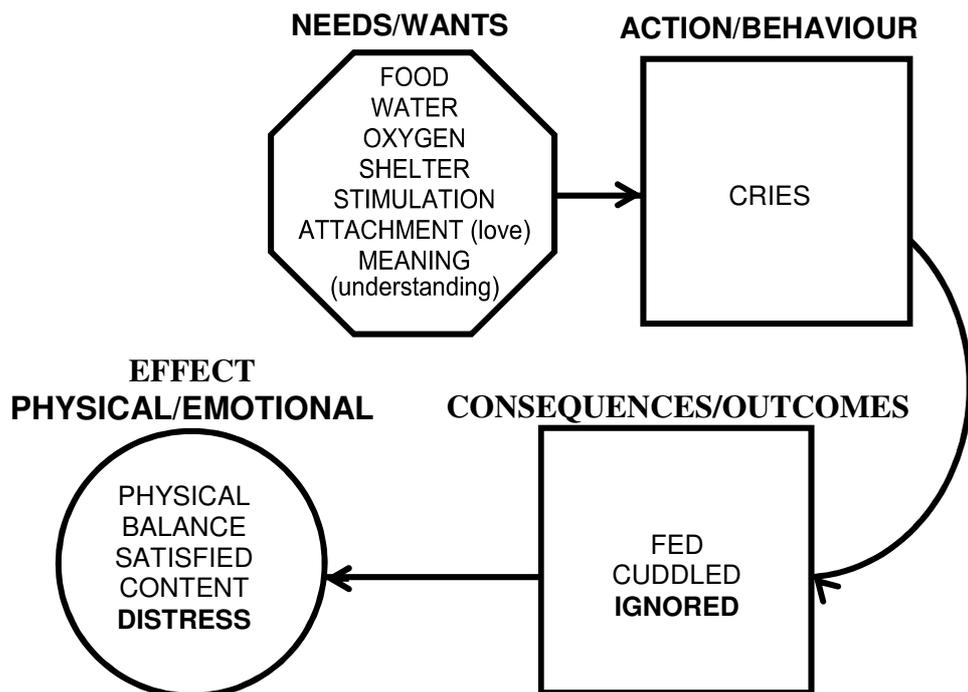
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Draw a box below and title it **CONSEQUENCES**.

DEVELOPING TRACKS

NEEDS/WANTS   **ACTION/BEHAVIOUR**

FOOD
WATER
OXYGEN
SHELTER
STIMULATION
ATTACHMENT(love)
MEANING
(understanding)

CRIES

CONSEQUENCES/OUTCOMES

FED
CUDDLED
IGNORED

Consequences have effects - emotional/physiological/sensory on the individual. If we use the above example then the effect may be that the child's hunger pain has gone away and he/she feels physiologically satisfied.

Draw the circle in line with consequence box and title it **EFFECT, PHYSICAL/ EMOTIONAL.**

DEVELOPING TRACKS

NEEDS/WANTS   **ACTION/BEHAVIOUR**

FOOD
WATER
OXYGEN
SHELTER
STIMULATION
ATTACHMENT (love)
MEANING
(understanding)

CRIES

EFFECT
PHYSICAL/EMOTIONAL   **CONSEQUENCES/OUTCOMES**

PHYSICAL
BALANCE
SATISFIED
CONTENT
DISTRESS

FED
CUDDLED
IGNORED

The baby learns very quickly that crying when hungry has the consequences of getting fed and feeling good again. The baby also cries when she wants any of her needs met. Other needs are not as easily interpreted and satisfied by the environment. We all have a clear understanding of needing food until we feel satisfied. A baby knows when it has had enough and parents respond by giving all the food it needs. However, when it comes to other needs, such as attachment or stimulation, we all have a problem knowing how much to give because they are subject to interpretation.

We have two types of memories one is our "explicit" or verbal - thinking memory. This refers to conscious awareness of facts or events that have happened to us. The other is the "implicit" or automatic memory which refers to memories of skills and habits, emotional responses, reflexive actions and classically conditioned responses. At birth our verbal memory is not well developed and so we rely heavily on our automatic memory. All species have an automatic memory, it is very much part of our survival system. This memory reminds us of the pain and pleasure that we have experienced in the past, and consequently our body tells us through our feelings whether we should do something again or run away from something that may causes us pain. Our automatic memory is instinctive, mostly unconscious, self-operating, spontaneous, and is largely out of our control.
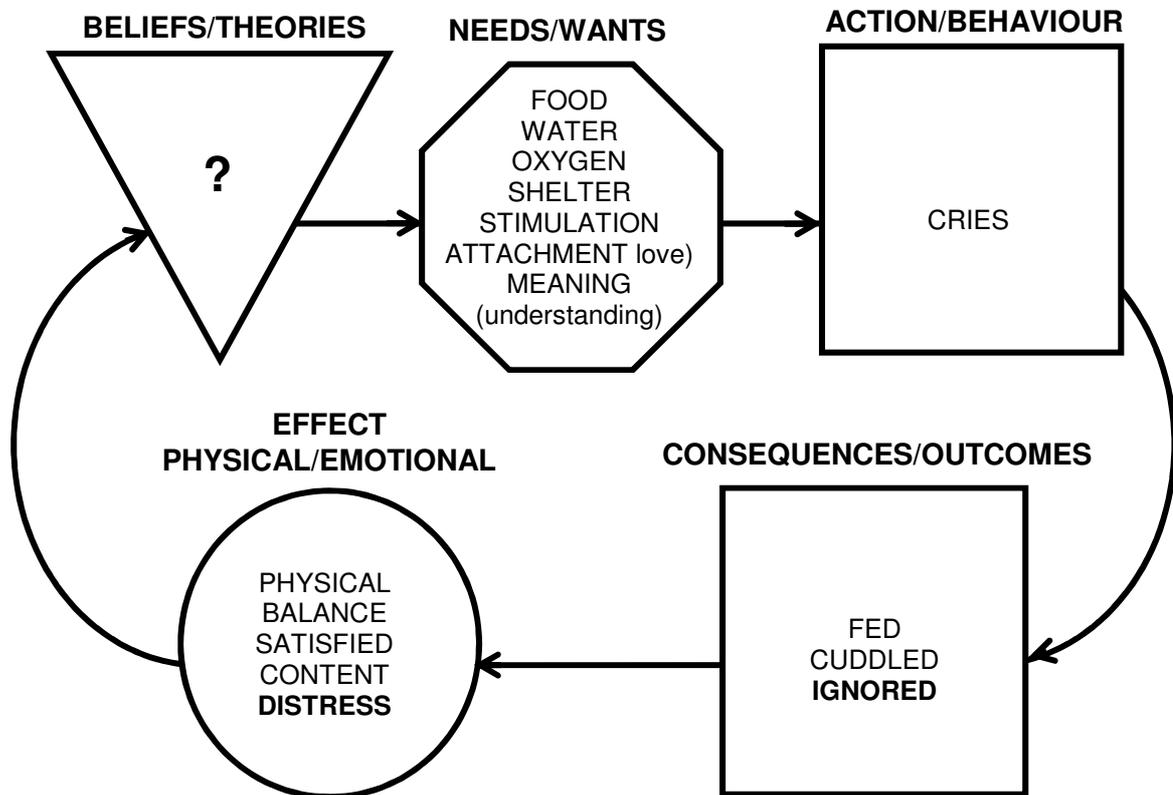
When we experience something our body memory records the impact felt. This impact is stored for future reference. We can observe this whentraining a dog to come when it is called, to sit, or to walk next to us (to heel). The method used is reward or punishment. When the dog comes we give her a biscuit, a pat or say something pleasant in a warm voice. We do the same when it sits or heels. When the dog does not obey us we may push her down to make her sit or in the case of teaching her to heel we give her a sharp tug on a choker chain and say heel at the same time.

 The dog learns to heel when we say "heel" because the word heel and the tone of our voice is connected to the pain of the choker chain. When we say "heel" the body of the dog remembers the pain and she walks beside us. Dogs have a very limited thinking memory but their automatic memory is as good as ours because their survival instinct is as strong as ours.

The more the dog, practises the better she learns, until she gets to the point when we do not need to say "heel". The dog automatically knows that going for a walk means she has to "heel." Similarly with humans the more a particular chain of events is experienced the more it becomes our reality - like a program on a computer. "I need food, I cry, my hunger is satisfied." We don't actually sit and think this through. This happens by a process of association between need-behaviour and outcome/ consequences (i.e., conditioning). Unlike dogs, human beings have the capacity to think at complex levels, this motivates us to want to understand and make sense of things. These ideas or theories form the core motivation of our behaviour.

Draw the TRIANGLE with point down and base up. This upside down triangle represents our thinking memory. It is upside down because our world starts small, then expands like a never-ending cone being filled up with new experiences everyday of our life.

CABCAA – DEVELOPING TRACKS

BELIEFS/THEORIES   **NEEDS/WANTS**   **ACTION/BEHAVIOUR**

?

FOOD
WATER
OXYGEN
SHELTER
STIMULATION
ATTACHMENT love)
MEANING
(understanding)

CRIES

EFFECT
PHYSICAL/EMOTIONAL   **CONSEQUENCES/OUTCOMES**

PHYSICAL
BALANCE
SATISFIED
CONTENT
DISTRESS

FED
CUDDLED
IGNORED

We also form the idea that we have to behave in a certain way in order to get our needs met or obtain certain outcomes. We create theories about who we are, what we are, how we should feel about ourselves, others and how we think the world sees us. We create and/or adopt (from significant others) theories and about everything we encounter.

Children as young as three years of age begin create theories of what the world is about and who they are. We all develop very strong theories about ourselves as a person: whether I'm capable or not, lovable or not, important or not. We call this our self-concept. It is this self-concept that motivates our behaviour.

That does not mean that we sit down and consciously think out the theory. For example: if we were criticised as children every time that we did something we would not necessarily consciously create a theory about ourselves that "I am not good enough." However, we would begin to develop a sense - a feeling that "I am not good enough." We may never actually verbalise "I am not good enough," but would feel like that because we would expect criticism every time we did something.

To avoid this criticism we would then try hard to act the way we think others would like us to act or we try to do things perfectly. This is done by trial and error, we behave in different ways until we find a way that we get the reinforcement we need. This often works, as generally parents want their children to do things, as they (the parents) would do them. The child then learns and says to herself, again not consciously, "if I do things perfectly I can avoid the pain of criticism." Thereafter, the child tries to do things perfectly and adopts the belief "I have to

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be perfect or I have to do the right thing, or I must not make mistakes." The internal command would depend on the interpretation the child gave to what she thought the parents or significant others wanted from her. It is vital for a child to adjust to its environment, otherwise her needs are not met and this may hinder her survival.

Needs are still at the basis of our motivation. But as we experience things, our basic needs such as food, shelter, safety, love, stimulation and comfort/belonging, are reinterpreted and WANTS are added. For example when a child discovers sweets it then wants sweets so needs and wants get mixed up.

In the process of trying to satisfy our needs/wants together with the responses made by the environment we develop theories about ourselves and others that help us to predict and make sense of the world. These theories become part of our self-concept. Consequently our self-concept dictates how we go about getting our needs and wants satisfied.

Research shows that by the age of eight our self-concept is well established, and there seems to be very little change to it from then onwards, unless there is conscious intervention. Most of us go through our lives actually being dictated to by theories that we made up about ourselves (in particular our self-concept) before we were eight years of age. At that age as we had limited ability to process information the theories that we develop are usually inconsistent and irrational. Now you know why we are all a little crazy.

Young children are egocentric. This does not mean that they are selfish. It means that they can only see the world from their point of view. Therefore, if you ask a four or five year old girl/boy (who has a brother/sister), if she has a brother, she will respond "Yes," then if you ask her if her brother has a sister the response will likely be "No." Why? The little girl cannot put herself in another person's shoes and see the world from another's perspective.

During this age children also see themselves as been the centre of everything, the cause of everything and consequently also responsible for everything negative and positive. For example, if children are ignored, abused or if people around them are angry, sad or mad then the children think that they have made it happen. For this reason, children who are emotionally neglected may come to think that they are not lovable, important or worthwhile. A child who is criticised for not doing it 'right' may come to think of him/herself as been "inadequate, dumb or stupid".

By the time that we are eight years of age we have a well-established belief system. We have millions of beliefs (or mental maps, if you like) about needs, wants, how we have to behave to satisfy the needs and what the likely outcome will be when we behave in a certain way. We form patterns or TRACKS as shown here (point to the Track that you have just drawn).
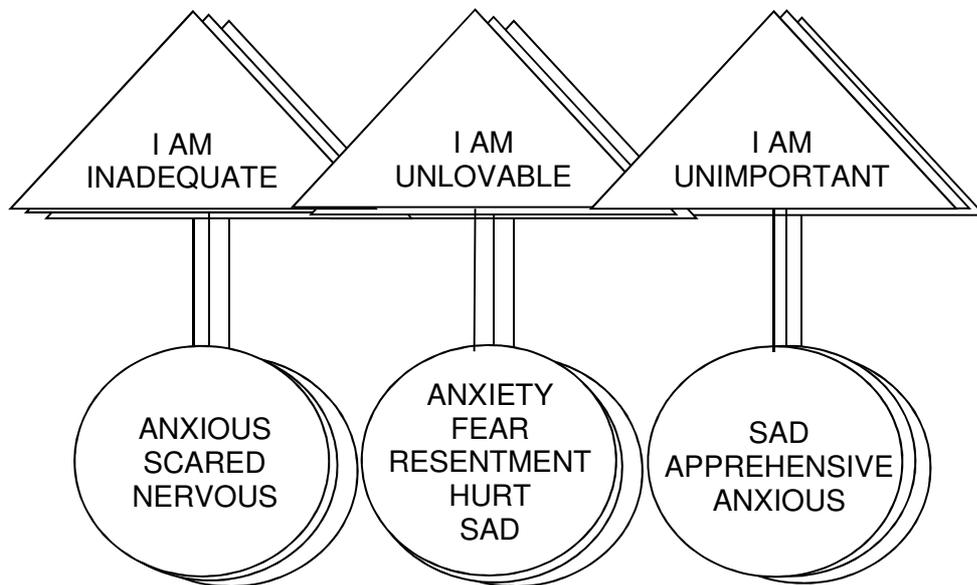

Repeat the following as a summary of what you have just said. point to the various boxes.

We start with needs because we are not sure how much thinking a baby can do. Needs motivate behaviour - behaviour has consequences - consequences affect the individual. The impact on the automatic memory of the consequences on the individual determines the strength of the memory retained. That is, experiences that have an intense emotional effect tend to be remembered much more than things that have no emotional impact.

If we store information which has no emotional meaning then our automatic memory is not affected, consequently, if we learn that the information we have is incorrect, we would have no problem in making changes to the memory. However, if the information had affected our automatic memory in any way, we would resist changing it.

Visualise the theories we have about ourselves as being thoughts attached to a lead weight which we call emotion.

Draw the pictures as shown below to give some idea what is meant.

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   I AM              I AM              I AM
INADEQUATE        UNLOVABLE        UNIMPORTANT


  ANXIOUS          ANXIETY
  SCARED            FEAR              SAD
  NERVOUS        RESENTMENT      APPREHENSIVE
                    HURT            ANXIOUS
                    SAD
```

The effect of the consequences on our automatic memory, determines the kind of beliefs, theories and ideas that we develop. Feelings stimulate thinking. If the consequences have a negative emotional impact we develop negative beliefs and vice-versa. For example: if as a child we were punished or ignored most of the time when we wanted to be loved (hugged, rewarded, accepted, acknowledged, listened to, approved of etc) for whatever reasons, we may have felt sad, hurt, scared or angry at that moment when we needed love and did not get it. The negative feeling/s together with the information from the significant person/s whom we wanted to be loved by, may have lead us to create the theory/belief that "I am not lovable."

Our parents are not our only teachers. Significant others such as sibling, grandparents, school teachers, friends and even the media may play a role in the development of beliefs and theories. Adults are our models. We do not know how to behave so we look towards adults as our model. The more significant the person in our life and the more we model our behaviour on them.

In some cultures, women, for example, tend to think that they are less important than men, or less intelligent or subservient to men. This theory was arrived at by watching how the parents treated each other and what happened when these beliefs were not followed by women. If children did not respect the beliefs about gender then there would be negative consequences.

Again the automatic memory would be affected, therefore, women follow these beliefs even if there are no men around otherwise they will experience fear, guilt and/or shame.

When you were a child, you created certain theories/beliefs because of the way your family reacted to your behaviour. You soon learned that the easiest and least painful way to survive was to meet their expectations. Were their expectations always reasonable, logical, rational, and immersed in love and respect? How many negative theories/beliefs do hold about yourself and others? Are those beliefs relevant in Australia today? How do your negative beliefs developed as a child, effect your expectations now?

Ten - twenty - thirty years later we are still motivated by beliefs/scripts/mental maps TRACKS, (different names given to same concept) that we made up as a child. They are perhaps slightly altered by adult life experiences, but basically still the same.

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Let us now jump to the present. How do we operate?   How does the past affect the present? The Model above shows how we developed our beliefs/mental maps/TRACKS. The Model below shows our TRACK now (how we function) with the internal learned Tracks still lurking in the background.
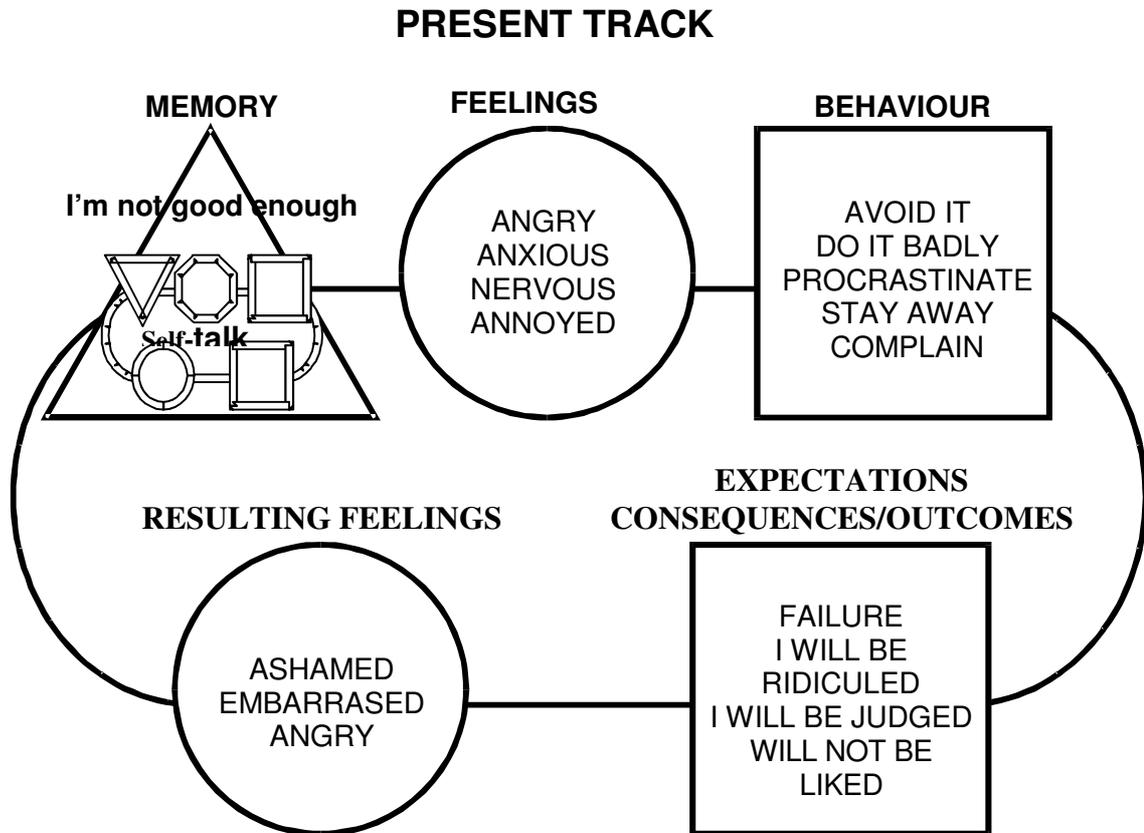
Draw the TRACK as below.

PRESENT TRACK

MEMORY   FEELINGS   BEHAVIOUR

Self-talk

RESULTING FEELINGS   EXPECTATIONS CONSEQUENCES/OUTCOMES
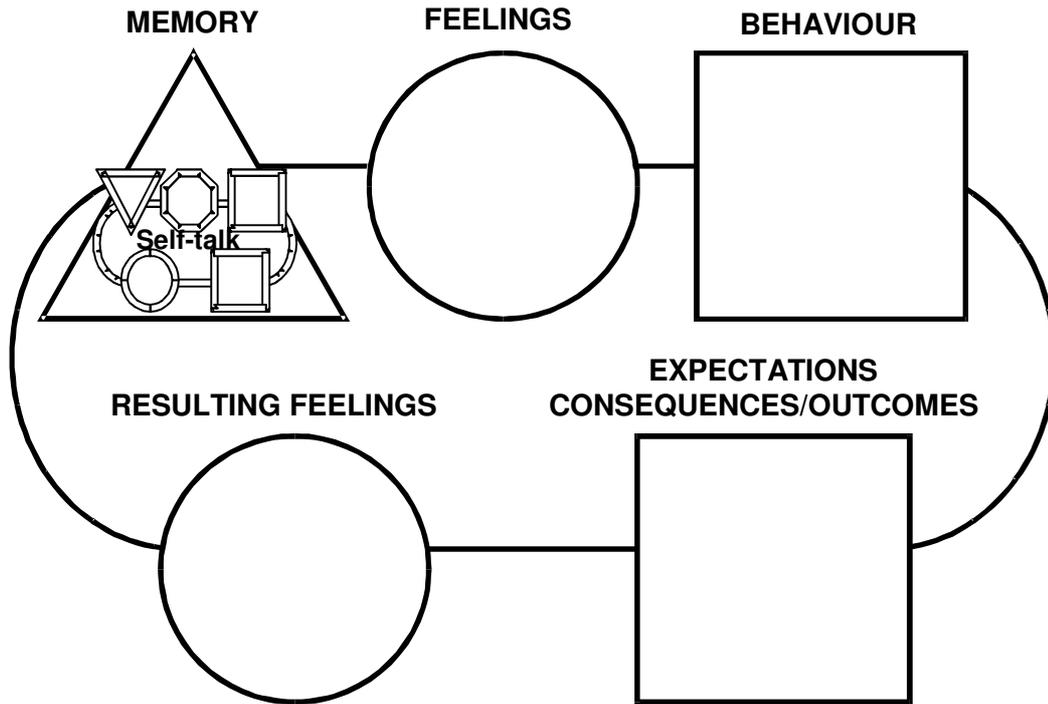
The triangle represents the stored information in our memory bank both cognitive and automatic (point to the developmental Track inside the triangle). **We store whole experiences, which are made up of: what we needed/wanted at the time; our actions or attempts to satisfy those needs/wants; the consequences of those actions, the impact that the consequences had on us and the theories we made up to explain the whole experience. We refer to this as the learned Track.**

An example of a Track..

PRESENT TRACK

MEMORY

I'm not good enough

Self-talk

FEELINGS

ANGRY
ANXIOUS
NERVOUS
ANNOYED

BEHAVIOUR

AVOID IT
DO IT BADLY
PROCRASTINATE
STAY AWAY
COMPLAIN

RESULTING FEELINGS

ASHAMED
EMBARRASED
ANGRY

**EXPECTATIONS
CONSEQUENCES/OUTCOMES**

FAILURE
I WILL BE
RIDICULED
I WILL BE JUDGED
WILL NOT BE
LIKED

What seems to happen is this; when we are confronted with a situation, a person, a thing, a comment, a Track or Tracks or programs that we learned in the past is activated. We experience in the here and now both the automatic and the thinking memory that belongs to or is associated with that Track/s formed in the past about the past. The feeling that we feel and the thinking that we do are more part of that past Track than the actual situation now.

We are not quite sure whether feeling or thinking comes first, it can be either or both at the same time. What is important is the fact that OUR MIND can tell our body anything AND OUR BODY DOES NOT KNOW THE DIFFERENCE BETWEEN WHAT HAS HAPPENED IN THE PAST AND WHAT IS HAPPENING NOW.

Our body does not know the difference between what we imagine and what is real. If

we imagine it we feel it. Most people do it randomly, however, we can harness the power of our imagination and use it our advantage. We can choose what we imagine and consequently can choose the way we feel.

To make it easier for us to remember that a good way to think about things is to imagine that we all have INNER WISDOM a WISE PART within us that is concerned about our happiness and well-being while still respecting the rights of others to happiness and well-being as well. This can be expressed as the INNER GOODNESS that we all posses, our essence, our life force.

This part does not judge us. It is gentle, wise and sensible and beyond our Tracks.

To get in touch with our WISE PART we need to:

(1)   **Check our feelings in the situation**

(2)   **Check the thoughts that go with the feelings**

(3)   **What exactly are we reacting to? Be specific.**

(4)   **Get in touch with our WISE PART and ask ourselves, do I want to go on feeling like this or do I want to feel different? I have a choice. (Look at the consequences for ourselves and others if we follow our feelings with behaviour). Will the outcome show respect for ourselves and the other? If not.....**

(5)   **What can I think to make myself feel better and manifest respect for myself and the other.**

In summary,

Tracks cause us to behave obsessively. We have to perform - or things have to be in a certain way. Our Tracks also cause us to make demands on ourselves, others and situations. The more rigid the Track/s - the stronger the obsession and the demand. The stronger the demand - the more intense the emotional reaction. Tracks behave like addictions.

To change Tracks we need to be aware of what general area of needs our emotions may be related to. Sometimes the demands we make are based on an irrational perception of needs, eg everybody has to like me. Therefore, we need to evaluate whether our needs are rational and fair. Then we have to deal with them in a responsible way.

CABCAA AS A COUNSELLING TOOL

From the above discussion it is evident that the model can be used at more than one level to show the client both how the Track is learned and the process by which the past dictates the present. Equally important is its versatility in relation to the focal point of the presenting problem. The model does not specify a beginning point apart from the initial development. Therefore, the counsellor can begin at any point in the cycle based on the client's presenting concern.

The starting point for the Track is dictated by the client's presenting concern, for example, if the client is feeling anxious, that is the current feeling state that is a concern and they want to change. We may proceed to map the track as follows at the appropriate time:
"We begin mapping the Track at the feeling circles, then we can go either back to the thinking triangle and ask – What kind of thoughts trigger the anxiety or what do you do – behaviour square – when you feel anxious and how is it affecting your life – consequent box. We explore the track as part of the counselling process. Identification of Tracks may take a considerable time. The client ends up with a map of her present state of being. Which include, thoughts, emotions, behaviours and outcomes for the person.

The client together with the counsellor map out a desired Track and work out ways of achieving that Track.

To achieve the desired Track a variety of therapeutic interventions can be used. Such interventions may focus on emotional regulation strategies, calming strategies, or cognitive restructuring, or reframing or gaining awareness. The counselling process to change tracks may integrate a variety of techniques suitable for that particular problem or client. There is no prescriptive technique that is applicable to all.

The aim is to change all or as many of the elements of the Track as possible simultaneously.

FIELD APPLICATION OF THE CABCAA MODEL.

Originally the Model was developed to facilitate counselling of children and adolescents but was extended with adults. A group program based on the Model was developed and tested under experimental conditions (Genovese, 1988).

With children and adolescents only the Action Stage of the Model is presented. They are told that in the same way that the brain controls the body, the mind controls the way we feel (no distinction is made between the brain and the mind). Children are asked to think of nice things that have happened to them and identify how they feel. They are then asked to think of bad things and identify how they feel. This is practised until it is clear to the child that different ways of thinking activate different feelings.

Children are taught about meta-cognitive skills. They are told that they can think about their thinking and therefore they can monitor and change the way they think. Once children show an understanding of this process an action Track is mapped out beginning at the point of concern. They are then asked, "Do you like being on this Track? or "Do you want to change Tracks?" If they wish to change Tracks then a desired new Track is created.

EFFICACY OF THE PROGRAM.

The efficacy of the therapeutic program, based on the model, was tested under experimental conditions using children between the ages 8 - 12. The two main interests in the study were: firstly, to ascertain if this program would promote change in cognition and behaviour that would generalise across settings

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and secondly, whether the change would be maintained. Maintenance was assessed by retesting the subjects in all areas a year after the program was completed.

Teachers in eight primary schools in the Perth Metropolitan area were asked to refer children whom they considered at risk socially and/or academically. The following problems were highlighted.

- (a) underachieving
- (b) disruptive
- (c) not motivated to learn (seen as lazy)
- (d) aggressive
- (e) withdrawn
- (f) daydreaming
- (g) excess emotional expression
- (h) unable to concentrate for any length of time
- (i) inattentive
- (j) attention seeking
- (k) negative towards self, school and/or others
- (l) rejected (by peers/others)
- (m) erratic performance
- (n) poor retention
- (0) poor social skills

The sample consisted of 128 children, 72 males and 56 females. Of these 64 were assigned randomly to the experimental condition (CABCAA group) and 64 to the control (Classroom group).

All children were tested three times: once prior to the commencement of the program, once at the completion of the program, and once at the follow-up one year later. At each assessment point the following measures were taken;

- (a) Self-esteem (The Lawrence Self-esteem Questionnaire (LAWSEQ) 1982), was used as the initial screening test.
- (b) Self-concept (Piers-Harris Children's Self-concept Scale, 1984),
- (c) Locus of control (Nowicki/Strickland Locus of Control Questionnaire, 1973).
- (d) Self-efficacy (Ollendick, 1982; Self-efficacy Questionnaire for Social Skills - Children).
- (e) Behaviour (Achenbach & Elderbrook, 1983; Child Behaviour Checklist, Teacher Rating Form (TRF)),
- (f) Academic performance (as per TRF),

To assess generalisation a short, open-ended evaluation questionnaire was sent to parents at the end of the program. The children were also given a short open- ended evaluation questionnaire.

RESULTS

Table 1.

Pretest, posttest and follow-up analysis of the dependent variables.

Dependent Measure	CABCAA Mean	SD		Classroom Mean	SD	
Self-concept.						
pretest	44.11	12.91		44.82	13.98	
posttest		52.84	13.53		51.12	14.89
follow-up	54.83	13.25		53.42	17.33	

TRF Behaviour

pretest	35.81	29.67		43.43	33.33	
posttest		26.17	18.95		26.79	21.51
follow-up	23.03	25.46		26.11	24.27	

Locus of Control

pretest	19.89	4.42		19.56	4.15	
posttest		21.48	5.35		20.03	5.10
follow-up	22.38	5.33		20.15	4.76	

Self-efficacy

pretest	24.95	4.42		29.10	9.16	
posttest		33.00	8.37		31.67	10.19
follow-up	34.50	8.94		29.22	8.96	

Academic Performance

pretest	15.60	4.23		16.10	4.38	
posttest		15.84	4.23		16.50	4.14
follow-up	16.98	5.39		16.54	3.80	

LAWSEQ

pretest	12.63	4.11		13.48	4.81	
posttest		19.05	6.56		18.21	6.96
follow-up	21.25	6.86		18.96	7.33	

At posttest the results showed that all measures, except academic performance, were affected by both the CABCAA and Classroom conditions. Self-concept and behaviour were equally effected by both conditions, however, statistical analysis of the results did reveal that locus of control, (1,106 df F = 14.8207 p < .001) and self-efficacy (1,106 df F = 10.0633 p <.002) were the two variables separating the CABCAA and Classroom conditions.

In the follow-up study 81% of the children from the CABCAA group and 86% of the children from the Classroom group were traced. These children had complete data, including teachers' rating on their behaviour.

The MANOVA on the posttreatment and follow-up data of all variables showed that overall there was a significant difference (p < .001) between CABCAA and Classroom condition. Again the locus of control (p < .001) and self-efficacy (p < .05) were the two main factors differentiating the two groups. The difference between posttreatment and follow-up results was close to being significant (p < .06).

The separate analysis (MANOVA) showed no significant difference between CABCAA and Classroom group in behaviour, self-concept and academic achievement (academic achievement p < .09). Leaders had no overall effect, however, as in the posttest analysis they did have an effect on locus of control and self-efficacy.

The parents' questionnaire was analysed separately. A total of 95 questionnaires were sent home and 81 were returned (85%). Of these 47 (94%) were from the CABCAA group and 34 (76%) from the Classroom group.

The results obtained from the parents' questionnaires are summarised in Figure 11.

In the children's evaluation there was no significant difference between the two groups in any responses.

The outcome in the follow-up analysis showed the same trend as the pre-post results with some exceptions.
> (1)   From pretest to posttest neither group showed changes in academic performance. However, at the follow-up the CABCAA group did show changes, in the positive direction,

approaching significance.

(2)   In all areas the CABCAA group continued to improve between post-test and follow-up.

(3)   The Classroom group maintained the same levels from posttest to follow-up, except for the measure of self-efficacy which reverted to pretest levels.

Of the children participating in both treatments 91%, were rated by teachers (at pretest) as having behaviour problems above the norm (as reported by Achenbach & Elderbrock, 1984). At follow-up, 17% of children from the CABCAA group were still rated as having behaviour problems, while of the Classroom group 38% still had problems.

A histogram of the TRF results for both conditions was constructed. Figures 5 and 6 shows the percentage of children (for each subscale) who scored above the norm in problem behaviour at pre-test, posttest and follow-up.

Figure 5.
Percentage of children scoring above the Normal Range in Problem Behaviour.
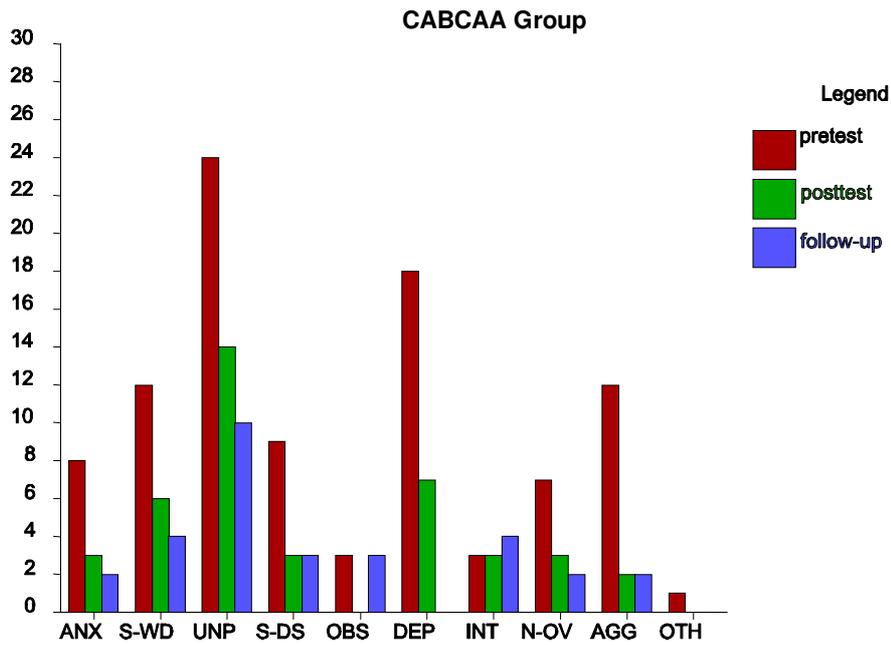
CABCAA Group

ANX - Anxious; *S-WD* - Social Withdrawal; *UNP* - Unpopular; *S-DS* - Self Destructive; *OBS* - Obsessive Compulsive; *DEP* - Depressed; *INT* - Inattentive; *N-OV* - Nervous Overactive; *AGG* - Aggressive; *OTH* - Other Problems.

Table 6.
Percentage of children scoring above the Normal Range in Problem Behaviour.
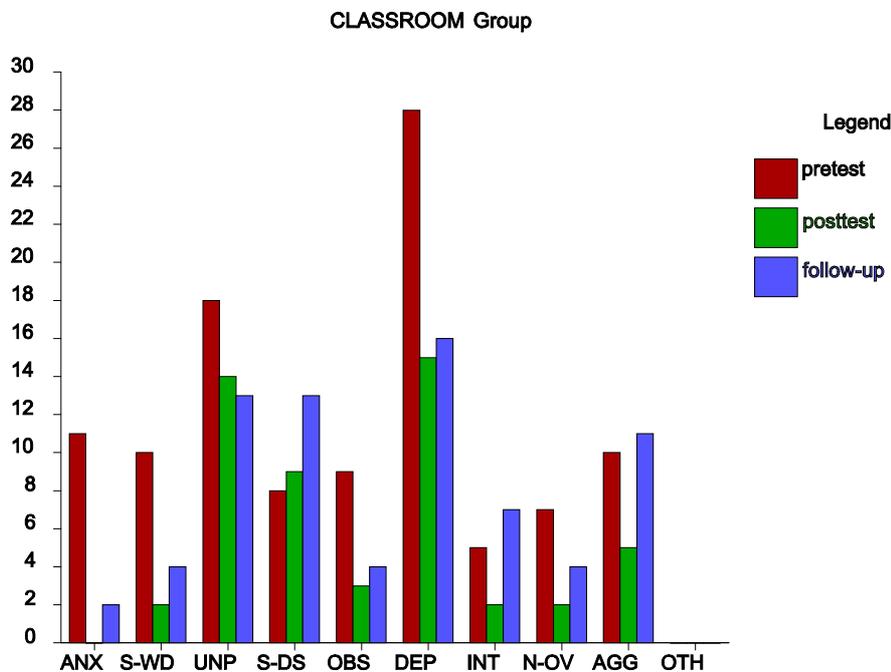
CLASSROOM Group

ANX - Anxious; *S-WD* - Social Withdrawal; *UNP* - Unpopular; *S-DS* - Self Destructive; *OBS* - Obsessive Compulsive; *DEP* - Depressed; *INT* - Inattentive; *N-OV* - Nervous Overactive; *AGG* - Aggressive; *OTH* - Other Problems.

Figures 7 and 8 show the percentage of participating children in both conditions scoring within the normal range or above (norms as reported by Piers-Harris, 1984) on the Self-concept Scale.

Figure 7.
Percentage of Children Scoring Within the Normal Range and Above
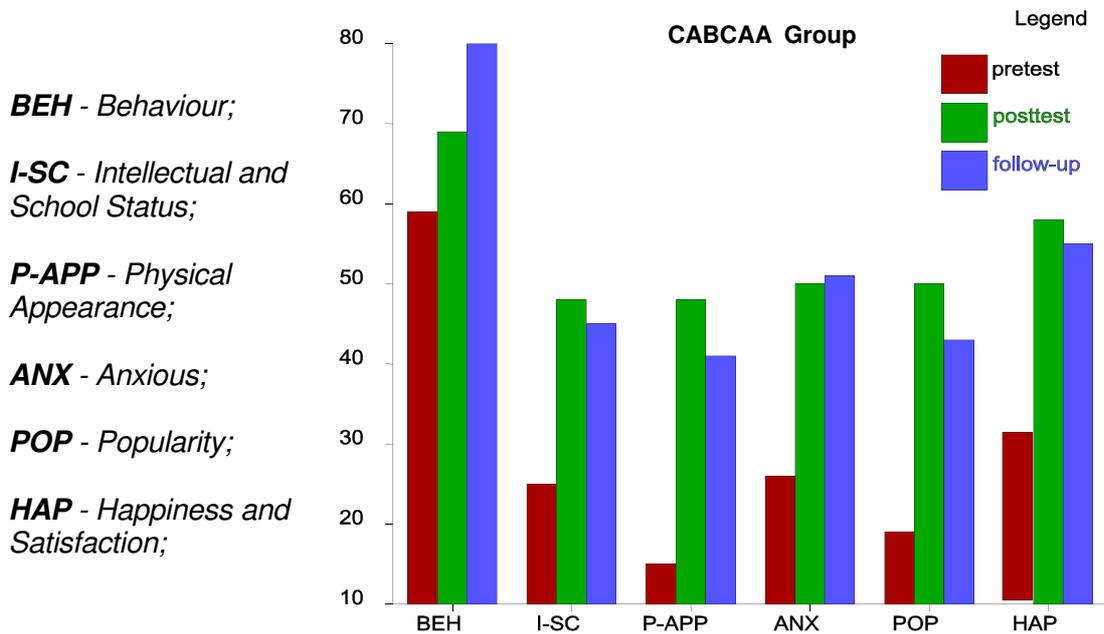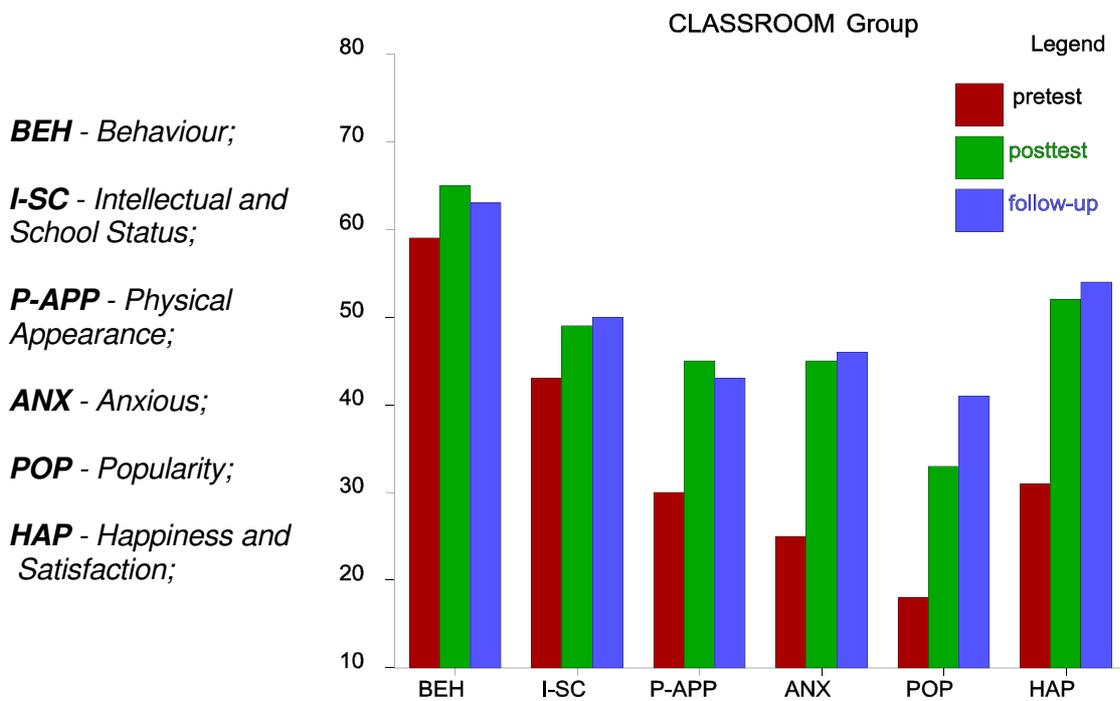on the Piers-Harris Self-Concept Test.

BEH - Behaviour;

I-SC - Intellectual and School Status;

P-APP - Physical Appearance;

ANX - Anxious;

POP - Popularity;

HAP - Happiness and Satisfaction;

Figure 8.
Percentage of Children Scoring Within the Normal Range and Above
on the Piers-Harris Self-Concept Test.

BEH - Behaviour;

I-SC - Intellectual and School Status;

P-APP - Physical Appearance;

ANX - Anxious;

POP - Popularity;

HAP - Happiness and Satisfaction;

Figures 9 and 10 shows the percentage of children in the CABCAA and Classroom group scoring within the normal range and above in academic behaviours as rated by teachers.

Figure 9.
Percentage of Children Scoring Within the Normal Range and Above in Academic Behaviours, as Rated by Teachers.
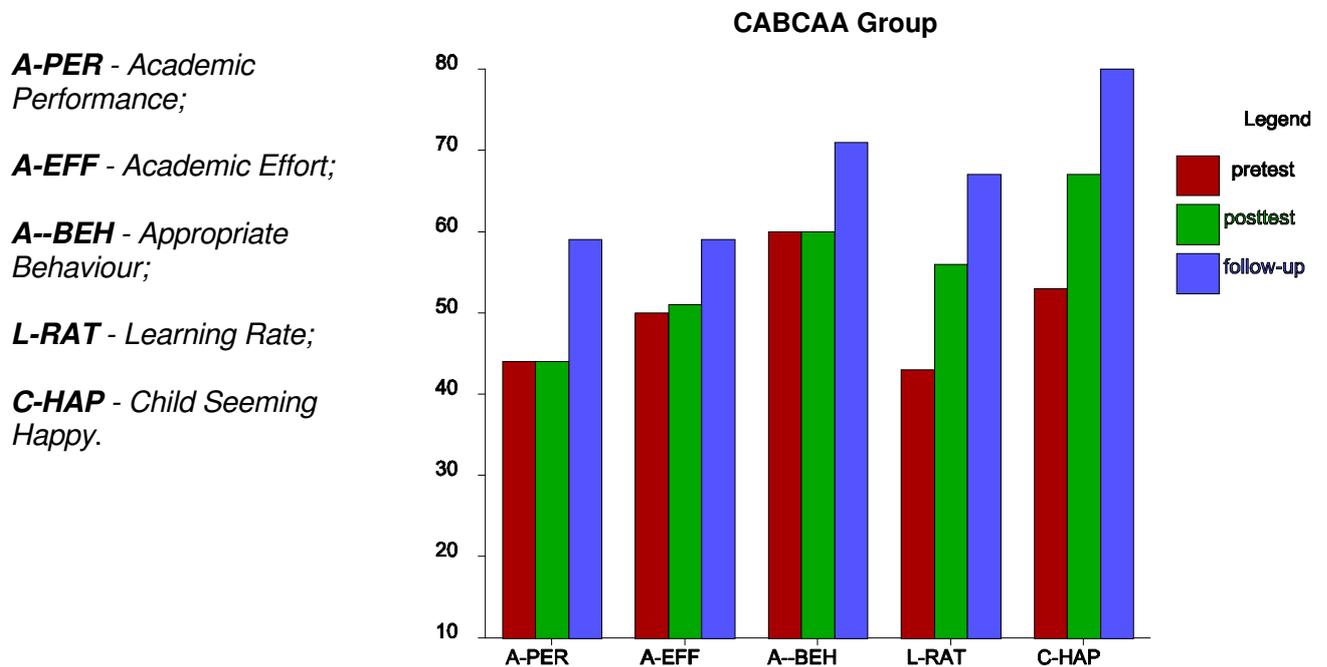
CABCAA Group

A-PER - *Academic Performance;*

A-EFF - *Academic Effort;*

A--BEH - *Appropriate Behaviour;*

L-RAT - *Learning Rate;*

C-HAP - *Child Seeming Happy.*

Figure 10.
Percentage of Children Scoring Within the Normal Range and Above in Academic Behaviours, as Rated by Teachers.

CLASSROOM Group

A-PER - *Academic Performance*

A-EFF - *Academic Effort;*

A--BEH - *Appropriate Behaviour;*

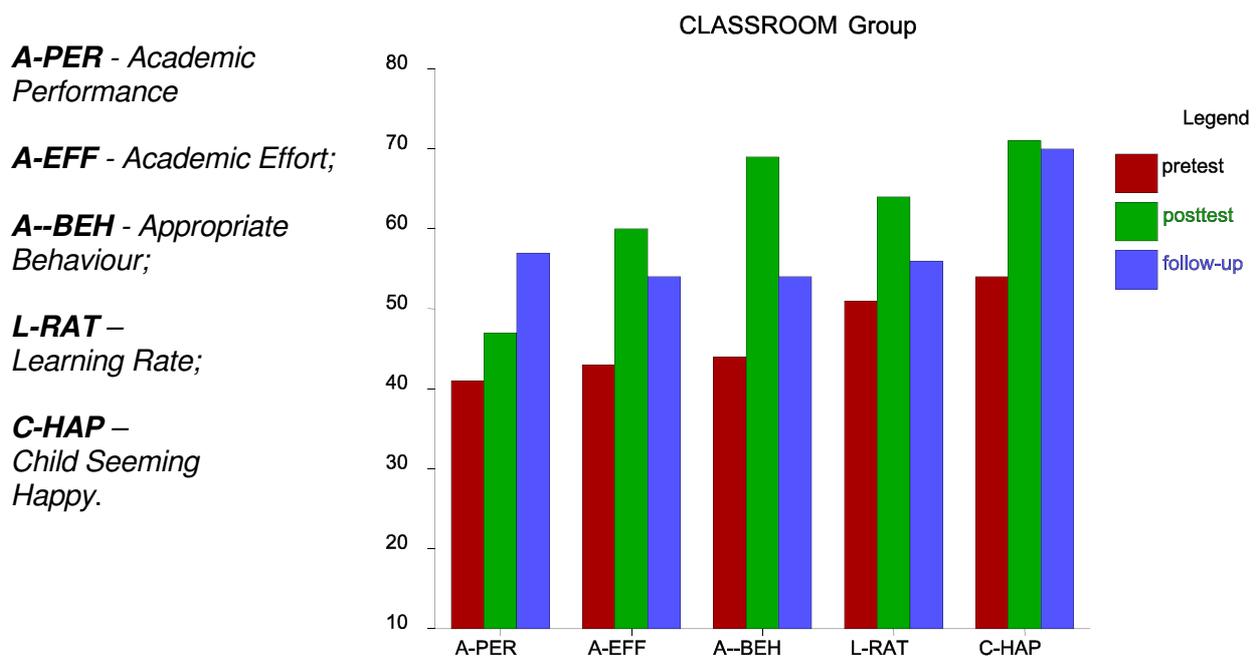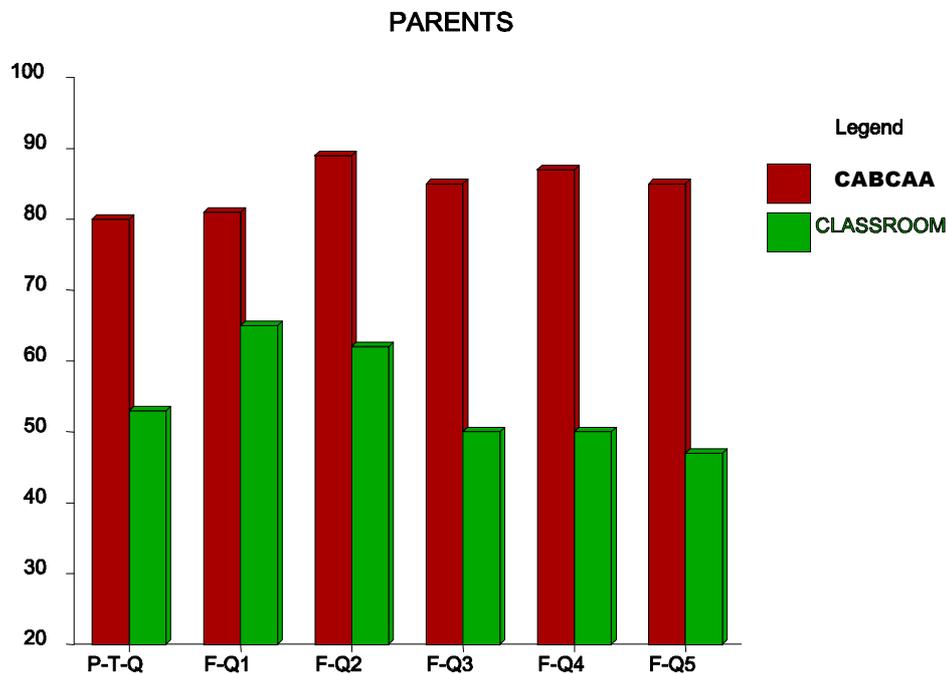**L-RAT** – *Learning Rate;*

C-HAP – *Child Seeming Happy.*

Figure 11 shows the percentage of parents who responded YES to the questions given.

Figure 11.
Percentage of Parents Responding YES

P-T-Q = Posttest question. Positive changes in behaviour.
(X^2 (1, N = 85) = 5.70, $\underline{p}$ < .02).
F-Q1 = Follow-up question. Did you notice changes at the end of the program last year?
(No sig.diff).
F-Q2 = Follow-up question. Were the changes positive?
(X^2 (1, N = 81) = 8.69, $\underline{p}$ < .01)
F-Q3 = Follow-up question. Have changes been maintained?
(X^2 (1, N = 81) = 11.66, $\underline{p}$ < .01)
F-Q4 = Follow-up question. Have more changes been made since then?
(X^2 (1, N = 81) = 12.34, $\underline{p}$ < .01)
F-Q5 = Follow-up question. Have the changes been positive?
(X^2 (1, N = 81) = 12.76, $\underline{p}$ < .01)

DISCUSSION.

The results obtained would suggest that this intervention program meets the aim of therapy. A primary aim of a therapeutic program is to persuade clients that their problem is potentially controllable by them. This awareness may also increase the clients expectations of their personal effectiveness (Stipek and Weisz, 1981). The two variables that differentiated the CABCAA and Classroom conditions both at posttest and follow-up were locus of control and self-efficacy. In these two areas this group continued to make significant gains after the program was completed. It would appear that the children became aware that their behaviour and outcome (consequences) were controllable by them. Consequently locus of control shifted towards internality and this shift was accompanied by changes in prediction about mastery of future action (self-efficacy).

Locus of control and self-efficacy are two constructs that effect intrinsic motivation (Boggiano, Main and Katz, 1988). Feelings of self-determination are critical determinants of intrinsic motivation (Deci and Ryan, 1980; 1985). Change induced through external control (e.g. tangible rewards, concern over evaluation by powerful others, fear of punishments) shift the perceived locus of causality from internal to

external. Feelings of self-determination thus tend to decrease and intrinsic motivation is lowered. Both the absence of controlling techniques and the belief that an event is self-initiated are necessary to experience a sense of self-determination. For any enduring change to occur, intrinsic motivation is critical.

In addition to locus of control, perception of competence is a major variable that is assumed to affect intrinsic motivation (Boggiano and Ruble, 1986; Deci and Ryan, 1985). Again, as with self-determination, the presence of pressure and/or manipulation ("excellent, you should keep up the good work") reduces subsequent intrinsic motivation (Ryan, 1982). The presence of a sense of self-determination, therefore, appears necessary for perceived competence to enhance intrinsic motivation (Boggiano, Main and Katz, 1988).

Very little reference is made to motivation to change in the literature regarding therapy with children. Kendall (1981) comments on the powerlessness of children in the therapeutic situation and the difficulty this presents in motivating children to change. Adults try to convince children that they need to change and what changes they need to make. This pressure and manipulation reduces feelings of self-determination and children therefore, make changes through external pressure rather than intrinsic motivation. In the environment where that pressure does not operate, they revert to their usual behaviour thus showing the lack of generalisation.

CABCAA does not coerce children into making any specific changes. The intervention strategy is designed to raise children's awareness about their present situation. Once they understand their situation they have the tools to change. The choice to change is theirs. In the author's experience (with approximately 500 children) no child has ever chosen to remain on the negative "Track". Perhaps by engaging metacognitive skills, conscious self-reflection is promoted, which may result in a realisation that there may be a more appropriate way of thinking and behaving that will get needs met.

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OTHER RESEARCH EVALUATING CABCAA

Fry,G (1993). A Component Analysis of a Cognitive-Behavioural Intervention Program for Children. Unpublished Master of Educational Psychology Dissertation. University of West Australia

Abstract
The aim of the study was to ascertain if a component of the CABCAA Changing Tracks Program for primary school children program was more efficacious then other components or more efficacious when the entire program was presented intact.
Seventy two primary school children were divided into four groups. One group received the entire program, the second group received the cognitive restructuring part of the program, a third group received the relaxation/meditation part of the program, and a fourth group received the non specific components of the program. The author of the program facilitated all of the groups. Pre-test data was collected one week before commencement of treatment and post-test data was collected one week after end of treatment. Pre-test and post –test were taken on self-esteem, locus of control and self-efficacy. There was no significant difference between the four groups at post-test. In all four groups self-esteem improved and was significant at .01 level. Locus of control became more internal and reached a significant level of .05 while self-efficacy showed no significant difference. It was concluded that either every component of the program was efficacious or since the common factor was the facilitator the results could be attributed to the facilitator. Some comments about the design and the sample size questions the results.

Harford-Taylor, C., (2004). Investigating the efficacy of Changing Tracks: A youth Mental Health Promotion Program. Unpublished master's dissertation. Curtin University of Technology, Perth, Western Australia
Abstract

The current study investigated the efficacy of the youth mental health promotion program, *Changing Tracks* to improve the social, affective and behavioural competence of participating adolescents. Two mixed gender groups were formed based on participation or otherwise in the *Changing Tracks.* The research project involved a split-plot design consisting of one within-subjects factor (time: pre-intervention, post-intervention and three-month follow-up) and one between-subjects factor (group: *Changing Tracks,* control). Five outcome variables were used to measure the impact of the program at each of the two post-test points. Groups were compared on measures of depressive symptomatology, social, affective and behavioural competence and global self-worth. Analyses of covariance (ANCOVAs), using pre-intervention scores as covariates, were conducted for each dependent variable at post-intervention and three-month follow-up to determine if the intervention group was differentiated on the basis of any of the dependent variables. Contrary to expectations, no significant group differences were reported in the level of depressive symptomatology (CDI) at either assessment points, after controlling for any between-group difference in pre-test scores. Adolescents in either group did not differ significantly in the level of self-reported depressive symptoms, with the mean depression scores for each group reducing over time.   In contrast, significant group differences were reported in level of self-reported global self-worth (Harter) immediately post-intervention and at three-month follow-up, after controlling for any between-group difference in pre-intervention scores. Both groups improved over time however intervention group children reported significantly more improvement in positive self-appraisals than control group children at both assessments. Findings regarding the level of strengths and difficulties were

mixed.In line with predictions, teachers of adolescents who participated in the intervention group reported significantly fewer total problems compared to the teacher reports of control adolescents immediately following the intervention. The mean teacher reported total difficulty scores based reduced for the intervention group during the intervention, whereas the group mean of the control group increased. However, group differences were not maintained over time. Contrary to expectations, the mean for teacher reports of total difficulties on the SDQ increased for the intervention group by the three-month follow up, while the group mean for the control group reduced over time. Although the mean total difficulty scores based on parent and self-report reduced for both groups over time, groups did not differ significantly at either assessment points. Qualitative evidence indicated that adolescents reported feeling more self-confident and more able to manage their emotions on completion of Changing Tracks. They also reported an increased ability to relax in stressful situations and reduced performance anxiety associated with the use of mindfulness exercises and relaxation techniques learned in Changing Tracks. Issues of implementation and the directions for future research are discussed.

Preece, M., (1994). <u>An investigation of the efficacy of a cognitive training program with primary school children.</u> Unpublished bachelor of science dissertation. University of Western Australia, Perth, Western Australia.

Abstract

Studies have shown that many "self-esteem" programs developed for children are largely ineffective in their aims to bring about positive changes. The types of programs that have been found to be the most effective are those that have a cognitive orientation and are led by professionals with training in the area of personal development such as psychologists (Hattie, 1992).
The aim of the present study was to investigate the efficacy of a cognitively oriented program called CABCAA or "Changing Tracks" which has recently been developed in Western Australia. The program which, amongst other things, aims to shift locus of control to be more internal, and empower children to change, employs many of the components of cognitive - behaviour therapy such as self-monitoring and cognitive restructuring, the concepts adapted in imaginative ways for use with children.

The CABCA group program is currently being implemented `en masse' to children in a number of Perth primary schools by teachers who have completed a three-day training program. In the present study involving 486 children from eight schools, self-report measures were taken of locus of control, social self-efficacy and self-concept, at a pre- and post-test stage 15 weeks apart. Changes were examined, comparing children who had taken part in the CABCA program over the three months to a control group of children who had not been involved in any special program.

Examining difference scores (post-test – pre-test), a significantly greater improvement on the measure of family self-concept was found for the CABCA group. No differences in the amount of improvement between the two groups were found on the locus of control and self-efficacy scales. Comparing the improvements of the different CABCA groups, locus of control appeared to be a critical variable with differences found as a function of school, group leader and the number of CABCA sessions completed. Qualitative data collected in the form of feedback from teachers and principals was supportive of the program, reporting a number of benefits. The findings of the study have implications for the types of programs that could, with benefit, be offered to children at the primary school level.

Smith, M., (2000). <u>An investigation of the effects of a locally based universal cognitive behavioural therapy program that aims to build resilience in Year 5 students.</u> Unpublished bachelor of psychology dissertation. Murdoch University, Perth, Western Australia.
<u>Abstract</u>

This study investigated the effects of a locally based universal cognitive behavioural therapy program that aims to build resilience in Year 5 students. three Metropolitan Government schools (Cloverdale Primary School, Tranby Primary School and Koorilla Primary School) were used in this study. In total 82 students comprised the sample (40 experimental, 42 control). The program, known as CABCAA, was run in 14 sessions for nine weeks. Pre and Post-testing measures were taken using the Lawrence Self-Esteem Questionnaire (LAWSEQ), the Piers-Harris Self-concept Scale, the Nowicki-Strickland Locus of Control Scale, the Self-Efficacy Questionnaire for Social Skills and the Child Behaviour Checklist-Teacher Rating Form (CBC-TRF). Results found significant improvements in the experimental group on the Self-Efficacy Questionnaire for Social Skills. Methodological issues and future directions for research are discussed.