Understanding The Model of Behavior Change

The Basic I Training uses a model of behavior change developed by researchers James Prochaska and Carlo DiClemente. This summary explains their main ideas and findings. For an excellent review article with more complete explanations, see: Prochaska JO, DiClemente CC, Norcross JC. In search of how people change: Applications to addictive behaviors. American Psychologist. 199247(9): 1102-1114.

Why Use This Model?

There are hundreds of different theories of human behavior. Prochaska and his colleagues wondered whether there were also hundreds of unique processes for change, or whether there were instead a limited number of processes for change that applied across different theories. They compared 18 leading systems of therapy, examining weight loss research and studies on people with addictive behaviors (smoking, drug use). They also carried out their own research on behavior change. They looked at people who changed with the help of therapy or special programs (smoking cessation or weight loss programs, for example), as well as "self changers"—people who made their changes without professional help.

They found that while researchers and individuals may have many different theories about behavior change, the actual process of change is remarkably similar across different studies using a variety of theoretical approaches. They developed a model that shows the stages and processes of behavior change, and called it a "Transtheoretical Model" because it applies across different theories.

Another important finding of the Prochaska research is that people changing behaviors generally go through five stages to make successful changes, and that interventions to help people change behaviors are much more effective when they are tailored to a person's specific stage of change. In some instances, a mismatched intervention can actually interfere with the process of behavior change and have a negative effect. The implications of these findings are clear: to be most effective, HIV counselors must determine a client's "stage of change" and select interventions appropriate to that particular stage.

Five Stages of Behavior Change

Prochaska and his colleagues identified five stages of behavior change. Each stage has its own characteristics. While one stage tends to follow another (that is, a person usually goes through stages 2 and 3 before getting to 4, rather than going directly from stage 1 to stage 4), the process is also very fluid and people generally move back and forth between stages for some time before achieving success in behavior change. It is important to remember that these are not strictly linear stages.

Stage 1: Not Thinking About It (Precontemplation)

At this stage, a person has no intention to change a behavior in the foreseeable future. In Prochaska's research, people were classified here if they had no serious intention to change the problem behavior. People in this stage are often unaware of the problems presented by their behavior—they are not having difficulty finding solutions, but in seeing that a problem exists in the first place.

Precontemplators who seek social services or counseling often do so because of pressure from others—family, courts and employers. The hallmark of this stage is resistance to recognizing or modifying a problem.

Certain types of HIV clients probably have a greater likelihood of being precontemplators. Examples of these special circumstances for testing include:

- Testing because of enticements (money, food)
- Individuals referred from TB sites because they have tested positive for TB
- Those who want to know their status for immigration or occupational purposes
- Someone who is testing because a new sexual

partner insists upon it.

Stage 2: Thinking About It (Contemplation)

In this stage, a person recognizes a problem exists and is seriously thinking about changing a behavior, but has not yet made a commitment to action. In Prochaska's research, people were classified here if they indicated they were seriously considering changing the behavior within the next six months. Despite this six-month intention, the contemplation stage can last for long periods of time. In fact, in one of Prochaska's studies of smokers, the most common outcome for 200 contemplators was no change to another stage throughout the entire two years of the study. The contemplator knows where he or she wants to go but isn't ready to do what is necessary to get there.

Contemplators spend considerable effort weighing the pros and cons of the problem and its solutions. The hallmark of this stage is the serious consideration of change, without adequate motivation to endure the effort, energy and loss change requires.

Among HIV clients, contemplators would be likely to make statements like, "I've been thinking I might need to do something about this behavior," or "This change is something I really should be working on," or "I know I should change this behavior, but..." They have not, however, made any actual modifications in their behavior.

Stage 3: Ready For Action (Preparation)

In this stage, a person brings together intention to change and preliminary behavioral efforts at making change. In Prochaska's research, people were classified here if they intended to take action within the next month, and/or had unsuccessfully taken action in the past year. This might include: for example, someone who wanted to stop smoking and had cut back the actual number of cigarettes smoked each day, or someone who had quit completely for two months, slipped and started smoking again, and intended to quit again within the month.

Among HIV clients, examples of people in the preparation stage include a client who has used a condom a few times in the past few months, and is motivated to do so with greater consistency in the future; or a client who had shared needles regularly until a needle exchange program opened up in his neighborhood two weeks ago, and has only shared on two occasions since then.

Stage 4: Action

In this stage, a person has made adaptations in behavior, experiences or environment in order to change the problem behavior. In Prochaska's research, people were classified here if they had successfully altered their behavior for a period from one day to six months. "Success" was defined by specific criteria, such as complete abstinence from smoking or drug use. This stage demands considerable time and energy, and is notable for overt and visible changes in behavior.

While action can be a dramatic and rewarding stage, it is not the same thing as successfully achieving and maintaining a behavior change. Action is a stage where people are particularly susceptible to relapse to an earlier stage—someone who gives up heroin use completely for three months, for example, and then uses again; or someone who has been consistent about using a condom for every act of intercourse for a month, and then slips and has unsafe sex.

Stage 5: Maintenance

In this stage, a person's efforts focus on maintaining a change in behavior, preventing relapse, and consolidating the gains of the action stage. In Prochaska's research, people were classified in this stage if they had successfully maintained their behavior change for six months or longer. While this was once considered a static stage ("Once you're there, you have arrived"), it is now viewed as a continuation rather than an absence of change ("Once you're there, there is still plenty of work to do"). Relapse to an earlier stage is still always possible.

Ten Processes Of Behavior Change

These five stages of behavior change describe in broad terms experiences people go through to achieve change. Prochaska's research also looked at the specific processes that people use to get from one stage to the next. Looking at many studies representing a wide range of psychological theories of behavior and change, he was able to describe ten processes of change that occurred consistently throughout the research.

Further study brought to light an important fact: use of these ten processes was linked to a person's stage of change. In other words, people in one stage were most likely to use some of these processes but not others.

As would be expected, precontemplators rarely used any processes of change. In fact, they were likely to process less information about their problems, spend less time considering how they think or feel about the problem behavior, and have fewer feelings about the negative aspects of their problem behaviors (they were not bothered by them) than people in other stages.

Contemplators, however, were more engaged by processes that provided information and increased their understanding of the behavior (observation, confrontation, interpretation, reading). They were interested in the effects of the behavior on their environment (family and relationships, home life, financial security, health). They also were drawn to processes of dramatic relief—the experience and expression of feelings regarding the problem and solutions.

As individuals learned more about the effects of the behavior on their lives, they became more likely to re-evaluate values and to reassess their sense of self ("What kind of person am I? Are the behavior and its consequences consistent with who I feel myself to be, or who I want to be?"). This reassessment often precipitated a move into the preparation stage.

Movement from pre-contemplation to contemplation stages, and from contemplation to preparation, was most common when cognitive, affective and evaluative processes of change were used. These processes emphasize how people think and feel about the behavior, what they believe the consequences of their behavior are, and what the consequences of change are likely to be.

In the preparation stage, people continued to use many of these same processes, but added in steps toward action, such as counter-conditioning (substituting alternatives for problem behaviors, such as relaxation, desensitization, assertiveness, or positive self-statements), and stimulus control (changing one's environment or actions to avoid high risk situations).

During the action stage, people used self-liberation techniques (commitment to act and belief in ability to change, decision-making therapies), reflecting their increasing sense of autonomy. They continued to use counter-conditioning and stimulus control, and also used processes of reinforcement management (rewarding self, or being rewarded by others, for changes; making contracts about behaviors). Action is a particularly demanding stage, and people were also more likely to depend upon the support of friends, family and other helping relationships.

The maintenance stage builds on each of the processes already used. People in maintenance had a sense of becoming the kind of person they wanted to be. They continued to rely on helping relationships, and used counter-conditioning and stimulus control techniques, especially when these were based on the conviction that maintaining the change supported a sense of self highly valued by themselves and at least one significant other.

The Importance of Matching Stages and Processes

As Prochaska's group gathered more information on how certain processes of change seemed most effective during specific stages of change, another interesting finding came to light. When processes of change and stages of change were mismatched, outcomes were significantly less successful. When they were matched, however, outcomes were more successful. In other words, when people were asked to use a process of change appropriate to their particular stage of change, they were significantly more likely to succeed in making a change in behavior.

In fact, Prochaska even found that providers were less likely to recruit people into their programs in the first place if the recruitment messages did not match people's stage of change. They cite the example of a major HMO, where over 70% of eligible smokers indicated they would enroll in a professionally developed self-help program if it were offered. The HMO spent considerable effort and resources developing a sophisticated, action-oriented program. Only 4% of the smokers signed up. This outcome highlights the fact that the vast majority of people with addictive or problem behaviors (including many HIV counseling clients) are not in the action stage. Among smokers, 10-15% are in the preparation stage, 30-40% are contemplators, and 50-60% are precontemplators. Prochaska points out that if these figures hold for other kinds of behaviors, "professionals approaching communities and work sites with only action-oriented programs are likely to underserve, or not serve the majority of their target population."

They cite another impressive example where matching processes to stages increased the effectiveness of the intervention. An intensive smoking cessation program

was developed for cardiac patients, emphasizing action and maintenance processes (personal counseling in the hospital, monthly telephone counseling follow-up). This program was extraordinarily successful for patients in action and preparation stages—94% were not smoking at six-month follow-up. This compares with a 66% rate for a control group of similar patients in similar stages receiving traditional interventions about smoking cessation (counseling and information). However, patients in precontemplation or contemplation stages who received the intensive program did no better than their similar control group receiving traditional interventions. At the study's end, 22% of precontemplators and 43% of contemplators had been smoke free for six months.

Outcomes across many studies were consistently correlated to stage of change. The overall amount of success people reported after interventions was strongly related to the stage they were in before starting treatment. In fact, in one study of a weight control program, the stages of change were the second best predictors of outcome, better than age, socioeconomic status, problem severity and duration, goals and expectations, self-efficacy and social support. The only more consistent predictor of outcome was what processes of change the clients used early in therapy. Further, they found that people who were helped to progress from one stage to the next—from contemplation to preparation, for example—were twice as likely to go on to make successful changes on their own in the future.

Implications For HIV Counseling

These findings have very powerful implications for HIV counselors, especially those working with clients who do not change over long periods of time or who relapse. Counselors often tend to develop a few favored techniques they are particularly comfortable with or that work especially well with many clients. In some cases, however, these techniques may not match a client's stage of change. The techniques will therefore be less effective than other, more carefully matched interventions.

Consider for example a program that asks participants to make a written or social (verbal) contract to avoid unsafe sex, and identifies "buddies" they can call if they find themselves in a situation where relapse seems likely. This is the model of change used by 12-step programs, many teen drug abuse programs and even teen abstinence programs. It is an excellent strategy for someone in the action or maintenance stage of behavior change and, with a little additional support, might be effective for someone in the preparation stage. Remember, however, that most people with problem behaviors are not in the action stage. This program is unlikely to be effective for the large numbers of people in the precontemplation or contemplation stage.

Think instead about a program that asks people to weigh the pros and cons of maintaining vs. changing behaviors. This kind of "cost-benefits analysis" might provide a shift for a non-contemplator, and would be consistent with the interests of the contemplator. For someone who has been in the contemplation stage for some time, however, a strict cost-benefits analysis is unlikely to bring about a meaningful shift in intention to change. A more useful strategy might be a deeper exploration of the cost and benefits in relation to the person's sense of self ("What kind of person am I? What does this behavior, or this behavior change, have to do with who I am and who I want to be?"). This exploration is more likely to advance someone to the preparation stage.

The cost-benefits analysis would be of little use to someone in the action stage who has already completed this kind of process and is ready and able to do something more direct about his or her behavior.

HIV counselors who understand this model and how to match interventions to stages can select processes that help advance people in the earlier stages (precontemplation, contemplation, preparation), and support people in the action and maintenance stages. Remember, Prochaska's research indicated that people who were helped by an intervention to advance from one stage to another would be twice as likely to make further successful changes on their own in the future. The emphasis in HIV counseling can be determining a person's stage of change and selecting interventions to advance that person to the next stage, or prevent relapse to an earlier stage. This strategy will be far more effective than trying to move every client, no matter what their circumstance or stage of change, to immediate and complete abstinence from HIV risk.