

STAGES OF CHANGE

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Empirical research on the stages of change has taken a number of tacks over the past 20 years. In this article, we review those published research studies that have directly examined the stages (precontemplation, contemplation, preparation, action, maintenance, and termination) as they relate to treatment outcome, broadly defined. The cumulative evidence indicates that tailoring the therapy relationship and treatment intervention to the stage of change can enhance outcome, specifically in the percentage of patients completing therapy and in the ultimate success of treatment. Several limitations of this body of research are noted. We conclude by advancing therapeutic practices both for conventional psychotherapy with individual patients and for proactive recruitment of entire populations.

In the transtheoretical model, behavior change is conceptualized as a process that unfolds over time and involves progression through a series of six stages: precontemplation, contemplation, preparation, action, maintenance, and termination. At each stage of change, different processes of change optimally produce progress. Matching change processes to the respective stages requires that the therapeutic relationship be matched to the client's stage of change. Furthermore, as clients progress from one stage to the next the therapeutic

relationship also progresses. In this article, we review the cumulative research evidence on how tailoring the therapy relationship to stage of change can enhance outcome, specifically in the percentage of patients completing therapy and in the ultimate success of treatment.

Stage Definitions and Assessment

Each stage represents a period of time as well as a set of tasks needed for movement to the next stage. Although the time an individual spends in each stage will vary, the tasks to be accomplished are assumed to be invariant.

Precontemplation is the stage in which there is no intention to change behavior in the foreseeable future. Most individuals in this stage are unaware or under-aware of their problems. Families, friends, neighbors, or employees, however, are often well aware that the precontemplators have problems. When precontemplators present for psychotherapy, they often do so because of pressure from others.

There are multiple ways to measure stage of change. In our studies employing the discrete measure of stages, we ask if the individual is seriously intending to change the problem in the near future, typically within the next 6 months. If not, they are classified as precontemplators. Even precontemplators can *wish* to change but this is quite different from intending or seriously considering change. Items that are used to identify precontemplation on the continuous stage-of-change measure (McConaughy, Prochaska, & Velicer, 1983) include "As far as I'm concerned, I don't have any problems that need changing" and "I guess I have faults but there's nothing that I really need to change."

Contemplation is the stage in which people are aware that a problem exists and are seriously thinking about overcoming it but have not yet made a commitment to take action. People frequently remain stuck in the contemplation stage for long periods. On discrete measures, individuals who state that they are seriously considering

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changing the problem behavior in the next 6 months are classified as contemplators. On the continuous measure these individuals would be endorsing such items as "I have a problem and I really think I should work on it" and "I've been thinking that I might want to change something about myself."

Preparation is a stage that combines intention and behavioral criteria. Individuals in this stage are intending to take action in the next month and have unsuccessfully taken action in the past year. As a group, individuals who are prepared for action report some small behavioral changes—"baby steps," so to speak. While they have made some reductions in their problem, individuals in the preparation stage have not yet reached a criterion for effective action, such as abstinence from smoking or absence of clinical depression. They are intending, however, to take such action in the very near future. On the continuous measure they score high on both the contemplation and action scales.

Action is the stage in which individuals modify their behavior, experiences, and environment in order to overcome their problems. Action involves the most overt behavioral changes and requires considerable commitment of time and energy. Modifications of the problem behavior made in the action stage tend to be most visible and receive the greatest external recognition. Individuals are classified in the action stage if they have successfully altered the dysfunctional behavior for a period from 1 day to 6 months. On the continuous measure individuals in the action stage endorse statements like, "I am really working hard to change" and "Anyone can talk about changing; I am actually doing something about it." They score high on the action scale and lower on the other scales.

Maintenance is the stage in which people work to prevent relapse and consolidate the gains attained during action. Being able to remain free of the problem behavior and to consistently engage in a new incompatible behavior for more than 6 months are the criteria for considering someone to be in the maintenance stage. On the continuous measure, representative maintenance items are, "I may need a boost right now to help me maintain the changes I've already made" and "I'm here to prevent myself from having a relapse of my problem."

Termination is the stage in which people have completed the change process and no longer have

to work to prevent relapse. Termination is defined as total confidence or self-efficacy across all high-risk situations and zero temptation to relapse.

Research Review

Empirical research on the stages of change has taken a number of tacks over the past 20 years (for reviews, see DiClemente, 1991; Prochaska, DiClemente, & Norcross, 1992; Prochaska, Redding, & Evers, in press; Norcross, 2002a, 2002b). Here, we review only those published research studies that have directly examined the stages and processes of change as they relate to treatment outcome, broadly defined.

Stages \times Processes

The transtheoretical model posits that different processes of change are differentially effective in certain stages of change. In general terms, change processes traditionally associated with the experiential, cognitive, and psychoanalytic orientations are most useful during the earlier precontemplation and contemplation stages. Change processes traditionally associated with the existential and behavioral traditions, by contrast, are most useful during action and maintenance.

Twenty years of research in behavioral medicine and psychotherapy converge in showing that different processes of change are indeed differentially effective in certain stages of change. Rosen (2000) published a meta-analysis of 47 cross-sectional studies examining the relationships of the stages and the processes of change. The studies involved smoking, substance abuse, exercise, diet, and psychotherapy. The mean effect size (d) was .70 for variation in cognitive-affect processes by stage and .80 for variation in behavioral processes by stage, both moderate to large effects. At the same time, the sequencing of change processes by stage varied somewhat by disorder or sample. Of particular interest was the finding that "use of helping relationships was strongly related to stages in studies of psychotherapy" (Rosen, 2000, p. 601).

The therapist's stance at different stages can be characterized as follows. With patients in precontemplation, often the role is like that of a *nurturing parent* joining with a resistant and defensive youngster who is both drawn to and repelled by the prospects of becoming more independent. With clients in contemplation, the role is akin to a *Socratic* teacher who encourages clients to achieve their own insights into their condition.

With clients who are in the preparation stage, the stance is more like that of an *experienced coach* who has been through many crucial matches and can provide a fine game plan or can review the participant's own plan. With clients who are progressing into action and maintenance, the psychotherapist becomes more of a *consultant* who is available to provide expert advice and support when action is not progressing as smoothly as expected.

Predicting Dropout

When people present for psychotherapy, the initial challenge is to help them continue. A meta-analysis across 126 studies found that the dropout rate was about 50% (Wierzbicki & Pekarik, 1993).

Research has identified stage-of-change-related variables as the best predictors of dropout across a growing number of problems, such as heroin addiction, cocaine abuse, alcoholism, domestic violence, obesity, chronic mental illness, and mental health diagnoses. In one of our studies we were able to predict psychotherapy dropout with 90% accuracy among clients with a variety of mental health problems (Brogan, Prochaska, & Prochaska, 1999). The 40% of the patients who terminated quickly (fewer than three sessions) and prematurely, as judged by their therapists, had a group profile representing the precontemplation stage. The 20% of patients who terminated quickly but appropriately had a group profile representing action. The 40% who continued in therapy had a mixed profile, with the majority being in the contemplation stage.

Stage as an Outcome Predictor

The amount of progress clients make during treatment tends to be a function of their pretreatment stage of change. For example, an intensive action- and maintenance-oriented smoking-cessation program for cardiac patients achieved success for 22% of precontemplators and 43% of the contemplators; 76% of those in action or prepared for action at the start of the study were not smoking 6 months later (Ockene, Kristellar, Ockene, & Goldberg, 1992).

If clients progress from one stage to the next during the first month of treatment, they can double their chances of taking action in the following 6 months. Among smokers, for example, of the precontemplators who were still in precontemplation at 1-month follow-up, only 3% took action

by 6 months. For the precontemplators who progressed to contemplation at 1 month, 7% took action by 6 months. Similarly, of the contemplators who remained in contemplation at 1 month, only 20% took action by 6 months. At 1 month, 41% of the contemplators who progressed to the preparation stage attempted to quit by 6 months (Prochaska, Norcross, & DiClemente, 1995). These data indicate that treatment programs designed to help people progress just one stage in a month may be able to double the chances of participants taking action on their own in the near future.

Proactive Treatment

Psychotherapy has traditionally taken a passive and narrow perspective on its relationship to patient populations. Like most health care providers, psychotherapists initially relate to patient populations in a reactive pattern. Therapists wait for patients to seek their services. Passive reactive relating is appropriate when practicing acute care—when patients are acutely ill, in pain, or distressed. But the major cripples and cost-drivers of the 20th century are chronic conditions.

One of our recent studies investigated the results of reaching out to patient populations. With a representative sample of 5,000 smokers we proactively offered therapeutic services. Because we knew less than 20% of this population would be ready to take action on their smoking, we let them know the services were designed for smokers at every stage of change: the 20% or less in the preparation stage who were ready to act in the next month; the 40% in the contemplation stage who were getting ready to quit in the next 6 months; and the 40% in the precontemplation stage who were not ready to quit.

By proactively reaching out to these patients and customizing our clinical communications to their stage of change we were able to have 80% participate in our clinical services (Prochaska, Velicer et al., 2001). That results in a quantum increase in our ability to care for this addiction. We replicated these results with a health maintenance organizations (HMO) population of about 4,000 smokers (Prochaska & Velicer et al., 2000) and a teenage population of about 4,000 teenagers with multiple behavior risks and their parents (Prochaska, Redding et al., 2002).

Two transformations in therapeutic relating can increase the percentage of high-risk and suffering people receiving clinical services. The first is to

reach out proactively and offer them therapeutic services. The second is to match the service to each individual's stage of change.

Stage-Matched Treatments

A series of clinical trials applying stage-matched interventions have been conducted. In our first large-scale clinical trial, we compared four treatments: a home-based action-oriented cessation program (standardized), stage-matched manuals (individualized), expert system computer reports plus manuals (interactive), and counselors plus computers and manuals (personalized). We randomly assigned by stage 739 smokers to one of the four treatments (Prochaska, DiClemente, Velicer, & Rossi, 1993).

In the computer condition, participants completed by mail or telephone 40 questions that were entered into our central computers that generated feedback reports. These reports informed participants about their stage of change, their pros and cons of changing, and their use of change processes appropriate to their stages. At baseline, participants were given positive feedback on what they were doing correctly and guidance on which principles and processes they needed to apply more in order to progress. In two progress reports delivered over the next 6 months, participants also received positive feedback on any improvement they made on any of the variables relevant to progressing.

In the personalized condition, smokers received four proactive counselor calls over the 6-month intervention. Three of the calls were based on the computer reports. Counselors reported much more difficulty in interacting with participants without any progress data. Without scientific assessments, it was harder for both clients and counselors to tell whether any significant progress had occurred since their last interaction.

Point-prevalence abstinence rates were compared for each of the four treatments over 18 months with treatment ending at 6 months. The two self-help manual conditions paralleled each other for 12 months. At 18 months, the stage-matched manuals moved ahead (18% vs. 11% abstinent). This is an example of a delayed action effect, which we often observe with stage-matched programs specifically and others have observed with self-help programs generally. It takes time for participants in early stages to progress all the way to action.

The computer alone and computer plus counselor conditions paralleled each other for 12 months. Then, the effects of the counselor condition flattened out (18%) while the computer condition effects continued to increase (25% abstinent).

The next test was to demonstrate the efficacy of the expert system when applied to an entire population recruited proactively. With over 80% of 5,170 smokers participating and fewer than 20% in the preparation stage, we demonstrated significant benefit of the expert system at each 6-month follow-up (Prochaska, Velicer et al., 2001). The point-prevalent abstinence rates for expert systems versus assessment alone were 9.7% versus 7.4%; 18.0% versus 14.5%; 21.7% versus 16.6%, and 25.6% versus 19.7% at 6, 12, 18, and 24 months, respectively. The advantages over proactive assessment alone increased at each follow-up for the full 2 years assessed. The implications here are that stage-matched treatments in a population can continue to demonstrate benefits long after the intervention has ended.

The expert system's efficacy was replicated in an HMO population of 4,000 smokers with 85% participation (Prochaska et al., 2000). In the first population-based study, the expert system was 34% more effective than assessment alone; in the second it was 31% more effective (23.2% abstinent vs. 17.5%). These replicated differences were clinically significant as well. While working on a population basis, we were able to produce the level of success normally found only in intense clinic-based programs with low participation rates of much more selected samples of smokers, namely about 25% abstinence at long-term follow-up.

Limitations of the Research

Although at least 100 empirical studies have been conducted on the core transtheoretical construct of the stages of change, none have directly and prospectively matched and mismatched the therapist's relational style in psychotherapy outcome studies. Rather, the available research concerns the predictive utility of the stages of change in terms of outcomes and dropouts, the differential use of the processes of change at various stages of change, and the relative efficacy of diverse forms of treatment. Further, the majority of published research concerns self-help interventions for addictive behaviors, as contrasted to psychotherapy for a wide range of neurotic disorders.

Therapeutic Practices

- *Assess the client's stage of change.* Probably the most obvious and direct implication of the research evidence is the need to assess the stage of a client's readiness for change and to tailor therapy relationships and interventions accordingly.
- *Beware of treating all patients as though they are in action.* Professionals frequently design excellent action-oriented treatments, but then are disappointed when only a small percentage of clients remain in therapy. The vast majority of patients are *not* in the action stage. Aggregating across studies and populations, we estimate that 10% to 20% are prepared for action, approximately 30% to 40% are in the contemplation stage, and 50% to 60% in the precontemplation stage. Thus, those professionals only with action-oriented programs are likely to underserve or misserve the majority of their target population.
- *Set realistic goals; move one stage at a time.* A reasonable expectation for many patients is to set realistic goals, such as progressing from precontemplation to contemplation. Such progress means that patients are changing, if we view change as a process that unfolds over time, through a series of stages. Helping patients break out of the stuck phase of precontemplation is a therapeutic success, since it about doubles the chances that patients will take effective action in the next 6 months. If we can help them progress two stages with brief therapy, we triple to quadruple the chances they will take effective action.
- *Prescribe stage-matched "relationships of choice" as well as "treatments of choice."* We conceptualize this practice, paralleling the notion of "treatments of choice" in terms of techniques, as offering "therapeutic relationships of choice" in terms of interpersonal stances (Norcross, 1993). The integration of stages of change and relationships of choice is an important practical guide for psychotherapists. Once you know a patient's stage of change, then you will know which relationship stances to apply in order to help him or her progress to the next stage and eventually to maintenance. Rather than apply the relationship stances in a haphazard or trial-and-error manner, practitioners can use them in a more systematic and efficient style across the course of psychotherapy.
- *Avoid mismatching stages and processes.* A person's stage of change provides proscriptive as well as prescriptive information on treatments of choice. Action-oriented therapies may be quite effective with individuals who are in the preparation or action stages. These same programs may be ineffective or detrimental, however, with individuals in precontemplation or contemplation stages.
We have observed two frequent mismatches (Prochaska et al., 1995). First, some therapists and self-changers appear to rely primarily on change processes most indicated for the contemplation stage—consciousness raising, self-reevaluation—while they are moving into the action stage. They try to modify behaviors by becoming more aware, a common criticism of classical psychoanalysis: insight alone does not necessarily bring about behavior change. Second, other therapists and self-changers rely primarily on change processes most indicated for the action stage—reinforcement management, stimulus control, and counterconditioning—without the requisite awareness, decision making, and readiness provided in the contemplation and preparation stages. They try to modify behavior without awareness, a common criticism of radical behaviorism: overt action without insight is likely to lead to temporary change.
- *Shift to proactive recruitment in population-based treatments.* If our results continue to be replicated, proactive and stage-matched treatments will be able to produce enormous impacts on entire populations.

References

- BROGAN, M. M., PROCHASKA, J. O., & PROCHASKA, J. M. (1999). Predicting termination and continuation status in psychotherapy using the transtheoretical model. *Psychotherapy, 36*, 105–113.
- DiCLEMENTE, C. C. (1991). Motivational interviewing and the stages of change. In W. R. Miller & S. Rollnick (Eds.), *Motivational interviewing: Preparing people for change*. New York: Guilford.
- McCONAUGHY, E. A., PROCHASKA, J. P., & VELICER, W. F. (1983). Stages of change in psychotherapy: Measurement and sample profiles. *Psychotherapy, 20*, 368–375.
- NORCROSS, J. C. (1993). The relationship of choice: Matching the therapist's stance to individual clients. *Psychotherapy, 30*, 402–403.
- OCKENE, J., KRISTELLAR, J., OCKENE, I., & GOLDBERG, R. (1992). Smoking cessation and severity of illness. *Health Psychology, 11*, 119–126.
- PROCHASKA, J. O., DiCLEMENTE, C. C., & NORCROSS, J. C. (1992). In search of how people change: Applications to addictive behaviors. *American Psychologist, 47*, 1102–1114.

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- PROCHASKA, J. O., DiCLEMENTE, C. C., VELICER, W. F., & ROSSI, J. S. (1993). Standardized, individualized, interactive, and personalized self-help programs for smoking cessation. *Health Psychology, 13*, 39-46.
- PROCHASKA, J. O., & NORCROSS, J. C. (2002a). *Systems of psychotherapy: A transtheoretical analysis* (5th ed.). Pacific Grove, CA: Brooks/Cole.
- PROCHASKA, J. O., & NORCROSS, J. C. (2002b). Stages of change. In J. C. Norcross (Ed.), *Psychotherapy relationships that work*. New York: Oxford University Press.
- PROCHASKA, J. O., NORCROSS, J. C., & DiCLEMENTE, C. C. (1995). *Changing for good*. New York: Avon.
- PROCHASKA, J. O., REDDING, C. A., & EVERS, K. (in press). The transtheoretical model and stages of change. In K. Glanz, F. M. Lewis, & B. K. Rimer (Eds.), *Health behavior and health education* (3rd ed.). San Francisco: Jossey-Bass.
- PROCHASKA, J. O., VELICER, W. F., ROSSI, J. S., REDDING, C. A., GREENE, G. W., ROSSI, S. R., SUN, X., FAVA, J. L., & PLUMMER, B. A. (2002). Impact of simultaneous stage-matched expert systems for multiple behaviors in a population of parents. *Annals of Behavioral Medicine, 24*, Sxxx (Abstract).
- PROCHASKA, J. O., VELICER, W. F., FAVA, J. L., ROSSI, J. S., & TSOH, J. Y. (2001). Evaluating a population-based recruitment approach and a stage-based expert system intervention for smoking cessation. *Addictive Behaviors, 26*, 00-00.
- PROCHASKA, J. O., VELICER, W. F., FAVA, J. L., RUGGIERO, L., LAFORGE, R., ROSSI, J. S., JOHNSON, S. S., & LEE, P. A. (2000). Counselor and stimulus control enhancements of a stage-matched expert system intervention for smokers in a managed care setting. *Preventive Medicine, 32*, 23-32.
- ROSEN, C. S. (2000). Is the sequencing of change processes by stage consistent across health problems? A meta-analysis. *Health Psychology, 19*, 593-604.
- WIERZBICKI, M., & PEKARIK, G. (1993). A meta-analysis of psychotherapy dropout. *Professional Psychology: Research and Practice, 29*, 190-195.