Why Falling Off the Wagon Isn't Fatal

By MAIA SZALAVITZ  Tuesday, Dec. 30, 2008
FIG. 1. RELAPSE RATE OVER TIME FOR HEROIN, SMOKING AND ALCOHOL.
Brickman’s Model of Helping & Coping Applied to Addictive Behaviors

<table>
<thead>
<tr>
<th>Is the person responsible for changing the addictive behavior?</th>
<th>YES</th>
<th>NO</th>
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<tbody>
<tr>
<td><strong>YES</strong></td>
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<tr>
<td>MORAL MODEL (War on Drugs)</td>
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<tr>
<td>Relapse = Crime or Lack of Willpower</td>
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<td>SPIRITUAL MODEL (AA &amp; 12-Steps)</td>
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<td>Relapse = Sin or Loss of Contact with Higher Power</td>
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<tr>
<td><strong>NO</strong></td>
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<tr>
<td>COMPENSATORY MODEL (Cognitive-Behavioral)</td>
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<tr>
<td>Relapse = Mistake, Error, or Temporary Setback</td>
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<td>DISEASE MODEL (Heredity &amp; Physiology)</td>
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<td>Relapse = Reactivation of the Progressive Disease</td>
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## Analysis of High-Risk Situations for Relapse

*Alcoholics, Smokers, and Heroin Addicts*

<table>
<thead>
<tr>
<th>RELAPSE SITUATION</th>
<th>Alcoholics (N=70)</th>
<th>Smokers (N=35)</th>
<th>Heroin Addicts (N=32)</th>
<th>TOTAL Sample (N=137)</th>
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<tbody>
<tr>
<td><strong>INTRAPERSONAL DETERMINANTS</strong></td>
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<tr>
<td>Negative Emotional States</td>
<td>38%</td>
<td>43%</td>
<td>28%</td>
<td>37%</td>
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<tr>
<td>Negative Physical States</td>
<td>3%</td>
<td>-</td>
<td>9%</td>
<td>4%</td>
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<tr>
<td>Positive Emotional States</td>
<td>-</td>
<td>8%</td>
<td>16%</td>
<td>6%</td>
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<tr>
<td>Testing Personal Control</td>
<td>9%</td>
<td>-</td>
<td>-</td>
<td>4%</td>
</tr>
<tr>
<td>Urges and Temptations</td>
<td>11%</td>
<td>6%</td>
<td>-</td>
<td>8%</td>
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<tr>
<td><strong>TOTAL</strong></td>
<td>61%</td>
<td>57%</td>
<td>53%</td>
<td>59%</td>
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<tr>
<td><strong>INTERPERSONAL DETERMINANTS</strong></td>
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<tr>
<td>Interpersonal Conflict</td>
<td>18%</td>
<td>12%</td>
<td>13%</td>
<td>15%</td>
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<tr>
<td>Social Pressure</td>
<td>18%</td>
<td>25%</td>
<td>34%</td>
<td>24%</td>
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<tr>
<td>Positive Emotional States</td>
<td>3%</td>
<td>6%</td>
<td>-</td>
<td>3%</td>
</tr>
<tr>
<td><strong>TOTAL</strong></td>
<td>39%</td>
<td>43%</td>
<td>47%</td>
<td>42%</td>
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</table>
“Let’s just go in and see what happens.”
A Cognitive Behavioral Model of the Relapse Process

- Effective coping response
- Increased self-efficacy
- Decreased probability of relapse

High-Risk Situation

- Ineffective coping response
- Lapse (initial use of the substance)
- Increased probability of relapse

- Decreased Self-efficacy
  - Positive outcome Expectancies (for initial effects of the substance)

- Abstinence Violation Effect
  - Perceived effects of the substance

Marlatt & Gordon 1985
Skill-Training with Alcoholics: One-Year Follow-Up Results

Days of Continuous Drinking

- **Skill training**
  - Mean: 5.1
  - SD: 6.9
  - \( p < .05 \)

- **Combined Controls**
  - Mean: 44.0
  - SD: 62.2

Chaney et al., 1978.
Skill-Training with Alcoholics: One-Year Follow-Up Results

Number of Drinks Consumed

- **Skill training**
  - Mean = 399.8
  - SD = 507.8
  - p < .05

- **Combined Controls**
  - Mean = 1592.8
  - SD = 2218.4

The graph shows a significant difference in the number of drinks consumed between the skill training group and the combined controls, with the skill training group consuming significantly fewer drinks with a p-value less than .05.
Skill-Training with Alcoholics: One-Year Follow-Up Results

Days Intoxicated

Skill training
(Mean = 11.1)

Combined Controls
(Mean = 64.0)

SD = 17.8

p < .05

SD = 17.8
Skill-Training with Alcoholics: One-Year Follow-Up Results

Controlled Drinking

- Skill training
  - Mean = 4.9
  - SD = 17.8
  - P = N.S.

- Combined Controls
  - Mean = 1.2
  - SD = 2.6
Empirical Support:
Review of 24 RCTs
Kathleen M. Carroll (1996)

Relapse Prevention:

- Does not usually prevent a lapse better than other active treatments, but is more effective at “Relapse Management,” i.e. delaying first lapse and reducing duration and intensity of lapses.
- Particularly effective at maintaining treatment effects over long term follow-up measurements of 1-2 years or more.
- “Delayed emergence effects” in which greater improvement in coping occurs over time.
- May be most effective for “more impaired substance abusers including those with more severe levels of substance abuse, greater levels of negative affect, and greater perceived deficits in coping skills.” (Carroll, 1996, p.52)
Empirical Support: Meta-Analytic Review
Irvin, Bowers, Dunn & Wang (1999)

- Reviewed 17 controlled studies to evaluate overall effectiveness of the RP model as a substance abuse treatment
- Statistically identified moderator variables that may reliably impact the outcome of RP treatment
- “Results indicate that RP is highly effective for both alcohol-use and substance-use disorders”
Empirical Support: Meta-Analytic Review
Irvin, Bowers, Dunn & Wang (1999)

Moderator Variables with Significant Impact on RP Effectiveness:

- Group format more effective than individual therapy format
- More effective as “stand alone” than as aftercare
- Inpatient settings yielded better outcomes than outpatient
- Stronger treatment effects on self-reported use than on physiological measures
- While effective across all categories of substance use disorders, stronger treatment effects found for substance abuse than alcohol abuse
PROJECT CHOICES
# Project Choices Team

<table>
<thead>
<tr>
<th>Role</th>
<th>Members</th>
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<tbody>
<tr>
<td><strong>Principal Investigator</strong></td>
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<td>Katie Witkiewitz</td>
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<td>Sarah Bowen</td>
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NIAAA Grant R21 #AA130544382
Mindfulness

“A way of paying attention: on purpose, in the present moment, non-judgmentally”

(Kabat-Zinn, 2005)
QUIET PLEASE
MEDITATION
IN PROGRESS
Results: Vipassana vs. TAU 3-Months Post-Release

- N = 173
- Significant reductions in substance use
  - Marijuana
  - Crack cocaine
  - Alcohol
  - Alcohol-related negative consequences
- Significant changes in psychosocial outcomes
  - Decreased psychiatric symptoms
  - Increased internal drinking-related locus of control
  - Increased optimism

(Bowen et al, 2006)
Mean Changes from Baseline to 3-month Follow-up: Peak Weekly Alcohol Use

Drinks per Peak Week

Estimated Marginal Means

Baseline

3 Months

control

tipassana
Mean Changes from Baseline to 3-month Follow-up: Alcohol-Related Negative Consequences
Mean from Baseline to 3-month Follow-up: Peak Weekly Crack Cocaine Use

Peak Weekly Crack Use

% Days Used (x 100)

Baseline

3 Months

control

vipassana
Mindfulness-Based Relapse Prevention
The MBRP Team

Principle Investigator: G. Alan Marlatt

Co-Investigators: Katie Witkiewitz, Mary Larimer

Project Coordinator: Seema Clifasefi

Post Docs: Sarah Bowen, Susan Collins

Graduate Research Assistants: Neha Chawla, Joel Grow, Sharon Hsu

NIDA Grant#R21 DA010562
Mindfulness and Western Psychology

• Incorporated into a number of treatment approaches, and is associated with positive outcomes for a variety of populations and conditions:
  • Mindfulness-Based Stress Reduction (MBSR)
  • Mindfulness-Based Cognitive Therapy (MBCT)
  • Dialectical Behavior Therapy (DBT)
  • Acceptance and Commitment Therapy (ACT)
  • Functional Analytical Psychotherapy (FAP)

• Associated with changes in brain areas related to reductions in anxiety and negative affect (Davidson et al., 2003)
Mindfulness-Based Relapse Prevention
(Bowen, Chawla & Marlatt, 2008; Witkiewitz, Marlatt & Walker, 2005)

- Integrates mindfulness practices with Relapse Prevention

- Patterned after MBSR (Kabat-Zinn) and MBCT (Segal et al.)
  - 8 weekly 2 hour sessions; daily home practice

- Components of MBRP
  - Formal mindfulness practice
  - Informal practice
  - Coping strategies
Goals of MBRP

- Increase awareness of triggers, interrupting habitual reactive behaviors
- Shift from "automatic pilot" to mindful observation and response
- Increase tolerance of discomfort, thereby decreasing the need to alleviate with substance use (self-medication)
- Acceptance of present moment experiences vs. focusing on the next "fix"
Facilitating MBRP

- Person-Centered or Rogerian approach
- Motivational Interviewing style
- Authenticity, unconditional acceptance, empathy, humor, present-centered
- Facilitators have their own ongoing practice similar to what they are teaching
- Facilitators deliver the program according to the MBRP Treatment Guide, but are spontaneous and creative within those parameters
“Formal” Meditation Practices

- Body Scan
  - Based on Vipassana
  - Adapted from Kabat-Zinn
- Sitting Meditation
  - Focused awareness (breath)
  - Expanding to Body, Emotion, Thought
- Walking Meditation
- Mountain Meditation
“SOBER” Breathing Space

S – **Stop:** pause wherever you are

O – **Observe:** what is happening in your body & mind

B – **Breath:** bring focus to the breath as an “anchor” to help focus and stay present

E – **Expand** awareness to your whole body & surroundings

R – **Respond** mindfully vs. “automatically”
Urge Surfing

“Observe and accept” vs. “fight or control”

Allows clients to learn alternative (nonreactive) responses, and weaken the intensity of urges over time
MBRP Session Themes

Session 1: Automatic Pilot and Relapse
Session 2: Awareness of Triggers and Craving
Session 3: Mindfulness in Daily Life
Session 4: Mindfulness in High-Risk Situations
Session 5: Balancing Acceptance and Action
Session 6: Thoughts as Just Thoughts
Session 7: Self-Care and Lifestyle Balance
Session 8: Building Support Networks and Continuing Practice

- Present-Centered Awareness
- Mindfulness and Relapse
- Bigger Picture: Creating a Balanced Life
Pilot Efficacy Trial

- Randomized Trial conducted at Recovery Centers of King County
- MBRP vs. TAU (process, 12-step, and psychoeducation)
- 12 MBRP groups
  - Two master’s level therapists per group
  - 5-12 participants
Individuals Completing IOP and IP

Recruitment and Screening (n = 295)

Randomized (n = 168)

Did not meet criteria (n = 109); Refused (n = 18)

MBRP (n = 93)

n = 62

n = 53

n = 70

Post-course 61%

2 months 57%

4 months 73%

TAU (n = 75)

n = 41

n = 42

n = 52
Participants

- 63.7% male
- Age = 40.45 ($SD = 10.28$)
- Ethnicity:
  - 55.4% Caucasian
  - 29.8% African American
  - 10% Native American
  - 6% Hispanic/Latino
  - 2.4% Hawaiian/Pacific Islander
  - < 1% Asian American
Participants

- Drug of Choice:
  - 45.2% Alcohol
  - 26.2% Cocaine/Crack
  - 13.7% Methamphetamine
  - 7.1% Opiates/Heroin
  - 5.4% Marijuana
  - 1.8% Other

- No differences between groups on:
  - Attrition
  - Baseline demographic or outcome variables
Results: Treatment Adherence

- MBRP Attendance: 5.18 sessions ($SD = 2.41$)
- Percent reporting weekly meditation practice (MBRP):
  - Post-course: 86%
  - 2-month: 63%
  - 4-month: 54%
- At 4-months, MBRP participants reported practicing:
  - 4.74 days per week ($SD = 4.0$)
  - 29.94 minutes per day ($SD = 19.5$)
Results: Substance Use

Percentage Any AOD Use

Time x group interaction: $B=-.32$, $SE=.14$, $p=.02$
Time$^2$ x group interaction: $B=.10$, $SE=.05$, $p=.04$

All Omnibus tests: $p < .001$
Results: Mindfulness & Acceptance

Over the 4-month follow-up, MBRP participants showed significant time x treatment effects:

- Increases in mindfulness skills (omnibus $p < .01$)
- Acting with awareness ($p = .02$) (FFMQ, Baer et al., 2006)
- Increases in acceptance ($p = .05$) (AAQ, Hayes et al., 2004)
Results: Craving

Time x treatment: $IRR = .65$, $SE = .12$, $p = .02$

Time$^2$ x treatment: $IRR = 1.15$, $SE = .07$, $p = .02$

PACS, Flannery et al., 1999
Zen Dog Dreams for a Medium Sized Bone
Results: Craving as a Mediator

Change in Craving

Treatment (MBRP vs. TAU)

Substance Use (2 month)

$z = -2.00, p < .05$

$\beta = .48^{**}$

$\beta = .21$

$2.27^{***}$

$\beta = .11^{**}$

$**p < .01, *** p < .001$
Results: Depression and Craving

![Graph showing the relationship between BDI postcourse and Penn Alcohol Craving Scale 2-months, with R^2 values of 0.20 for Control and 0.01 for MBRP.](image)
Discussion

- Preliminary evidence suggests promise for MBRP for:
  - Decreasing rates of substance use
  - Increasing mindfulness (awareness) and acceptance
  - Reducing craving, which mediates the effect of treatment
Future Directions

- Investigate additive effects of mindfulness-based practices to standard RP
- Unique mediators and moderators of MBRP
- Modify treatment program to include ongoing support for MBRP participants
- Compare MBRP as initial treatment vs. aftercare
**Acknowledgements**

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<td>Jon Kabat-Zinn</td>
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<td>Anne Douglass</td>
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| MBRP Trainers:                   |
| Sarah Bowen                      |
| Neha Chawla                      |
| Lisa Dale Miller                 |
| Roger Nolan                      |

| MBRP therapists                  |
| Supervisors:                     |
| Judith Gordon                    |
| Sandra Coffman                   |
| Anil Coumar                      |
| Steven Vannoy                    |
| Madelon Bolling                  |
“It is on the very ground of suffering that we can contemplate well-being. It is exactly in the muddy water that the lotus grows and blooms.”

Thich Nhat Hanh, 2006
Thank You