

Summary Analysis

Oregon Department of Corrections' Wellness & Resiliency Pilot Program (WRP): Contrasting Pre-Post Survey Measures Between WRP and a Comparison Group

Introduction/ Background:

In the spring of 2013 the Oregon Department of Corrections (henceforth referred to as the 'department') began a collaboration with the Prison Mindfulness Institute to explore the efficacy of mindfulness/ meditation practice to promote wellness and resiliency of staff working in the department's prisons. The goal of this project was to learn more about how introducing staff to basic mindfulness/ meditation skills might impact staff climate/culture and individual staff's self-awareness and emotional resiliency.

Shortly before the WRP study began the department made staff wellness their top initiative priority after studies conducted by two different universities determined departmental prison staff were experiencing significant emotional and health problems. A team of researchers from Portland State University found department staff were experiencing excessive levels of suicide, depression, obesity, emotional exhaustion and PTSD (Denson, 2014). The Oregon Health & Science University conducted a pilot intervention and study (Kuehl, 2014) that focused on staff obesity. OHSU found that staff in receiving 12 half hour wellness class sessions (providing facts on nutrition, sleep, stress management, exercise, work-family conflicts and resiliency) had significantly improved bio-markers (body-mass index, cholesterol and waist-to-hip ratio) compared to another group of staff that did not receive the intervention.

The above studies continued to arouse concerns for the health and wellness of its staff led to interest in exploring mindfulness/ meditation practices as a possible sustainable solution to some of the wellness problems their staff continued to have. The department decided to contract with the Prison Mindfulness Institute (PMI) to conduct a demonstration pilot for training and introducing mindfulness/ meditation practice to staff. PMI is a national purveyor of secular mindfulness/ meditation practices with experience training this in many different state and local corrections systems. PMI subcontracted with JSAT, another national corrections consulting company to conduct a pre-post survey evaluation of the pilot project that they delivered to the department between spring 2013 and 2014.

Study Design

The project design consisted of a three-faceted intervention: 1) delivering a two-day training in mindfulness/ meditation to a sample of 60 staff, conveniently drawn for four prisons, located in relative close proximity; 2) three one-day booster sessions in the following year; and, 3) optional local 'Communities of Practice' for staff trained in meditation to confer, exchange experiences and practice further at deeper levels. The latter interventions with staff were quite experiential and personal, with follow-up 'homework' or practice encouraged throughout the project via individual coaching/ instruction sessions.

The impact of the above pilot was assessed with a pre-post design utilizing an array of survey measures. Staff receiving the meditation training in the pilot as well as a comparison

group of prison staff (that was derived from staff in prisons not involved in the pilot) were surveyed at the onset of the project and at one-year follow-up.

The Sample

The 60 subjects who received mindfulness/ meditation training were selected to be in this pilot group were identified in two ways. First, volunteers were requested at each of the four prisons with a preference for Field Training Officers (FTO) positions, Emergency Staff Support (ESS) and other staff of 'influence' as well as a few staff that management deemed at-risk for fatigue and burnout. Later some of the staff in the sample were 'volun-told' via their supervisors, especially the latter staff deemed at-risk. Thus the staff receiving the mindfulness training intervention was a convenient sample very apt to have significant selection effects.

The comparison group was drawn from volunteers across six different prisons other than the four prisons where the above pilot sample worked. Approximately 1500 staff were contacted with email invitations to participate in a on-line survey, that included a lottery for prizes varying from a hundred to a couple hundred dollars. 194 of the latter staff completed four different surveys. These staff were also told they would be contacted approximately one year later for an option to participate in a similar follow-up survey. Staff in both the pilot and the comparison group were required to complete informed-consent forms prior to taking the survey.

Unfortunately, many of the staff that completed the surveys, both in the pilot and comparison groups did not complete either certain demographic variables or select survey items, or in some instances entire survey tools. This syndrome of incomplete surveys persisted at follow-up, one year later, thus compounding the problem. Moreover, a number of staff in both groups that responded to the original surveys opted out of the follow-up surveys. Incomplete surveys and attrition resulted in a reduced sample ($n = 24$) from the pilot who completed at least five of the eight demographic variables, completed all surveys and attended at least two subsequent Community of Practice, follow-up sessions. In a similar fashion, 70 members of the comparison group completed demographic information and surveys at the same thresholds.

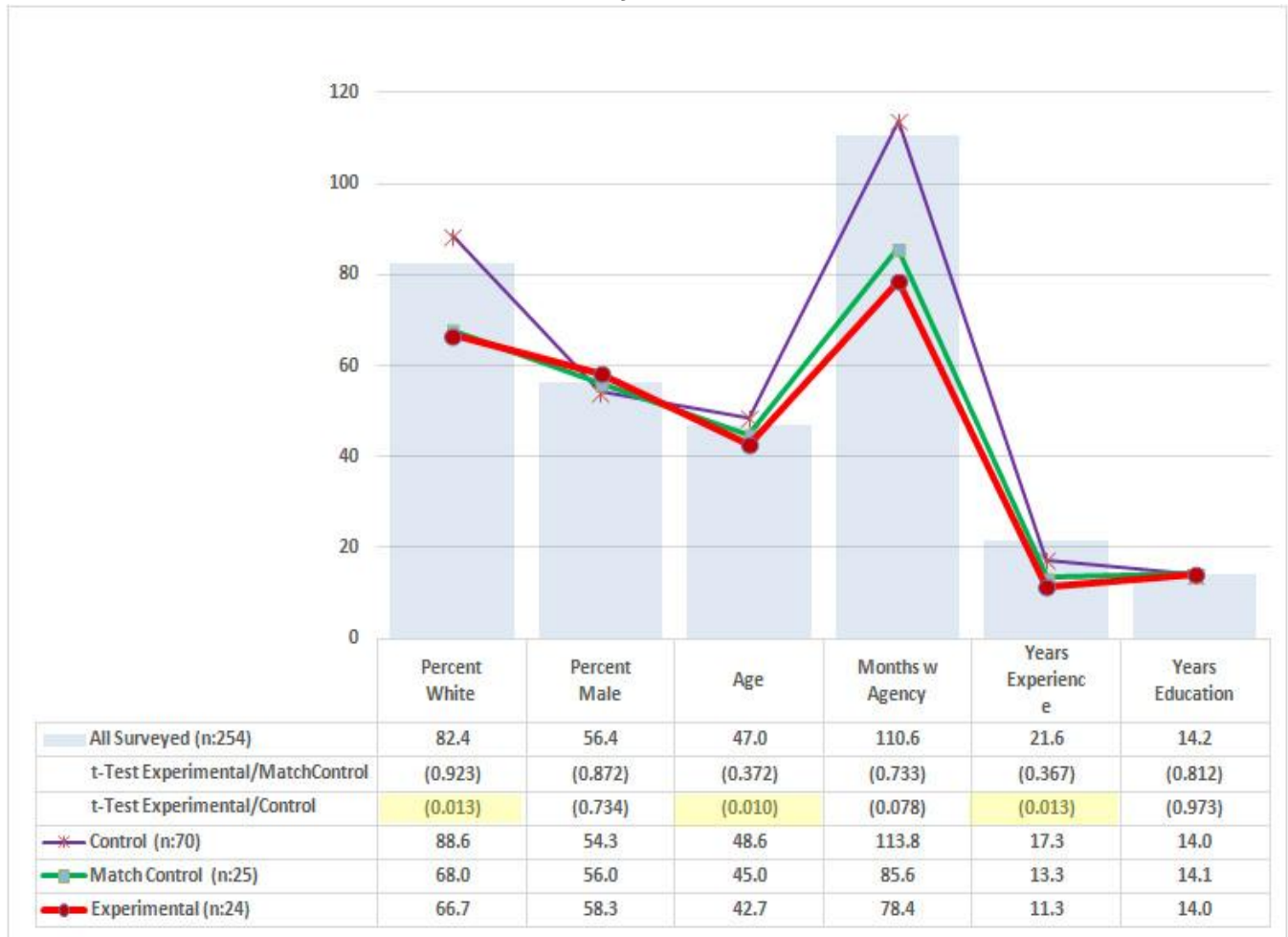
The pilot group of staff contained more minorities, were younger, had fewer months of service with the department and less experience in corrections in general than the comparison group. The pilot contained 33.3% minority as opposed to 11.4% in the comparison group. The mean age for staff in the pilot was 42.7 years and in the comparison group it was 48.6 years of age. Pilot staff had on average 78 months with the department and the comparison group average of 114 months. The staff in the pilot had an average of 11.3 years experience in corrections, while the comparison group averaged 17.3 years. On two remaining demographic variables, the two samples appeared similar: 58% of the pilot group were males and 54% of the comparison group; and, both groups had an identical average education level of 14.0 years.

Standard t-tests were applied to compare the pilot and comparison group samples for significant differences on six demographic variables. Significant differences at the (.01) levels were determined for % White (versus Minorities); Age and Years Experience in Corrections. The difference between pilot and the comparison group on Months of Experience with Agency approached modest significance (.05) but did not reach it.

Given the differences in background variables, a second comparison group or matched control group was created to control for these significant demographic differences. 25 staff in the original comparison group of 70 were identified based on matching demographic criteria to form a Match Control, in addition to the standard comparison Control group. As would be

expected, t-test determined no differences between the Match Control and the Pilot groups on any demographic variables.

Oregon DOC Mindfulness Project Sample Demographics



The Measures

The primary measures for this evaluation were self-report surveys administered at the on-set of the project in May of 2013, and at follow-up, one year later. Four different survey instruments were used, two that focus on organizational climate and culture (Likert Organizational Climate Survey and the Employee Satisfaction Survey) and two that focus on the individual respondent's self-perceptions and emotional awareness (Five Factor Mindfulness Questionnaire and the Assessing Emotions Scale). Between these four tools there are a total of 15 subscales and four summary, or total average measures. The four surveys range between 15 to 39 items that respondents are requested to complete and each tool takes about 3 – 5 minutes to complete.

Organizational Surveys:

The *Employee Satisfaction Survey* (ESS) was constructed by the investigator based on meta-analysis findings regarding the reliability and validity of previous tools studied. The ESS has 15 items that are all five-point Likert scales ranging from 1) Very Discontented, to 5) Extremely Satisfying. Examples of the items are: 1. Opportunities for promotion; 2. Quality of my supervision; and, 3) Support and encouragement from my co-workers. Organizational work has found scores on employee satisfaction to be correlated with staff burnout, turnover and low productivity.

The *Likert Organizational Climate Survey* (LOCS) was developed by Rensis Likert in 1932 and has been used to assess and evaluate untold thousands of organizations since then. The LOCS has 18 Likert-type items ordered into six subscales:

Leadership Goals	Motivation Control	Communication Decision-Making
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When the items across all subscales are averaged it produces a summary or average score that ranges between 1 – 20. The LOCS average score can be used for an index regarding how evolved and functional an organization's general climate is. Scores of five and below reflect an exploitive-authoritative work atmosphere. Score of 6-10 are considered benevolent-authoritative while score of 11-15 are consultative. Finally, total average LOCS scores that are between 15-20 are referred to as participative, the level where the greatest communication and teamwork occurs.

Individual Awareness Surveys:

The *Assessing Emotions Scale* (AES) sometimes also referred to as the *Emotional Intelligence Scale* (EIS) was based on Salovey and Meyer's (1990) model of emotional intelligence. The Salovey model proposed that emotional intelligence is comprised of four components: 1) perception of emotion in the self and others; 2) expression of emotions; 3) regulation of emotions (in self and others); and, 4) utilization of emotions in solving problems (Shutte et al, 2009). Shutte and colleagues developed and refined the AES instrument based on data collected from college students, therapists and their clients and later inmates. Subsequent factor analysis suggested the current 33 item, four scale version, which has undergone numerous validation studies. The AES has been found to be higher for females than males, and higher for therapists than clients and prisoners and correlates well with the openness to experience trait of the big-five personality dimensions.

The AES is a self-report 33 item survey tool, with items formed as five-point Likert type items (1 = strongly disagree – 5 = strongly agree). The items are distributed across four subscales, consistent with the original model: Perception (of Emotions); Managing (One's Own Emotions); Managing (Other's Emotions); and, Utilization (of Emotion). Higher scores indicate greater competency within each of the latter subscales.

The *Five Facets Mindfulness Questionnaire* (FFMQ) is a five-scale self-report survey tool designed to assess an individual's ability to direct his or her attention on purpose, in the present moment, non-judgmentally. The latter scales represent attributes of self-awareness

found in greater degree among meditators than non-meditators. The FFMQ was created by Baer and colleagues (Baer et al, 2006) to assess progress in achieving mindfulness or a more focused and present mental state. The FFMQ has been validated as scoring higher in meditator versus non-meditators populations in a variety of contexts as well as different countries (Bruin et al, 2012).

Meditation practice is hypothesized to directly and positively impact an individual's capacity for self-awareness across the dimensions of the FFMQ. In addition, an individual's Emotional Intelligence (AES) would be positively impacted as his or her self-awareness expands. Finally, the measures of organizational climate (LOCS and ESS) are anticipated to be associated with increases in the individual awareness measures, as norms of interaction within the organization shift with more extensive collective awareness.

Findings

Individual Awareness Surveys:

FFMQ

When the initial FFMQ survey was administered at the onset of the project the Experimental group that subsequently received the mindfulness training scored significantly lower than both the Control and Matched Control groups on Act (with Awareness) and Total FFMQ Average Score. On one other subscale, Non-Judgmental, they were significantly lower than the Control but not the Matched Control. Therefore it appears that the Experimental group were started the project with a slightly lower capacity for mindfulness than the other two comparison groups. And considering that part of the selection criteria the department utilized was 'at risk for fatigue and burnout' this is not surprising.

Five Facet Mindfulness Questionnaire Baseline Survey Results



The difference in the FFMQ subscale scores between the initial baseline survey and a subsequent follow-up survey one year later indicate that the Experimental group significantly improved on FFMQ Observation (of one’s mind). The gain score or difference between this subscale score, time-one versus time-two were significant (.017). In addition, the gain score for the Control group on FFMQ Describe (one’s thoughts) was also significant (.036). The Experimental group’s differences on the FFMQ Total Average score approached (.089) but did not reach significance. Thus there were only two indicators of absolute differences on the FFMQ, between time one and two.

Five Facet Mindfulness Questionnaire Within Group Gain Scores (T-1 vs T-2)



The difference in the FFMQ subscale scores between the initial baseline survey and a subsequent follow-up survey one year later indicate that in relative terms, only the Experimental group significantly improved on certain scales. When compared across groups, the gain scores (the difference between average subscale scores, time-one versus time-two) were significantly higher for the Experimental group than both the Control and Matched Control groups on FFMQ Observing (one’s mind) and significantly greater on the FFMQ Total Average than the Matched Control. The Experimental group also had greater gain scores that approaching significance on

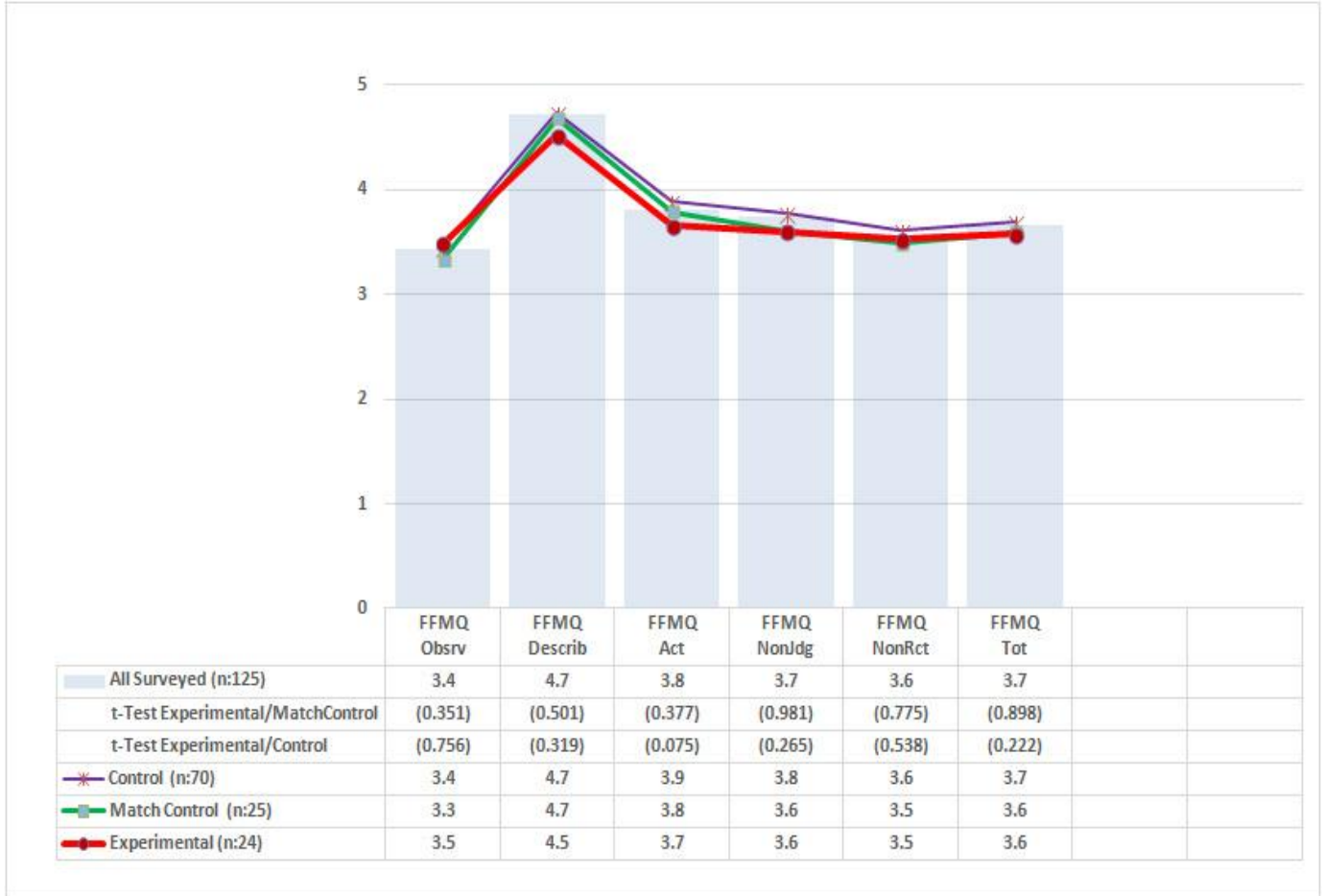
the latter Total Average score as well as the Act (with Awareness) subscale. This demonstrates that significant improvements in scores on the FFMQ only adhered to the Experimental group, albeit only a subset of the subscales.

Five Facet Mindfulness Questionnaire Between Group Gain Scores



Interestingly, at one-year follow-up, the results FFMQ survey shows no significant differences between the Experimental, the Control and the Matched Control groups. The previously described gains made by the Experimental group appear to be compensate or off-set the significant differences i.e., lower Experimental FFMQ scores determined in the initial survey at the onset of the project.

Five Facet Mindfulness Questionnaire One Yr Follow-up Results



AES

When the project was initiated, baseline measures for the Assessing Emotions Scale indicated that similar to the FFMQ results, the only significant differences across groups involved lower scores for the Experimental group. The latter had significantly lower scores than the Matched Control group on AES Perception (of Emotions). The Experimental group was also significantly lower on the AES Managing (One's Own Emotions) subscale scores than the Control group, as well as the Matched Control group. So again, another indication the groups were not beginning at the same starting line at the on-set of the project.

Assessing Emotions Scale Baseline Survey Results



The Experimental group increased its average scores on AES Managing (Emotions) and AES Total Average scores in the one-year follow-up survey. The Control and Matched Control groups did neither increased their scores or in the one scale that reflected positive gains (AES Perception (of Emotions) approached statistical significance. All statistical gains favored the Experimental group.

Assessing Emotions Scale Within Group Differences (T-1 vs T-2)



When examining each group’s difference in scores between the baseline AES survey results and the subsequent follow-up with the AES, a remarkably similar pattern to the FFMQ results emerged: the only significant within group gains were made by the Experimental group. The latter had increased score differences on the AES Managing (One’s Own Emotions). Moreover, the greater Gain scores of the Experimental group approached statistical significance compared to both the Control and Matched Control groups on the AES Average score and the AES Utilizing (Emotions) scale compared to the Control group.

Assessing Emotions Scale Between Group Gain Scores



Similar to the follow-up results for the FFMQ survey, at one-year follow-up, the results AES survey shows no significant differences between the Experimental, the Control and the Matched Control groups. The previously described gains made by the Experimental group appear to be compensate or off-set the significant differences i.e., lower Experimental FFMQ scores determined in the initial survey at the onset of the project.

Assessing Emotions Scale 1 Yr Follow-Up Survey Results



Organizational Surveys:

The two organizational surveys, the ESS and LOCS showed no significant differences between the Experimental, Control or Matched Control groups when administered at baseline (the onset of the project). The average score on the Employee Satisfaction Survey was 3.2, suggesting that the average respondent was “moderately satisfied” with their current job situation. Most of the subscale scores as well as the average LOCS score fall below 10 (out of a possible 20) suggesting that staff perceive the department as what Likert referred to as a ‘Benevolent-Authoritative organization’, that rewards or punishes staff and encourages little involvement.

Employee Satisfaction Scale & Likert Org. Climate Scale Baseline Survey Results



No within group or between group differences in gain scores on either the ESS or the LOCS were determined after examining the follow-up survey results. This is not surprising because many more factors are likely to impact these organizational culture measures.

Furthermore, some of these other variables potentially have much more direct influence upon perceptions of the culture (e.g., relationship with supervisor, access to organizational decision-making) than mindfulness/ self-awareness factors. Even though there were no substantive differences on the organizational culture measures, there is evidence of a favorable trend that again, favors the experimental group.

There are two patterns in the pre and post organizational culture surveys that suggest the mindfulness intervention may contribute a positive influence on the organization’s culture. The first is that then only pre/ post difference that approaches significance (.056) at follow-up is the ESS Average score, which 3/10 of a point greater for the Experimental group. Secondly, at follow-up – though not at a statistically significant level – the Experimental group higher on all organizational culture dimensions but one (LOCS Goals) than both the Control and Matched Control groups. Furthermore, the Experimental group’s scores on across most of the subscales of the LOCS, as well as the Total Average score have moved into the 10-15 score range that Likert referred to as a “Consultative System” denoted by marked by a marked increase in communication compared to the earlier, lower levels. The Control and Matched Control groups’ scores predominantly remained, however, at the ‘Benevolent Authoritarian levels.



Conclusion

This survey analysis of the Oregon Department of Correction's Wellness & Resiliency Pilot Program shows modest but consistent evidence for potential positive effects associated with the program. Notwithstanding several limitations noted above to this study, the findings warrant further investigation. That significant differences were determined between the pre or baseline survey results and the post or follow-up survey one year later is important because one of the primary issues of this study's design and execution was a perilously small sample size; the smaller sample size works against finding any significant differences, much less a consistent pattern for them. The evidence suggests that some improvements in staff well-being, particularly areas related to managing one's emotions and acting with awareness, can be positively impacted through the type of mindfulness training received by the experimental group in this study.

Several recommendations are in order based on this report. First, subsequent replications of this study with greater attention to sample size and sampling frames will help determine more about the overall impact of similar staff wellness projects. Additional measures such as burn-out scales and workforce engagement might be of some additional help as well. A second recommendation would be to conduct some form of process evaluation regarding the program and the mindfulness training itself. This additional information, if linked to survey findings such the present study determined could be help in revising and improving future programs.

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