Empirically Supported Treatments Impact on Organizational Culture and Climate

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Empirically Supported Treatments Impact on Organizational Culture and Climate

ABSTRACT

Objectives: With the continued push to implement empirically supported treatments (ESTs) into community based organizations, it is important to investigate whether working condition disruptions occur during this process. While there are many studies investigating best practices and how to adopt them, the literature lacks studies investigating the working conditions in programs that currently use ESTs. Methods: This study compared the culture and climate scores of a large organization’s programs that use ESTs and those programs indicating no EST usage. Results: Of the total 55 different programs (1,273 front-line workers), 27 programs used ESTs. Results indicate that the programs offering an EST had significantly more rigid and resistant cultures, compared to those without any ESTs. In regard to climate, programs offering an EST were significantly less engaged, less functional, and more stressed. Conclusion: Outcomes indicate a significant disruption in organizational culture and climate for programs offering ESTs.

Keywords: empirically supported treatments, organizational culture, organizational climate
INTRODUCTION

After some initial debate, the utilization of empirically supported treatments (ESTs), sometimes referred to as evidence-based practices (EBPs), is considered the gold standard of client care. Many social work organizations are trying to incorporate ESTs throughout all of their clinical services, and further, funding agencies, such as the Centers for Disease Control and Prevention and Substance Abuse and Mental Health Services Administration, are prompting them to do so. These and other funders sometimes mandate the utilization of a specific EST, and provide a list of endorsed ESTs (see http://www.effectiveinterventions.org/en/home.aspx; http://nrepp.samhsa.gov/).

One of the main reasons that ESTs have been so successfully incorporated into treatment services is the plethora of studies linking clients’ improved health outcomes and the general attitude that treatments should be based in scientific evidence (Institute of Medicine, 2001; Sackett & Haynes, 1995). It is now assumed that social workers must be well-informed and up-to-date with the newest knowledge in order to best serve their clients and remain professionally relevant (Pace, 2008; Gibbs, 2003).

In an effort to bridge science and practice, researchers have examined possible barriers to ESTs adoption. Organizational-level studies have produced some interesting findings, namely, factors associated with the culture and climate of an organization. For instance, the literature indicates that organizational culture and climate shape decisions about whether or not ESTs are adopted and implemented (Hemmelgarn et al., 2006). Early dissemination and implementation literature (Rogers, 1995; Nadler & Tushman, 1997; Rousseau, 1997) revealed that any successful adoption of new technology is as much a social as a technical method. Hemmelgarn and
colleagues (2006) reported that the social context of an organization can result in the organization approaching problems differently, and can affect what types of interventions the organization selects and how it puts these interventions into regular practice. Likewise, the influence of an organization’s social context on the choice, method, and everyday implementation of an intervention could maximize or minimize its overall clinical effectiveness (Aarons, 2004; Aarons, 2005; Burns & Hoagwood, 2005; Hemmelgarn et al., 2006).

Understanding the workplace environment is important because studies suggest that organizations with poor cultures and climates not only erect barriers when trying to adopt a new practice (Addis & Krasnow, 2000; Addis, Wade, & Hatgis, 1999), but also directly influence quality of client care and client’s health outcomes (Aarons & Sawitzky, 2006; Glisson, 1996). An organization’s poor culture and climate could be a significant obstruction to reaching the goal of connecting science and practice. However, even if organizations have successfully incorporated ESTs into their system, any improved health benefits the client might receive from an EST could be diminished if that client is treated in a program with a poor culture and climate.

**What is Organizational Culture and Climate?**

When new workers enter an organization, they are educated into the organizational culture by means of direct observation and modeling and through their personal experiences of rewards, punishments, and expected outcomes (Hemmelgarn et al., 2006). Culture can be defined as the normative beliefs and united behavioral expectations in an organizational service unit (Cooke & Szumal, 1993). According to Hemmelgarn and colleagues (2006), workers become acculturated to a set of organizational beliefs and expectations that help guide their interpretation of organizational stimuli, the decisions they make, and behaviors in which they engage.
The definition of organizational climate is the employee’s individual and specific perception of the psychological impact of the work environment on his or her own well-being (James & James, 1989; James et al., 1990; James & Jones, 1974). Individuals evaluate what is important to their personal welfare and whether or not aspects of their job provide the factors contributing to well-being (James et al., 1990). Edmondson (1999) provided an expansive concept of climate, explaining that teams foster a sense of safety. This sense of safety and confidence that the team will not embarrass, reject, or punish someone for disagreeing with the team allows for the perception that one’s environment is non-threatening and safe for errors to happen. A safe work environment creates a venue where mistakes can be addressed and solutions can be generated (1999).

Employees who perceive their work environments as being nonsupportive or unwelcoming reflect insecurities during typical work interactions. Conversely, if workers perceive that the organization stands behind them and is dependable during stressful periods, they are more likely to be persistent and innovative when faced with unexpected problems (Hemmelgarn et al., 2006).

The ideal social work organization would provide services that have empirical support, in an atmosphere with an ideal culture and climate. Unfortunately, to our knowledge, no researchers have overtly focused on ESTs utilization’s impact on organizational culture and climate. It is not known whether implementing and adopting an EST impacts an organization’s culture and climate scores. An abundance of empirical studies have examined the best ways to evaluate and implement ESTs throughout clinical settings (Bartholomew, 2007; Fuller, 2007; Moher, 1995). Some earlier discussions and concerns in the literature have also considered possible disruptions once ESTs were adopted in practice, such as incorporating the clinical worker’s judgments,
expertise and flexibly into utilizing ESTs (see, Gambrill, 1999, 2003, 2006; O'Hare, 2005; Pollio, 2006). Other studies have offered some cautions and recommendations to organizations interested in the smooth transition of adopting ESTs into their systems (see, Gioia, 2007; Mattaini & Moore, 2003). However, the literature is missing studies that have compared the culture and climate of programs that are currently utilizing or not utilizing ESTs.

To begin to examine the association between organizations’ culture and climate and their use of ESTs, a study was conducted with a single, large child mental health services agency that offers many types of programs, some that use ESTs and others that do not. The overall purpose of this evaluation was to compare the organizational culture and climate scores of programs that use ESTs and those that do not use ESTs at this point in time. This study is cross-sectional, and therefore cannot address the question of causal order.

**METHOD**

**Setting**

The setting for this study was the Hillside Family of Agencies (HFA), the largest child and family human service agency in Western and Central New York State (NYS). HFA has helped children and their families for more than 170 years, and currently employs more than 2,400 staff within four affiliate organizations. HFA provides services to clients across 30 New York counties and in Prince George’s County, Maryland and two affiliate organizations providing support services. Affiliates of this $140+ million network provide services to children from birth to age 26 in more than 12,000 families each year. HFA provides services in six major categories, including child welfare, mental health, juvenile justice, education, youth development, and developmental disabilities/mental health. HFA holds NYS licenses with the Office of Children and Family Services, the Office of Mental Health, the Office for People with
Developmental Disabilities, and the Department of Health and the State Education Department and is accredited by the Council on Accreditation.

**Study Sample**

Participants in this study worked in a total of 55 different programs across the four direct service affiliates. A senior HFA manager defined the 55 programs according to the program’s service function and supervisory structure. Several programs with fewer than five workers were excluded because they did not meet measurement scoring criteria. All workers in a program were supervised by the same supervisor and were housed in the same location and each program provided a single type of service (e.g., residential, outpatient, day treatment, etc.). Across HFA, two types of programs predominated: community based \((n = 17, 31\%)\) and residential \((n = 18, 33\%)\). The remaining program types included day treatment \((n = 5, 9\%)\), foster care and residential-based schools \((n = 4, 7\% \text{ for each})\), medical \((n = 3, 5\%)\), service integration \((n = 2, 4\%)\), and adoption and outpatient \((n = 1, 2\% \text{ for each})\). Programs were not divided equally across the four affiliates. Affiliate A had six programs, affiliate B had three programs, affiliate C had two programs and affiliate D had 44 programs, including 13 community based and 15 residential programs.

All participants in this study were ‘front-line’ employees (i.e., those employees having direct service contact with the children and families this agency served). Given this criterion, participants represented a number of different work roles in the agency, including but not limited to: direct care workers in residential settings, therapists, and mentors. The participation rate for this study was 82%, yielding a total sample of 1,273 participants from a total of 1,552 child and family service providers.
The number of participants per program ranged from 5 to 84 (Median = 15, \( M = 23, SD = 18 \)). About 13% of the sample worked at affiliate A; about 8% worked at affiliate B; about 5% worked at affiliate C; and 74% worked at affiliate D. Approximately 42% of respondents worked in residential programs; 23% worked in community based programs; 12% worked in day treatment programs; and 11% worked in residential-based school programs. The remaining respondents worked in four much smaller services. Aggregate data on the demographic characteristics of the population of HFA front-line employees were not obtained from HFA Human Relations. Thus the extent, if any, to which participating employees differed from all study-eligible employees could not be determined.

The final sample of participants had a mean age of 35 years (SD = 11; range: 19-73), 59% were female, and 74% self-identified as white, 17% as African American and 5% or less for any other category (multiple categories were allowed). At the time that this survey was administered, participants had worked in the human service field for an average of 9.6 years (SD = 8.5; range: 0-50) and at their current agency for an average of 5 years (SD = 5.62; range: 0-36). Seventeen percent had completed high school, 17% had earned an associate degree, 38% had received their bachelor’s degree, 27% had obtained their master’s degree, and 1% had earned a doctoral degree. Education was the predominant discipline in which these degrees were earned (23%), followed by social work (18%), psychology (16%), nursing (4%), and medicine (0.4%). The category of “other” made up for the bulk of the distribution (39%); however, we were not able to determine the contributing disciplines. Although the majority of participants (75%) were in service provider positions only, 12% also had supervisory responsibilities, 2% also had managerial responsibilities, and 10% reported ‘Other’ positions.
As might be expected, the median values of participant demographics and backgrounds presented a sometimes wide range across the 55 programs. Median age ranged between 25 and 52; years of experience ranged between 3 and 25; and years in the present position ranged between 1 and 18. The ranges in the percentages of participants with different educational levels or majors were also very wide. Across both the education levels and major educational categories listed above, the minimum percentage was zero. The maximum educational level percentages were 54% for high school graduate, 55% for an associate degree, 100% for both a bachelor and a master degrees, and 33% for a doctoral degree. The maximum educational major percentages were 70% for education, 83% for social work, 100% for nursing, 24% for medicine, 67% for psychology, and 100% for other majors.

Measures

Organizational Social Context

The Organizational Social Context Measurement Model (OSC) is a measurement system guided by a model of social context that consists of both organizational (structure and culture) and individual (work attitudes and behavior) level constructs. These constructs include individual and shared perceptions (climate), which are believed to mediate the impact of the organization on the individual (Glisson, 2002; Glisson et al., 2008). The OSC measurement tool contains 105 items that form four domains, 16 first order factors and 7 second order factors that have been confirmed in a national sample of 100 mental health service organizations with approximately 1,200 clinicians. The self-administered Likert scale survey takes approximately 20 minutes to complete and is presented on a scanable bubble sheet booklet.

The OSC is a measure of a program’s culture and climate as reported by its workers; thus, scores are computed for the program as a whole and not for its individual workers. The
scores reported are T scores, whose computation is based on Glisson et al.’s (2008) sample of agencies. The three factors that comprise an organization’s culture are Proficiency (.94), Rigidity (.81), and Resistance (.81) (Glisson et al., 2008). Proficient cultures will place the health and well-being of clients first and workers will be proficient, working to meet the unique needs of individual clients, with the most recent available knowledge (e.g., “Members of my organizational unit are expected to be responsive to the needs of each client” and “Members of my organizational unit are expected to have up-to-date knowledge”). Rigid cultures allow workers a small amount of discretion and flexibility in their activities, with the majority of controls coming from strict bureaucratic rules and regulations (e.g., “I have to ask a supervisor or coordinator before I do almost anything” and “The same steps must be followed in processing every piece of work”). Resistant cultures are described as workers showing little interests in changes or new ways of providing services. Workers in Resistant cultures will suppress any openings to change (e.g., “Members of my organizational unit are expected to not make waves” and “Members of my organizational unit are expected to be critical”).

The factors for organizational climate are Engagement (.78), Functionality (.90), and Stress (.94) (Glisson et al., 2008). Engaged climates are characterized by the workers’ perceptions that they can accomplish worthwhile activities and stay personally involved in their work while remaining concerned about their clients (e.g., “I feel I treat some of the clients I serve as impersonal objects”—reverse coded and six items “I have accomplished many worthwhile things in this job”). Workers in Functional climates receive support from their coworkers and have a well-defined understanding of how they fit into the organizational work unit (e.g., “This agency provides numerous opportunities to advance if you work for it” and “My job responsibilities are clearly defined”). Stressful climates are ones where workers are
emotionally exhausted and overwhelmed as the result of their work; they feel that they are unable to accomplish the necessary tasks at hand (e.g., “I feel like I am at the end of my rope” and “The amount of work I have to do keeps me from doing a good job”).

**Evidence Supported Treatment Utilization**

A senior HFA manager, in conjunction with program managers, provided descriptive data of the 55 programs. Each program was described in terms of its type of service, whether it used ESTs, the names of the ESTs used, and funding agencies. Although the interventions this agency identified were called or designated as evidence-based practices (EBPs), this is inconsistent with the original model of EBP, which is a process for individual clinicians to come to decisions with clients about what interventions to offer. Thyer (2011) reviewed the distinctions between the empirically supported treatment model, which lists specific interventions, and EBP, which does not. Of the 55 total programs, 27 programs reported using one or more specific ESTs. Although programs might have had internal measures for each EST, the result of senior and program managers’ agreement that a specific program was utilizing an EST formed the basis for specifying if programs were using ESTs or not. In addition, the researchers did not evaluate whether the programs that indicated they offered an EST were, in fact, doing so with acceptable or adequate levels of fidelity to the protocol.

**Data Collection Procedure**

Upon IRB approval, the OSC survey was administered to participants in paper and pencil format. Data collection occurred in groups, without the presence of agency supervisory or administrative personnel who did not also have direct service responsibilities. Each group was read instructions assuring subjects that their responses were anonymous and data would only be reported back to the organization in aggregated form. Participating employees received no
compensation for participation. Completed surveys were collected, checked for completeness, and securely shipped to Dr. Glisson’s research center in Tennessee for scoring.

RESULTS

Table 1 reports univariate statistics for the culture and climate T scores for the 55 programs. Except for Engagement, the mean T score for all scales is above the scale mean of 50 by 0.42 to 1.85 SDs, based on the sample scale standard deviations. Across the 55 programs, the T score values exhibited a large spread for each of the scales. The range was smallest for Proficiency and Rigidity, about 26.3 for both, but largest for Resistance (41.3) and Functionality (40.3). Across the six scales, the scale mean and scale median were quite close, with no discernible pattern as to which was greater. Skewness values ranged from -0.466 (Proficiency) to 0.377 (Engagement) and kurtosis values ranged -0.380 (Engagement) to 1.128 (Stress). Boxplot outliers were observed for Engagement (2 programs) and Stress (1 program). No data transformations were applied to those two scales, however.

Table 1 about here

Of the 55 programs, 27 (49%) reported using an EST. Across the four affiliates, the percentage of programs that used an EST ranged from 41% to 100%. All outpatient and residential based school programs and approximately three-quarters of both day treatment and residential programs used an EST. About 30% of community based programs used an EST. None of the adoption, foster care, and service integration programs used an EST. The specific ESTs used included PBIS, TFCBT, CARE, and functional behavior analysis, as well as several other ESTs used by a single program. The majority of programs (20 of 27) using an EST were funded by State of New York agencies. In contrast, the majority of programs (18 of 28) not using an EST
received funding from other sources, which included county-level agencies, school districts, as well as non-governmental sources.

Table 2 reports the means and standard deviations of the culture and climate scale T score for programs using and not using an EST. We report t-tests of the differences to provide a standard reference; however, recall that we did not sample agencies and, furthermore, we surveyed every clinical service program in HFA. The extent to which HFA is representative of child and family mental health service agencies, large or small, is unknown. Significant mean differences were noted for two of the culture scales (Rigidity and Resistance). Programs using an EST were more rigid (i.e., having little flexibility and controlled by bureaucratic rules) and more resistant (i.e., shows little interest in change and suppressing any opportunity for change) than programs indicating no EST utilization. In addition, significant mean differences were noted for all three of the climate scales (Engagement, Functionality, and Stress). Programs using an EST were significantly less engaged (i.e., accomplishing worthwhile things, remains personally involved, and concerned about their clients), less functional (i.e., receiving cooperation and help from coworkers, having clear understanding how they fit it and can work successfully within their work unit), and more stressed (i.e., emotionally exhausted and overwhelmed from their work and unable to get the necessary work done) than programs not using an EST. The differences between the two groups ranged from about 4 to about 7 T score points across the five scales that showed significant effects. However, the confidence intervals were quite wide because of the small size of the sample. Effect sizes may provide a more useful comparison and, as reported in Table 1, uniformly fell within the medium to large range, i.e., 0.5 to 0.9, for all scales. Examination of residuals revealed that standardized values ranged between -3.03 (Proficiency) and 3.08 (Stress). Although skewness values ranged between -0.492 and 0.595,
five of the six distributions showed positive skewness values. Kurtosis values ranged between -0.736 and 1.312.

Table 2 about here

**DISCUSSION AND APPLICATION TO PRACTICE**

The purpose of this study was a simple comparison of the scores on Glisson and associates’ (Glisson et al. 2008) dimensions of culture and climate for programs in a single, large child and family services agency that either did or did not use an EST. The results showed that EST-using programs differed from non-EST-using programs on two of the three culture dimensions and all three of the climate dimensions. The number of programs in the sample was small; thus, the between-group differences have low precision. The effect sizes, however, were in the medium to large range—between 0.5 and 0.9. Because no other studies have evaluated the relationships between culture, climate, and EST adoption, the meaningfulness of these effect sizes and how they affect the interpretation of the data are unknown.

Although Gambrill (1999, 2003, 2006), O’Hare (2005), and Pollio (2006) cautioned that some clinical workers’ professional experiences might be disrupted and Gioia (2007) and Mattaini & Moore (2003) alerted us to organizational disturbances, the outcome from this study might encourage us to reinvestigate some of their concerns.

Some possible reasons for these unanticipated outcomes include that the organization could become more rigid (Leonard-Barton, 1992) once deciding to commit to a specific, program-wide EST. If a program is going to succeed in adopting an EST, the program would seemingly have to focus on following the protocols of that EST. Also, in order to retain some level of fidelity to the EST, the organization may be rigid and resistant to any changes for a period of time.
In the implementation and adoption of any EST, the program will have to invest both money and time. Even if the EST is free and clear to use, there is a large investment in initial staff training and ongoing education. Most clinical programs would be expected to follow the EST adoption with specific and dedicated supervision structures.

Programs with mandated ESTs could be even more rigid and resistant to any changes. Mandated ESTs, whether coming from internal or external authorities, have some level of accountabilities and expectations, which could bring an increased level of rigidity, resistance, and stress. However, of the 27 programs that indicated using an EST in this study, only two were mandated.

Organizations that have developed a regular custom around the use of existing practices lose their self-reinforcing system for worker stability (Barley, 1986; Orlikowski, 2000). The routines developed in task-performing groups continue, despite outside forces requiring change (Gersick & Hackman, 1990; McGrath et al., 1984; Szulanski, 2000). Attempts to alter the work-group’s past routines with new ones might cause overall resistance, rigidities, and feeling less functional and engaged and more stressed.

**Limitations**

This study has a number of important limitations, most significantly that all size-qualifying programs in a convenience-selected agency were surveyed. It is not known whether this study’s results are representative of other agencies. These data are a cross-sectional snapshot of this agency at a scientific-regulatory point in time. This study did not determine the reasons why a program began using an EST, but motives may have included regulatory changes, funding agency requirements, reviews of the empirical literature and other factors—anything but random assignment. We also did not determine when the ESTs were implemented or how they were
implemented with respect to staff involvement in selection, staff training and ongoing technical support. Thus it cannot be known to what extent the variance in culture and climate scores is attributable to pre-existing differences, implementation quality and other history effects, and EST use. Furthermore, there is no way to know the effect of individual worker and supervisor characteristics. For instance, we are unable to determine if programs offering ESTs attract certain workers or if programs hire certain type workers.

In this particular study, the length of time programs had been utilizing an EST was unknown; it was also unknown if any of the programs received training and continuing technical supports. The programs using ESTs could be at the beginning of the adoption and implementation process and culture and climate scores might return to more positive levels over a period of time. What seems to be the most important limitation is the lack of pre-EST adoption culture and climate data. Changes or overall differences in culture and climate could have many possible reasons. For instance, there could be differences between program worker turnover; differences between supervisors, managers or administrators; various work/task rules between each program; different and competing demands and requirements; program treatment philosophy; and various therapeutic demands. This study was not able to discern which programs have remained the same and which have changed over time. Instead, this study is limited to a brief, static glimpse into a capricious system.

As with any new area of study, more investigation and information are necessary. As mentioned earlier, the social work field, in particular, continues the move toward widespread EST implementation. A recommended next step would be to identify agencies or programs in the very early stages of EST adoption and follow them over time, collecting both qualitative data and quantitative data, particularly the Organizational Social Context survey, at two or multiple time
points that correspond to meaningful stages in the adoption-implementation-customary usage process.
References


### Table 1
Univariate Statistics for Culture and Climate Scale T Scores

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<tr>
<th></th>
<th>Culture</th>
<th>Climate</th>
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</thead>
<tbody>
<tr>
<td></td>
<td>Proficiency</td>
<td>Rigidity</td>
</tr>
<tr>
<td>Mean</td>
<td>52.35</td>
<td>59.45</td>
</tr>
<tr>
<td>SD</td>
<td>5.66</td>
<td>6.34</td>
</tr>
<tr>
<td>Median</td>
<td>53.25</td>
<td>59.20</td>
</tr>
<tr>
<td>Minimum</td>
<td>37.10</td>
<td>45.66</td>
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<tr>
<td>Maximum</td>
<td>63.48</td>
<td>71.98</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Functionality</td>
<td>Stress</td>
</tr>
<tr>
<td>Mean</td>
<td>60.15</td>
<td>56.47</td>
</tr>
<tr>
<td>SD</td>
<td>8.79</td>
<td>6.76</td>
</tr>
<tr>
<td>Median</td>
<td>59.46</td>
<td>56.29</td>
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<tr>
<td>Minimum</td>
<td>40.14</td>
<td>41.53</td>
</tr>
<tr>
<td>Maximum</td>
<td>80.44</td>
<td>78.26</td>
</tr>
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</table>
Table 2
Culture and Climate Scale T Scores as a Function of Programs’ Utilization of Empirically Supported Treatments

<table>
<thead>
<tr>
<th>Domain</th>
<th>Scale</th>
<th>EST Used</th>
<th>N</th>
<th>Mean</th>
<th>SD</th>
<th>Mean Difference</th>
<th>95% Confidence Interval</th>
<th>Effect Size</th>
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<tbody>
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<td>Culture</td>
<td>Proficiency</td>
<td>No</td>
<td>28</td>
<td>53.80</td>
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<td>-2.96</td>
<td>-5.94 to 0.02</td>
<td>-0.52</td>
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<td></td>
<td></td>
<td>Yes</td>
<td>27</td>
<td>50.84</td>
<td>5.60</td>
<td></td>
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<tr>
<td>Rigidity</td>
<td></td>
<td>No</td>
<td>28</td>
<td>57.11</td>
<td>6.65</td>
<td>4.75</td>
<td>1.55 to 7.96</td>
<td>0.75</td>
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<td></td>
<td></td>
<td>Yes</td>
<td>27</td>
<td>61.86</td>
<td>5.06</td>
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<tr>
<td>Resistance</td>
<td></td>
<td>No</td>
<td>28</td>
<td>63.30</td>
<td>9.16</td>
<td>5.77</td>
<td>1.29 to 10.26</td>
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<td></td>
<td></td>
<td>Yes</td>
<td>27</td>
<td>69.08</td>
<td>7.28</td>
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<tr>
<td>Climate</td>
<td>Engagement</td>
<td>No</td>
<td>28</td>
<td>45.77</td>
<td>6.26</td>
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<td>27</td>
<td>41.59</td>
<td>7.41</td>
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<tr>
<td>Functionality</td>
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<td>28</td>
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<td>8.24</td>
<td>-6.70</td>
<td>-11.13 to -2.26</td>
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<td>Yes</td>
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<td>56.74</td>
<td>8.15</td>
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<td>Stress***</td>
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<td>No</td>
<td>28</td>
<td>53.46</td>
<td>6.44</td>
<td>6.12</td>
<td>2.84 to 9.41</td>
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<td>27</td>
<td>59.58</td>
<td>5.66</td>
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</table>

Notes. Effect size computed using pooled standard deviation (see Table 1). ***p < .001. **p < .01. *p < .05. +p < .10.