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The General Environment Fit Scale: A Factor Analysis and Test of Convergent Construct Validity

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Abstract

Person-environment fit (P-E fit) was initially espoused as an important construct in the field of community psychology; however, most of the theoretical and empirical development of the construct has been conducted by industrial/organizational (I/O) psychologists. In the current study, the GEFS—a P-E fit measure was developed from I/O and business management perspectives on fit—was administered to 246 attendees of an annual convention for residents and alumni of Oxford House (OH), a network of over 1400 mutual-help recovery homes. The authors conducted confirmatory factor and convergent construct validity analyses on the GEFS. The results suggested that the theoretical factor structure of the measure adequately fit the data, suggesting that the GEFS is a valid measure of P-E fit. OH resident fit with their recovery home was related to satisfaction, but not expected tenure. Exploratory analyses revealed that the sufficient supply of resident needs by the recovery home and similarity between residents and their housemates predicted satisfaction with the recovery home, but only similarity with housemates predicted how long residents intended to stay in the OHs.

Keywords

Congruence; Person-Environment Fit; Person-Environment Congruence; Person-Organization Fit; General Environment Fit Scale

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At the inception of community psychology, person-environment transactions and, more specifically, person-environment fit (P-E fit) were espoused as important concepts for the field (Rappaport, 1977). Person-environment fit is a theory that proposes that the congruence between persons and their environments influences behavior and psychological functions (Walsh, 2009). The concept has its roots in Parsons' (1909) assertion that individuals varied in their congruence with different occupations, as well as Kurt Lewin's field theory (1939), which posited that behavior is a function of both persons their environment. Pargament (1986) and Moos (1987) developed much of the theoretical and empirical P-E fit community literature, but the majority of P-E fit theory and empirical work has been conducted by industrial/organizational (I/O) psychology and business management, which have contributed a large body of literature on the concept (Ostroff & Judge, 2007). Within this literature, P-E fit has been measured either directly, by explicitly asking individuals how well they fit with an environment or indirectly, by measuring both the

individual and the environment (Kristof, 1996). Some examples of indirect fit include the assessment of the values of the individual and the environment, the needs of the individual and supply of those needs by the environment, and the demands of the environment and the abilities of the individual.

Both lack of fit and optimal fit have implications for psychological and behavioral outcomes. For example, individuals who do not fit with an environment may leave the setting (Cable & DeRue, 2002; Schneider, 1987). Past literature has also shown the fit to be related to alienation (Thomson, & Wendt, 1995), anxiety (Caplan, Tripathi, & Naidu, 1985), depression (Capla et al., 1985), well-being (Capla et al., 1985), satisfaction with settings (Cable & DeRue, 2002; DeRue & Morgeson, 2007; Handal, 1981; Kahana, Lovegreen, Kahana, & Kahana, 2003; Verquer, Beehr, & Wagner, 2003), commitment (Cable & DeRue, 2002; Greguras & Diefendorff, 2009; Verquer, Beehr, & Wagner, 2003), identification with settings (Cable & DeRue, 2002), citizenship behaviors (Cable & DeRue, 2002). However, the relationship between fit and outcomes is not always positive. Some degree of misfit may be beneficial. Attraction-Selection-Attrition (ASA) theory suggests that organizations attract individuals similar to the organization, select similar individuals, retain individuals that are similar, become homogenous through this process, and are less effective because of the homogeneity (Schneider, 1987).

Even though much of the recent theory and empirical investigations of P-E fit have come from I/O psychology and business management, past research has explicitly and implicitly applied the theory to topics relevant to community psychology, such as individual fit with residential community settings and mutual-help support groups. These include, college residence halls (Tracey, Sherry, and Keitel, 1986), elderly living environments (Buffum, 1988; O'Connor and Vallerand, 1994), residential mental health care settings (Lehmann, Mitchell, and Cohen, 1978; Timko & Moos, 1998; Segal et al., 1989) residential addiction recovery settings (Timko & Moos, 1998) and mutual support recovery groups (Humphreys & Woods, 1993; Luke, Roberts, & Rappaport, 1993; Mankowski et al., 2001; Morgenstern, Kahler, & Epstein, 1998; Ouimette, Humphreys, Moos, Finney, Cronkite, & Federman, 2001). In community settings, P-E fit has been found to be related to social integration (Segal, Silverman, & Baumohl, 1989), and intent to stay in a setting (Verquer, Beehr, & Wagner, 2003), as well as attendance at support group meetings (Humphreys & Woods, 1993; Luke, Roberts, & Rappaport, 1993) and 12-step group involvement (Mankowski, Humphreys, & Moos, 2001).

There are a number of common factors that emerge in the studies referenced above. For example, the fit between persons and their environments may be conceptualized as either supplementary or complementary. Supplementary fit is when individuals possess attributes that are similar to their environment, such as when individuals espouse the same values as an environment or when individuals share the demographic characteristics with a setting (Muchinsky & Monahan, 1987). Complementary fit is when individuals and environments complement one-another by addressing one-another's needs, such as when an environment provides opportunities for achievement that are concordant with the individuals' needs for achievement or when an individual with exceptional problem solving skills is in an environment that is in turmoil.

Underneath the supplementary and complementary domains of fit are more specific conceptualizations. Under the domain of supplementary fit is congruence between individuals and their setting (Muchinsky & Monahan, 1987). One way of conceptualizing such similarity is the congruence between individual and environment goals and values (Chatman, 1989). Another conceptualization of the congruence between individuals and environments is the interpersonal similarity between a member of a setting and other

members of that setting (Cable & Judge, 1996; O'Reilly, Caldwell, & Barnett, 1989). Some residential community and mutual help setting P-E fit research has demonstrated a theme of demographic similarity. Humphreys and Woods (1993) found that both Black and White participants whose ethnicity matched that of their geographic area were more likely to attend 12-step groups after treatment. Luke et al. (1993) found that participants whose marital status and/or history of hospitalization were different from the rest of the group attended fewer meetings. Segal et al. (1989) found that residents were more socially integrated in facilities and neighborhoods in which their demographics were most closely aligned with their environment or environments that were more tolerant of differences. Lastly, Majer, Jason, Ferrari, Venable, and Olson (2002) found that some residents of recovery homes had difficulty identifying with others around having a disability, having been adopted, sexual orientation, religious past, race, having a mental illness, age, gender, having HIV/AIDS, use of prescription drugs, intravenous drug use, prior incarceration in prison, prior military service, and other characteristics. They found that residents who had problems identifying with others around prior incarceration and military service showed lower levels of abstinence social support and those with one or more issues identifying with others showed lower self-efficacy regarding substance use.

Currently, complementary fit is conceptualized as needs-supplies fit and demands-abilities (Cable and DeRue, 2002; Caplan, 1987). The needs-supplies concept suggests that fit is a result of an environment adequately meeting an individual's needs, such as when an introverted individual is in an environment that provides sufficient interpersonal space (Caplan, 1987). The demands-abilities concept posits that fit is determined by an individual's ability to meet the demands her/his environment, such as when a people have the knowledge required to complete tasks required of them in a given environment (Caplan, 1987). Kristof-Brown, Barrick, and Stevens (2005) noted that, although the environmental fulfillment of individual needs side of complementary fit has been thoroughly conceptualized and empirically examined in P-E Fit literature, individual fulfillment of environmental needs has yet to be fully explored. Thus, five ways of achieving fit in a setting are through (1) value and goal congruence, (2) interpersonal similarity with others in the setting, (3) environmental supply of individuals' needs, (4) individuals' ability to meet the demands of the environment, and (5) individuals' unique contributions to a setting.

The most widely-used measure of fit in the I/O and business management literature is a direct subjective measure of fit developed by Cable and DeRue (2002). This measure examines two dimensions of fit—person-organization fit and person-job fit. For the organization dimension, the measure assesses the congruence between individual and organizational values. For the job dimension, the measure examines individuals' abilities to meet the demands of their job and how well the job meets the needs of the individual. Although this is a reliable, validated, and well-established measure of fit (Cable & DeRue, 2002), the instrument is limited. First, the language used in the measure is targeted to employment settings and may not translate well to community settings. Second, the measure only includes positively phrased questions, which may make the instrument more susceptible to response bias. Third, the measure examines two dimensions of fit within a single instrument rather than assessing multiple aspects of fit within a single dimension. Fourth, the measure only examines individuals' similarity with environments by the congruence of values rather than examining similarities between the individual and others in the environment. Lastly, complementary fit is only examined by assessing environmental fulfillment of individual needs and not how individuals may fill unique roles in environments. Given the limitations of this existing measure of P-E fit, a new measure of P-E fit is needed and should incorporate language that is appropriate for community contexts, include both negatively- and positively-phrased questions, examine a single dimension of fit within a social environment, assess individual perceptions of similarity to others in the

setting, and assess individual contributions to environment. The General Environment Fit Scale (GEFS) was developed to address these issues.

Cable and DeRue's (2002) factor analysis found that value congruence, needs-supplies fit, and demands-abilities fit were distinct constructs. The GEFS uses questions phrased similar to this measure, so the constructs are expected to be unique factors in the GEFS. Additionally, Cable and Judge (1996) found that value congruence and interpersonal similarity showed different relationships with global perceptions of fit, which suggests that these may be distinct constructs. Lastly, Piasentin and Chapman (2007) found that similarity and complementarity were distinct constructs. Therefore, these five theoretical dimensions (i.e., value congruence, similarity, needs-supplies fit, demands-abilities fit, and unique contributions) are hypothesized to be unique factors in the newly developed GEFS. In addition, past research has shown that that fit with settings is consistently related to satisfaction with the setting (Cable & DeRue, 2002; DeRue & Morgeson, 2007; Handal, 1981; Kahana, Lovegreen, Kahana, & Kahana, 2003; Verquer, Beehr, & Wagner, 2003; Verquer, Beehr, & Wagner, 2003) and how long members stay in settings (Cable & Judge, 1996; O'Reilly, Caldwell, & Barnett, 1989). Given the consistency of this literature, any new measure of P-E fit should be expected to predict satisfaction with and intended length of stay in the setting that the measure targets. Therefore, we hypothesize that resident fit with their OH will significantly predict their satisfaction with the recovery home, as well as how long residents intend to stay in their recovery home.

Methods

The current study examined a theoretical five-factor structure for the GEFS and tested the relationship of the measure and its proposed factors to constructs related to P-E fit. To achieve these goals, this study conducted a cross-sectional survey of attendees of the annual OH World Convention. OH is a network of over 1400 democratically-run mutual-help homes for individuals in recovery from substance addictions, and is the largest self-help recovery residential program in the US (Jason, & Ferrari, 2010). The 2010 Oxford House World Convention drew about 650 attendees, of which 246 (38%) participated in the current study. The convention coordinators allowed the investigators to conduct the study at a table in the vendors section of the convention. The authors recruited participants by either walking up to convention attendees and asking them to participate or by making a similar request of attendees who stopped at the table. The participants were compensated with a chance to win one of six \$100 Visa gift cards. The sample was 71% White, 19% Black, 11% multiple or other ethnicities, 52% male, and 48% female. Of respondents who answered the question about OH residency, 194 (79%) were current OH residents. The median resident length of residency in their current OH was 12 months ($SD = 20.97$ months; range = 0–117 months) and the median length of sobriety was 24 months ($SD = 42.86$ months; range = 0–326 months).

Measures

Person-environment fit—P-E fit was measured using the GEFS (Appendix A), a newly developed Likert-type (1=strongly disagree to 4=strongly agree) measure of fit. The initial self-report questionnaire included 26 randomly-ordered questions that were theoretically devised to assess the five aforementioned aspects of P-E fit. For each aspect of fit, five to six direct subjective questions about fit were presented to allow participants the flexibility to form their own appraisals of which values, needs, demands, similarities, and unique roles influencing fit with their environment (see Appendix A for examples). This direct subjective assessment of fit is concordant with Cable and DeRue's (2002), and others' (Kristof, 1996; Edwards, 1991; Piasentin & Chapman, 2007) methods for examining fit. The measure and

subscales were scored by calculating the mean of the items for each, with higher scores indicating greater fit between resident fit and their OH.

Satisfaction—Resident satisfaction with their OH was assessed using a slightly modified version of Judge, Bono, and Locke's (2000) subscale from the Brayfield and Rothe's (1951) Job Satisfaction Index. The Judge et al. (2000) subscale from the Job Satisfaction Index is a 5-item, 7-point Likert-type (1= strongly disagree to 7 =s strongly agree) self-report inventory of employees' satisfaction with their job. It has been shown to be both valid and reliable (Judge, Locke, Durham, & Kluger, 1998). This measure was modified by replacing "job" with "Oxford House." The measure was scored by calculating the mean of the items, with higher scores indicating resident satisfaction with their OH. The measure demonstrated good internal consistency in the current study ($\alpha = .81$)

Expected tenure—Expected tenure was measured by asking participants a single question about how long they intended to stay in their current recovery home. Participants indicated how many years and months they intended to stay.

Data Analysis

Missing data—Of the 246 participants in this study, 223 completed over half of the GEFS. Those that did not complete at least half of the GEFS were excluded from the analyses. For the confirmatory factor analysis, the missing data for those that completed at least half of the instrument was estimated using Full Information Maximum Likelihood (FIML) feature in Mplus (Muthén & Muthén, 2007). The validity analyses used scale totals that were calculated using the mean of responses to individual items. Data from residents who did not respond to an entire subscale were not used in these analyses.

Confirmatory factor models—The author conducted a series of seven confirmatory factor analyses using Mplus 5.2. The five models examined were: (1) the five-factor theoretical structure with all factors allowed to correlate, which was the reference model for comparing alternative solutions; (2) a unidimensional structure; (3) a two-factor structure comprised of complementary fit and supplementary fit as defined by Cable and DeRue (2002); (4) a three solution that removed demands-abilities fit from the complementary factor, since having the ability to meet the demands of an environment does not complement or supplement the environment; (5) the five-factor theoretical structure of the GEFS with no correlation between factors; (6) the theoretical five-factor structure with only Interpersonal Similarity and Unique Roles factors allowed to correlate; and (7) the theoretical five-factor structure with only Interpersonal Similarity and Unique Roles allowed to correlate. The last two models are proposed, since having a values similar to a setting would be expected to have a positive relationship to whether individuals see themselves as similar to others in the setting and being different from others in a way that adds to the environment is expected to be negatively related to being similar to others in the setting. The seven proposed models are depicted in Table 1.

Examining model fit—To assess model fit, the study examined both the absolute fit of the theorized five-factor model and comparative fit with alternative models. Fit was assessed using the Comparative Fit Index (CFI), Tucker-Lewis Index (TLI), Root Mean Square Error of Approximation (RMSEA), and Standardized Root Mean Square Residual (SRMR) for each of the seven proposed models, with cutoffs suggested by Hu and Bentler (1999; CFI $\geq .92$, TLI $\geq .90$, RMSEA $\leq .08$; SRMR $\leq .08$). The five-factor model was then compared to the six other competing models by examining the chi-square differences between proposed models, with lower chi-squares indicating better fitting models. Confirmatory factor analyses demonstrated comparable results using only current residents or using both current

residents and alumni, both groups' data were used to increase power in the analyses, with alumni retrospectively reporting on their perceived fit with the OH they lived in.

Convergent construct validity—To assess the construct validity of the GEFS, the authors used data from only current OH residents. The authors regressed satisfaction and intended length of stay each onto the GEFS, with significant predictions demonstrating convergent construct validity for the GEFS. Given Cable and DeRue's (2002) findings of differential relationships between various aspects of fit and outcomes, this study also explored the relationship between the GEFS factors and the two outcome variables. For this exploratory analysis, satisfaction and expected tenure were regressed onto all of the five factors using backward selection with PASW 17.0.2. Backward selection was used to remove non-significant predictors from the model to ensure parsimony. Only current OH residents' data were used for these validity and exploratory analyses.

Results

Selection of items

First, the authors selected four items demonstrating the greatest variance from each theorized factor to ensure that items captured a maximum range of response possibilities.

Confirmatory factor analysis

The initial confirmatory factor analysis failed to confirm the theorized five-factor structure of the GEFS (CFI = .89; TLI = .87; RMSEA = .06, CI_{.95} .05, .07; SRMR = .06); however, some items were not explained well by the factor structure. In order to address this, the study used an iterative process of removing items with little variance explained and conducting confirmatory factor analyses until the structure fit the theoretical structure. Two items were removed through this process. The means, standard deviations, and inter-item correlations for the final 18 items are displayed in Table 2. The final five-factor structure (see Figure 1) contained 18 items and conformed to P-E fit theory (see Tables 3–T6 for results). This suggests that the measure adequately represents the five-factor theory it was developed with. As indicated in Table 4, the unidimensional model, two-factor model, three-factor model, five-factor model with Interpersonal Similarity and Value Congruence correlated, and five-factor model with Interpersonal Similarity and Unique Roles correlated did not meet the a priori criteria on the fit indices, which suggests that these alternative models do not adequately fit the data.

Model comparison

First, the one-factor model was compared to the two-factor model, with the two-factor model fitting significantly better ($\Delta\chi^2 = 155.03$, $\Delta df = 1$, $p < .001$). Second, the one-factor model was compared to the three-factor model, with the three-factor model fitting significantly better ($\Delta\chi^2 = 172.62$, $\Delta df = 3$, $p < .001$). Third, the one-factor model was compared to the correlated five-factor model, with the correlated five-factor model fitting significantly better ($\Delta\chi^2 = 442.32$, $\Delta df = 10$, $p < .001$). Fourth, the uncorrelated five-factor model was compared to the correlated five-factor model, with the correlated five-factor model fitting better ($\Delta\chi^2 = 223.99$, $\Delta df = 9$, $p < .001$). Fifth, the model that allowed a correlation only between Interpersonal Similarity and Value Congruence was compared to the correlated five-factor model, with the correlated five-factor model fitting better ($\Delta\chi^2 = 186.42$, $\Delta df = 8$, $p < .001$). Lastly, the correlated five-factor model was compared to the model that allowed a correlation only between Interpersonal Similarity and Unique Roles, with the correlated five-factor model fitting better ($\Delta\chi^2 = 222.09$, $\Delta df = 8$, $p < .001$). As indicated by these comparisons, the theorized five-factor structure with correlated subscales is the best fitting model for this measure.

The final five-factor 18-item GEFS demonstrated good internal consistency as a whole ($\alpha = .82$), with factors demonstrating acceptable to moderate internal consistency (Value Congruence $\alpha = .66$, Interpersonal Similarity $\alpha = .81$, Needs-Supplies $\alpha = .71$, Unique Roles $\alpha = .75$, and Demands-Abilities $\alpha = .62$). These scales showed low to high correlations with one-another (see Table 3).

Concurrent convergent validity

Analyses of concurrent convergent construct validity indicated that, as hypothesized, global GEFS scores of current OH residents significantly predicted residents' satisfaction with their OH ($\beta = .48$, $t(188) = 7.53$, $p < .001$). Global fit explained 23% of the variance in satisfaction ($R^2 = .23$, $F(1, 188) = 56.64$, $p < .001$). However, global GEFS scores did not predict how much longer residents intended to stay in their OH ($\beta = .11$, $t(159) = -1.33$, $p = .18$).

Residents' satisfaction with their OH was significantly predicted by needs-supplies fit ($\beta = .53$, $t(187) = 8.79$, $p < .001$) and similarity with other residents ($\beta = .16$, $t(187) = 2.57$, $p = .01$). These two aspects of fit explained 35% of the variance in resident satisfaction with their OH ($R^2 = .35$, $F(2, 187) = 50.50$, $p < .001$). As mentioned, global fit was not a predictor of how long residents expected to stay in their OH; however, resident perceptions of similarity between themselves and their housemates did significantly predict of expected tenure ($\beta = .19$, $t(159) = 2.45$, $p = .02$) and explained 3% of the variance in expected stay ($R^2 = .03$, $F(1, 159) = 6.02$, $p = .02$).

Discussion

The current study confirmed the hypothesized factor structure of the GEFS. The confirmed five-factor structure included: values congruence, needs-supplies fit, unique roles fit, and demands-abilities fit. Global resident-recovery home fit predicted satisfaction with the home but was not related to how long residents intended to stay in the recovery home. These findings suggest that the GEFS is a valid measure of P-E fit and that, as with fit in employment settings, fit in community settings has a positive relationship to satisfaction. For expected length of stay in a community setting though, fit may have a relationship with this intention that is different than that found in employment settings. For example, the setting examined in the current study is a recovery home setting. Individuals' health needs in this setting may supersede the influence of fit in the residents' decisions about how long they will stay in the setting. Overall, these results provide convergent validity to suggest that the GEFS might be used as a measure of person-environment fit in community settings.

Exploratory analyses of individual factors' relationship to these constructs found that only needs-supplies fit and residents' perceived similarity with their housemates predicted resident satisfaction with their recovery home. The congruence between individual and setting values (Cable & DeRue, 1996, 2002) and environmental supply of individual needs (Cable & DeRue, 2002) have been shown to be an important predictor of satisfaction but value congruence was not found to significantly predict satisfaction in this recovery community. It is possible that in community settings like recovery homes, which are designed to address residents' need for sober housing, the provision of this need may supersede differences in values. The relationship between interpersonal similarity and satisfaction is similar to past research on similarity (Piasentin & Chapman, 2007), suggesting that similarity with others may have relationships in community settings that are concordant with those in employment settings. These analyses also found that similarity with housemates predicted how long residents intended to stay in their recovery home, even though global fit was not related to this construct. Again, past fit research in employment settings has found the congruence between individual and environment values (Cable &

DeRue, 2002; Cable & Judge, 1996; Chatman, 1991) to predict intended tenure, but for the current study, only similarity was a predictor of intended length of stay though, suggests that individuals' consideration of similarity with others may be important in decisions to remain in a setting. Again, the superordinate goal of sobriety may supersede any discordant values. The relationship between interpersonal similarity and tenure is similar to past research on similarity predicting greater tenure (O'Reilly, Caldwell, & Barnett, 1989), as well as research demonstrating that greater demographic greater similarity between individuals and their geographic environment was related to mutual-help group attendance (Humphreys & Woods, 1993). Furthermore this research supports the findings of Majer et al. (2002). These findings and the findings of the current study suggest that identification with other members of a social environment is important for individual outcomes in that environment. Both the satisfaction and expected tenure findings provide support for the addition of the similarity subscale, but further research will need to examine the utility of the unique roles subscale.

Although, this study has shown the GEFS to have both internal consistency and confirmatory validity, there are some limitations to this study and its findings. The measure was tested on a single specific population of individuals in recovery from substance addiction and was a convenience sample of Oxford House World Convention attendees. Those attending this conference may have better fit and satisfaction with their OHs and the organization given their motivation to attend this conference, for which attendees must devote a substantial amount of money for registration and transportation costs. This conference also has sessions that provide inspiration regarding the OH system, so fit and satisfaction scores may have been inflated by this social context. Additionally, the current study did not fully support convergent validity and did not examine discriminant validity. Furthermore, the current study used a cross-sectional design and examined intentions to stay in a recovery home rather than actual length of stay. Future longitudinal studies may provide valuable insight about the impact of fit on actual tenure. Finally, the study only examined one environmental context. Future research should examine the measure's utility in other contexts. Lastly,

It is unfortunate that no research has been conducted on P-E fit in multiple contexts and the impact of these multiple fits on global outcomes, such as mental health, well-being, satisfaction with life, and substance use. For those in recovery from substances, important contexts to examine in future research include recovery homes, treatment groups, mutual-help support groups, the workplace, and the family. Jansen and Kristof-Brown's (2006) conceptualization of multiple dimensions of person-organization fit provide some guidance for conceptualizing fit in multiple settings. When considering multiple settings, fit should be determined by the outcome of interest. For global outcomes, such as mental health, well-being, satisfaction with life, and substance use, multiple fits should be examined; however, specific fits may be more appropriate for outcomes such as involvement, commitment, and satisfaction with a particular setting. In addition, little research has been conducted on the fit between organizations or programs and their environmental context. As demonstrated by Segal et al.' (1989) findings, some organizations may better fit some social environments better than other organizations. Finally, studies examining the implication of P-E fit have thus far have not generally examined implications for the environment. For example, one could image that individual misfit with a group could have detrimental effects on group cohesion and a sense of community, especially for small groups.

In summary, the GEF is firmly grounded in P-E fit theory and includes subscales for five conceptualizations of fit. This measure proved to be both reliable and valid. The demonstration of the relationship between fit and satisfaction and between similarity and intended length of stay are noteworthy, given the selectivity of the sample and lack of resulting variability in satisfaction. These results suggest that P-E fit influences residents'

experiences of their recovery home, but the relationship between fit and outcomes may be different in community settings than in employment settings. The GEFS provides an opportunity for community researchers to examine fit in community settings with a reliable and valid instrument designed to be used in a variety of environmental contexts. Hopefully, the results of this study and the development of a P-E fit measure for community contexts will challenge to field of community psychology to further examine fit with communities and develop P-E fit theory to address the needs of community psychology.

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Appendix A

General Environment Fit Scale

The items below ask about how well the **setting** you currently **action** in matches your values, needs, abilities, and characteristics. Please circle the number to indicate how much you agree or disagree with each statement.

1. My personal abilities and education are a good match for the demands that my **setting** places on me. (DA)
2. The other **members** of my **setting** are similar to me. (MS)
3. I do not add anything unique to my **setting**. (UR*)
4. My values prevent me from fitting in with my **setting**. (VC*)
5. I have the ability to meet the demands of my **setting**. (DA)
6. The other **members** of my **setting** are different from me. (MS*)
7. My **setting** fulfills my needs. (NS)
8. There is a poor fit between what my **setting** offers me and what I need in a **setting**. (NS*)
9. The values of my **setting** do not reflect my own values. (VC *)
10. My unique differences add to the success of my **setting**. (UR)
11. The **setting** that I **action** in does not have the attributes that I need in a **setting**. (NS*)
12. I am different than the other residents of my **setting**. (MS*)
13. The match is very good between the demands of my **setting** and my personal skills. (DA)
14. I am not able to meet the demands of my **setting**. (DA*)
15. Nothing unique about me adds to the success of my **setting**. (UR*)
16. I am similar to other residents of my **setting**. (MS)
17. I make unique contributions to my **setting**. (UR)
18. My personal values are similar to those of my **setting**. (VC)

Notes: the **setting** placeholders are replaced with the name or type of setting (i.e. recovery home or Oxford House), the **action** placeholders are replaced with the action associated with the setting (i.e. living), the **members** placeholder is replaced with the term used for members in the setting (i.e. residents)

* denotes a reverse-scored item

VC indicates Value Congruence subscale items

NS indicates Needs-Supplies subscale items

DA indicates Demands-Abilities subscale items

MS indicates Interpersonal Similarity subscale items

UR indicates Unique Role subscale items

Figure 1. Five-factor confirmatory factor analysis for the General Environment Fit Scale. * $p < .05$, ** $p < .001$, VC = Value Congruence subscale, IS = Interpersonal Similarity subscale, NS = Needs-Supplies subscale, UR = Unique Roles subscale, and DA = Demands-Abilities subscale.

Table 1

Confirmatory Factor Analysis Models

Model 1 ¹	Model 2	Model 3	Model 4	Model 5 ²	Model 6 ³	Model 7 ⁴
Factor 1 VC	Factor 1 VC IS	Factor 1 VC IS	Factor 1 VC IS	Factor 1 VC	Factor 1 VC	Factor 1 VC
Factor 2 IS	NS UR	Factor 2 UR NS	Factor 2 UR NS	Factor 2 IS	Factor 2 IS	Factor 2 IS
Factor 3 NS	DA	DA	Factor 3 DA	Factor 3 NS	Factor 3 NS	Factor 3 NS
Factor 4 UR				Factor 4 UR	Factor 4 UR	Factor 4 UR
Factor 5 DA				Factor 5 DA	Factor 5 DA	Factor 5 DA

Note.

¹Correlations between all factors allowed.

²Correlations between factors not allowed.

³Only IS and VC factors allowed to correlate.

⁴Only IS and UR allowed to correlate.

VC = Value Congruence items, IS = Interpersonal Similarity items, NS = Needs-Supplies items, UR = Unique Roles items, DA = Demands-Abilities items.

Table 2

Inter-item Correlations, Means, and Standard Deviations

Item	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18
1	—																	
2	0.24 ²	—																
3	0.17 ¹	0.02	—															
4	0.21 ²	0.30 ²	0.20 ²	—														
5	0.37 ²	0.07	0.15 ¹	0.25 ²	—													
6	0.14 ¹	0.53 ²	0.03	0.32 ²	-0.03	—												
7	0.28 ²	0.25 ²	0.12	0.33 ²	0.35 ²	0.06	—											
8	0.26 ²	0.27 ²	0.18 ²	0.46 ²	0.17 ¹	0.25 ²	0.36 ²	—										
9	0.21 ²	0.31 ²	0.15 ¹	0.42 ²	0.11	0.27 ²	0.35 ²	0.45 ²	—									
10	0.21 ²	-0.06	0.39 ²	0.10	0.20 ²	-0.16 ¹	0.20 ²	0.13	-0.01	—								
11	0.27 ²	0.18 ²	0.24 ²	0.41 ²	0.18 ²	0.23 ²	0.37 ²	0.63 ²	0.48 ²	0.18 ²	—							
12	0.10	0.45 ²	-0.10	0.21 ²	0.00	0.64 ²	0.14 ¹	0.21 ²	0.14 ¹	-0.16 ¹	0.21 ²	—						
13	0.47 ²	0.20 ²	0.18 ²	0.19 ²	0.29 ²	0.09	0.33 ²	0.32 ²	0.27 ²	0.34 ²	0.33 ²	0.18 ²	—					
14	0.16 ¹	0.06	0.19 ²	0.27 ²	0.17 ¹	0.01	0.22 ²	0.39 ²	0.22 ²	0.32 ²	0.35 ²	0.05	0.30 ²	—				
15	0.21 ²	-0.02	0.49 ²	0.20 ²	0.20 ²	0.01	0.17 ¹	0.32 ²	0.26 ²	0.43 ²	0.35 ²	-0.04	0.25 ²	0.25 ²	—			
16	0.15 ¹	0.51 ²	-0.06	0.16 ¹	0.06	0.44 ²	0.18 ²	0.12	0.13	-0.02	0.10	0.54 ²	0.22 ²	-0.03	-0.04	—		
17	0.28 ²	-0.03	0.42 ²	0.13	0.29 ²	-0.07	0.22 ²	0.18 ²	0.15 ¹	0.49 ²	0.23 ²	-0.12	0.29 ²	0.20 ²	0.44 ²	-0.02	—	
18	0.29 ²	0.39 ²	0.08	0.34 ²	0.10	0.26 ²	0.36 ²	0.33 ²	0.43 ²	0.04	0.36 ²	0.26 ²	0.36 ²	0.19 ²	0.17 ¹	0.34 ²	0.15 ¹	—
Mean	3.41	2.84	3.36	3.65	3.63	2.68	3.36	3.62	3.41	3.24	3.57	2.82	3.32	3.67	3.42	2.98	3.36	3.22
SD	0.55	0.74	0.81	0.61	0.55	0.87	0.56	0.59	0.74	0.74	0.59	0.87	0.56	0.63	0.70	0.67	0.62	0.63

Notes.

¹
 $p < .05$,²
 $p < .01$

Table 3

Error Variances

Item	Estimate	S.E.	z
1	0.19	0.02	8.16**
2	0.29	0.04	8.21**
3	0.41	0.05	8.72**
4	0.23	0.03	8.83**
5	0.24	0.03	9.50**
6	0.31	0.04	7.07**
7	0.22	0.02	9.41**
8	0.14	0.02	7.17**
9	0.30	0.04	7.90**
10	0.30	0.04	8.01**
11	0.14	0.02	6.81**
12	0.31	0.04	7.04**
13	0.16	0.02	6.81**
14	0.31	0.03	9.32**
15	0.26	0.03	7.67**
16	0.26	0.03	8.62**
17	0.20	0.03	7.52**
18	0.25	0.03	8.71**

Note.

**
 $p < .001$

Table 4

Standardized Factor Loadings

	Estimate	S.E.	z		Estimate	S.E.	z
Factor 1				Factor 4			
Item 4	0.63	0.05	12.33**	Item 3	0.62	0.05	11.70**
Item 9	0.67	0.05	13.51**	Item 10	0.67	0.05	13.44**
Item 18	0.61	0.05	11.31**	Item 15	0.69	0.05	13.83**
Factor 2				Item 17	0.71	0.05	14.81**
Item 2	0.69	0.05	14.83**	Factor 5			
Item 6	0.77	0.04	19.92**	Item 1	0.61	0.06	10.46**
Item 12	0.77	0.04	19.44**	Item 5	0.46	0.07	7.13**
Item 16	0.66	0.05	13.71**	Item 13	0.70	0.05	13.10**
Factor 3				Item 14	0.45	0.07	6.62**
Item 7	0.54	0.06	9.34**				
Item 8	0.77	0.04	19.45**				
Item 11	0.78	0.04	20.06**				

Note.

 $p < .001$

Table 5

Comparison of Four Competing GEFS CFA Models

Models	χ^2	df	CFI	TLI	RMSEA	SRMR	$\Delta\chi^2$
Model 1	224.74**	125	0.92	0.90	0.06	0.06	
Model 2	667.06**	135	0.55	0.49	0.13	0.12	-442.32
Model 3	512.03**	134	0.68	0.64	0.11	0.12	-287.29
Model 4	494.44**	132	0.69	0.65	0.11	0.12	-267.70
Model 5	448.73**	134	0.74	0.70	0.10	0.17	-220.99
Model 6	411.16**	133	0.77	0.73	0.10	0.16	-186.42
Model 7	446.83**	133	0.74	0.70	0.10	0.18	-222.09

Notes.
*** $p < .001$;
CFI = Comparative Fit Index; TLI = Tucker-Lewis Index; RMSEA = Root Mean Square Error of Approximation SRMR = Standardized Root Mean Square Residual.