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Results from a Psychometric Assessment of a New Tool for Measuring Evidence-Based Decision Making in Public Health Organizations

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Abstract

Background—In order to better understand how to improve evidence-based decision making (EBDM) in state health departments, measurement tools are needed to evaluate changes in EBDM. The purpose of this study was to test the psychometric properties of a new measurement tool to assess EBDM in public health practice settings.

Methods—A questionnaire was developed, pilot-tested and refined in an iterative process with the input of public health practitioners with the aim of identifying a set of specific measures representing different components of EBDM. Data were collected in a national survey of state health department chronic disease practitioners. The final dataset (n=879) for psychometric testing

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Conflict of Interest

None of the authors have financial or non-financial competing interests.

was comprised of 19 EBDM items that were first examined using exploratory factor analysis, and then confirmatory factor analysis.

Results—The final model from confirmatory factor analysis includes five latent factors representing components of EBDM: capacity for evaluation, expectations and incentives for EBDM, access to evidence and resources for EBDM, participatory decision making, and leadership support and commitment.

Conclusions—This study addresses the need for empirically tested and theory-aligned measures that may be used to assess the extent to which EBDM is currently implemented, and further, to gauge the success of strategies to improve EBDM, in public health settings. This EBDM measurement tool may help identify needed supports for enhanced capacity and implementation of effective strategies.

Keywords

evidence-based decision making; public health; measurement; confirmatory factor analysis

Background

State health departments (SHD) are important organizational settings for the promotion of statewide and local evidence-based preventive practices in chronic disease that address some of the most pressing health issues facing the US population. Numerous resources are now available for identifying research-tested prevention programs and interventions to improve effectiveness of SHD practices on community health (National Cancer Institute, 2013; Cochrane Public Health, 2016; US Preventive Services Task Force; Zaza, Briss, & Harris, 2005). However, previous work has identified substantial gaps in the dissemination and implementation of evidence-based interventions (EBIs) among state and local public health practitioners (Brownson, Fielding, & Maylahn, 2009). Prior work in the study of best practices in public health settings suggests that improving certain organizational processes may facilitate organizational uptake of EBIs (Dodson, Baker, & Brownson, 2010; Jacobs, Dodson, Baker, Deshpande, & Brownson, 2010; Jacobs, Jones, Gabella, Spring, & Brownson, 2012; Maylahn, Fleming, & Birkhead, 2013).

Evidence-based decision making (EBDM) involves a number of relevant components, including: summarizing the findings from the best available peer-reviewed evidence, using data and information systems, applying program planning frameworks, engaging the community in assessment and decision-making, conducting sound evaluation, and synthesizing science and communication skills with common sense and political acumen for dissemination to other stakeholders and decision makers (Brownson, Fielding, & Maylahn, 2013). EBDM is central to the notion of evidence-based public health practice in general, emphasizing processes undertaken not only by organizational leaders, but also, perhaps more importantly, by program managers and staff responsible for administering specific programs and interventions (Brownson, Fielding, & Maylahn, 2009; Brownson et al., 2013; Kohatsu, Robinson, & Torner, 2004). Some of these processes are included among administrative evidence-based practices set forth by Brownson et al. (2012), which defines a set of core competencies for public health administrators in five domains: workforce development,

leadership, organizational climate and culture, relationships and partners, and financial processes (Brownson, Allen, Duggan, Stamatakis, & Erwin, 2012). Standards employed by the national accrediting body in public health also address many components of EBDM as crucial for a well-functioning public health agency (Public Health Accreditation Board, 2013). The essential goal of measuring EBDM is to capture an important organization driver of public health practice that ultimately results in the implementation of effective interventions that improve population health status (Aarons et al., 2014; Brownson et al, 2012; Klaiman et al, 2016; Pettman et al., 2013, Yang & Bekemeier, 2013).

A core issue for research examining the dissemination and implementation (D & I) of evidence based interventions involves stronger measurement of the multiple dimensions of EBDM, as well as the multiple levels at which decisions are made and implemented in SHDs (Proctor & Brownson, 2012). There are numerous theories and frameworks in D&I science that can inform the development of a model for measuring EBDM in the SHD setting (Tabak, Khoong, Chambers, & Brownson, 2012). These include diffusion of innovations, theories for knowledge transfer and exchange in work settings, and institutional theory (Kramer & Cole, 2003; Kramer et al., 2013; Kramer & Leithwood, 2004; March & Olsen, 1983; North, 1990; Rogers, 2003; Scott, 2008). While there has been some previous research in conceptualizing and developing theory-based measures for studying dissemination and implementation of EBI's in public health organizational settings (Barrett, Plotnikoff, Raine, & Anderson, 2005; Elliott et al., 2003; Stamatakis et al., 2012; Yousefi-Nooraie, Dobbins, & Marin, 2014), there are few measurement scales for EBDM that have been empirically tested in these settings and mapped closely to a conceptual framework.

While organizational structure varies across state health department (SHD) settings, generally chronic disease programs have a dedicated unit with administrative leaders overseeing program managers and other staff in charge of implementing specific programs (e.g., tobacco control, diabetes prevention, asthma control, cancer screening) (Alongi, 2015; ASHTO Profile of State Public Health, 2014). Developing measures to assess the ability of these program managers and staff to use EBDM is key to understanding how to improve implementation of evidence-based interventions in SHDs. The purpose of this study was to assess the construct validity of a newly-created measure of EBDM through a systematic examination of its psychometric properties.

Methods

Study Design and Data

The context for the current study is a multi-phase dissemination study with a cluster randomized trial component that was designed to examine the effect of dissemination strategies on enhancing organizational capacity and support for evidence-based chronic disease prevention in SHDs. In this analysis, 2013 data from the trial's national survey with SHD staff working in chronic disease from all 50 states and Washington, D.C. were analyzed. Author et al. (year) described the larger study, including the adapted theoretical framework which informed overall survey development, based partly on Kramer and Cole's conceptual framework for research knowledge transfer and utilization (Author et al., year).

The adapted framework for dissemination of evidence-based public health, a distinct concept with a related set of constructs to EBDM, (figure published in Author et al. (year)) placed workplace context and work unit resources as key drivers of research utilization. Each of these hypothetically predictive factors included a number of components that are incorporated in descriptions of EBDM (e.g., access to research evidence, evaluation data, supervisory support and expectations, etc.), but that were not theoretically formulated into defined constructs with specific measures. Therefore, the purpose of this study was to identify a set of specific measures representing different components of EBDM, confirming the factor structure of these measures, estimating the relationships among these factors, and demonstrating overall goodness of fit for the resulting measurement models.

Measures

The measurement items included in the current analysis were part of a national SHD online survey questionnaire that contained a total of 68 items and was developed from the study team's previous research (Authors), a literature review (Authors), and five rounds of study team review. Details describing the overall study are published elsewhere (Authors). The 7-point Likert scale survey items on EBDM were from two previously tested sets of questions developed by our research team for use with local health departments. First, the items derived from administrative evidence-based practice (A-EBP) constructs were developed for a national survey of local health department directors by several co-authors based on literature review findings (Authors). Reliability test-retest analyses with 38 local health department administrators showed substantial A-EBP reliability intra-class correlation coefficients (ICC) of .66 – .85 and internal consistency Cronbach alpha values of .69–.81 (Authors). Secondly, additional items were adapted from a set of questions on stages of EBDM dissemination developed and tested for local health department obesity prevention staff to answer in response to a single local respondent-selected intervention (Author). Wording of these items was modified to reflect plurality as state health departments promote a number of evidence-based strategies.

For the national SHD survey, cognitive-response testing was conducted with 11 former state health department chronic disease directors or program managers. As a result two items were deleted and the wording of several others was refined. Test-retest reliability was then conducted with 106 current state health department employees working in chronic disease prevention, resulting in the removal of two additional items and slight rewording of three items. Of the remaining items, most had ICCs ≥ .70 and Cronbach alpha values ≥ .70 reflecting adequate reliability and internal consistency. The final survey had 23 items in the EBDM section. Respondents were asked to record their agreement with the item statements, from 1=strongly disagree to 7=strongly agree.

Data Collection

The national survey was conducted March – May 2013 among US state health department chronic disease prevention practitioners from the 50 US states, Washington, D.C., and US territories via emailed invitation. Practitioners eligible to participate in the survey were identified from state health department websites or lists from partnering organizations (initial target sample size = 1170). Respondents included program managers and staff in

comprehensive cancer prevention and control, cancer screening, tobacco control, physical activity, nutrition, obesity prevention, diabetes prevention, and cardiovascular health. Human subjects approval was obtained from the institutional review board of Washington University in St. Louis. Follow-up email reminders and phone calls resulted in a total of 923 completed surveys. The 19 surveys received from five of the eight US territories were excluded from the current set of analyses, leaving 904 surveys among the 50 US states and the District of Columbia and a response rate of 77.3%. The final analytical sample was 879, after excluding those who had missing values in at least one question (n=25).

Statistical Analysis

The primary goal of the analysis was to examine latent constructs comprised of the 23 EBDM items and then test the construct validity of the resulting latent factors. The rationale for our analysis was guided by methods described in Schumaker & Lomax (2010), which recommends a stepwise process for identifying the number of latent factors in a measurement model (exploratory factor analysis [EFA]), confirming the validity of those factors (confirmatory factor analyses [CFA]), and identifying the most parsimonious and theoretically sound structural equation model with goodness of fit indices (Schumaker & Lomax, 2010). This approach has been deemed appropriate under similar conditions to our study, since the purpose of our analysis was to identify a best-fitting model for multidimensional constructs based on a proposed model containing large numbers of potential indicators with unknown psychometric properties (Bollen, 2000). Because so few participants had missing data on at least one variable, and because chi-square tests comparing the excluded and analytical samples indicated no significant differences ($p>.10$), we excluded them from all analyses. EFA uses listwise deletion whereas CFA allows for missing data, and we chose to include only those participants who would be included in both analyses.

All survey items representing components of EBDM were identified, and 23 items that had good reliability from the test-retest study (ICC > .65) were retained for the EFA. An EFA was then conducted to identify discrete factors comprised of items with moderate to high factor loadings (.6 or above). Items comprising the resulting factors were examined for their correspondence to constructs described in the theoretical model, and were subsequently analyzed using a series of CFA (19 items). W A series of structural equation models were compared to identify the best fitting model, based on model fit indices and allowing for modifications including adding error covariances and the removal of poor-performing items (i.e., low factor loadings). Multiple fit indices were used to evaluate model fit: the chi-square/degrees of freedom, comparative fit index (CFI), and root mean square error of approximation (RMSEA) and its associated 90% confidence interval. CFI values between 0.90–0.95 or above suggest adequate to good fit and RMSEA values <0.06 suggest good model fit (Hu & Bentler, 1995; Hu & Bentler, 1999). Correlations between factors were also examined. All analyses were conducted in SPSS v17.0 (SPSS Inc., 2008) and AMOS v18.0 (SPSS Inc., 2009; Arbuckle, 2007).

Results

As shown in Table 1, the majority of respondents were female (80.4%), aged between 30–59 years (78.9%), and working in the state health department as a program manager, administrator, coordinator or director (57.8%). The most common chronic disease program areas were tobacco (35.3%), obesity (31.6%), and physical activity (30.7%).

The results of the EFA suggested a 5-factor solution, based on a 0.6 cut-point for factor loadings (explaining 64.3% of the variance). The factors and corresponding items are reported in Table 2. Repeating the analysis with random split-half sample supported an essentially identical solution (data not shown in table). Although other cut-points for factor loadings were considered, the resulting solution generated generally robust and distinct groupings of items that corresponded to key constructs comprising components of worksite characteristics and workplace context that the theoretical model suggested would be predictive of EBDM processes related to EBI uptake.

A structural equation model was then constructed to conduct the CFA for each of the following five latent factors with corresponding items, item-specific error terms, and correlations between factors: 1) capacity to conduct evaluation (3 items), 2) expectations and incentives for using EBDM (4 items), 3) access to evidence and resources to support EBDM (5 items), 4) participatory decision-making (3 items), and 5) leadership support and commitment (4 items). As shown in Table 3, the base model did not have good fit across all indices. In the first modified model, 3 covariance terms were added among items in factors 3, 4, and 5, which resulted in improved (though still moderate) fit across all indices. Additional modifications were made by combining information from model-based modification indices with prior information regarding conceptual fit with study design and reliability of specific items. In the second modified model, two covariance terms were added according to the modification index. In the third modification, one covariance term was added and two items were removed due to a combination of relatively low factor loadings (<.6) and conceptual reasons (from discussion of study team, based on concerns about social desirability, or the tendency to respond in a way perceived as more favorable, and difficulty of interpretation), which resulted in good model fit across all indices. Finally, a fourth modified model was run after eliminating a variable due to relatively low factor loading (.6) in combination with relatively low test-retest reliability (ICC <.7), which further improved model fit, though only slightly.

The final model including five factors with corresponding items and cross-factor correlations is shown in Table 4. All five factors include item factor loadings of >.6. The factor representing capacity to conduct evaluation (Factor 1) stands out as having the lowest cross-factor correlations among all factors, ranging from .36–.48. The other four factors had moderate cross-factor correlations ranging from .64–.74.

Discussion

This study addresses the need for empirically tested and theory-informed measures that may be used to gauge the success of strategies to improve EBDM in public health settings. The

motive of this study was to: 1) develop a measure that could be used to assess baseline and change in EBDM, 2) map measurement factors to a conceptual framework, and 3) assess construct validity of the measurement factors. Our findings suggest that our measurement tool has strong construct validity with regard to five measurement factors that represent components of EBDM: capacity to conduct evaluation, expectation and incentive for using EBDM, access to evidence and resources for EBDM, participatory decision-making, and leadership support and commitment. Capacity to conduct evaluation appeared to have the strongest construct and discriminant validity, as evidenced by high item loadings and relatively lower correlations with the other four latent factors. This may indicate that the processes, as well as infrastructural supports, around conducting program evaluation are likely to operate somewhat more independently from other EBDM related processes. We believe the stronger between-factor correlations (~0.7) for the other four factors adequately represents the overlap as well as distinction among other processes related to EBDM.

A combination data-driven and theory-based approach was used in this study to address the complexities inherent in choosing the best measurement model for evaluating changes in EBDM in state public health departments. While a purely theory-based approach is often considered the most robust for model-testing, our approach reflects the reality of developing practical measures for testing implementation strategies in public health settings. In addition to the real-world limitations associated with conducting survey research in a professional work setting using questionnaires loaded with numerous measurement items, the myriad of theories and frameworks describing D&I processes pose a challenge in operationalizing the “correct” theory (Tabak, Khoong, Chambers, & Brownson, 2012; Mitchell, Fisher, Hastings, Silverman, & Wallen, 2010; Nilsen, 2015). Likewise, it is not sufficient to rely solely on quantitative techniques to identify items comprising latent factors in a measurement model (Bollen 2000). The combined approach resulted in a parsimonious model with both reasonable fit and theoretically-supported constructs.

The resulting factors from the final CFA model aligned with several constructs previously suggested as being important for knowledge transfer in organizational settings, providing some support that the theoretical bases for our measures development was reflected in the final measurement model. For example, our factors representing capacity to conduct evaluation and access to evidence and resources to support EBDM correspond to previously proposed work unit resources, and factors representing expectation and incentive for using EBDM and participatory decision making reflect previously proposed characteristics of workplace context (Allen et al. 2013, adapted from Kramer et al. (Kramer & Cole, 2003; Kramer et al., 2013; Kramer & Leithwood, 2004). In addition, the factors align with priorities of the national public health accreditation program, and thus provide a set of research-tested measures that may be of interest to public health agencies seeking ways to gauge improvements in their organizations’ functions (Public Health Accreditation Board, 2013).

It is also important to note that this works aligns with scientific literature based outside of the US, primarily in Canada, Australia and the U.K., which applies a related set of terminology and theoretical frameworks to understand strategies to close the gap between research evidence and public health policymaking and practice, such as knowledge

translation and exchange (KTE) and evidence-informed decision making (EIDM) (Boyko et al., 2011; Dobbins et al., 2001; Dobbins et al., 2009; Lewin et al., 2012; Makkar et al., 2015; Peirson et al., 2012; Pettman et al., 2013; Squires et al., 2011; Waters, 2009; Yousefi-Nourei & Dobbins, 2015). Peirson et al. (2012) identified several critical factors for building EIDM capacity at an organizational level in Canadian public health units that were similar to measures in the current instrument, such as leadership capacity, access to and resources for using evidence (including workforce skills), having a receptive organizational culture and knowledge management strategy. A tool to assess policymakers' engagement with research in Australia (Makkar et al., 2015) identified several characteristics of organizational capacity that also share some similarities with the current work, including valuing research, and having tools, systems, knowledge and skills among staff to use research. Dobbins et al. (Dobbins et al., 2009) found that public health agencies in Canada differed in their response to a set of KTE interventions as a function of whether the organizational culture was supportive of EIDM.

Slight modifications were made as noted in our model-building steps that allowed for some cross-loading among measurement items. Although overall good fit was found for the final SEM model, some may consider it a limitation that there was moderate discriminant validity evidenced by some relatively strong between-factor correlations. However, this may be an accurate reflection of the process of EBDM involving fluid connections across organizational structures and within work units. Marsh et al. (2009) contend that lack of discriminant validity can be theoretically sound in similar contexts (Marsh et al., 2009). While results from our CFA provide some evidence of the construct validity of the EBDM measurement tool, future work is needed to examine change in EBDM factors over time as a function of organizational improvement strategies, and to assess the performance of the tool in predicting relevant outcomes in order to provide stronger evidence of the validity and utility of the tool. Also, these data are based on self-report; it may be possible to link this work on self-reported data with the other parallel work in abstracting information from health department program records insofar as EBDM-related processes are documented and similarly measurable.

While EBDM is not in itself specific to chronic disease prevention, it is particularly important in this field. Achieving benchmarks in chronic disease prevention (e.g., Healthy People 2020 (U.S. Department of Health and Human Services, 2012)) will require multiple interventions and policies implemented over a relatively long period of time to address the multiple risk factors and conditions comprising the major causes of chronic disease, and tailored to meet specific community needs. In addition, many of the risk factors and opportunities for prevention cross over multiple conditions and diseases such that coordination across program areas is critical (Allen et al., 2014). Therefore, success cannot be evaluated with a focus on any one particular evidence-based intervention, nor are benchmarks with respect to population health outcomes likely to manifest in a short period of time. As a whole, these considerations underlie the importance of evaluating organizational processes like EBDM, in addition to other infrastructural supports and workforce skills, in determining the capacity for mounting an appropriate public health response to challenges in chronic disease.

Conclusions

The current measurement tool may be added to the small but growing arsenal of tools to measure EBDM and other related D&I concepts in public health organizations (Stamatakis et al., 2012). Toward the ultimate goal of public health organizations utilizing the most effective approaches based on up-to-date evidence, as theory-based frameworks from D&I science suggest, identifying strategies to improve implementation of EBIs will require multipronged approaches (Damschroder et al., 2009; Greenhalgh, Robert, MacFarlane, Bate, & Kyriakidou, 2004). Lessons learned from the national health department quality improvement and accreditation initiatives can be used in conjunction with the current and other EBDM measurement tools to identify needed supports for enhanced capacity and implementation of effective strategies (Public Health Accreditation Board, 2013). As these measurement tools evolve, it will be important to triangulate self-reported survey data with data from “objective” sources (e.g., record reviews) as well as from qualitative studies of EBDM in public health settings.

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List of Abbreviations

EBDM	evidence-based decision making
EBI	evidence-based interventions
SHD	state health department
EFA	exploratory factor analysis
CFA	confirmatory factor analysis
SEM	structural equation model
D&I	dissemination and implementation
EIDM	evidence-informed decision making
KTE	knowledge translation and exchange

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Table 1

Description of study sample

Table 1. . Descriptive Statistics

	Analytical Sample*	
	n	%
	879	94.7
Gender		
Male	172	19.6
Female	707	80.4
Age		
20–29 years	62	7.1
30–39 years	209	23.9
40–49 years	242	27.6
50–59 years	240	27.4
60 years or older	123	14.0
Agency/Organization		
State Health Department	879	100.0
Position		
Program Manager/Administrator/Coordinator/Director	508	57.8
Health Educator	108	12.3
Epidemiologist	75	8.5
Statistician	5	0.6
Program Evaluator	33	3.8
Overall director of all chronic disease programs	12	1.4
Other Division or Bureau Head/Deputy Director	28	3.2
Community Health Nurse, Social Worker, Dietitian, Nutritionist	28	3.2
Other (please specify):	82	9.3
Program Area		
Tobacco	310	35.3
Obesity	278	31.6
Physical Activity	270	30.7
Diet/Nutrition	238	27.1
Cancer Prevention Control	249	28.3
Diabetes	216	24.6
Cardiovascular Health	227	25.8
Asthma	81	9.2
Health Promotion	251	28.6
School Health	117	13.3
Evaluation	120	13.7
Epidemiology	108	12.3

* Chi-square tests based on comparing the excluded and analytical sample distributions indicated no significant differences (p>.10).

Table 2

Factor descriptions and corresponding measurement items

Factor 1: Capacity to conduct evaluation, Eigen value = 2.72; 11.8% variance explained
Item 1: My work unit plans for evaluation of interventions prior to implementation.
Item 2: My work unit uses evaluation data to monitor and improve interventions.
Item 3: My work unit distributes intervention evaluation findings to other organizations that can use our findings.
Factor 2: Expectation and incentive for using EBDM, Eigen value = 3.43; 14.9% variance explained
Item 4: My direct supervisor expects me to use EBDM.
Item 5: My performance is partially evaluated on how well I use EBDM in my work.
Item 6: My direct supervisor recognizes the value of management practices that facilitate EBDM.
Item 7 (DELETED): ~~*I use EBDM in my work.*~~
Factor 3: Access to evidence and resources to support EBDM, Eigen value = 3.61; 15.7% variance explained
Item 8: My work unit has access to current research evidence for EBDM.
Item 9: Informational resources (e.g., academic journals, guidelines, and toolkits) are available to my work unit to promote the use of EBDM.
Item 10: My work unit currently has the resources (e.g., staff, facilities, partners) to support application of EBDM.
Item 11: The staff in my work unit has the necessary skills to carry out EBDM.
Item 12 (DELETED): ~~*My work unit offers employees opportunities to attend EBDM trainings.*~~
Factor 4 Participatory decision-making, Eigen value = 2.57; 11.2% variance explained
Item 13: When decisions are made within my work unit, program staff members are asked for input.
Item 14: Information is widely shared in my work unit so that everyone who makes decisions has access to all available knowledge.
Item 15: My work unit engages a diverse external network of partners that share resources for EBDM.
Factor 5: Leadership support and commitment, Eigen value = 2.60; 11.8% variance explained
Item 16: Top leadership in my agency (e.g. agency head, state health officer, deputies) recognizes the value of EBDM.
Item 17: Top leadership in my agency encourages use of EBDM.
Item 18: My agency is committed to hiring people with relevant training in the core disciplines in public health (e.g., epidemiology, health education, environmental health).
Item 19 (DELETED): ~~*Stable funding is available for EBDM.*~~

*Measurement items in survey that were deleted from final CFA model are noted with strikethroughs.

Table 3

Goodness of fit indices and subsequent modifications from structural equation model-building for the final 5-factor model.

	X2	df	p	AIC	RMSEA	95%CI (RMSEA)		CFI	Modification note
						Lower	Upper		
Base model	776.4	142	<0.0001	50736.0	0.071	0.066	0.076	0.912	No modification
Modification 1	491.5	139	<0.0001	50376.6	0.054	0.049	0.059	0.951	3 covariance terms added (between items 6–8, items 13–14, and items 16–17)
Modification 2	396.3	137	<0.0001	50258.9	0.046	0.041	0.052	0.964	2 covariance terms added (between the items 8 and 12, and items 4 and 7)
Modification 3	269.2	105	<0.0001	45101.5	0.042	0.036	0.048	0.974	2 items deleted (items 7 and 19)
Modification 4	226.7	91	<0.0001	42168.9	0.041	0.034	0.048	0.978	1 item deleted (item 12)

Table 4

Final model item-specific factor loadings and cross-factor correlations

	Final Factors and Measurement Items	Factor Loadings	Cross-Factor Correlations				
			Factor 1	Factor 2	Factor 3	Factor 4	Factor 5
Factor 1	**Capacity for Evaluation**			**.36**	**.48**	**.47**	**.36**
	Plan ahead for evaluation (pre-implementation)	.84					
	Use evaluation data to improve program	.91					
	Distribute evaluation findings	.71					
Factor 2	**Expectations & Incentives for EBDM**				**.70**	**.64**	**.72**
	Direct supervisor expects EBDM	.83					
	Performance evaluated on EBDM	.70					
	Direct supervisor values EBDM	.80					
Factor 3	**Access to Evidence & Resources for EBDM**					**.74**	**.73**
	Access to current research evidence	.67					
	Informational resources available	.61					
	Work unit has staff & facilities for EBDM	.78					
	Staff have skills for EBDM	.78					
Factor 4	**Participatory Decision Making**						**.65**
	Program staff asked for input on decisions	.67					
	Information for decisions widely shared	.70					
	Engage diverse network of partners	.76					
Factor 5	**Leadership Support & Commitment**						
	Top agency leadership values EBDM	.68					
	Top agency leadership encourages EBDM	.74					
	Agency committed to hiring trained staff	.61					