Knowledge, attitudes, and usage of evidence-based assessment and treatment practices in the Korean mental health system: Current status and future directions[*]

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The dissemination of evidence-based practices (EBPs) has made relatively slow progress over the past few decades. To understand and inform dissemination efforts in Korea, levels and correlates ("predictors") of knowledge, attitudes and use of evidence-based practices among 300 graduate student, internship trainees, licensed psychology professionals, and professional school counselors in the Korean mental health field were examined. Results revealed that professional school counselors had the lowest levels of knowledge of empirically-supported treatments (ESTs) compared to all other groups. Professional school counselors also held the most negative views of both evidence-based assessments (EBAs) and ESTs. Across all groups, structured diagnostic interviews and ideographic assessment were used the least frequently. Significant correlates of EBP knowledge, attitudes and usage included practitioner age, years of clinical experience, hours of supervision per week, monthly assessment caseload, and monthly treatment caseload. Study limitations and implications are also discussed, including training efforts needed in Korea to increase the perception towards and usage of EBPs in both clinical and school settings.

Key words : Evidence-Based Practices, dissemination, implementation, attitudes, knowledge

No more than just a few decades ago, claims have begun to be made that all psychological treatments are equally effective (e.g., Luborsky, Singer, & Luborsky, 1975; Shapiro and Shapiro, 1982; Wampold et al., 1997). This assertion however has since been questioned, largely related to pressures from managed care (Institute of Medicine, 2001). Various psychological and psychosocial treatments have been put to the test via rigorous methodological investigations relying on research designs that are able to better isolate treatment effects and test treatment efficacy (McHugh & Barlow, 2010). After decades of rigorous scientific exploration, the mental health field has identified a variety of effective treatment practices for emotional and behavioral problems for both adults (Ponniah, & Hollon, 2008; Hollon & Ponniah 2010) and children/adolescents (Chorpita et al., 2011; Kazdin & Weisz, 1998; Kazdin & Weisz, 2003). These treatments have become known as 'empirically-supported treatments' (ESTs; Chambless et al., 1996, 1998) and represent a significant advance forward in the field with respect to practitioners being able to improve the lives of their clients.

The search for more effective practices has also extended beyond the treatment domain. The term Evidence-Based Practice in Psychology (EPPP) was coined recently by the APA Presidential Task Force on Evidence-Based Practice to describe a broader set of concepts related to the full array of clinical services provided to patients, including effective referral and triage, evidence-based assessment (EBA), case formulation, and treatment planning (APA, 2006). Despite advances in the field with respect to identifying effective practices to enhance the quality and effectiveness of services provided to clients, both practicing clinicians in mental health delivery settings (Stewart & Chambless, 2007) and graduate and internship training programs (Crits-Christoph, Frank, Chambless, Brody, & Karp, 1995; Weissman et al., 2006) have been slow to adopt and utilize these "evidence-based" treatment and assessment practices. EBA and EST practices still continue to be limited to being used primarily in research and academic settings—the places in which they were initially developed and tested (Reis, Duggan, Allen, Stamatakis, Erwin, & Brownson, 2014). This phenomenon has been referred to as the disconnect and "gap" between science and practice (Lilienfeld et al, 2013; Clancy & Cronin 2005).

Various efforts have been made to overcome the barriers to disseminating and implementing evidence-based practices (both EBAs and ESTs) in "real world" settings. Despite these efforts, there has still been limited success with respect to evidence base practices being utilized by frontline clinicians (Novins et al, 2013; Westen et al., 2004). Recent studies have found that 'treatment as usual' or 'usual care' practices in community settings include a high degree of non-evidence-based treatment practices (Baumann

et al. 2006; Weersing & Weisz, 2002; Zima et al., 2005) and often lack the 'depth and specificity' needed to achieve optimal client outcomes (Garland, Bickman, & Chorpita, 2010). And when compared against practitioners who deliver ESTs, 'treatment as usual' practices in community settings often obtain significantly worse outcomes (Weisz, Jensen-Doss, & Hawley, 2006; Weisz et al., 2012; Weisz et al., 2013), although with some exceptions (Southam-Gerow et al., 2010).

Several barriers have been noted to exist in the dissemination process in general (see Rogers, 2004). Among these barriers include both (a) the lack of knowledge and (b) negative attitudes held towards the new 'technology' (such as new evidence-based treatments). For these reasons, researchers in the US have begun to develop instruments to measure knowledge and attitudes of EBAs and ESTs, and to investigate levels and correlates of these variables. Stumpf and colleagues (2009) for example developed the Knowledge of Evidence-Based Services Questionnaire (KEBSQ) to measure practitioners' knowledge of youth ESTs and this instrument has since been used in several US contexts, such as to measure changes in practitioners knowledge levels of ESTs following trainings (Stumpf et al., 2009) and following program quality improvement interventions (Weist et al., 2009). Researchers have also identified predictors of ESTs knowledge among US practitioners, including practitioners' most advanced degree,

practice setting, and licensure status (Nakamura et al., 2011).

In addition to knowledge, researchers have also investigated levels and predictors of practitioner *attitudes* towards both ESTs (Aarons, 2004; Addis, & Krasnow, 2000; Baumann et al. 2006; Borntrager et al., 2009; Essock et al., 2003; Rubin & Parrish, 2007) and more recently, EBAs (Jensen-Doss, & Hawley, 2010) with (both child and adult) clients in general. For example, Aarons (2004) developed the Evidence-Based Practice Attitude Scale (EBPAS), which measures therapists' attitudes across several factors, such as the "appeal" of evidence-based practices (focusing on manual-based treatment protocols). Through this measure, it was found that therapists tend to have negative views towards manualized treatments. Specifically, therapists reported believing that manualized treatments are rigid, inflexible, and limit their ability to make independent clinical decisions. Borntrager and colleagues (2009) modified the EBPAS (to create the Modified Practice Attitudes Scale; MPAS) so that questions no longer referenced treatment manuals specifically when asking about evidence-based treatments. They did this in order to measure therapists' attitudes about evidence-based practices independent from therapists' attitudes about treatment manualization. In their study, Borntrager and colleagues administered both the MPAS and EBPAS to therapists before and after a training on ESTs, and they found that therapists held

negative views of ESTs specifically with respect to their manualization and not about ESTs in general. Using the MPAS, Nakamura and colleagues (2011) also found that therapists who knew less about ESTs (based on their scores on the KEBSQ) also held more negative attitudes towards ESTs.

Jensen-Doss and Hawley (2010) also recently developed the Attitudes Toward Standardized Assessment Scale (ASA) to measure clinicians attitudes towards standardized (evidence-based) assessment. In their study, they found that higher professional degree and affiliation were significant predictors of more positive attitudes towards EBAs. They also found that the ASA scales significantly predicted use of standardized assessment tools by practitioners.

While this important work related to understanding levels and predictors of EBAs and ESTs in the US has been making progressing, little to no substantial steps forward have yet been made in several other parts of the world including East Asian, and more specifically, South Korea. Since Evidence-Based Practices (EBPs) have been introduced to psychologists in the 1990s, such as by the Task Force on Promotion and Dissemination of Psychological Procedures of Division 12 of the American Psychological Association, EBPs have only slowly been disseminated within South Korea through graduate courses, internship training programs, and Korean psychology conferences. For example, as Korean clinical psychologists became

more aware of the importance and significance of EBPs, the Korean Clinical Psychology Association held an annual conference recently in 2011 which for the first time specifically focused on the usage and dissemination of EBPs in Korea.

South Korea however is in clear need of an effective mental health system given that prevalence rates of mental disorders have been increasing among youth and adults, and suicide rates have been the highest among OECD countries from 2002 to 2012 (OECD, 2012). Lifetime prevalence rate of mental disorders in Korea (excluding alcohol-related disorders) among those ages 18-74 years also increased from 12.6% in 2006 to 14.4% in 2011, and the use of psychological treatment services among psychiatric patients also increased from 11.4% in 2006 to 15.3% in 2011 (Ministry of Health, Welfare and Family Affairs, 2011). These changes clearly demonstrate the relevance and importance of achieving quality mental healt h care in the Korean mental health system. However, very few studies have been conducted regarding EBAs and EBTs usage in Korean mental health settings. For example, upon reviewing all Korean scientific databases for the terms 'empirically-supported treatments,' 'evidence-based treatments,' 'evidence-based practices,' and 'evidenced-based assessment,' there were only 13 papers on these topics so far to date. Among the research conducted to date in Korea, Kwon (2008) asked 150 Korean

- 894 -

clinical psychologists to indicate their primary therapeutic orientation; approximately 50% reported that their primary orientation was eclectic, and 32% reported having a cognitive-behavioral or behavioral orientation. As cognitive-behavioral and behavioral therapy comprise a considerable portion of EBTs, it can be inferred that the majority of the clinical psychologists in Korea use — or at least identify with the use of — EBTs and EBAs, particularly those grounded in cognitive-behavioral or behavioral therapy. However, more studies are clearly needed to better understand the actual state of affairs in Korea regarding usage and related factors of EBAs and EBTs among Korean mental health providers. For example, professional school counselors have relatively recently begun to be employed in school settings to help provide mental health support for students. These professional school counselors, however, do not have traditional psychology training backgrounds, with the majority originally being school teachers, and then provided with additional education and training prior to working as professional school counselors. This is also an important provider population to understand, yet no studies have yet been conducted on this group.

The purpose of the present study was therefore to examine knowledge, attitudes and usage of EBAs and ESTs in South Korea to better understand the current status of the Korean mental health field and to inform future

directions along these dimensions. From a dissemination and implementation perspective, there is a natural progression in the implementation of new 'technologies' (including EBPs). First comes *knowledge;* that is, in order to utilize something new, knowledge of the new practice is often a prerequisite. However, knowledge is not sufficient by itself; the next important factor is one's *attitude* towards the new 'technology.' That is, even if knowledge is high, but negative attitudes exist towards the new treatment, the new treatment will likely not be implemented. Finally, usage monitoring (of service quality) is important to ensure that the practice is being used in the intended way. For example, it is possible that someone has both high knowledge and positive attitudes towards the new treatment, and therefore attempts to implement the new 'technology;' however, the administered services may not meet the intended quality of the new 'technology,' speaking to the need to assess and monitor the quality of services delivered.

In the present study, each of these domains were examined in this order. First levels of EBP *knowledge* were examined to determine whether this basic prerequisite was met among members of the Korean mental health field. Then levels of EBP *attitudes* were examined to understand perceptions held towards these relatively 'new technologies' in the Korean mental health field. And then, levels of EBP *usage* were examined to better understand the actual service types being

implemented by members of the Korean mental health field. In this process, whether *knowledge, attitudes,* and *usage* of EBPs differed significantly across the four major service delivery groups of (a) graduate students, (b) internship trainees, (c) licensed psychology professionals, and (d) professional school counselors were examined.

Second, correlates (i.e., *"predictors")* of knowledge, attitudes and usage of EBPs were examined to identify which therapists characteristics were related to low and high levels of *knowledge, attitudes,* and *usage* of EBPs. Identifying such correlates (i.e., *"predictors")* of knowledge, attitudes and usage of EBPs is important as such information can inform future quality improvement and system enhancement efforts (cf. Garland et al,. 2010) and inform next steps toward disseminating EBPs more effectively and successfully in the Korean mental health system. As examined in previous studies (e.g., Addis, & Krasnow, 2000), age and years of clinical experience were examined as correlates of knowledge, attitudes and usage of EBPs in the present study. Also, given that supervision (Bearman, Weisz, Chorpita, Hoagwood, Ward, Ugueto, & Bernstein, 2013) and clinical case load (Shield et al., 2003) have also been found to influence the quality of services provided, these service parameters were also examined with respect to their relation to knowledge, attitudes and usage of EBPs.

Method

Participants

The present study included participants in the field of Korean clinical/counseling/health psychology and also professional school counselors in Korea. A total of 300 participants were recruited if they completed any of the four main study measures related to knowledge, attitudes, and use of evidence-based practices (see below for study measures). There were 29 participants who were excluded because they did not belong to any of the above 4 groups. This final sample included 271 females (90.3%) and 27 males (9.0%). Ages ranged from 22 to 59 years (mean=30.1; SD=7.95). All participants were ethnically Korean and fluent in Korean. Of the included participants, 127 (42.3%) were graduated students in clinical/counseling/health psychology programs, 81 (27.0%) were full-time internship trainees in clinical settings, 53 (17.7%) were mental health professionals, and 39 (13.0%) classified themselves as professional school counselors. A total of 161 (54.3%) participants indicated that their primary orientation was cognitive-behavioral, followed by 56 (18.7%) eclectic, 41 (13.7%) client centered, 22 (7.3%) psychoanalytic, 7 (2.3%) family systems, and 5 (1.7%) as 'other.' Additional therapist background information for each of these groups and for the full sample may be seen in Table 1.

Table 1. Therapist Background Information

	Graduate Students	Internship Trainees	Licensed Professionals	Professional School Counselors
	M (SD) [Range]	M (SD) [Range]	M (SD) [Range]	M (SD) [Range]
Age (years)	26.01 (4.36) [22-49]	27.62 (3.66) [22-43]	36.15 (8.41) [24-59]	40.45 (9.03) [23-54]
Years of clinical experience	0.82 (1.83) [0-10.50]	1.69 (1.96) [0-14]	8.02 (5.61) [1-25]	3.21 (3.45) [0-12.50]
Average number of assessment cases per month	1.97 (4.20) [0-25]	12.68 (8.87) [0-50]	7.82 (9.72) [0-45]	15.96 (20.97) [0-80]
Average number of therapy cases per month	2.19 (4.21) [0-20]	3.01 (3.62) [0-15]	7.00 (8.11) [0-40]	32.21 (31.36) [0-160]
Average number of therapy sessions per month	3.18 (6.69) [0-40]	8.03 (11.48) [0-60]	18.24 (22.16) [0-85]	29.73 (27.19) [0-90]
Number of hours of supervision per week	1.38 (2.34) [0-10]	4.77 (3.83) [0-20]	0.88 (1.91) [0-10]	2.13 (5.78) [0-30]

Measures

Therapist Background Questionnaire (TBQ)

This questionnaire asks participants to report their demographic, professional, and practice background characteristics. For example, participants are asked to provide their obtained licenses, academic degree, theoretical orientation, years of clinical experience, occupational environment, and major field of work among other relevant background variables.

Korean Version of the Knowledge of Evidence-Based Services Questionnaire (KEBSQ; Ebesutani, 2014)

The Korean version of the KEBSQ (K-KEBSQ) was based on the English Version of the KEBSQ developed by Stumpf, Higa-McMillan, and Chorpita (2009). This measure was designed to measure knowledge of empirically-supported treatment practice for common youth mental disorders. The original English version consists of 40 empirically

supported and unsupported treatment practices for the areas of: anxious/avoidant (A), depressed/withdrawn (D), disruptive behavior (B), and/or attention/hyperactivity (H), with none (N) for no corresponding choices. Respondents are asked to indicate all problem areas where the practice has empirical support for effectiveness based on scientific research studies (e.g., "Encouraging the child to participate in pleasurable activities on a regular basis"). All correct answers are summed to create a total knowledge score ranging from 0 – 160, with higher scores indicating more EST knowledge. This questionnaire was reported as a stable and valid measure to measure knowledge of empirically-supported treatment practice among US practitioners (Stumpf et al., 2009). The K-KEBSQ development study identified two subscales related to different aspects of EST knowledge (Ebesutani, 2014): *low* EST coverage and *high* EST coverage. The *low* EST coverage subscale examines the ability to discriminate between treatment techniques that are and are not considered evidence-based. The *high* EST coverage subscale examines the ability to identify for which *problem areas* treatment techniques are considered evidence-based. These subscales were used in the present study in addition to the total score.

Although internal consistency was somewhat low for the total KEBSQ score based on the present sample (alpha=.65), the original KEBSQ development sample indicated that internal consistency of the total score may not be a relevant psychometric index since "the structure of the KEBSQ is designed such that each item represents an independent and unique technique that may be used in the treatment of youth psychopathology" (Stumpf et al., 2009, p. 59). Internal consistency was thus not reported in the original KEBSQ psychometric paper. However, alpha was .84 for the 'EST vs Non-EST Discrimination Knowledge' low-coverage subscale, and .82 for the 'ESTs Problem Area Discrimination Knowledge' high-coverage subscale in the present study.

Korean Version of the Attitudes toward Standardized Assessment Scale(K-ASA; Ebesutani, 2014)

The Korean Version of the Attitudes toward Standardized Assessment Scale (K-ASA; Ebesutani, 2014) was based on the original English version of the ASA developed by Jensen-Doss and Hawley (2010) to assess practitioners' attitudes toward standardized assessment tools. The K-ASA is a 12-item measure yielding two attitude-related factors pertaining to standardized assessment scales: 'Benefit over Clinical Judgment' (e.g., "Clinical problems are too complex to be captured by a standardized measure") and 'Practicality' ("Standardized symptom checklists are too difficult for many children and their families to read or understand"). Items are rated in a 5-point Likert scale ranging from 1 (Strongly

Disagree) to 5 (Strongly Agree). The K-ASA was modified by eliminating the 'non-reverse-worded' item as they were found to interfere with the reliability and factor structure of the measure. Because the K-ASA includes only reverse-worded items, higher scores indicate more negative attitudes towards standardized assessment. Internal consistency of the K-ASA total score based on the present sample was .76. Internal consistency for the ASA subscales based on the US version were similar, ranging from .72 to .75 (Jenson-Doss & Hawley, 2010).

Korean Version of the Modified Practice Attitude Scale (K-MPAS; Park & Ebesutani, 2014).

The Korean Version of the Modified Practice Attitude Scale (K-MPAS) is based on a measure developed by Chorpita and colleagues for their research investigating provider attitudes toward evidence-based practices (Borntrager, Chorpita, Higa-McMillan, & Weisz, 2009). The K-MPAS measures therapists' attitudes toward evidence-based treatment practices (e.g., "I dislike evidence-based treatments because they are too inflexible"). Items are based on a scale ranging from 0 (not at all) to 4 (to a very great extent). In the Korean version (Park & Ebesutani, 2014), all 'non-reversed-worded' items were eliminated which led to a well-fitting one factor model of EST attitudes. Because this version of the MPAS includes only reverse-worded items, higher scores indicate more

negative attitudes towards empirically supported treatments. Internal consistency of the K-MPAS total score was .65 in the present sample and was .80 in the original study (Borntrager et al., 2009).

Assessment Usage Questionnaire (AUQ; unpublished measure)

This scale was developed specifically for this study to assess how often clinicians use different types of assessments methods prior to and during treatment. The AUQ asks respondents to rate their frequency of using (a) structured interviews before treatment (e.g., Structured Clinical Interview for DSM-IV), (b) standardized scales before treatment (e.g., Beck Depression Inventory), (c) unstructured clinical interviews before treatment (i.e., there are no set questions for these interviews and questions are generally guided by clinical judgment based on clients' answers), (d) idiographic assessment tools during treatment (i.e., measures created by the therapist and client together in order to track specific problems focused on in therapy), and (e) standardized scales during treatment. Respondents are asked to rate each item on a scale from 0-3, corresponding to none, sometimes, often, and always.

Procedure

Prior to any data collection, all study procedures were approved by the Yonsei

- 899 -

University IRB (201201-12-17) and Duksung Women's University IRB. In order to obtain responses from different types of participants in the field of clinical, counseling, and health psychology in Korea, the study questionnaires were administered (in Korean) across multiple different settings and administrations. First, with the permission from the conference committee, the paper version of this survey was distributed to mental health professionals and trainees at an annual conference of the Korean Clinical Psychological Association (KCPA). Attendees of this conference typically include clinical psychology graduate students, internship trainees, and professionals working in the field of clinical psychology. After collecting data from this sample, an online version of this survey and a letter that briefly described the purpose of the research (including consent information) were emailed to members of the Korean Clinical Psychological Association and also to professional school counselors. Professional school counselors were considered a different population than clinical psychology graduate students, internship trainees, and clinical psychology professionals since they are primarily teachers and are generally not provided with the same training as psychologists; however, they are still an important group to study given that they provide support services to students with mental health concerns in school settings. An email was therefore sent to professional school counselors via a listserv asking them to complete the online version of the questionnaires. The paper version of the questionnaires was also administered to professional school counselors (who agreed to participant in the study) following a professional school counselor workshop. Participants who consented and agreed to participate in the study completed the questionnaires anonymously. There were a total of 135 participants (45%) who completed the online version of the questionnaire sent via the KCPA listserv, 126 participants (42%) who completed the paper version of the questionnaire at the KCPA conference, 24 professional school counselors (8%) who completed the online version of the questionnaire sent via the professional school counselor listserv, and 15 professional school counselors (5%) who completed the paper version of the questionnaire at the professional school counselor workshop. A random subset of participants (15%) was re warded with gift certificates for their participation. Given that recent research found general equivalence between data collection methods derived from paper versions and online versions of self-report assessment forms (Weigold, Weigold, & Russell, 2013), survey responses from both the paper version and the online version were combined.

Data Analytic Plan

Analyses for the present study were focused on understanding (a) levels and (b) correlates

(i.e., "predictors") of knowledge, attitudes, and usage of evidence-based practices in the Korean mental health field. We focused on these parameters given their relevance to the sequential stages believed to underlie the process of EBP dissemination (Aarons, 2004; Schoenwald & Hoagwood, 2001). More specifically, based on the theory of diffusion of innovation, Rogers (2004) posited that there are 5 stages through which individuals pass through as they encounter, adopt, and implement new technologies such as EBPs. These 5 stages are (1) knowledge and understanding of the new technology, (2) attitude and level of persuasion towards the new technology, (3) deciding [and taking steps] to use the new technology, (4) actually putting the new technology in use, and (5) seeking confirmation (and reinforcement) for using the new technology. Following the order of this dissemination process, we reported levels of EBP Knowledge, Attitudes, and Usage matching this sequential order: (a) Levels of 'Knowledge of Empirically Supported Treatments' (based on the KEBSQ), (b) Levels of 'Attitudes of Toward Standardized Assessment' (based on the ASA scales), (c) Levels of Attitudes toward Empirically Supported Treatments' (based on the MPAS), and (d) Levels of 'Assessment Usage' (based on the Assessment Usage Questionnaire). When reporting these levels, differences between the four service delivery groups in the study (i.e., Graduate Students, Internship Trainees, Licensed

Psychology Professionals, and professional school counselors) were examined using ANOVA and paired t-tests. Correlates (i.e., "predictors") of evidence-based practices related to knowledge, attitudes, and usage were also examined via correlations, as done in previous studies (cf. Nakamura et al., 2011; Nelson & Steele, 2007). The variables of age, years of clinical experience, supervision hours per week, and (assessment and treatment) clinical case load per month were examined. Alpha levels were set at .05.

Results

Levels of EBP Knowledge, Attitudes, and Usage

EST Knowledge

Mean levels of EST knowledge (for each of the subgroups) appear in Table 2. Professional school counselors scored significantly lower on total EST knowledge compared to all groups, including psychology graduates students [$F(1)=18.44$, $p=.000$], internship trainees [$F(1)=9.25$, $p=.003$], and licensed psychology professionals [$F(1)=24.32$, $p=.000$]. These results suggest that professional school counselors have the lowest knowledge levels of ESTs across all service delivery groups. The licensed psychology professional group also scored significantly higher than both the internship trainees group [$F(1)=13.97$, $p=.000$] and graduate students

- 901 -

Table 2. Knowledge and attitudes of evidence-based assessment and treatment practices

Scale	N	Mean (SD)
KEBSQ - Total		
Licensed Professionals	51	99.82 (10.01)[a]
Graduate Students	116	96.08 (6.91)[b]
Internship Trainees	75	94.37 (6.36)[b]
Professional School Counselors	34	90.53 (5.52)[c]
KEBSQ - EST vs Non-EST Discrimination Knowledge		
Licensed Professionals	51	32.82 (8.21)[a]
Graduate Students	116	32.52 (7.13)[a]
Internship Trainees	75	31.45 (7.72)[ab]
Professional School Counselors	34	28.68 (8.66)[b]
KEBSQ - ESTs Problem Area Discrimination Knowledge		
Licensed Professionals	51	38.53 (11.47)[a]
Graduate Students	116	35.85 (8.86)[a]
Internship Trainees	75	35.47 (8.87)[a]
Professional School Counselors	34	35.09 (10.71)[a]
K-ASA - Total		
Professional School Counselors	35	36.74 (6.20)[a]
Internship Trainees	70	33.76 (5.09)[b]
Licensed Professionals	50	33.54 (5.79)[b]
Graduate Students	111	33.01 (5.02)[b]
K-ASA - Practicality		
Professional School Counselors	35	24.49 (3.91)[a]
Internship Trainees	70	22.46 (3.83)[b]
Licensed Professionals	50	22.32 (4.08)[b]
Graduate Students	111	21.77 (3.40)[b]
ASA - Clinical Judgment		
Professional School Counselors	35	12.26 (2.81)[a]
Internship Trainees	70	11.30 (2.12)[a]
Graduate Students	111	11.24 (2.41)[a]
Licensed Professionals	50	11.22 (2.40)[a]
MPAS		
Professional School Counselors	36	8.06 (2.90)[a]
Internship Trainees	73	7.48 (2.89)[ab]
Graduate Students	108	6.73 (3.02)[b]
Licensed Professionals	49	6.67 (2.71)[b]

Note. KEBSQ=Knowledge of Evidence Based Services Questionnaire; ASA= Attitudes toward Standardized Assessment Scales; MPAS=Modified Practices Attitude Scale; higher scores indicate more knowledge on the KEBSQ and more *negative* attitudes on the ASA and MPAS. [ab] differing letter superscripts indicate a significant pairwise mean difference based on a 95% confidence interval.

group [F(1)=7.81, p=.006], which was expected given their professional licensure status. Interestingly, graduate students and internship trainees did not differ significantly on total EST knowledge [F(1)=2.95, p=.09].

When examining the EST knowledge subscales, it was found that there were no differences between these groups with respect to EST Problem Area Discrimination Knowledge. However, significant differences were found with respect to EST vs Non-EST Discrimination Knowledge. Specifically, professional school counselors scored significantly lower on 'EST vs Non-EST Discrimination' Knowledge than clinical psychology graduates students [F(1)= 6.89, p=.01] and licensed professionals [F(1)= 4.98, p=.03]. In other words, professional school counselors had a more difficult time determining whether certain treatment techniques were evidence-based or not. No other differences were found between these four groups regarding EST knowledge.

Attitudes Toward Standardized Assessment

Mean levels of graduate students, internship trainees, professionals and professional school counselors' attitudes towards standardized assessment appear in Table 2. Professional school counselors reported having significantly more negative attitudes towards standardized assessment in general (on the K-ASA total score) than graduate students [F(1)=13.08, p=.000], internship trainees [F(1)=6.92, p=.01], and

licensed professionals [F(1)=5.94, p=.02]. No other groups differ significantly from each other based on the K-ASA total score.

The same pattern of results was also found for the K-ASA Practicality subscale. However, there were generally no differences found on the K-ASA Clinical Judgment subscale across these four groups.

Since the K-ASA scale ranges from 1 (strongly disagree) to 5 (strongly agree), the mean item response value for the total score to the value corresponding to the most positive attitude (i.e., the value of "1" corresponding to "strong disagree" with the negative statements about standardized assessment) and to the value corresponding to the most negative attitude (i.e., the value of "5" corresponding to "strongly agree" with the negative statements about standardized assessment) were compared. The mean item response value (based on the full sample) was 2.82 (S.D.=0.45). The mean value response (of 2.82) was significantly more 'positive' (i.e., significantly smaller) with respect to attitudes than the most negative attitude (i.e., value of "5"), t(265)=78.32, p=.000, and also significantly more positive (i.e., significantly smaller) than the neutral location of "3," t(265)=6.58, p=.000. However, the mean value response (of 2.82) was still significantly less positive (i.e., significantly larger) than the most positive attitude (i.e., value of "1"), t(265)= 65.15, p=.000. These results suggest that attitudes toward standardized assessment are,

overall, more positive than negative—although significant room remains for attitudes to become even more positive.

Attitudes Toward Empirically Supported Treatments

Mean levels of graduate students, internship trainees, professionals and professional school counselors' attitudes towards empirically supported treatments appear in Table 2. Similar to above, professional school counselors had the most negative attitudes towards ESTs overall. Specifically, professional school counselors reported having significantly more negative attitudes towards ESTs than graduate students $[F(1)=5.29, p=.02]$, and licensed professionals $[F(1)=5.09, p=.03]$. No other groups differ significantly from each other.

Since the K-MPAS scale ranges from 0 ("Not at All Agree") to 4 ("Agree To a Very Great Extent"), the mean item response value for the total score to the value corresponding to the most positive attitude (i.e., the value of "0" corresponding to "Not at All Agree" with the negative statements about empirically-supported treatments) and to the value corresponding to the most negative attitude (i.e., the value of "4" corresponding to "Agree To a Very Great Extent" with the negative statements about empirically-supported treatments) were compared. The mean item response value (based on the full sample) was 1.42 (S.D. =0.59). This mean value response (of 1.42) was significantly more

'positive' (i.e., significantly smaller) with respect to attitudes than the most negative attitude (i.e., value of "4"), $t(265)=71.53$, $p=.000$, and also significantly more positive (i.e., significantly smaller) than the neutral location of "2," $t(265)=16.06$, $p=.000$. However, the mean value response (of 1.42) was still significantly less positive (i.e., significantly larger) than the most positive attitude (i.e., value of "0"), $t(265)=39.41$, $p=.000$. These results also suggest that attitudes toward empirically-supported treatments are, overall, more positive than negative—although significant room remains for attitudes to become even more positive regarding empirically- supported treatments.

Assessment Usage

Frequency of the different types of assessment use among the Korean graduate students, internship trainees, licensed psychology professionals, and professional school counselors appear in Table 3. The general finding of assessment usage across these groups was that internship trainees tended to use structured interviews and standardized questionnaires most frequently. This is consistent with the fact that internship trainees serve primarily as assessors during their training in hospital settings. Licensed psychology professionals reported using *unstructured* interviews the most frequently among all the groups. Standardized questionnaires were used the least frequently during treatment by professional school counselors. There were no

Table 3. Usage of assessment methods

Assessment Type	N	Mean (SD)
Structured Interviews Before Treatment		
Internship Trainees	77	2.19 (1.00)[a]
Licensed Professionals	50	1.98 (1.02)[ab]
Graduate Students	97	1.94 (0.93)[ab]
Professional School Counselors	36	1.78 (0.80)[b]
Standardized Questionnaires Before Treatment		
Internship Trainees	77	3.30 (0.86)[a]
Licensed Professionals	50	3.28 (0.76)[a]
Graduate Students	97	2.53 (0.97)[b]
Professional School Counselors	36	2.19 (0.71)[b]
Unstructured Interviews Before Treatment		
Licensed Professionals	50	3.20 (0.70)[a]
Internship Trainees	77	2.91 (0.81)[b]
Professional School Counselors	36	2.47 (1.03)[c]
Graduate Students	97	2.20 (1.02)[c]
Standardized Questionnaires During Treatment		
Internship Trainees	77	2.66 (1.07)[a]
Licensed Professionals	50	2.64 (0.85)[a]
Graduate Students	97	2.42 (0.92)[ab]
Professional School Counselors	36	2.19 (0.62)[b]
Idiographic Assessment During Treatment		
Graduate Students	97	2.22 (0.90)[a]
Licensed Professionals	50	2.18 (0.72)[a]
Professional School Counselors	36	2.06 (0.71)[a]
Internship Trainees	77	2.06 (0.85)[a]

differences between any groups on frequency of idiographic assessment during treatment.

Based on the full sample, differences in frequency of usage across the five assessment types were examined. With respect to 'before treatment' assessment practices, structured interviews were rated as the least frequently used among all assessment practices; and it was

rated as used significantly less frequently than both standardized questionnaires [$t(259)$ = 12.04, p=.000], and unstructured clinical interviews [$t(259)$ = 7.31, p=.000].

With respect to 'during treatment' assessment practices, ideographic assessment methods were used significantly less frequently than standardized questionnaires, $t(259)$ = 5.77, p=.000.

In summary, the use of structured diagnostic interviews and ideographic assessment were used the least frequently before and during the treatment phase, respectively.

Correlates of EBP Knowledge, Attitudes, and Usage

Significant relationships between background variables and EBP related outcomes are shown below.

Knowledge

Years of clinical experience was significantly related to both general Knowledge of ESTs (based on the total KEBSQ score), [$r(268)$=.18, p<.01] and also ESTs Problem Area Discrimination Knowledge, [$r(268)$=.18, p<.01]. Therefore, those with more years of clinical experience tended to have more EST knowledge.

Attitudes

Age was significantly related to negative attitudes towards standardized assessment

[$r(264)$= .17, p<.01] and clinical judgment-related negative attitudes toward standardized assessment [$r(264)$= .17, p<.01]. In other words, being older was associated with more negative views of EBAs. Those with greater clinical caseloads per month (i.e., those with more treatment cases per month) also held more negative attitudes towards ESTs [$r(218)$= .19, p<.01] and also more negative attitudes towards EBAs [$r(216)$= .14, p<.05].

Usage

Age was significantly related to less use of standardized questionnaires before treatment [$r(259)$= .14, p<.05] and during treatment [$r(259)$= .14, p<.05]. That is, being older was associated with less use of standardized questionnaire-based assessment. Years of clinical experience was significantly related to more use of unstructured clinical interviews before treatment for assessment purposes [$r(250)$=.29, p<.01]. Therefore, those who are older with more years of clinical experience tended to use more unstructured clinical interviews and less standardized questionnaire-based assessment.

More assessment cases per month were associated with significantly more use of structured interviews [$r(225)$= .22 p<.01].

Number of supervision hours received per week was significantly and positively related to the use of structured interviews before treatment [$r(231)$= .19, p<.01] and the use of standardized questionnaires before treatment

$[r(231)=$ .15, $p<.05]$. Therefore, more supervision was related to more usage of structured and standardized assessment. Also among all four service delivery groups, internship trainees received the most supervision per week (mean=4.77 hours/week) and licensed psychology professionals received the least supervision hours per week (mean=0.88 hours/week), as seen in Table 1.

Discussion

The purpose of this study was to (a) examine levels of *knowledge, attitudes,* and *usage* of EBPs across the four major service delivery groups in the Korean mental health system—including graduate students, internship trainees, licensed psychology professionals and professional school counselors—and (b) to identify therapists characteristics (e.g., age, years of clinical experiences, amount of supervision hours, and service caseload) that were significantly related to low and high levels of *knowledge, attitudes,* and *usage* of EBPs. Results revealed that, relative to professional school counselors, all three psychology groups (i.e., graduate students, internship trainees, licensed psychology professionals) scored significantly better with respect to discriminating EST from non-EST (indicative of having more EST knowledge), and they also held significantly more positive attitudes towards evidence-based assessment

(including the practical aspects of EBAs), and also used structured assessment instruments significantly more frequently than professional school counselors.

In terms of therapists characteristics that were significantly related to EBP outcomes, EST knowledge was significantly related to more years of clinical experience. In terms of attitudes, being older was significantly related to more negative views of EBAs and greater clinical treatment caseloads per month was significantly related to more negative attitudes towards EBPs. Notably, however, professional school counselors overall had much larger (assessment and treatment) caseloads than all other groups, including graduate students, internship trainees and licensed psychology professionals (as seen in Table 1). This could account for the significant relationship between clinical case load and negative attitudes (since professional school counselors were found to be associated with more negative attitudes towards EBPs, as reported above). It is also worth noting that the client population typically seen by professional school counselors may be systematically different and more challenging (e.g., less motivated to be in therapy) than the client population typically seen by psychologists in clinic settings. For example, students seen by professional school counselors may be required to see their professional school counselors, whereas clients seen in private clinics may often seek out therapy on their own. This potential difference

in client population should be considered when interpreting these results.

In terms of usage of EBAs, those who are older and those with more years of clinical experience tended to use standardized questionnaire-based assessment less frequently and unstructured clinical interviews more frequently, respectively. Due to the correlational nature of these results, however, it is unclear whether age or clinical experience directly influences assessment use styles, or whether other related variables are responsible for these relationships (such as differences in training backgrounds). More supervision hours per week and more assessment cases per month were also significantly related to more usage of structured and standardized assessment. Again, it is unclear whether more supervision hours and assessment caseload directly influences EBA usage, or are simply related to other variables that account for this relationship. Nonetheless, there is a theoretical link between supervision and EBP usage, and so it would be worthwhile for future studies to continue to examine the relationship between these therapists characteristics and implementation of EBPs. For example, if supervision truly does directly increase the use of EBPs, it will be worth considering how to increase supervision experiences for professionals beyond graduate school and their training years in the hospital.

Implications are as follows. First, professionals in Korea who have higher degrees and clinical training appear to be more knowledgable than students, trainees and professional school counselors. These findings may not be surprising in the Korean mental health system considering that professionals in Korea with higher degrees and more clinical training are more likely to have been exposed to more evidence-based treatment workshops. Notably, the professional mental health climate in Korea is somewhat different from that in the US. When the concept of evidence-based assessment and treatment was introduced in the US in the 90's, there was significant pressure to accept this EBPs due to the changes in the managed health care system, even when professionals were not ready to fully adopt them. These EST practices conflicted with long-held competing theoretical orientations and professional practices among many practitioners in the field in the US at that time. Criticism and resistance against the evidence-based movement among professions were observed since then for the past 20 years in the US (even to today), showing how difficult it can be for a field to accept and adopt evidence-based practices. Based on the climate in the US, it was posited that practicing clinicians likely lack detailed knowledge of EBPs, particularly relatively to more recently trained graduate students (Higa & Chorpita, 2007; Stuart et al., 2002). This was not the case based on our study. Korean licensed psychology professionals were the most prepared and knowledgeable group of EBPs. This appears to

be related to the history of the dissemination of EBPs in Korea. The EBP movement was first introduced to Korea by a small number of professionals in university graduate settings; it then expanded to professional peer and practitioners networks gradually over time. Notably, no additional outside pressure has ever existed in Korea to adopt EBPs, such as pressure from managed health care (which currently does not oversee mental health services in Korea). The EBP movement was thus not forced upon Korean practitioners; rather, the EBP movement appeared to have gained its current level of awareness in Korea through being recognized as a new and important direction for mental health service delivery in general. From a dissemination and implementation theory perspective, this type of view and attitude surrounding a 'new technology' employment is promising with respect to future successful uptake.

Although licensed psychology professionals scored the highest on EST knowledge, they reported the most frequent use of *unstructured* assessment methods and they also reported receiving the *least* amount of clinical supervision hours. These are service characteristics among licensed psychology professionals that could be further strengthen to improve service delivery, such as through the use of more structured/standardized assessment and interview practices, as well as more supervision hours received by this licensed professional group.

As noted above, it was found that those with psychology backgrounds held more positive attitudes towards evidence-based practices than professional school counselors; however, it is important to highlight that professional school counselors in Korea are primarily teachers with education backgrounds. Fewer than 10 years has past since the importance of mental health services in educational settings has been recognized in Korea —mainly due to the increase of mental health problems seen among children and adolescents (Ministry of Education, Science, and Technology, 2012). In the Korean education system, professional school counselors are recruited among teachers who have education and/or psychology related backgrounds; and they are then provided with additional training via a two-year master's program in school counseling. The college of education across Korea is responsible for training these professional school counselors, and notably, the theoretical orientations of these training institutions are quite varied. Further, the concept of evidence-based assessment and treatment are not included in the curriculum for several of these professional school counselor training institutions. It is thus understandable that professional school counselors are not as familiar with the evidence-based assessment and treatment practices compared to the psychology groups examined in the present study. However, this also suggests that more efforts are need to address the role of EBP-related education in these training

institutions and to increase awareness of EBPs to disseminate EBPs more effectively in school settings. This is important especially considering that professional school counselors are front line service mental health providers for students in the Korean society.

In terms of comparisons of knowledge, attitudes and usage of EBPs with those of other countries, it is interesting to note that mean knowledge scores among the Korean participants in our study were comparable to those reported in a recent US-based sample of therapists (Nakamura et al., 2011). For example, Nakamura and colleagues (2011) reported average KEBSQ Total Scores of 96.9 (SD=8.84) among their group of doctoral students, interns, doctorates of psychology and medical doctors (Nakamura et al., 2011, p. 296). In our sample of graduate students, interns and licensed psychology professionals, means KEBSQ Total Scores ranged from 94.37 (SD=6.36) to 99.82 (SD=10.01). Based on overall mean comparisons of these scores (using the reported means and standard deviations of the KEBSQ total score in both samples), t-tests analyses (www.quantitativeskills.com/sisa/statistics/t-test.htm) revealed that none of these Korean-based scores were significantly different from Nakamura and colleagues ' (2011) US-based practitioner knowledge scores. For example, the difference between the US group and the Korean Internship group was non-significant, $t=1.23$, $p=.88$; and the difference between the US group and the

Korean Licensed Professional group was also non-significant, $t=1.23$, $p=.11$. These results are promising as they demonstrate that practitioners in our field are at comparable levels (with respect to EST knowledge) relative to other countries, despite EBPs being introduced to Korea only relatively recently.

As outlined above, the present study looked into the current state of affairs with respect to levels of knowledge, attitudes and usage of EBPs, differences across four important service delivery groups, and predictors of these EBP outcomes. That said, there were limitations of this study worth noting. First, professionals were recruited from an annual conference as well as through an internet advertisement sent to the Korean Clinical Psychological Association (KCPA) listserv. It is possible that those who completed the survey were active KCPA members who were professionals working primarily in university settings. Clinic-based practitioners are less likely to attend conferences and respond to survey requests from the KCPA listserv. These sampling procedures could have introduced some bias (and lack of representativeness) in the present results.

Secondly, although the KEBSQ and MPAS were used to measure knowledge of and attitudes towards ESTs, no instruments were used to measure actual practitioners *usage* of ESTs in the present study. Since it is known that knowledge and attitudes do not perfectly predict subsequent behavior (Rogers, 2004), the present study cannot tell us what types of

practices are actually being used by providers in the Korean mental health field. It will thus be important for future studies to measure actual usage of ESTs among Korean providers to better understand the quality of treatment service delivered in the field. Such information would be able to provide valuable information regarding how ESTs are being disseminated in the Korean mental health field and where targeted training efforts are needed moving forward. Weersing and colleagues (2002) developed the Therapy Procedures Checklist, which is a measure that asks about various treatment practices used by practitioners, and this measure could be used for this purpose in future studies.

Another limitation is that all measures were based on self-report, including all attitude measures. Relatively recently, however, the Implicit Association Task (Greenwald, McGhee, & Schwartz, 1998) —initially used primarily in the field of social psychology—has begun to be used to examine implicit attitudes and behaviors in the field of clinical psychology (cf. Nock et al., 2010). Use of assessment paradigms such as the Implicit Association Task may provide a better assessment of attitudes towards EBAs and ESTs (less subject to response bias) than the self-report measures used in the present study and should be considered in future research. Another limitation is that "predictor" analyses were correlational in nature, and so causality and directionality of effects cannot be inferred from the results. These analyses also do not

control for 'third' variables. For example, although we found that being older was significantly associated with more negative attitudes towards EBPs, this relationship could be explained by the fact that the professional school counselor group was both the oldest group (see Table 1) and also held the most negative attitudes towards EBPs. Despite these limitation and areas of needed future research, the present study took an initial glimpse at important issues in the Korean mental health field. Notably, very few treatment outcomes studies have been conducted to date in Korea and virtually no quality control systems are in place to oversee and ensure high fidelity and preserved quality of psychotherapeutic services for children and adults in the Korean mental health field. This is clearly problematic, leaving those in need of mental health services potentially vulnerable and without the effective care they need. In any mental health system, it is the responsibility of mental health service providers to deliver effective, scientifically-supported services to afflicted members of society. Korea is no exception. Increasing knowledge, attitude and usage of EBPs among Korean professionals is clearly among the first steps towards achieving this goal. The next steps include developing and delivering educational and training programs to disseminate EBPs to front line clinicians while continuing to increase their awareness, competence, and fidelity of EBP practices. Long-term, on-going systematic

service reviews, continuing education programs, and quality control initiatives will then be needed to ensure that quality services are delivered to patients in the Korean mental health system over the long term. Evidence-based treatment programs and training curriculums designed to enhance mental health systems on a large scale and in long-term, sustainable ways are being developed and tested in the US at the present time—such as the 'Managing and Adapting Practice' (MAP) service training curriculum program (www.cimh. org/managing-and-adapting-practice-map). This MAP training program is led by the PracticeWise team and its effectiveness is currently being tested in the California mental health system with respect to being able to increase the use of EBPs and enhance the effectiveness of therapists who come from a wide range of backgrounds, from masters-level counselors to PhD-level clinical psychologists. Given that the majority of service providers in Korea come from masters-level backgrounds, similar initiatives as MAP should be considered in the future to enhance the Korean mental health system as well.

The present study took an initial step towards moving this important initiative forward, and it is hoped that this is just the beginning of additional, much needed efforts in clinical, counseling and educational settings to disseminate and increase the implementation of effective assessment and treatment practices to those in need.

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한국 정신건강체계에서의 근거기반 평가 및 치료의 태도, 지식, 사용에 관한 연구: 현황 및 향후 방향

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근거기반실천(evidence-based practices: EBPs)은 지난 수십 년 동안 상대적으로 느리게 보급되어 왔다. 국내에서 근거기반실천을 보급하기 위한 노력을 이해하고 알리기 위해, 본 연구에서는 국내 정신보건분야의 대학원생, 수련생, 전문가, 전문상담교사 300명의 근거기반실천에 대한 지식, 태도, 사용의 수준 및 상관을 연구하였다. 연구 결과, 전문상담교사가가 다른 집단에 비해 경험적으로 지지된 심리치료(empirically-supported treatments: ESTs)에 대한 지식수준이 가장 낮았다. 또한 전문상담교사는 근거기반평가(evidence-based assessments: ASAs) 및 경험적으로 지지된 심리치료에 대해 가장 부정적인 인식을 갖고 있었다. 모든 집단은 구조화된 진단면접과 개별/특수 평가(ideographic assessment)를 최소한으로 사용하였다. 근거기반실천에 관한 지식, 태도, 사용은 임상경력 년수, 주당 수퍼비전 시간, 월당 평가 사례수, 월당 치료 사례수와 유의한 상관이 있었다. 본 연구 결과를 바탕으로 국내 임상 및 학교 환경에서 근거기반실천이 더욱 알려지고 사용되기 위해 더 많은 교육이 필요하다는 점을 논의하였다.

주요어 : 근거기반실천, 보급, 시행, 태도, 지식