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Abstract

Recent changes to clinical psychology training and supervision in Australia have been driven by a deliberate endeavour by regulatory authorities and professional bodies to align education and training to competency-based models of training, a development that is apparent internationally in Psychology and other health disciplines. This Special Issue of the *Clinical Psychologist* provides an opportunity to address the critical question: How do reforms in Clinical Psychology training standards match international benchmarks for competency-based pedagogies? The current paper outlines key principles of competency-based pedagogies and critically examines whether Australia's new standards and guidelines for accreditation of coursework, practicum requirements, and supervision are consistent with competency principles and match guidelines in the U.K. and the U.S.A. The current review indicates that in an overall sense, practitioner training in Australia is tracking well in comparison to international developments. The paper highlights progress achieved, discusses major gaps and challenges, and examines the extent to which current accreditation changes constitute a reliable blueprint for the development of a competent psychology workforce for the country. Specifically, the decreased emphasis on the regulation of inputs (e.g., nature and type of coursework and practicum) is pedagogically sound and has the potential to promote innovation and efficiencies. A revision of the current competency framework will help underpin future progress. Secondly, the lack of reliable and valid instruments together with less than optimal adherence to systematic, timely and ecologically valid competence assessments constitute a major challenge and a serious threat to ensuring safe and competent psychology practice.

Keywords: accreditation standards, Australian clinical psychology standards, competency frameworks, clinical supervision, international trends in clinical psychology training, competency-based professional development

Key Points

1. Competency-based education and clinical training play important coordinated roles in ensuring the competence of clinical psychologists consistent with the accreditation standards and registration requirements of the Psychology Board of Australia.
2. Although significant progress has been made in Australia to incorporate the competency-based approach, additional implementation efforts should be taken to establish a comprehensive, valid and fit-for-purpose competency framework, incorporating empirically-supported means of assessment.
3. In addition to ensuring measurable competence to enter the profession, challenges abound to maintain competence throughout a psychologist's career given the ongoing advance of science – commitment to the competency-based approach provides the necessary scaffolding for ongoing professional development.

Competency-based Standards and Guidelines for Psychology Practice in Australia:

Opportunities and Risks

Recent changes to psychology education, training and supervision in Australia are significantly influenced by deliberate and systematic endeavours by regulatory authorities and professional bodies to align education and training practices to a competency-based model of training, with such an emphasis becoming apparent in revisions of standards and guidelines for accreditation. These developments are consistent with a broader movement favouring competency-based models of education and training across health disciplines within Australia and internationally (Pachana et al., 2011). The Special Issue of the *Clinical Psychologist* provides an opportunity to address two critical questions: First, to what extent are training standards, guidelines and initiatives in Australia in alignment with key principles of competency-based models? Second, how do reforms in psychology training standards compare with developments in other countries such as in the U.S.A and U.K that are similarly committed to competency-based training models, or, at least, to a shift to competency-based performance standards?

A clear articulation of core principles underpinning competence-based models is essential to a critical evaluation of both the progress achieved and the identification of future challenges facing psychology training in Australia. Five principles and their implications are discussed below.

1. A comprehensive and valid framework of competencies needs to be established

A primary principle (and an essential first requirement) is that relevant stakeholders including regulatory authorities and professional bodies establish a comprehensive, valid and fit-for-purpose framework of competencies (Foad et al. 2009; Gonsalvez & Calvert, 2014; Kaslow et al., 2004, 2009). Such a framework will allow the prescription of essential competencies that practitioners must meet to be deemed eligible to practice, thereby ensuring that the public are protected through safe and acceptable standards of psychological services. Although the expectation that practitioners should provide quality and ethical services to the public has been in existence long before the competence pedagogies gained momentum, a committed endeavour to define, classify and organise competencies into an established taxonomy has not occurred until recently (Foad et al., 2009; Kaslow et al., 2004, 2009). Whereas in the past, training institutions and internship directors had more say (and latitude) in curriculum planning, competency-based models of training make room for and often charge key stakeholders including regulatory authorities and professional bodies with the task of establishing an *authoritative* framework of competencies for the professionals they licence.

In this regard, there have been impressive achievements within Australia and internationally. In important ways, the American Psychological Association (APA) has led the competency movement in psychology through a series of initiatives spanning the last twenty years. These initiatives

include the Competency Conference (Kaslow, 2004), several committees, workgroups, and taskforces, such as the workgroup on competencies in clinical supervision (Falender et al., 2004) and the Board of Educational Affairs (BEA) Task Force on Supervision Guidelines for Health Service Psychologists (American Psychological Association, 2015), charged with advancing specific objectives. Noteworthy progress includes expert consensus around a cube-model of competencies (Rodolfa et al., 2005) and establishing benchmarks for the many competency domains (Fouad et al., 2009). More recently there have been revisions and refinements to these frameworks to serve overlapping but different objectives: for training institutions (Hatchett et al., 2013) and for the psychology practitioner (Rodolfa et al., 2013; Schaffer, Rodolfa, Hatcher, & Fouad, 2013).

In Australia, two developments appear to have been pivotal to progress. First, the Psychology Board has explicitly championed the competency-based approach. New standards of accreditation and revised guidelines (Australian Psychology Accreditation Council [APAC], 2019) clearly articulate the need for accredited training programs in institutions and registration programs for individuals to be guided by competency-based pedagogies, prescribed stage-based sets of competencies for four different levels of training: foundational, pre-professional, professional, and professional with specialised areas of endorsement (APAC, 2019). Further, to regulate the quality of clinical supervision, the Board established a system to accredit supervisor training providers and introduced mandatory supervisor training requirements for all supervisors, and specified that supervision models had to be consistent with competency-based models (Psychology Board of Australia, 2013). Secondly, research led by a consortium of University Clinic Directors and Practicum Coordinators have designed and empirically evaluated an instrument, the Clinical Psychology Practicum Competencies Rating Scale (CΨPRS) that represents a framework of 44-60 competencies across 10 domains (Gonsalvez et al., 2013, Deane et al., 2018; Gonsalvez et al., 2015; Terry, Gonsalvez, & Deane, 2017). This multisite study has provided a large and comprehensive data set of end-of-placement competency assessments (Gonsalvez et al., 2013; 2015), has provided insight into the hierarchical clustering of competencies into domains and sub-domains (Gonsalvez et al., 2015) and helped clarify differential trajectories of competency development over time (Deane et al., 2018). These instruments are currently adopted in more than 25 clinical psychology training institutions in Australia (Gonsalvez, Terry & Deane, 2016).

1.1 Established frameworks should serve as blueprints for education and training activities

A second principle, closely allied to the first, is that competency frameworks should serve as blueprints for educators to design, deliver and evaluate all aspects of the curriculum (Gonsalvez & Calvert, 2014). Within such a conceptualisation, end-point competencies should determine the content domains that need to be included, what teaching methods and training techniques should be adopted to achieve the targeted competencies, and who should deliver these learning and teaching activities (Kaslow et al., 2009). Further, the framework of to-be-attained competencies would also determine assessment methods and processes, including how, when and who would assess the competencies (Gonsalvez & Crowe, 2014). A direct implication for the accreditation process is that training programs are now required to demonstrate that the various elements of coursework, practicum and research and their assessment map onto the established competency grid (APA, 2015; APAC, 2019). In effect, to retain their accreditation, institutions are expected to have monitoring and evaluation processes in place to demonstrate that each trainee attains the prescribed set of required competencies.

1.2. How detailed should competency frameworks be?

Whilst the above question is important, it is akin to the proverbial predicament regarding the length of a piece of string. A key reason for the rise of competency-based pedagogies is the expectation that a systematic and sophisticated classification of competencies would help (a) to reliably differentiate between developing and competent practitioners, and (b) to map the boundaries between specialisations in Psychology (Gonsalvez & Calvert, 2014). The identification of common and unique competencies within each specialisation is essential to define scope-of-practice, a step that has direct implications for training, licensure, and workforce planning at the macro level. Competence frameworks must be sufficiently comprehensive and specific competencies sufficiently nuanced to ensure they are fit for purpose. In fact, there is good international consensus on *what* the broad domains for practitioner competence should be. For instance, Table 1 maps the APAC competencies against the domains included by the Benchmarks Work group (Fouad et al., 2009) and the British Psychological Society (2019).

Insert Table 1 here

As the data in Table 1 illustrates, although the APAC does not categorise their competencies into a domain structure, the independent competencies map well onto relevant domains. Because the APAC competencies are designed for Masters-level programs, the absence of competencies under Consultation/Management/Advocacy and Supervision/Teaching domains may not be of major concern. There are pedagogical reasons why these advanced competencies may be best addressed at a later developmental stage. For instance, the Registration Board's supervisor training program adequately addresses the supervision competency, and higher-order management and leadership competencies may be better suited at PhD or post-doctoral levels. What is also apparent is that the current APAC system of competencies is much less comprehensive and far less structured than other exemplars. For instance, the competency framework published Fouad et al. (2009) comprises 15 domains, 168 independent competencies (56 for each of three developmental levels), and 404 behavioural anchors that are meant to facilitate competence assessment. In comparison, the framework authored by the British Psychological Society for doctoral programs in clinical psychology comprises nine core domains and 70 independent competencies (BPS, 2019), and the APAC framework has 28 competencies (16 professional and 12 clinical psychology; APAC, 2019). Whilst, the number of competencies is not necessarily a reliable measure of the framework's effectiveness, it is difficult to envision that a short list of competencies will be sufficiently comprehensive to serve as a viable blueprint for training of psychologists across the country. A more comprehensive and pedagogically sophisticated classificatory system may be required, a point discussed further in Section 1.4.

In Table 2 APAC competencies for Assessment and Intervention are compared with similar competencies by the Competency Work Group (Fouad et al., 2009). As the Table illustrates, good agreement is evidenced (see Table 2). What is also noteworthy is that, in addition to defining competencies Fouad et al. (2009) also provide for each competency a set of behavioural anchors that will help training providers more reliably evaluate whether or not the competency is reached.

Insert Table 2 here

1.3. The focus on outcomes rather than on inputs

A third principle is the focus on outputs and outcomes of learning, training and supervision as indicators of competence. This focus is different in important ways from previous models of professional training that emphasised measures of input (e.g., years of study, numbers of teaching/practicum/client-hours/supervision hours) as determinants of quality. The result is that accreditation standards should include an organised list of competencies that trainees must demonstrate at exit-points, or if important, at relevant milestones during the course of their journeying towards competence. Expressed differently, it is incumbent on regulatory authorities to clarify the boundaries of the knowledge base required for competence and to articulate learning outcomes (expressed as competencies) that should be attained at the final exit point. However, it is not the role of accreditation standards “to explicitly prescribe the processes by which competencies should be reached; rather, it should judge the degree to which a program achieves outcomes consistent with the standards in this document and its training aims” (APA, 2018, *Standards of Accreditation*, p. 2). Nor is it their role to stipulate how a provider may package programs of study for the achievement of the graduate competencies at the different levels (APAC, 2019, p. 7)

There are compelling reasons for this widely accepted shift in focus. First, health professionals including psychologists acquire competence through different strategies, often developing at different rates with progress varying at different training stages (Talmi et al., 2015). Consequently, ensuring equal “inputs” across individuals is a poor predictor of the attainment of required performance levels at exit points including at the final exit point when students become eligible to practice independently. Finally, there is an obvious need for effective and cost-efficient strategies to improve and enhance training outcomes. Consequently, a detailed prescription of input-requirements could stifle innovative approaches and strategies.

In an overall sense, accreditation documents in Australia demonstrate this paradigm shift from content to competencies (Weiss, 1991) and from input to outcomes (APA, 2018). For instance, previous accreditation guidelines for clinical psychology prescribed specific ranges for coursework (40-50%), research (20-33%) and practicum placements (e.g., 25-30%), listed the number of coursework hours for each of several content areas, and offered fairly detailed guidelines about how many hours, in what situations and how practicum hours needed to be accrued (APAC, 2010; APS Clinical College guidelines, 2013). Current accreditation standards are much less prescriptive with this trend likely to continue. One of the key goals of APAC’s update on accreditation, was that the new standards “reflect contemporary views on measuring quality in education, in particular in relation to assessing outcomes rather than simply accounting for inputs” (APAC, 2019, p. 3).

Admittedly, new accreditation documents (APAC, 2019) continue to retain several input metrics including a prescription of a required number of years of full-time study for students to become eligible for generic registration (six years) and for registration with endorsements (six years + a two-year registrar program), prescribe a minimum number of practicum hours (1000 hours for generic registration), a minimum number of face-to-face client hours, and a minimum number of supervision hours. A combination of output and input requirements are understandable and may even be required during a period of transition to competency-based training, a point discussed in a later section. It is notable that accreditation documentation from both the UK and the USA similarly combine input and output measures.

1.4. Conceptualising competence attainment as a developmental process

Competence attainment is a journey through multiple stages of development (Fouad et al., 2009; Talmi et al., 2015). However, this developmental process is not necessarily linear and cannot be assumed to occur as a natural function of experience. In fact, as competence can be attained, so can it be eroded. Thus, practitioners have a duty to both maintain and reach for increased levels of competence across their careers. It is also important to recognise that competence development is not a “one-size-fits-all” process for all individuals. For instance, trainees will have different competency starting points, and the rates with which development unfolds will differ for a range of reasons (e.g., aptitude, quality of training, community needs) (Gonzalez et al., 2015; Hatcher et al., 2013). Importantly, competency types have particular developmental trajectory profiles, with not only different starting points but with different growth rates (Larkin & Morris, 2015). For example, functional competencies (e.g. *intervention*) begin at a lower starting point and develop more slowly than foundational competencies (e.g. *response to supervision*) (Deane, Gonzalez, Joyce and Britt, 2018; Gonzalez et al., 2015). Understanding the nature of competency development has important implications for how failure is perceived. Namely, competency problems at a particular stage of development do not necessarily suggest an inability to reach competence, but rather that the trainee is “not there yet”. In addition, failure in one competency domain does not indicate overall poor performance, and rather points to opportunities for targeted support and remediation, while holding in mind that the challenging competency may develop more slowly than others.

Hatcher & Lassiter (2007) adopt a three-stage model (Novice, Intermediate, Advanced) in their framework for practicum competencies,

although they draw attention to two additional stages (Proficient, and Expert) proposed by other researchers. The Clinical Psychology Practicum Competencies Rating Scale (C²PRS) adopts a four-stage model to competence (Beginner, Stage 2, Stage 3, Competent), although two additional post-competent stages (proficiency and expert) are mentioned (Gonsalvez et al., 2015). Fouad et al. (2009) use three developmental stages (Readiness for Practicum, Readiness for Internship, Readiness for Entry to Practice) in their classification. Consistent with their three-tiered model, three different lists of competencies and behavioural anchors have been formulated (Fouad et al., 2009). The number of stages delineated in these frameworks are guided more by pragmatic concerns than by pedagogic theory or empirical evidence. The relevance of the developmental approach to conceptualise competence is widely accepted. Nevertheless, empirical research to systematically chart developmental trajectories of the various competency domains as a function of training (and systematic training manipulations) will be impactful.

The psychologist registration process in Australia identifies two levels of registered psychologists – those who have generic registration and those with specialised areas of endorsement. A fit-for-purpose framework must necessarily make obvious shared and distinctive competencies (across competency domains and competency types) in a manner that will facilitate differentiation between the two groups. For example, if the two groups have diagnostic competencies that differ in terms of the severity and complexity of client presentations (e.g., high prevalence/less severe psychological disorders vs. low prevalence/severe/complex psychological disorders), these differences should be explicitly specified to enable accredited programs to plan for and differentially assess the attainment of these competencies. The systematic formulation of behavioural anchors in accordance with pedagogy and taxonomy principles may be a useful first step. The published work on benchmarks (see column 3 in Table 2) by the Competency Work Group (Fouad et al., 2009) may serve as a useful guide.

In addition, nine different areas of endorsement are currently acknowledged (Psychology Board of Australia, 2013). The fit-for-purpose test is: Does the existing classification system facilitate a systematic and meaningful mapping of competencies frameworks/lists prescribed across the nine areas of endorsements? To achieve this we require all specialisations to follow a uniform classificatory system built on taxonomy principles that are simple, specific and consistent. In other words, the nine competency frameworks will need to adhere to a uniform template to allow the identification of shared and distinctive competency sets. A scrutiny of the current frameworks indicates that this is not the case. In summary, whilst notable progress has been achieved in some respects, additional work on the design of an overarching classification system and on refinements of our existing competency framework are priorities.

1.5. Fair, reliable and ecologically valid assessment

The assessment of competence offers much to education and training; it fosters learning, evaluates progress, assists in determining curriculum and training program effectiveness, advances the field, and protects the public (Kaslow, 2004). Reliable and ecologically valid assessments are inherently important in the identification of trainees with competence problems at various stages of development. In fact, the rationale for relaxing input criteria (e.g. number of coursework and placement hours) is predicated upon the assumption that a systematic and ongoing program of competence monitoring, feedback and assessment during the course of their training will ensure that trainees acquire and demonstrate desired competence and thereby lead to more effective and efficient attainment of curriculum goals. In effect, a program of assessments was expected to serve as a system of ‘red-flag’ alerts to signal potential competence problems and final assessments at exit points would serve as a reliable safety net that prevented less-than-competent practitioners from gaining a licence to practice.

2. Have training institutions in Australia adopted a competence-based assessment system, and have accreditation standards facilitated this major change in the way assessment is conceptualised?

Within the competency paradigm, assessment is more than one component of a curriculum that usually occurs at the end of a unit. On the contrary, a system of planned formative and summative assessments constitutes the structural spine, is integral to, and must map onto the framework of competencies. Such a system must be comprehensive, covering all domains and competence types including the knowledge, skills, attitudes and values that comprise a given competency. Assessments must also be fair, independent and objective, and they must be administered at multiple points throughout training (Kaslow et al., 2004, 2007, 2009). Experience by itself does not beget competence or expertise (Falender & Shafranske, 2007; Gonsalvez and Milne, 2010); consequently, competence must be demonstrated both during and at the final exit of training, and not simply assumed because input criteria have been met. This last point is important, because some training programs assume that the demonstration of competence at some point during training is sufficient. However, expected levels of competence at the end of a trainee’s first placement are not equivalent to expected levels of competence at the end of the final placement, and it cannot be assumed that competencies improve predictably and linearly as a function of experience. Multiple assessment tool modes and techniques should be used to assess program learning outcomes, and include, where relevant, direct observation in professional practice settings (APAC, 2019, p. 9).

The development of reliable and valid assessments has important implications for Accreditation Guidelines and training institutions. Namely, it allows a shift toward emphasising outputs (i.e. competency demonstration) rather than the adherence to strict input criteria (e.g. placement hours) as key to determining competence. As a consequence, training institutions will be required to scrutinise and pay more attention to assessment practices. This may result in the introduction of more comprehensive and independent assessments using objective structured clinical examinations (OSCEs) or vivas, as are commonly used in medical training and are beginning to be used in psychology (e.g., Sheen, McGillivray, Gurtman, & Boyd, 2014).

3. Progress in Competency Based Training and Areas of Expected Growth

Refinement of Key Concepts and Definitions

The growth of competency-based approaches to professional psychology training has been accompanied by considerable refinement in supporting enterprises such as the development of more robust measurement tools (e.g. Muse, McManus, Rakovshik, & Thwaites, 2017) and more precise specification of key terms and concepts (Frank et al., 2010; Humphreys, Crino, & Wilson, 2017; Mulder, 2014; Sharpless & Barber, 2009). Central to these analyses have been the question of how to define competence thresholds (Sharpless & Barber, 2009) and how to meaningfully

apply these to the whole corpus of skills, knowledge, values, and attitudes needed to practice a profession (e.g. see Menezes, Hawa, Oswald, & Lee, (2018) for an example from psychiatry).

One key output from this body of research has been the refinement of dimensions and thresholds in competence definitions that allow reliable separation of practitioners into categories of competency spanning novice through to expert (see Sharpless & Barber (2009) for a review). This type of differentiation of competence is particularly important for matching training needs to the intensity and complexity of the job roles for which practitioners are being prepared. In the field of psychological therapist training, this has become highly relevant as increased competence does generally lead to better patient outcomes (Barber, Sharpless, Klostermann, & McCarthy, 2007; Branson, Myles, Mahdi, & Shafran, 2017; Liness, Beale, Lea, Byrne, Hirsch, & Clark, 2019a). However, at the milder end of the problem spectrum, there is now extensive data (described below) showing how competency-based approaches to psychological therapy training can improve the delivery of psychological treatments to people who previously experienced erratic access to evidence-based treatments.

Workforce Impacts of Competency-Based Approaches

The origins of competency-based approaches to professional education and training are commonly attributed to higher education reforms that gained momentum internationally in the 1970s. These reforms arose when it became clearer that there was a disconnection between the needs of the labour market and the product offered by educational providers (Mulder, 2014). In the United Kingdom and Europe governments attempted to more closely tie training and educational outcomes to the needs to industry as a way of securing economic competitiveness in the emerging concept of “knowledge economies”. Since that time, competency based training has continued to gain traction and now is a common pedagogical approach across diverse industries from healthcare to computing, tourism, sales, and engineering (Mulder, 2014).

As reviewed extensively by Mulder (2014), professional competency frameworks commonly develop from “reverse engineering” of the behavioural outputs required to perform a role. Hence, the focus for education providers is on specifying the combination of knowledge, skills, and attitudes needed to be deemed as “competent”. A fundamental feature of competency-based approaches is that allocation of rights to assume a professional role is based on what someone can do (i.e. the educational *outputs*), not based on the time served in training (i.e. educational *inputs*). A preeminent example in the field of psychology is the development of psychological therapy competency frameworks (Roth & Pilling, 2008) supported by formal rating methods for grading levels of competence achieved by practitioners (Kohrt et al., 2015; Muse et al., 2017; Muse & McManus, 2013). But, a competency-based approach is also evident in other aspects of applied psychology practice such as the specification of neuropsychological competencies (Hessen et al., 2018) and in broader models of applied psychology competence (Bartram & Roe, 2005).

A reasonable question at this point is whether there is any evidence that competency-based approaches have had an impact on the labour market? One salient example where the competency approach has had a direct impact on the psychological workforce is the NHS England Improving Access to Psychological Therapies (IAPT) programme, launched in 2007 and now scaled up to serve all sectors of the English NHS (Clark, 2011; Liness, Beale, Lea, Byrne, Hirsch, & Clark, 2019b). This initiative initially focused on providing access to treatment for anxiety and depressive disorders but has now been expanded to meet the needs of other segments of the population such as people with serious mental illnesses (Johns et al., 2019) and children and young people (Fonagy & Clark, 2018). The growth in IAPT services has been accompanied by the development of new competency frameworks that have been used to structure training outcome evaluations for IAPT therapists (Clark, 2018). To date, the IAPT initiative has trained nearly 11,000 practitioners and the service currently treats more than half a million patients a year at a cost to the taxpayer of about £580 per patient (Clark, 2018). The range of treatments provided is anchored to evidence-based practice guidelines from authorities such as NICE. This results in IAPT therapists being trained in therapy competencies relevant to the population need and evidence base. Consequently, the skill sets acquired following specific subtypes of IAPT training vary across treatment techniques including CBT, IPT, Brief Dynamic Interpersonal Therapy, and Couples Therapy for Depression.

The IAPT service delivery protocol includes routine outcome assessment for more than 98% of treated patients and so provides a chance to describe the pathway from therapist training through to patient outcomes (Clark et al., 2018). Hence, the analysis of publicly available IAPT data has started to separate out how symptom improvement is impacted by therapy level factors (e.g. whether the patient has a clearly recorded descriptor of their problem type) versus organisational delivery factors (e.g. how long the patient has to wait to be seen). This work provides strong evidence that psychological therapists trained to a pre-specified competency standard can provide psychological interventions to a level that reliably produces beneficial outcomes.

Furthermore, recent research on multi-professional IAPT CBT training suggests that using a competency focused approach may help with making more precise decisions about how much time should be invested to ensure the competency level needed to produce recovery for most patients (Liness, Beale, Lea, Byrne, Hirsch, & Clark, 2019b). Liness et al. examined both competency development (using the Revised Cognitive Therapy Scale, CTS-R; Blackburn et al, 2001) and patient recovery rates achieved by trainees who had various professional backgrounds (e.g. clinical psychologists, mental health nurses, OTs) or no prior professional training (a third of the sample were Psychological Well-being Practitioners - PWP). The study outcomes show that all of the therapists showed significant competency improvements on the CTS-R but the Clinical Psychologist sub-group needed less training to achieve the same or superior competence ratings. Given the challenges of meeting the need for growth in the global mental health workforce (Patel, Chowdhary, Rahman, & Verdelli, 2011; Singla et al., 2017), taking a competency-based approach to determining training inputs may be far more cost-effective than trying to reproduce the professional role identities (e.g. psychologist, psychiatrist) currently used in high income countries (Fulton et al., 2011). In the next section, we provide a brief scan of the horizon to see how developments in competency-based training will impact on applied psychology in the future.

Emerging Trends in Competency-Based Training Delivery

Technology is beginning to significantly disrupt the way that knowledge can be transferred to mental health practitioners (Bairy, Ganesh,

Govindraj, & Chand, 2019). Traditional approaches to training that involve attendance at a university and face-to-face contact with lecturers in classrooms are increasingly being displaced by digital approaches (Fairburn & Wilson, 2013). So, does technology-mediated training leads to better or more efficient competency development than traditional techniques? Firstly, there is little doubt that increasingly ubiquitous digital devices such as video-camera enabled smart phones do directly improve competency-based training by making real world samples of trainee clinical behaviour easier to capture. Direct behavioural samples (e.g. live video) allow much more precise and tailored supervisor feedback compared to more traditional methods such as verbal descriptions provided by the trainee during clinical supervision.

But, there are other uses of technology that have yet to be proven effective in reliably leading to competency development. For example, a recent randomised control trial (RCT) comparison of internet delivered CBT with or without supplementary clinical supervision delivered via Skype found that competency development was best when trainees received supervision alongside the online training package (Rakovshik, McManus, Vazquez-Montes, Muse, & Ougrin, 2016). So, although there is significant promise from using the internet to scale-up and automate the knowledge transfer aspects of competence development, it is likely that the need for tailored feedback from a clinical supervisor will remain a key bottleneck to be overcome. The following section continues to examine the future prospects for competency-based clinical psychology training but with a particular focus on the overarching principles and processes that will continue to shape and refine clinical psychology training models over the course of a psychologist's career.

4. Opportunities and Risks for the Future

Competence is a lifelong pursuit. It is neither static nor absolute but dynamic and continuously developing (Falender & Shafranske, 2012). However, the word "competence" itself may belie the underlying concept and give the false impression that it is an endpoint rather than a moving target. Increasingly it is clear with the explosion of knowledge and research, that competence requires an active, ongoing process to attain and maintain knowledge, skills, and attitudes. It is best approached as an orientation to psychological practice that acknowledges the diminishing durability of professional knowledge (Neimeyer & Taylor, 2014) and establishes life-long learning and continuous improvement as hallmarks. Thus, rather than constituted as a static fixed end-point, competence is a dynamic evolving point of reference, as service requirements and delivery change, and science evolves. Informed opinion suggests that the half-life of professional knowledge is expected to decrease within the next decade from nine years to just over seven years, with substantial variability across specialties and proficiencies. Expected half-life ranges from four (clinical neuropsychology) to 17 (psychoanalytic psychology) years (Neimeyer, Taylor, Rozensky, Cox, 2012). Registration or licensure demarks a moment in one's professional development that verifies that one has attained demonstrable competence at a point in time as well as the requisite foundational knowledge, skills, and attitudes. It is perhaps a bitter pill to swallow that "all procedures in clinical science come with an expiration date" (Levenson, 2014, p. 37). The challenge concerns the means by which ongoing professional development occurs and how educators and trainers instil values that support continuous education and training (beyond transactional regulatory requirements). How might a culture of competence be encouraged? We need to continue to examine through scientific investigation best practices in the dissemination of knowledge and practice innovation (Edmunds, 2013). The assumption that continuing education attendance is a major mechanism for maintenance of competence has been questioned, shifting attention to mechanisms to enhance transfer and application of learned knowledge, skills, and attitudes to practice (Neimeyer & Taylor, 2019). Training institutions need to step up to an empirically-based approach to ensure that life-long learning is an essential value and practice instilled during the training trajectory. In addition to the development and maintenance of technical expertise, efforts need to be taken to address the clinical needs of increasingly diverse populations of consumers of psychological services.

In the United States, both the American Psychological Association Multicultural Guidelines: *An Ecological Approach to Context, Identity, and Intersectionality* (American Psychological Association, 2017) and *Guidelines for Race and Ethnicity in Psychology* (American Psychological Association, APA Task Force on Race and Ethnicity Guidelines in Psychology, 2019) represent a shift to developmental, contextual, and intersectionality, multiple identities of client(s), supervisees, and supervisors, and competence implications that are directly delineated. While increasing attention had been devoted to multiple identities of clients, focus on supervisees and supervisors and their corresponding worldviews represents a shift (Falender, Shafranske, & Falicov, 2014). Similarly, cultural humility, or the incorporation of a commitment to critical self-reflection and self-critiquing, addresses and redresses power dynamics, through identifying imbalances in client-therapist (supervisee)-supervisor dynamics with the instillation of respectful curiosity and humility. Implicit in these approaches is recognition of privilege, power, and oppression, or the exercise of power unjustly (Falender et al., 2014). Difficult conversations may ensue, with supervisors conducting respectful discourse, focused on enhancing supervisee competence rather than simply overlooking or unintentionally fostering spurious compliance with supervisor interventions or directives. A challenge is translating the guidelines to practice, incorporating them into competence frameworks, and ensuring change in not simply in knowledge or skills, but attitudes. Although such a mandate is international in scope, individual countries, regions, or communities need to fashion approaches fitting to the local environment. The challenge of ensuring career-long clinical competence, informed by considerations of individual multicultural diversity and context, requires an approach that begins in graduate education and training and offers a framework that scaffolds ongoing professional development and the exercise of competence – the competency-based approach offers such a framework.

In contrast to global assessments of competence, a molecular approach parses specific knowledge, skills, and attitudes and lends clarity to foster development of the supervisee and target areas of lesser competence, guiding support and, as indicated, remediation. Thus, the supervisee is viewed in the frame of a predetermined standard, a criterion-referenced one rather than across a training cohort or group as in norm-based assessment (Falender & Shafranske, 2007). The identification of the specific competencies (e.g., listening skills, knowledge of diagnostic systems, and risk assessment), which are assembled or bundled to perform a specific clinical task (or competency) is undertaken in an attempt to "reduce measurement to definable units that contain sufficient granularity as to be unequivocal" (Bers, 2001, p. 29). Discrimination at the "molecular"

level assists the supervisee to focus development on specific areas or skill sets that are required for performance of the clinical task. Feedback and self-assessment aimed at this level of refinement better target training objectives and encourage supervision activities to be adjusted to enhance learning and skill development in the areas most needing improvement.

The use of routine outcome monitoring (ROM) in supervision provides another avenue to assess supervisee competence and to protect client welfare (Chapman et al., 2017). Data obtained from clients has been found to be instrumental in reducing treatment failure, (e.g., identifying deterioration or poor therapeutic alliance) (Miller, Hubble, Chow, & Seideland, 2013) and enhancing treatment outcomes (Lambert & Harmon, 2018; Muir et al., 2019). Tracking the therapy process (over a number of clients) theoretically parallels progression in supervisee development and as such is a valuable tool in continuous performance evaluation. Metacompetence, or accurately assessing, identifying, and knowing what one knows and what one does *not* know, is the organizing principle. Implicit in metacompetence are reflective practice, self-awareness, and ongoing self-assessment (Falender & Shafranske, 2007), which can be augmented by client feedback.

Summary and Conclusions

Close to two decades ago, Murray Gruppen, Catton, Hays, & Wooliscroft, (2000), signalled that the urgent need for the development and implementing assessment methods to evaluate competence remained a challenge for psychology educators, trainers, regulators, and credentialing bodies. This message has been reiterated and extended to include the need for standardized tools, protocols and procedures that can be used for different stages of professional development by several authors in Australia (Gonsalvez et al., 2013, 2015; Pachana et al., 2011) and globally (Kaslow et al., 2007, 2009; Schuwirth & van der Vleuten, 2003). Significant progress has been made, but empirical support for the various competencies measures has been halting. The next step in the progression to such tools, protocols, and procedures would be both local and international collaborations to assess the specific competencies, their emergence and growth, and their impact not simply upon supervisee development but also on the outcomes of the clients. Although we cannot assume a linear relationship between the two, it is time for clinical supervision to be an active ingredient (Falender, 2018) with specific supervision training and supervision competence criteria, a path begun by Australia, and one to be emulated in other countries. The premise that osmosis, or slow absorption of one's own supervision practice, can no longer be considered sufficient to conduct clinical supervision during the training trajectory. Supervisors, like trainees, must demonstrate competence to practice. As the most influential factor in the development of clinical prowess of the supervisee, attention to the process of competency-based education, training, supervision, and continuous professional development is essential. Further, in addition to statutory or governmental requirements, a culture of accountability is required throughout the education and training system, which encourages attitudes of excellence and commitment to the public good, which can only be attained by career-long commitment to clinical competence. Finally, there is an urgent need for an authoritative, comprehensive and fit-for-purpose framework of competencies in Australia against which the two different registration levels and any specialised endorsements can be mapped. Such a blueprint of what competencies must be attained by whom is foundational, and is essential for educational institutions to plan how these outcomes will be achieved, how learning, practicum and supervision activities will be sequenced and integrated, and which innovative strategies could improve training effectiveness and efficiencies.

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PSYCHOLOGIST COMPETENCY STANDARDS IN AUSTRALIA

1

Table 1. Distribution of competencies from competency frameworks adopted in the USA, Australia and the UK that fall within a 12-Domain grid (Column 1). Note Dm=Domain, and Item numbers refer to competency codes derived from their respective sources.

Competency Domains	Competency Work Group (USA) Fouad et al. (2009)	Australian Psychology Accreditation Council (APAC, 2019)	British Psychological Society (BPS, 2019)
	<i>N = 56 competencies</i>	<i>N = 28 competencies</i>	<i>N = 70 Competencies</i>
	Domains = 15 (Professionalism, Reflective practice, Scientific knowledge and methods, Relationships, Individual and cultural diversity, Ethical, legal standards and policy, Interdisciplinary systems,	Domains: Not structured by domains	Domains = 9: Generalisable meta-competencies, Psychological assessment, Psychological formulation, Psychological intervention, Evaluation,

Assessment, Intervention, Consultation, Research/Evaluation, Supervision, Teaching, Management, Advocacy)
Levels included in table: Readiness for entry to practice

Levels: Professional competencies (16) and Specialised Areas of Endorsement Competencies – Clinical Psychology (12)

Research, Personal and professional skills and values, Communication and teaching, Organisational and systemic influence and leadership.
Level: Doctoral programmes in clinical psychology

1. Professionalism	<p style="text-align: center;"><i>N = 5 competencies</i></p> <p><i>Dm1</i> - Includes competencies under (a) Integrity-honesty, (b) deportment, (c) accountability, (d) concern for welfare of others, (e) professional identity</p>	<p style="text-align: center;"><i>N = 1 competency</i></p> <p>Professional competencies: 3.13</p>	<p style="text-align: center;"><i>N = 3 competencies</i></p> <p><i>Dm7</i> - Personal and professional skills and values: Items 7f, 7g, 7h</p>
2. Reflective practice	<p style="text-align: center;"><i>N = 3 competencies</i></p> <p><i>Dm2</i> - Reflective Practice: Includes competencies under (a) reflective practice, (b) self-assessment, (c) self care</p>	<p style="text-align: center;"><i>N = 1 competency</i></p> <p>Professional competencies: 3.14</p>	<p style="text-align: center;"><i>N = 3 competencies</i></p> <p><i>Dm1</i> – Generalisable meta-competencies: Items Ii <i>Dm7</i> - Personal and professional skills and values: Items 7d, 7i</p>
3. Scientific Knowledge and Methods	<p style="text-align: center;"><i>N = 3 competencies</i></p> <p><i>Dm3</i> - Scientific knowledge and methods: Includes competencies under (a) scientific mindedness, (b) scientific foundation of psychology, (c) scientific foundation of professional practice</p>	<p style="text-align: center;"><i>N = 5 competencies</i></p> <p>Competencies = 5 Professional competencies: 3.2 Specialised area: 4.2.1.i, 4.2.1.ii, 4.2.1.iii, and 4.2.1.iv.</p>	<p style="text-align: center;"><i>N = 5 competencies</i></p> <p><i>Dm1</i> - Generalisable meta-competencies: Items 1a, 1b, 1c, 1d, 1g</p>
4. Relationships	<p style="text-align: center;"><i>N = 3 competencies</i></p> <p><i>Dm4</i> - Relationships: Includes competencies under (a) interpersonal relationships, (b) affective skills, (c) expressive skills</p>	<p style="text-align: center;"><i>N = 0 competencies</i></p> <p>*Counselling skills included as a pre-professional competency</p>	<p style="text-align: center;"><i>N = 5 competencies</i></p> <p><i>Dm2</i> – Psychological assessment: Item 2a <i>Dm3</i> – Psychological formulation: Item 3e <i>Dm4</i> - Psychological intervention: Item 4a, 4d <i>Dm7</i> – Personal and professional skills and values: Item 7j</p>
5. Individual And Cultural Diversity (I&Cd)	<p style="text-align: center;"><i>N = 4 competencies</i></p> <p><i>Dm5</i> – Individual and cultural diversity: Includes competencies under (a) self as shaped by I&CD, (b) others as shaped by I&CD, (c) Interactions as shaped by I&CD, (d) Applications based on I&CD</p>	<p style="text-align: center;"><i>N = 1 competency</i></p> <p>Professional competencies: 3.3</p>	<p style="text-align: center;"><i>N = 4 competencies</i></p> <p><i>Dm3</i> – Psychological formulation Item 3d, 3g <i>Dm8</i> - Communication and teaching: Items 8b, 8f</p>
6. Ethical Legal Standards And Policy	<p style="text-align: center;"><i>N = 3 competencies</i></p> <p><i>Dm6</i> - Ethical legal standards and policy Includes competencies under (a) knowledge of ethical/legal/professional standards and guidelines, (b) awareness and application of ethical decision making, (c) ethical conduct</p>	<p style="text-align: center;"><i>N = 3 competencies</i></p> <p>Professional competencies: 3.10, 3.11, 3.12</p>	<p style="text-align: center;"><i>N = 5 competencies</i></p> <p><i>Dm7</i> – Personal and professional skills and values: Items 7a, 7b, 7c, 7e, <i>Dm9</i> - Organisational and systemic influence and leadership: Item 9a</p>
7. Organisation & Interdisciplinary Systems	<p style="text-align: center;"><i>N = 4 competencies</i></p> <p><i>Dm7</i> - Interdisciplinary systems Includes competencies under (a) knowledge of shared and distinctive contributions of other professions, (b) functioning in multidisciplinary and interdisciplinary contexts, (c) interdisciplinary collaboration/consultation, (d) respectful and productive relationships</p>	<p style="text-align: center;"><i>N = 1 competency</i></p> <p>Professional competencies 3.10,</p>	<p style="text-align: center;"><i>N = 8 competencies</i></p> <p><i>Dm1</i> – Generalisable meta-competencies: Items 1f, 1h <i>Dm3</i> – Psychological formulation Item 3j <i>Dm4</i> - Psychological intervention: Item 4g, 4h, 4i <i>Dm9</i> - Organisational and systemic influence and leadership: Items 9b, 9g</p>
8. Assessment & Formulation	<p style="text-align: center;"><i>N = 6 competencies</i></p> <p><i>Dm8</i> - Assessment Includes competencies under (a) measurement and psychometrics, (b) evaluation methods, (c) application of methods, (d) diagnosis, (e) conceptualisation and (f) recommendations, communication of findings</p>	<p style="text-align: center;"><i>N = 9 competencies</i></p> <p>Professional competencies: 3.4 to 3.8 Specialised area: 4.2.2.i, 4.2.2.ii, 4.2.2.iii, and 4.2.2.iv.</p>	<p style="text-align: center;"><i>N = 11 competencies</i></p> <p><i>Dm2</i> – Psychological assessment: Items 2b, 2c, 2d, 2e <i>Dm3</i> – Psychological formulation: Items 3a, 3b, 3c, 3d, 3f, 3h <i>Dm8</i> - Communication and teaching: Item 8a</p>
9. Intervention	<p style="text-align: center;"><i>N = 5 competencies</i></p> <p><i>Dm9</i> - Intervention Includes competencies under (a) knowledge, (b) planning, skills, (c) implementation, (d) progress, (e) evaluation</p>	<p style="text-align: center;"><i>N = 5 competencies</i></p> <p>Professional competencies: 3.9 Specialised area: 4.2.3i, 4.2.3ii, 4.2.3iii, and 4.2.3iv.</p>	<p style="text-align: center;"><i>N = 7 competencies</i></p> <p><i>Dm1</i> – Generalisable meta-competencies: Items 1e <i>Dm4</i> - Psychological Intervention: Items 4b, 4c, 4d, 4e, 4f, 4j</p>

See details in Table 2

		See details in Table 2	
10. Research/Evaluation	<i>N = 2 competencies</i> <i>Dm10</i> – Research Includes competencies under (a) scientific approach to knowledge generation, (b) application of scientific method to practice	<i>N = 3 competencies</i> Professional competencies: 3.15, 3.16, 3.17	<i>N = 10 competencies</i> <i>Dm5</i> – Evaluation: Items 5a, 5b, 5d, 5e, 5f <i>Dm6</i> – Research: Items 6a, 6b, 6c, 6d, 6e
11. Consultation, Management, Advocacy	<i>N = 10 competencies</i> <i>Dm10</i> – Consultation: Includes competencies under (a) role, (b) addressing referral question, (c) communication of findings, (d) application of methods <i>Dm14</i> – Management: Includes competencies under (a) management, (b) administration, (c) leadership, (d) evaluation of management and leadership <i>Dm15</i> – Advocacy: Includes competencies under (a) empowerment, (b) systems change	Not represented	<i>N = 4 competencies</i> <i>Dm8</i> - Communication and teaching: Item 8e <i>Dm9</i> - Organisational and systemic influence and leadership: Items 9d, 9e, 9f
12. Supervision & Teaching	<i>N = 8 competencies</i> <i>Dm12</i> – Supervision. Includes competencies under: (a) expectations and roles, (b) processes and procedures, (c) skills development, (d) awareness of factors affecting quality, (e) participation in supervision process, (f) ethical and legal issues <i>Dm13</i> - Teaching. Includes competencies under (a) knowledge, (b) skills	Not represented	<i>N = 5 competencies</i> <i>Dm5</i> – Evaluation: Item 5c <i>Dm8</i> - Communication and teaching: Items 8c, 8d, 8g <i>Dm9</i> - Organisational and systemic influence and leadership: Item 9c

Table 2. Assessment and intervention Professional Competencies (Codes beginning with 3.0) and Professional Competencies for Specialised Areas of Practice (Codes beginning with 4.0) prescribed by APAC (APAC, 2019) and Competencies and Behavioural Anchors for competency attainment recommended by the Benchmarks Work Group (Fouad et al., 2009).

APAC		BENCHMARKS WORK GROUP	
DOMAIN: ASSESSMENT			
Competency	Competency	Behavioural Anchor	
A. Measurement and Psychometrics			
3.6. Conduct professional interviews and assessments and synthesise information from multiple sources, including assessment of risk, to formulate a conceptualisation of the presenting issues to determine the most appropriate interventions, including management of risk.	Independently selects and implements multiple methods and means of evaluation in ways that are responsive to and respectful of diverse individuals, couples, families and groups and context	<ul style="list-style-type: none"> • Demonstrates awareness and competent use of culturally sensitive instruments, norms • Seeks consultation as needed to guide assessment • Demonstrates limitations of assessment data clearly reflected in assessment reports 	
B. Evaluation Methods			
4.2.2(iv). Apply advanced psychological knowledge to culturally responsive assessment in the area of clinical psychology, including: evaluation of symptom reduction, therapeutic outcomes, the therapeutic alliance and client progress throughout therapy	Independently understands the strengths and limitations of diagnostic approaches and interpretation of results from multiple measures for diagnosis and treatment planning	<ul style="list-style-type: none"> • Accurately and consistently selects, administers, and scores and interprets assessment tools with clinical populations • Selection of assessment tools reflects a flexible approach to answering the diagnostic questions • Comprehensive reports include discussion of strengths and limitations of assessment measures as appropriate • Interview and report leads to formulation of a diagnosis and the development of appropriate treatment plan 	
C. Application of Methods			

4.2.2(ii). Use of assessment tools and processes related to a wide range of psychological disorders, and including psychometric tests, structured or semi-structured interviews, behavioural observations, measures of functionality and processes that enable collection of collateral information from multiple sources, including groups and systems relevant to the client	Independently selects and administers a variety of assessment tools and integrates results to accurately evaluate presenting question appropriate to the practice site and broad area of practice	<ul style="list-style-type: none"> Independently selects assessment tools that reflect awareness of client population served at practice site Interprets assessment results accurately taking into account limitations of the evaluation method Provides meaningful, understandable and useful feedback that is responsive to client need
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D. Diagnosis

4.2.2(i). Evaluation of psychological disorders with reference to relevant international taxonomies of classification, including disorders of moderate to severe level and complexity	Utilizes case formulation and diagnosis for intervention planning in the context of stages of human development and diversity	<ul style="list-style-type: none"> Treatment plans incorporate relevant developmental features and clinical symptoms as applied to presenting problem Demonstrates awareness DSM and relation to ICD codes Regularly and independently identifies problem areas and makes a diagnosis
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E. Conceptualization and Recommendations

4.2.2(iii). Apply advanced psychological knowledge to culturally responsive assessment in the area of clinical psychology, including: integration, interpretation, and synthesis of clinical psychological assessment data with the knowledge of psychopathology to inform case formulation, diagnosis and intervention	Independently and accurately conceptualizes the multiple dimensions of the case based on the results of assessment	<ul style="list-style-type: none"> Independently prepares reports based on the results of the assessments Administers, scores and interprets test results Formulates case conceptualizations incorporating theory and case material
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F. Communication of Findings

3.8. Interpret and communicate findings in oral and written formats, including formal psychological reports, using culturally appropriate language.	Communication of results in written and verbal form clearly, constructively, and accurately in a conceptually appropriate manner	<ul style="list-style-type: none"> Writes an effective comprehensive Report Effectively communicates results Verbally Reports reflect data that has been collected via interview and its limitations
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DOMAIN: INTERVENTION

Competency

Competency

Behavioural Anchor

A. Knowledge of Interventions

4.2.1(i). Apply advanced psychological knowledge of the following to their practice in clinical psychology: psychological theories of the aetiology, progression and/or recovery, precursors and sequelae of psychological disorders, including incidence, prevalence and predisposing, risk, protective and maintenance factors Also 4.2.1 (ii), (iii), (iv)	Applies knowledge of evidence-based practice, including empirical bases of intervention strategies, clinical expertise, and client preferences	<ul style="list-style-type: none"> Writes a case summary incorporating elements of evidence-based practice Presents rationale for intervention strategy that includes empirical support
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B. Intervention planning

4.2.3(i). Selection, tailoring and implementation of appropriate evidence-based interventions on the basis of an initial case formulation, whether individuals, dyads or carers/dependents	Independent intervention planning, including conceptualization and intervention planning specific to case and context	<ul style="list-style-type: none"> Accurately assesses presenting issues taking in to account the larger life context, including diversity issues Conceptualizes case independently and accurately Independently selects an intervention or range of interventions appropriate for the presenting issue(s)
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C. Skills

2.2. Demonstrate appropriate interpersonal communication and interview skills in situations appropriate to psychological practice and research.	Clinical skills and judgment	<ul style="list-style-type: none"> Develops rapport and relationships with wide variety of clients Uses good judgment about unexpected issues, such as crises, use of supervision, confrontation
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This includes active listening, clarifying and reflecting, effective questioning, summarising and paraphrasing, developing rapport, appropriate cultural responsiveness and empathic responding.

- Effectively delivers intervention

D. Intervention Implementation

Apply advanced psychological knowledge to culturally responsive interventions in the area of clinical psychology, including:

4.2.3(iv). Evidence-based practice in the understanding and management of psychological disorders, including across the age range and across modalities such as e-health approaches.

4.2.3(iii). Consultation and collaboration with other professionals regarding clinical planning and referrals, particularly in the context of complex case presentations

Implements interventions with fidelity to empirical models and flexibility to adapt where appropriate

- Independently and effectively implements a typical range of
- intervention strategies appropriate to practice setting
- Independently recognizes and manages special circumstances
- Terminates treatment successfully
- Collaborates effectively with other providers or systems of care

E. Progress evaluation

4.2.3(i). Monitoring of outcomes and modifications based on evolving case formulation and intra- and interpersonal processes, with care given to the appropriateness of interventions for the client or clients within their wider context

Evaluate treatment progress and modify planning as indicated, even in the absence of established outcome measures

- Independently assesses treatment effectiveness & efficiency
- Critically evaluates own performance in the treatment role
- Seeks consultation when necessary

Note: The numerical values are codes assigned to the competency in the APAC document. The framework from the Benchmarks Work Group includes competencies for three developmental levels including Readiness for practicum, Readiness for internship and Readiness for entry to Practice. Only competencies from the latter group are included.