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SELF-EFFICACY AND OUTCOMES: VALIDATING A MEASURE
COMPARING SOCIAL WORK STUDENTS' PERCEIVED AND ASSESSED
ABILITY IN CORE PRE-PLACEMENT SKILLS

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Abstract

Assessing and researching social work students' skills prior to first placement presents challenges, but also the opportunity for comparison with students' perceptions of their abilities/skills at an important professional development stage. This paper reports on initial quantitative results from a three-year study of students' self-confidence in core skills/microskills at the profession's 'readiness for direct practice' threshold in England. A combined cohort of postgraduate and undergraduate social work students ($n = 95$) at one university completed a three-stage integrated

self/module evaluation questionnaire during a common module. Using a Self-Assessed Skills Inventory, (SASI), a self-efficacy scale based on Likert-scale responses to 28 statements was developed and validated for internal consistency. Linear analysis of self-efficacy values, assessment outcome, programme level and prior work experience for a non-biased sample ($n = 66$) at the final stage shows results are independent of both programme level and prior experience. However, a correlation established between self-efficacy and marks for an assessed interview is shown to be strongly positive and significantly predictive for undergraduates, but weaker and negative for postgraduates. Considering relevant literature, the study's limitations and implications for other social work programmes, this study establishes direct criterion-related validity between a self-efficacy scale and formal assessment.

Keywords

Communication skills, self-assessment, self-efficacy, self-confidence, readiness for direct practice, social work education, research and evaluation

Introduction

Despite an agreed international definition of social work (IFSW, 2014), there is considerable difference between countries in how the essential components of professionalism are described, in terms of competences, capabilities, or statements of knowledge, values and skills (e.g. Moriarty *et al.*, 2015; Council on Social Work Education, 2015), and how they are assessed. Within England, even after a significant sector-wide programme of social work reform (Social Work Reform Board, 2010) critical issues are still contended, such as whether it is a single or divided profession working in specialist settings, and whose role it is to define a profession - government, employers or a professional body (Croisdale-Appleby, 2014; Narey, 2014; DfE, 2014; DH, 2014). Nevertheless, there is still a recognized need for skilled, capable and confident social workers, able to demonstrate skills and values in situations of high risk and uncertainty, supported by knowledge, theory and research (Munro, 2011; DfE, 2016).

Novice professionals (Dreyfus and Dreyfus, 1986) need an effective educational foundation to make the transition from qualifying courses, so that "*skilled behaviour*" becomes "*so routinized through practice and experience that it is performed almost automatically*", allowing them to progress to the "*deliberative processes*" (Eraut, 1994, p. 111–112) necessary for dealing with complexity. Communication, critical reflection and self-awareness are core skills for developing professional confidence and identity for practice (Bruce, 2013; Fook *et al.*, 2015). Mastery of these is particularly important before being assessed as ready for placement.

The challenge is how to assess component skills (microskills), as well as the integration of these (Bogo *et al.*, 2006), and how to research educational outcomes at

the thresholds between education and professional practice (Carpenter, 2005; Carpenter and Burgess, 2010; Moriarty *et al.*, 2011). Self-efficacy research provides an approach to investigating the relationship between student/practitioner self-assessed confidence and assessed competence/capability (*e.g.*, Holden *et al.*, 2002; Parker, 2006; Carpenter, 2015; Holden *et al.*, 2015); whether self-efficacy can be predictive of results and developing and validating suitable measures or scales for such research are additional challenges.

This paper presents quantitative data from the first year of a 3-year study of social work students at one university in England, on a module preparing/assessing them before first practice placement (the 'Readiness for Direct Practice' threshold). In this paper we report the development and validation of a self-assessed confidence in skills inventory/questionnaire, and demonstrate it has criterion-related validity (Drost, 2011) in relation to formal assessment.

Frameworks, learning and outcomes for core skills

Readiness for practice thresholds

Most literature and research defines 'readiness' (to practise) at the point of professional qualification/graduation or registration, *i.e.*, at point of entry to a work role (*e.g.*, Bogo *et al.*, 2006; Moriarty *et al.*, 2011; Sussman *et al.*, 2014). Changes in social work education in England implemented from 2013 require students to undertake 30 days of skills development before and alongside placements, and meet Readiness for Direct Practice requirements. Currently framed by the Professional Capabilities Framework (PCF) (The College of Social Work, 2012a) and regulated by

the Health and Care Professions Council (2012), social work education in England is now no longer aligned with Scotland, Wales and Northern Ireland.

The PCF defines Readiness for Direct Practice (RDP) (The College of Social Work, 2012b) as the first professional threshold, stating that students, by the point of assessment, should:

"... demonstrate basic communication skills, ability to engage with users, capacity to work as a member of an organisation, willingness to learn from feedback and supervision, and demonstrate basic SW (social work) values, knowledge and skills in order to be able to make effective use of first practice placement".

PCF guidance emphasizes integrated assessment of a range of core skills, including communication, critical reflection and self-awareness, alongside knowledge and values (Keville, 2012), rather than separated assessments of component competences (*cf.* National Occupational Standards elsewhere in the UK). This answered calls to assess social workers as holistic professionals rather than as competent technicians (Eadie and Lymbery, 2007). The challenge is to do both.

Skills development

Skills development, especially of communication skills, has long been embedded in social work education, particularly at early stages, (*e.g.*, Trevithick, 2012; Henderson and Mathew Byrne, 2016). Across social work, medicine, nursing, and counselling, lists/inventories or hierarchies of microskills - building blocks for effective communication - have been devised for self-assessment scales or career/educational development, (*e.g.*, Ivey, 1982; Holden *et al.*, 2002), or for independent rather than self-rating, (*e.g.*, Bolger, 2015). However, reducing communication to measurable

microskills can constrain proper evaluation of context and meaning (Bolger, 2015). The acknowledged lack of a knowledge base in communication skills research has been explained by complexity of learning processes and limited attempts at evaluation, with calls for more robust effectiveness measures, and more attention to written communication skills and transfer to practice learning (Trevithick *et al.*, 2004; Bolger, 2015). While some research studies focus on involvement of service users and carers (*e.g.*, Moss *et al.*, 2007), learning/assessment tools, such as video, (*e.g.*, Cartney, 2006) or specialist communication, for example with children (Lefevre, 2015), few have investigated self-assessment in communication skills (*e.g.*, Bakx *et al.*, 2003; Bolger, 2015), and none successfully compared with actual results of tracked students (*cf.* Baartman and Ruijs, 2011, with different cohort students and self-efficacy measured *after* formal assessment).

Assessment and educational outcomes

Social work educators have been challenged on assessment of competences (Bogo *et al.*, 2006) and to focus more on outcomes when assessing the impact of educational approaches to developing skills or changing professional behaviour (Carpenter, 2005). The relation between self-assessment, self-confidence and measured outcomes is of interest in professional education (Baartman and Ruijs, 2011), but competence in skills must still be demonstrated (Quinney and Parker, 2010). Studies investigating co-relationships between outcomes reveal the complexity of variables (Carpenter and Burgess, 2010).

Social/demographic factors affecting social work education

Data and informative research on successful outcomes in social work education, beyond that available from individual universities/education providers, is limited, and even more so at the pre-placement threshold. Whether a higher level academic programme or prior work experience is better preparation for professional success/practice-readiness is actively debated in England (DfE, 2016).

Social work in England retains a common professional qualification, undifferentiated professionally between undergraduate and postgraduate programmes, unlike the USA where Bachelors and Masters social work programmes have common professional competences but differentiated outcomes and specialisation opportunities at postgraduate level (CSWE, 2015). Systematic longitudinal research on differences between undergraduates and postgraduates appears limited. Sheppard and Charles' study (2014) in two English universities found differences between under- and post-graduates in critical thinking skills and similarities in "*interpersonal dispositions*", but only *on entry* to professional training and without reference to final results.

Drawing on comparative research in England (Holmstrom and Taylor, 2008), and Canada (Pelech *et al.*, 1999), Holmstrom (2010) found no conclusive correlation between previous experience and positive outcomes of course completion, and a slight negative correlation between length of experience and success on social work programmes.

Systematic data on overall success rates of graduating social work students reported by the former regulator, General Social Care Council (GSCC), recorded age, gender, race/ethnicity, disability and previous academic qualifications, but not previous work

experience, and there is evidence of differential impact on outcomes, for example based on race/ethnicity (Fairtlough *et al.*, 2013). GSCC's 10-year report (2012) highlighted that, "*in general, those with the highest previous academic qualifications at the point of enrolment had the highest pass rates*", without differentiating between students on under- and post-graduate courses. Skills for Care, (SfC, 2016), now collates information from the Higher Education Statistics Agency. Both GSCC and SfC confirm lowest pass rates are for those under 20 years at enrolment—the age-group more likely to be undergraduates.

Self-efficacy

The concept of self-efficacy was a key component of Bandura's Social Learning Theory to account for an individual's decision/ability to act in specific situations (1977, 1986). Self-efficacy is defined as an individual's belief that they "*can successfully execute the behavior required*" (Bandura, 1977, p. 193) in order to achieve expected outcomes. An individual's perceived self-confidence determines the tasks they are prepared to attempt and depends on the demands of the task (*e.g.*, complexity, difficulty). High levels of self-confidence enable individuals to attempt more complex work and be resilient when outcomes are not successful. In contrast, those with low self-confidence are conservative in the problems they address and lose confidence when problems arise. However, self-confidence alone in the ability to act will not "*produce desired performance if the component capabilities are lacking...(or individuals) have no incentives*" (Bandura, 1977, p.194).

An individual's perceived self-efficacy cannot be measured directly and so its value must be inferred. In education, it is conventionally calculated as the mean level of an

individual's confidence in their perceived ability, using a Likert scale, to a set/inventory of specific tasks (see Holden *et al.*, 2002). Students' responses will depend on their own conceptions of each task at the time a questionnaire is completed. Baartman and Ruijs (2011) provide a useful comparison of perceived and actual competence/competency, including self-belief, self-esteem and self-efficacy, in their Netherlands study of social work students' perceptions and achievement at four points during training.

The environment in which a decision to act is taken will affect the decision and the outcomes. Self-efficacy in social work research has been applied in professional practice, for example by Ellet in relation to retention levels (2007) and by Carpenter *et al.* in relation to job satisfaction, role clarity and role conflict or stress (2015). Parker (2006) also applied the concept with students on practice placement. In education, several studies have been conducted since Holden *et al.*'s key study in 2002. Many have been restricted in comparative terms by sample size and/or selection (*e.g.*, Koprokswa, 2010; Quinney and Parker, 2010; Lefevre, 2015). Studies building on Holden *et al.* (2002) conducted by Rishel and Majewski (2009), Baartman and Ruijs, 2011, Rawlings (2012), and Holden *et al.*, (2015) tested their inventories for content validity and internal consistency, but only three (Holden *et al.*, 2002; Baartman and Ruijs, 2011; Holden *et al.*, 2015) considered convergent validity. Holden *et al.* (2002) researched the change in students' self-efficacy between the beginning and end of a postgraduate course, using two consecutive cohorts. Subjects included 393 students at pre-test, 650 at post-test, with 215 completing both. The inventory used was the Social Work Self-Efficacy Scale (SWSE), already assessed for content validity in an earlier study; it included 52 skills arranged in five subgroups devised by staff adding four subgroups to one from an external source. Internal

consistency and convergence validity was assessed in relation to Frans' 1993 Social Work Empowerment scale (SWE), with a correlation of 0.57. In SWSE, each skill is prefaced with the phrase stem '*How confident are you that you can ...?*'. The findings reported increases in self-efficacy during the programme and identified skills where students felt most/least confidence.

Rishel and Majewski's multi-site study (2009) used 117 self-selecting students on the advanced phase of a Masters programme studying in a variety of modes. Their inventory included 65 internally-developed items, additional to the SWSE inventory, all grouped in relation to 17 programme learning outcomes. Self-efficacy was assessed at the beginning and end of the phase, with significant increases noted for all 17 outcomes alongside a decreasing standard deviation. Results reviewed by mode of study showed few significant differences. More specifically, there were no differences in the post-test between students with/without advanced standing.

Rawlings (2012) researched the link between self-efficacy and practice skill with two groups of self-selecting, undergraduate students, (16 entering the course, and another 16 leaving). The self-efficacy inventory combined an existing scale for counselling, three sections from the SWSE, and five additional items. Students were asked to assess confidence in working '*in the following week with clients*'. Clinical social workers assessed practice skill based on a videoed interview with a 'standardized client' and three related written responses. No significant relationship between self-efficacy and practice skill was reported. Prior relevant experience was related to practice skill but did not affect self-efficacy.

Holden *et al.*'s (2015) self-efficacy study with self-selecting Masters students on three parallel courses of differing length, used a pre-test/post-test design with 550

students completing both questionnaires ($n_1 = 108$, $n_2 = 238$, $n_3 = 204$). The inventory included 41 items matched to 10 competences defined by the professional accreditor (CSWE, 2008). Convergence testing was considered in relation to the SWE scale, with correlations of 0.46 or higher for each course. In two courses there was no significant difference in correlation with Holden *et al.*'s findings in 2002. Although bias within the selection of students was not considered, the number completing tests at both stages adds significantly to the power of the study, relative to studies using different groups at each stage.

Summary

Literature reviewed relevant to this study revealed limitations or gaps in systematic and evaluative published research:

- at the pre-placement RDP (Readiness for Direct Practice) threshold in qualifying courses in England, as defined in the professional framework (PCF), since educational changes in 2013;
- on learning and teaching of communication skills, education outcomes, and integration with transfer to practice;
- on the impact on education outcomes of previous experience and/or postgraduate/undergraduate programme level.

An established body of studies in self-efficacy, although with differing variables and samples, underpins the methodology for the design and validation of this study's questionnaire. Three studies demonstrated convergent validity (in relation to SWE), but only two tracked individual students (Holden *et al.*, 2002; Holden *et al.*, 2015). The third, (Bartman and Ruijs, 2011), established a relationship with assessment

outcomes, but with differing student groups and not measured contemporaneously.

None of the studies used unbiased student samples, or collected and used demographic data.

Aims of the Research

This research investigates whether there is an association between self-confidence and assessment outcomes at the RDP threshold and variables that might affect this, building on existing module-evaluation systems and learning approaches. The project overall also hopes to identify what might improve/help/ hinder students' learning and development of practice-relevant skills, in the module and then into placement.

This study developed a self-assessment inventory to compare with formally assessed ability in skills/microskills. Three hypotheses were formulated:

1. Students' overall self-confidence can be measured/assessed using an inventory of module-specific skills/micro-skills creating an internally consistent construct.
2. This construct can be correlated with end of module assessment establishing criterion-related validity.
3. Both level of programme and length of prior work experience may have a significant influence on the correlation.

In this study we consider all three aspects of validity: content validity, internal consistency and criterion-related validity (Drost, 2011). Content validity is addressed through design of the questionnaire and review of anomalous statements in the

analysis. We address internal consistency statistically, and convergent validity through linear modelling (establishing criterion-related validity).

The research team selected the term 'self-assessment' in preference to 'self-efficacy', to reduce possible student misunderstanding in completing questionnaires and emphasize links with existing module self-evaluation, review processes and language.

Methodology

Context of study

This paper presents first year quantitative results from research on a core-skills module for all students, both postgraduate (PG) and undergraduate (UG), on two social work programmes.

The module, contributing to students' overall RDP assessment before first placement, is designed to enable skills development in: communication and interviewing, and associated initial assessment/writing and reflection. Teaching and assessment for this professional foundation module is provided at undergraduate academic level to all UG and PG students at this university, with all other modules differentiated by programme level.

Students have to pass four separately assessed elements, with students' module result calculated on amalgamation: Interview with a service user/actor (INT), written Report of the assessed interview (REP), Portfolio of skills workbook (PORT), and reflective Self-evaluation drawing on the interview and module learning (sEVAL).

Students were taught in six workshop groups (four UG, two PG) over the academic year 2013-2014, using a dedicated practice learning suite (Skills Laboratory)

providing learning resources and technology for recording/reviewing of interviews (both practice and assessed).

The research team included the combined module academic teaching team, an independent researcher and an analyst; who all contributed to research design and progress. The module team were responsible for all student contact, and the researcher and analyst for data preparation and analysis, and providing evaluation feedback to the module team and a research report to students at the end of the module.

Ninety-five students started the module, with 87 completing to assessment, and 83 (95%) passing overall. Pass rates were statistically independent of postgraduate or undergraduate course level.

Ethics and Sampling

Students complete course participatory consent forms which include the module, and as the research is designed to be integral to learning and module evaluation, further ethical clearance was not required by the Faculty. All students who attended the module were treated as subjects. As students could choose to remain anonymous, the sample used in the study must be considered as self-selecting.

Questionnaires

Students completed self-assessment questionnaires at three stages (T1, T2, T3), at the beginning, middle and end of the module teaching programme, to allow them to focus on progress in acquiring skills/microskills. Time was allocated during workshop sessions for questionnaire completion with the same format at each stage. Students

who missed a questionnaire could complete it in their own time if they requested this. The questionnaire continues to be used as an integral part of the module.

Each questionnaire consisted of two sections, with a detachable top-sheet, containing a statement that the questionnaire formed part of module self-assessment. Students were invited, but not required, to provide their student ID number (for correlating between stages). It was clearly stated that information they provided would not be accessible to the module team or have any influence on their formal assessment.

The first questionnaire included an additional question, asking the number of years of relevant work experience students had completed.

Section 1 of the questionnaire asked students to self-assess their perceived confidence in 29 specific skills/microskills *as if they were dealing with a service-user in a real-life situation now*, using a modified five-point Likert scale to collect responses, where 1 was a low rating, and 5 high. A sixth response (X) allowed students to indicate that they did not understand the meaning of a particular skill. Self-assessment of confidence *as if in practice* was to emphasize relevance to real practice, not just to passing a simulated interview assessment (*cf.* Rawlings, 2012).

Section 2, used to collect qualitative data, included two questions, asking students to comment briefly on factors that had been most and least helpful/useful in the development of their skills. Qualitative analysis of responses to these questions contributed to module development feedback processes, and is reported elsewhere (Tompsett, Henderson, Mathew Byrne, Gaskell Mew and Tompsett, 2016).

Design of questionnaire

The 29 skill statements in Section 1 of the questionnaire were created from a curricular list of skills/microskills given to students at the start of the module, based on the module team's teaching approach (Henderson and Mathew Byrne, 2016). This list covered skills/microskills for communication/interviewing (including, e.g., use of minimum encouragers, open/closed/probing questions, paraphrasing, etc.), and for writing/initial analysis and reflection/self-evaluation, and shows significant overlap with comparable inventories (e.g., Trevithick, 2012; Bolger, 2015). Each skill was converted to a statement of current competence devised by the two researchers (e.g., *I am able to, I have little difficulty in*) and the sequence of statements was randomized to eliminate any underlying sub-grouping. This set of statements is termed the Self-Assessed Skills Inventory (SASI) in the remainder of the paper.

Four statements were randomly selected and rewritten as a lack of confidence (e.g., *I have difficulty being self-aware in an interview*) as part of planned data validation. These statements were checked with the module team and modified as necessary. The SASI questionnaire is available online (Supplementary Material, 2a).

Data Validation

Student responses to the statements were assessed for consistency. One statement, (*I have little difficulty in analysing situations, responses and problems*) was rejected as an over-complex outlier, bringing the number of statements for subsequent analysis to 28. All students were retained (see Supplementary Material, 2b, online for detailed analysis of validation tests and modelling).

Input variables

The principal input variable was a SASI rating: this was calculated as a mean level of confidence for each student who provided a complete set of responses in the range 1 to 5 to the 28 remaining statements in the questionnaire (at any stage). The SASI calculation is not possible where students select 'X' as a response to any statement. For this paper, only the T3 SASI rating was analysed. The distribution of student SASI ratings could be treated as Normal (Shapiro-Wilk: $W = 0.97$, $p = 0.09$) with Huber parameters: $\mu = 4.07$ and $\sigma = 0.32$.

Two covariates were included in the analysis: the programme level for each student (undergraduate/postgraduate) and the length of prior relevant work/voluntary experience with service users. Categories used for length of experience were: none, 0-6 months, 6 months-1 year, 1-2 years, 2-3 years, 3-4 years, 4-5 years, and more than 6 years.

Output variables.

Each of the four module assessment marks (after moderation) was treated as an output variable. The correlation matrix between these is shown in Table 1.

[Table 1: about here]

Analysis

In this analysis, 0.05 was set as the limit for statistical tests of significance.

Participant Flow

Of the 87 students completing the module (55 UG, 32 PG), 66 (76%) with a complete set of data were included in the analysis (38 UG, 28 PG), excluding those who withdrew from the module, were not assessed, omitted their ID or provided incomplete questionnaires (at T1 and T3). Table 2 provides a summary of participant flow.

[Table 2: about here]

Principal Component Analysis

The principal component for the set of responses included all the statements in the inventory (see Figure 1). The statement with the lowest coefficient (4) appears to have the least direct association with social work (*'I am able to use IT ... as expected'*) but as this is insufficient evidence to remove this statement, all the 28 statements were retained.

[Figure 1: about here]

Internal consistency of responses

Internal consistency was tested using Cronbach's alpha ($\alpha = 0.89$). This value is high for a multi-valued inventory (Tavakol and Dennick, 2011) but at the minimum level of values as reported by Holden *et al.* (2002). The conventional response to a high value is to reduce the number of statements, but here, that would conflict with the need to maintain content validity.

Assessment of bias

Interview marks for the students included in this study were compared with those completing the assessment but who were excluded from the analysis (see Table 3). Results indicate the sample used in the analysis of the Interview marks is an unbiased sample of all students completing the module.

[Table 3: about here]

Table 4 shows the relationship between programme level and length of experience. Despite an apparent bias for lower levels of experience, the distribution of experience should be treated as statistically equivalent (Fisher's exact test for count data is 0.71).

[Table 4: about here]

The mean and standard deviation of the SASI ratings for both groups of students were calculated and tested for equivalence and shown to be statistically equivalent (see Table 5).

[Table 5: about here]

The possibility of a correlation between SASI ratings and length of experience was tested using ANOVA, as shown in Table 6. Length of experience, with eight possible values, is represented by seven separate variables (EXP2, EXP3, EXP4 etc.), each of which represents the advantage/disadvantage of having some level of experience (0-0.5, 0.5-1, 1-2 years, etc.) over having no experience at all.

[Table 6: about here]

Two values (EXP4: 1–2 years, EXP8: more than 6 years) have a level of significance below 5%, but there was no systematic grouping indicating a numerical relationship between length of experience and SASI ratings.

Linear modelling of assessment marks

Linear modelling (Campbell, 2006) identifies the ‘best-fit’ linear combination of a set of input variables and any correlation between them, as an estimate of one or more output variables. The approach is unbiased if the distribution of the remaining errors is Normally distributed (either predictably or *de facto*).

Modelling Interview Marks

Modelling the relationship between Interview marks and the three input variables, ignoring correlation between them, showed that the SASI rating was significant ($p < 0.01$) as a predictor, but that neither programme level nor length of experience were significant.

Extending the model to include correlation between input variables was simplified in this case, having already established that neither SASI rating nor programme level (PL) were correlated with experience. Results from this model are shown in Table 7, where residuals can be treated as Normal (Shapiro-Wilk, $W = 0.98$, $p = 0.28$). Three t -values are significantly different from zero — the SASI rating, PL and SASI:PL. The t -value for both SASI:PL and PL are approximately equal and opposite.

[Table 7: about here]

Inclusion of the correlation between programme level and SASI rating indicated that programme level changed the correlation between SASI ratings and Interview mark. For undergraduates, an increase in SASI rating corresponds to a marked increase in Interview mark, but to a slight decrease in Interview marks for postgraduates. Figure 2 shows the two relationships that remain after length of experience was removed from the model.

[Figure 2: about here]

Relationship between input variables and other assessment elements

Neither the SASI rating, nor programme level, nor the correlation between them, had any significant effect on the Portfolio mark, and neither Report writing nor Self-evaluation marks were correlated with SASI ratings. However, there was a weak association between these assessments and programme level that was moderated by the SASI rating, but no systematic, consistent correlation with length of experience.

Results of Analysis

Two statistically significant conclusions can be drawn from this study.

- 1 Criterion-related validity of self-efficacy: there is a direct correlation between SASI ratings and Interview marks.
- 2 Influence of Programme level as an explanatory variable: neither Interview mark nor SASI ratings are directly influenced by programme level. Programme level does, however, change the correlation between Interview mark and SASI rating.

There is no evidence that length of experience is correlated with Interview marks.

Discussion

The most distinctive achievement of this study is the establishment of a valid linear model based on students' self-assessment of their confidence (the SASI rating) in performing certain skills—establishing criterion-related validity for student self-efficacy with respect to a subsequent educational assessment, the assessed interview.

This study complements studies by Holden *et al.* (2002) and Holden *et al.* (2015) that established criterion-related validity, using Frans' 1993 Social Worker Empowerment scale, but there are distinctions in design in this study, which links self-efficacy directly to formal assessment using an unbiased sample; Holden *et al.*'s study (2015), in contrast, links self-efficacy to a subjective measure using a larger, potentially biased, sample, though establishes replicative consistency across multiple sites.

A number of factors have contributed to establishing criterion-related validity for self-efficacy with an assessment measure when others have been unsuccessful (*cf.*

Rawlings, 2012). The interview assessment is focused on integrating skills that are evidently related to professional practice. The students are assessing themselves in well-defined, core-level skills and the analysis is based on responses at the (final) stage when students might be expected to be most accurate. Establishing such clear results would be unlikely if any of these conditions were relaxed.

Self-assessment of skills has been shown to be a significant predictor of interview marks, but to have no influence on written assessments: Portfolio, Report and Self-evaluation. While possibly surprising, especially in relation to self-evaluation (requiring similar self-assessment and reflection skills), twenty-three of the inventory skill statements are particularly relevant to interview performance.

The study's finding that programme level had no direct effect on the interview (i.e., both postgraduate and undergraduate average marks are similar) is particularly surprising, as all students were assessed at undergraduate level for professional consistency in this university; the absence of correlation with programme level extends to all other module assessment elements as well.

Why being a postgraduate has not in this study advantaged their results in an undergraduate level module merits further discussion. Postgraduates already hold degrees, have higher entry-level critical thinking skills (Sheppard and Charles, 2014), and are also in receipt of government bursaries, (undergraduates receive theirs only after passing the RDP threshold). These factors would raise expectations of achievement. GSCC (2012) reported higher pass rates for those with higher academic qualifications, echoed by HESA (Higher Education Statistics Agency) data in 2016 (SfC). Levelling factors, potentially promoting commonality of student experience, include the shared teaching programme, staff, learning/skills laboratory resources and emphasis on practice (not solely academic) skills, requiring similar '*interpersonal dispositions*' (Sheppard and Charles, 2014).

The predictability of interview marks dependent on programme level and self-confidence (SASI rating) suggests undergraduates are justified in interpreting their own self-confidence as an indicator of their level of performance in an assessed interview, but the same is not true for postgraduates. Studies in counselling and self-efficacy cited by Rawlings (2012) reported mixed findings between self-efficacy scores and performance for undergraduates/postgraduates. It is possible the differentiated finding in this study relates to this particular cohort or some factor about undergraduate or postgraduate learning approaches. Students' perceptions of what helps and hinders learning are reported in parallel qualitative data from this research project (Tompsett, Henderson, Mathew Byrne, Gaskell Mew and Tompsett, 2016). Now the SASI inventory has been validated, this establishes the basis for comparing student self-efficacy ratings across stages, with a second cohort, and whilst on placement.

This study suggests implications for other social work programmes, to consider developing their own curriculum-related self-assessment inventories, allowing further comparative research with this study's differentiated findings between postgraduates' and undergraduates' self-confidence as a predictor for interviewing skills assessment.

Limitations of the study

The absence of any consistent influence in this study of prior experience on either self-confidence or interview assessment (or, indeed, on any of the assessments) compares with Holmstrom and Taylor's findings (2008), but may need further research with fewer subcategories. Rawlings' study with undergraduates (2012) did find a statistical correlation between prior experience and practice skill, but not with self-efficacy; however, the majority of students (20/32) had no experience and Rawlings expresses caution interpreting her findings.

The current study focuses on one year's cohorts in one university and has not yet been replicated. Although the size of the inventory is small (*cf.* Holden *et al.*, 2002; Holden *et al.*, 2015), extending it with additional/higher-level skills would not have been supported by or integrated with the module curriculum. Inclusion of additional covariates, such as gender, educational experience, race/ethnicity and disability, might have allowed comparison with other studies (*e.g.*, Fairtlough *et al.*, 2013), but use of this information would have required ethical clearance, and, potentially, reduced sample size and compromised anonymity (Holden *et al.*, 2002).

Overall conclusions

Framed in relation to students' self-assessment of confidence, this study extends the range of self-efficacy research from qualifying courses to post-qualifying practice (cf. Parker, 2006; Ellet, 2007; Carpenter et al., 2015), and provides an evaluative study on skills learning and teaching (including communication skills) to both undergraduates and postgraduates (Trevithick et al, 2004). This research at Readiness for Direct Practice level contributes also to literature on educational/professional transitions and thresholds, and provides a foundational baseline before students enter practice placement (Moriarty *et al.*, 2011).

The study establishes the development and validation of a self-efficacy scale that has direct criterion-related validity in relation to a formally assessed measure. Subjective self-assessment of confidence (in core skills performance) is shown to be a significant positive predictor for marks in an assessed interview for undergraduates, and a weak negative predictor for postgraduates. The interview requires integration of skills, important in social work education balancing competing assessment of individual skills and the ability to combine them in professionally relevant assessments. Marks overall and in all other assessed elements were independent of programme level and prior experience.

Developing critically reflective and self-assessment skills, alongside demonstrated ability, should ensure only social work students judged 'ready for practice' cross over the professional threshold to supervised practice with service users. The ability to master microskills, integrate them in practice, and build on them with advanced skills provides the foundation for future professional expertise.

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