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2021

## Self-Reflection and its Relationship to Occupational Competence and Clinical Performance in Level II Fieldwork

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### Recommended Citation

Iliff SL, Tool GM, Bowyer P, Parham LD, Fletcher TS, Freysteinson WM. Self-Reflection and its Relationship to Occupational Competence and Clinical Performance in Level II Fieldwork. *The Internet Journal of Allied Health Sciences and Practice*. 2021 Jan 01;19(1), Article 8.

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### Abstract

**Purpose:** Reflective practitioners embody the ability to critique their own clinical thinking about the dilemmas that frequently arise in professional practice and everyday life. Conflicting evidence exists on whether or not self-reflective practices are effective in promoting academic, clinical, and personal success. This quantitative study investigated self-reflection as a predictor of increased occupational competence and clinical performance in Level II Fieldwork for entry-level Master's degree occupational therapy students. **Method:** The study used convenience sampling to recruit participants and data were collected via a demographic survey and self-assessment questionnaires. Multiple linear regression analyses were conducted to determine the extent to which self-reflection predicts occupational competence and clinical performance.  $R^2$  values were examined to determine the importance of each dependent variable (occupational competence and clinical performance). **Results:** Findings revealed a statistically significant relationship between self-reflection and occupational competence ( $p = 0.0053$ ) but not between self-reflection and clinical performance ( $p = 0.08$ ). Self-reflection accounted for 14% of the variance in clinical performance ( $R^2 = 0.14$ ), and more than one third ( $R^2 = 0.38$ ) of the variance in occupational competence. Results suggest that students who self-reflect regularly during fieldwork may have a greater ability to maintain everyday life routines during the demands of Level II Fieldwork. **Conclusions:** Self-reflection strongly predicts occupational competence of occupational therapy students during Level II Fieldwork, but does not significantly predict students' clinical performance. **Recommendations:** Occupational therapy educators should consider incorporating guided self-reflection activities into the academic program in order to support student occupational competence. Intentional coaching in self-reflection may better prepare students for a clinical setting by supporting healthy daily routines, which may help them to manage stress during Level II Fieldwork. Future research should explore the impact of self-reflection training during clinical rotations (provided by clinical educators) on student clinical performance. Revision of the measurement of clinical performance is warranted to include questions pertaining to soft skills such as self-reflection and awareness.

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### **Acknowledgements**

The researchers wish to acknowledge the participants for their involvement in the study and Cristina Murray-Krezan, a statistician at the University of New Mexico, for her expertise in data analysis and interpretation. We would like to thank the Scholarship in Education Allocations Committee at the University of New Mexico and the Jean A. Spencer Occupational Therapy Fund at Texas Woman's University Institute of Health Sciences - Houston Center for providing financial support during the study. We are grateful to the Model of Human Occupation International Institute and American Occupational Therapy Association Education Summit committees who approved the study for dissemination as poster presentations at their conferences in 2017.

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The Internet Journal of Allied Health Sciences and Practice

*Dedicated to allied health professional practice and education*

Vol. 19 No. 1 ISSN 1540-580X

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### ABSTRACT

**Purpose:** Reflective practitioners embody the ability to critique their own clinical thinking about the dilemmas that frequently arise in professional practice and everyday life. Conflicting evidence exists on whether or not self-reflective practices are effective in promoting academic, clinical, and personal success. This quantitative study investigated self-reflection as a predictor of increased occupational competence and clinical performance in Level II Fieldwork for entry-level Master's degree occupational therapy students. **Method:** The study used convenience sampling to recruit participants, and data were collected via a demographic survey and self-assessment questionnaires. Multiple linear regression analyses were conducted to determine the extent to which self-reflection predicts occupational competence and clinical performance.  $R^2$  values were examined to determine the importance of each dependent variable (occupational competence and clinical performance). **Results:** Findings revealed a statistically significant relationship between self-reflection and occupational competence ( $p = 0.0053$ ) but not between self-reflection and clinical performance ( $p = 0.08$ ). Self-reflection accounted for 14% of the variance in clinical performance ( $R^2 = 0.14$ ), and more than one third ( $R^2 = 0.38$ ) of the variance in occupational competence. Results suggest that students who self-reflect regularly during fieldwork may have a greater ability to maintain everyday life routines during the demands of Level II Fieldwork. **Conclusions:** Self-reflection strongly predicts occupational competence of occupational therapy students during Level II Fieldwork but does not significantly predict students' clinical performance. **Recommendations:** Occupational therapy educators should consider incorporating guided self-reflection activities into the academic program in order to support student occupational competence. Intentional coaching in self-reflection may better prepare students for a clinical setting by supporting healthy daily routines, which may help them to manage stress during Level II Fieldwork. Future research should explore the impact of self-reflection training during clinical rotations (provided by clinical educators) on student clinical performance. Revision of the measurement of clinical performance is warranted to include questions pertaining to soft skills such as self-reflection and awareness.

**Keywords:** clinical performance, competence, education, fieldwork, occupation, self-reflection

## INTRODUCTION

Healthcare demands and human complexity have made it essential for new graduates to demonstrate the clinical reasoning skills necessary to become a reflective practitioner. Schön and Parham conceptualized the “reflective practitioner” as one who uses self-reflection as a tool for revisiting or reflecting on an experience to learn from it.<sup>1,2</sup> Self-reflection, a component of emotional intelligence, is thought to be paramount to the development of professionalism and serves as the foundation of adult education and life-long learning.<sup>3,4</sup> Pedagogical approaches in health sciences programs that promote self-reflection are growing in popularity.<sup>5</sup> Is self-reflection actually creating autonomous, qualified, and self-managed professionals that can meet the challenges of today’s healthcare climate? The clinical impact of self-reflection in occupational therapy education as well as education in many other health sciences has not been adequately studied. Conflicting evidence exists on whether self-reflection practices are effective in promoting academic and clinical success.<sup>6,7</sup> The aim of this study was to investigate whether engagement in self-reflection is a predictor of increased occupational competence and fieldwork clinical performance for occupational therapy students.

## LITERATURE REVIEW

### Self-Reflection and Occupational Competence Defined

Self-reflection is an ambiguous concept that is not easily defined.<sup>8</sup> Education scientists Boud, Keogh, and Walker defined self-reflection as “a deliberate intellectual and affective activity in which individuals engage to explore their experiences in order to lead to new understanding and appreciation,” including recapturing the experience, thinking about it, mulling it over, and evaluating it.<sup>9</sup> Psychologists understand self-reflection as “a form of mental processing with a purpose and/or anticipated outcome that is applied to relatively complex or unstructured ideas for which there is not an obvious solution”.<sup>10</sup> Medical students regard self-reflection as “a metacognitive process that occurs before, during, and after situations with the purpose of developing greater understanding of both the self and the situation so that future encounters with the situation are informed from previous encounters.”<sup>11</sup> Self-reflection encompasses taking a candid look at one’s self; recognizing strengths and areas for growth; learning how to experience one’s range of emotions; finding ways to identify and heal psychological pain; ceasing doing things that do not work; thinking, feeling, and behaving consciously and positively; being more proactive than reactive; being willing to learn, grow, and change; and exposing one’s self to new experiences.<sup>12,13</sup> Students and clinicians self-reflect about their work and personal lives with intent to refine, improve, and change.<sup>3,4,12</sup> Advocates claim that with regular self-reflection, students can more easily become competent and autonomous individuals and practitioners.<sup>3</sup>

White, a humanistic psychologist, described competence as “an inner assurance that one can do the necessary things for a satisfactory self-picture, and that such a sense results from demonstrated masteries.”<sup>13</sup> The term occupational competence originated in the Model of Human Occupation (MOHO).<sup>14,15</sup> In this model, occupational competence is defined as “the degree to which one is able to sustain a pattern of occupational participation that reflects one’s occupational identity (who you are and wish to become).”<sup>14</sup> Occupational competence is highly influenced by volition, which involves three domains: (1) personal causation, i.e., belief in one’s own competence or self-efficacy, (2) values, i.e., what is meaningful and important, and (3) interests, i.e., what is fun and fulfilling.<sup>14,15</sup> Without volition, there is little motivation to perform and achieve, thus making occupational competence difficult to achieve. An example of occupational competence is when mature students realize that they are not retaining the reading of assigned texts because of constant interruptions by their children. Reflecting on the situation, these students determine that getting up at 6:00 am to read while the children are asleep allows for quality retention of reading and later quality time with the children. In this example, self-reflection led to changes in daily routines, allowing them to restore and maintain occupational competence.

### Academic and Clinical Performance and Self-Reflection

There are mixed conclusions in the literature on whether self-reflection actually increases performance in academic and clinical settings. Several studies across allied health fields support self-reflection as a method for improving academic and clinical performance.<sup>10,16-20</sup> Sharing and recording experiences in online discussions and journals have been found to support the development of critical analysis and self-appraisal skills in nursing, physical therapy, and medical students during interprofessional courses.<sup>16</sup> Guransky et al described constructive and early feedback as crucial to developing reflective writing and critical thinking skills for social work students.<sup>17</sup> In this study, social work students felt that online journaling encouraged learning at a deeper level and refined their reflective practice.<sup>17</sup> In the field of nursing, Pai found that self-reflection with insight and clinical experience may help students to deflect anxiety that can interfere with the development of clinical competence.<sup>18</sup> Reflective web-based discussion and self-reflection guidance also had positive impacts on nursing students’ practice abilities, allowing for self-examination of practice and new knowledge acquisition.<sup>19</sup> McLeod et al discovered that self-reflection skills can play a key role in the development of professional competence in medical students and can potentially increase student engagement and predict long-term educational success in medical school.<sup>20</sup> Another study uncovered a moderate correlation between clinical performance and reflective ability in midwifery students when using written reflection assignments.<sup>10</sup>

In contrast, other studies revealed that reflective practice techniques had no effects on performance.<sup>21-23</sup> Cook found that journaling did not predict success in the clinic or national exam for physical therapy students.<sup>21</sup> Carr and Johnson found no correlation between self-reflection or insight and academic performance in written or clinical exams in fourth year medical students.<sup>22</sup> Lew and Schmidt discovered a limited effect on academic performance using self-reflective journaling in science students.<sup>23</sup> In summary, the existing evidence is not clear as to whether pedagogical efforts to teach self-reflection are effective in improving clinical performance.

### **Self-Reflection in Occupational Therapy Level II Fieldwork**

Fostering students' emotional intelligence and their capacity to accurately self-appraise their clinical skills supports fieldwork success.<sup>7</sup> Self-appraisal or reflection is a key professional attribute in the workplace for occupational therapy (OT) practitioners and students.<sup>12</sup> Effective fieldwork students tend to be more insightful, motivated, and capable of managing their own emotions. They respond positively to feedback and make the necessary changes needed to increase client and team engagement in order to generate a more therapeutic environment.<sup>24</sup> Giles et al determined that students effectively reflected to identify strengths and areas for improvement by using reflective video analysis before starting Level II fieldwork.<sup>5</sup>

OT clinical education is designed to develop entry-level competence in OT students in various clinical settings.<sup>25</sup> OT Students complete two Level II Fieldwork experiences in different settings. Each Level II Fieldwork is a 12-week clinical rotation that is supervised and facilitated by a certified and registered occupational therapist who has a minimum of one year of experience and oversees the student's performance on a daily or weekly basis as needed. During each fieldwork, OT students are active agents of change by putting into action their occupational identity in an ongoing way to achieve their desired outcome of being a competent, occupational therapist. At first, fieldwork students are closely supervised as they work toward occupational competence by meeting responsibilities and expectations of their own personal values and standards for performance. Midway through each fieldwork, supervision tapers as students are maintaining personal and professional routines and caseloads by participating in a range of purposeful occupations with clients that provide both student and client with a sense of achievement, personal control, and satisfaction. By the end of fieldwork, through time and intentional practice, OT students and practitioners transform their beliefs, attitudes, and assumptions to develop new insights and perspectives. Self-awareness also builds a student's occupational competence in fieldwork by enhancing therapeutic use of self, and strengthening the efficacy of client interventions.<sup>24,26</sup> Leadership potential is realized and a feeling of success and confidence results as each student embarks on a rewarding occupational therapy career.<sup>7</sup>

The evidence just presented suggests that self-reflection may be a predictor of occupational competence and clinical performance in OT students during fieldwork. Whether engagement in self-reflection predicts occupational competence and clinical performance has not yet been examined in the field of occupational therapy. In addition, how OT fieldwork students conceive of self-reflection has not previously been studied, nor has its relationship to self-perceived occupational competence and job-related clinical performance been examined. To fill in these gaps in our knowledge of the value of self-reflection, the purpose of this quantitative study was to investigate whether self-reflection was a predictor of increased occupational competence and clinical performance in Level II Fieldwork for entry-level Masters OT students at the University of New Mexico (UNM). This research study examined the following research question: Is self-reflection a predictor of self-perceived occupational competence and observed clinical performance in OT students during Level II Fieldwork? This study can inform pedagogical instruction and self-reflection methods to better prepare OT students for the professional workplace.

## **METHOD**

### **Design and Procedures**

A quantitative research study design using multiple regression analyses was used to address whether self-reflection is a predictor of occupational competence and clinical performance in Level II Fieldwork. Figure 1 is a schematic outlining the study procedures. The principal investigator (PI) obtained approval for the study from Institutional Review Boards at both UNM and Texas Women's University Institute of Health Sciences – Houston Center prior to data collection. The PI emailed a recruitment flyer and consent form introducing the study to all second year UNM occupational therapy students before starting their second Level II Fieldwork experience. Recruited participants followed a secure link, allowing them to review and provide informed consent electronically for the study. The PI and graduate research assistant (GRA), collected quantitative data through the administration of a demographic survey and self-assessment questionnaires, which were analyzed by the PI and statistician using multiple regression techniques to explore whether self-reflection was a predictor of occupational competence and successful performance in Level II Fieldwork.

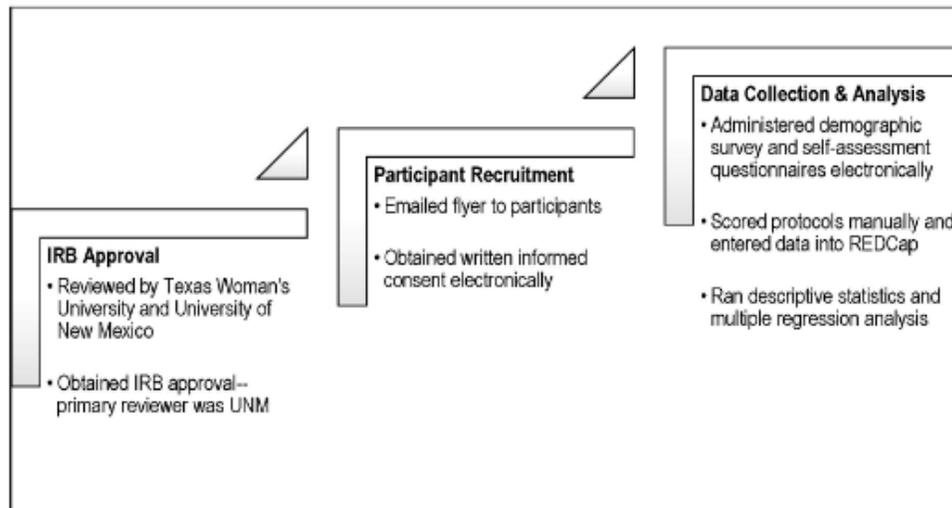


Figure 1. Diagram of Study Procedures

### Participants

The study used convenience sampling to recruit entry-level master's OT graduate students from the University of New Mexico (UNM) Graduate Occupational Therapy Program who were starting their Level II fieldwork placements ( $n = 24$ ). Inclusion criteria were entry-level graduate students from UNM who (1) had completed all academic occupational therapy coursework, (2) were currently enrolled in Level II Fieldwork, and (3) gave written informed consent. The exclusion criterion was withdrawal from Level II Fieldwork for any reason at any point during data collection.

Age and grade point average (GPA) were the independent variables in initial multiple regression models with clinical performance or occupational competence as the dependent variables. Age and gender, together, produced an  $R^2$  of 0.05, meaning they accounted for only about 5% of the variability in clinical performance and occupational competence.  $R^2$  quantifies the amount of variability in the dependent variables that is accounted for by the independent variables (in this analysis, age, and gender). A higher  $R^2$  indicates that more variability in the dependent variable is accounted for by the independent variables.

A power analysis was conducted to determine optimal sample size for detection of meaningful relationships between independent and dependent variables. Specifically, the power analysis identified the respective sample sizes required for 80% and 90% power to detect an increase in  $R^2$ , assuming a type I error rate of 0.025 (using a Bonferroni correction for two primary outcome measures: clinical performance and occupational competence). The analysis also estimates the magnitudes of  $R^2$  that might increase when self-reflection is added to the model. The hypothesized  $R^2$  values ranged from 0.15 to 0.55, indicating that GPA, age, and self-reflection accounted for 15%-55% of the variability in the dependent variables. Even though the study sample size was small and underpowered ( $n = 24$  vs. the 84 needed for the study to have a power of 80%), the research team decided to conduct the multiple regression analyses as an exploratory effort to complement the study's qualitative analyses, which are described in detail in a separate publication.<sup>27</sup>

### Instruments

#### **American Occupational Therapy Association Fieldwork Performance Evaluation**

The researchers adopted and used the standard American Occupational Therapy Association (AOTA) Fieldwork Performance Evaluation (FWPE) to measure student clinical performance in the study.<sup>28</sup> OT clinical instructors assess students using the instrument's 4-point Likert scale to evaluate each student's strengths and challenges in relation to their clinical skills and entry-level competence as an OT practitioner. The FWPE generates total scores and seven sub-scores including evaluation, intervention, and professional behaviors.<sup>28</sup> This study only used the student's total scores to measure clinical performance. The FWPE was pilot tested in two studies using Rasch measurement methods, commonly used to validate competency-based assessments, to determine if it measured entry-level competency.<sup>29</sup> The FWPE has good reliability as indicated by differences in level of difficulty between items, and acceptable goodness-of-fit. i.e., data indicating that student responses fit the expected pattern (i.e., students would be more likely to reach competence on the easier items) across different practice settings.<sup>29</sup>

### **Groningen Reflection Ability Scale**

The PI received permission from the developer to use and administer the Groningen Reflection Ability Scale (GRAS) to measure self-reflection during the participants' last Level II Fieldwork experience.<sup>30</sup> The GRAS is a self-report measure based on the Five-factor Personality Theory that describes the factors of extroversion, agreeableness, conscientiousness, emotional stability, and intellect/autonomy.<sup>31</sup> The GRAS asks a person to reflect on their actual approach to learning and functioning in practice when reading each item, rather than what they think their experience should be. The GRAS is a one-dimensional, 23-item, 5-point Likert scale ranging from totally disagree (1) to totally agree (5) that covers three relevant aspects of personal reflection: Self-reflection, empathetic reflection, and reflective communication. The reliability or internal consistency of the scale is adequate (0.74 and 0.83, as measured by Cronbach's alpha, cited from two previous studies using the GRAS).<sup>30,32</sup> Overall, the GRAS is a practical measurement instrument that yields reliable data that contributes to valid inferences about the personal reflection ability of medical students and doctors, both at individual and group levels.

### **Occupational Self-Assessment Version 2.2**

The research team purchased (via the MOHO Web) and administered the most current version of the Occupational Self-Assessment (OSA) to measure occupational competence after the participants' last Level II Fieldwork rotation.<sup>33</sup> The OSA is a MOHO-based self-report that captures an individual's perspective of their own occupational competence, how well they do things in everyday life (e.g. handling responsibilities, taking care of self) and accomplishing goals. The 21-item, ipsative-referenced questionnaire consists of two primary self-assessment forms: *OSA Myself* and *OSA My Environment*. This study only adopted and used the *OSA Myself*, consisting of statements about occupational behavior that require the respondent to rate specific activities on a four-point scale to indicate how well he or she performs each one. The OSA has been used in a variety of studies to further develop its psychometric properties and utility. Kielhofner, Forsyth, Kramer, and Iyenger conducted a three-part study using Rasch analyses and determined that the OSA has good internal validity on all items.<sup>34</sup> The study revealed adequate sensitivity in distinguishing between levels of occupational competence, and can be used in a reliable manner, validly measuring occupational competence, 90% of the time, by the vast majority of participants. Other studies reported that the OSA can produce reliable and valid scores for most people within a wide range of abilities, across continents, with diverse populations, and in a variety of practice settings.<sup>35,36</sup>

### **Data Collection**

The research team collected and managed the data on the 24 participants using REDCap (Research Electronic Data Capture) a secure, web-based application designed to support data capture for research studies.<sup>37</sup> Within REDCap, participants independently completed the demographic survey and assessed themselves using the GRAS and OSA before their final Level II Fieldwork experience. After completion of this fieldwork experience, the research team collected the total scores on the FWPE, based on the clinical supervisor's evaluation of the student. The GRAS and OSA assessments were scored independently, cross-checked and confirmed by the PI and GRA. All de-identified data were uploaded to an Excel spreadsheet for ease in statistical analyses.

### **Data Analysis**

Descriptive statistics were calculated to summarize sample characteristics. Means and standard deviations were calculated for continuous variables, and frequencies and percentages were calculated for categorical variables (see Table 1). All analyses were completed collaboratively with biostatistician Cristina Murray-Kreznan at UNM. Multiple regression analyses were conducted to determine whether the independent variable, self-reflection (GRAS score) was predictive of the dependent variables, which were the overall scores on the FWPE (clinical performance) and the OSA (occupational competence), while controlling for grade point average (GPA) and age. Changes in R<sup>2</sup> values, with the introduction of each independent variable (including control variables), were analyzed to determine the importance of each predictor variable. To minimize the likelihood of a Type I error in the primary analysis, a Bonferroni correction was computed to account for two primary outcome measures. As a result, alpha was set at 0.025. All statistical analyses were performed using SAS 9.4.

For the outcome measure of clinical performance (FWPE), the full regression model was:  $\beta_0 + \beta_1 \text{SR} + \beta_2 \text{Age} + \beta_3 \text{GPA} + \beta_4 \text{Gender} + \beta_5 \text{Hispanic} + \beta_6 \text{SR} * \text{Gender} + \beta_7 \text{GPA} * \text{Gender} + \epsilon$ . For the outcome measure of occupational competence (OSA), the full model regression model was:  $\beta_0 + \beta_1 \text{SR} + \beta_2 \text{Age} + \beta_3 \text{GPA} + \beta_4 \text{Gender} + \beta_5 \text{Hispanic} + \beta_6 \text{SR} * \text{Gender} + \epsilon$ . A backwards stepwise variable selection procedure was employed to identify the best-fitting models for each outcome measure. The procedure began with the full models described above. Next, the models were reduced by eliminating the least significant variables at each iteration, and then re-run until plausible effects were identified.

A residual analysis was also performed to assess model fits. Tests of normality, specifically the Shapiro-Wilk test, were executed to determine whether residuals followed a normal distribution as required for linear regression. Predicted values of outcome

measures FWPE and OSA were plotted against the residuals from the regression model to visually identify any non-constant error variance, because linear regression assumes that the residual variability is constant across the data.

## RESULTS

Table 1 summarizes the demographic characteristics of the sample. Means and standard deviations were calculated by gender for continuous variables. The frequencies and percentages by gender for categorical variables are also displayed. There were more females ( $n = 19$ ) than males ( $n = 5$ ) in the study. The average age of females (26.8 years) was younger than the average age of males (38.7 years). On average, females scored themselves slightly higher in self-reflection and somewhat lower in occupational competence than males. Males and females seemed to score similarly overall on clinical performance (FWPE). Most participants were specified as "other" with high GPAs. Normality assumptions were met for residual analyses of both clinical performance (FWPE,  $p = 0.55$ ) and occupational competence (OSA,  $p = 0.15$ ), indicating that multiple regression analyses were appropriate for the specific analysis in the study.

**Table 1:** Descriptive Statistics of Sample ( $n = 24$ )

Variables	Total M (SD)	Females ( $n = 19$ ) M (SD)	Males ( $n = 5$ ) M (SD)
Age	30.3 (7.1)	28.6 (5.5)	37.8 (8.2)
GPA	3.9 (0.2)	3.8 (0.2)	4.0 (0.1)
GRAS	94.6 (6.1)	95.2 (6.0)	92.2 (6.6)
OSA	64.9 (6.4)	63.9 (6.1)	68.6 (6.9)
FWPE	144.8 (15.5)	144.7 (15.9)	145.0 (15.4)
	<b><i>n</i> (%)</b>	<b><i>n</i> (%)</b>	<b><i>n</i> (%)</b>
Hispanic	9 (34.0)	8 (42.1)	1 (20.0)
Other	15 (63.0)	11 (57.9)	4 (80.0)

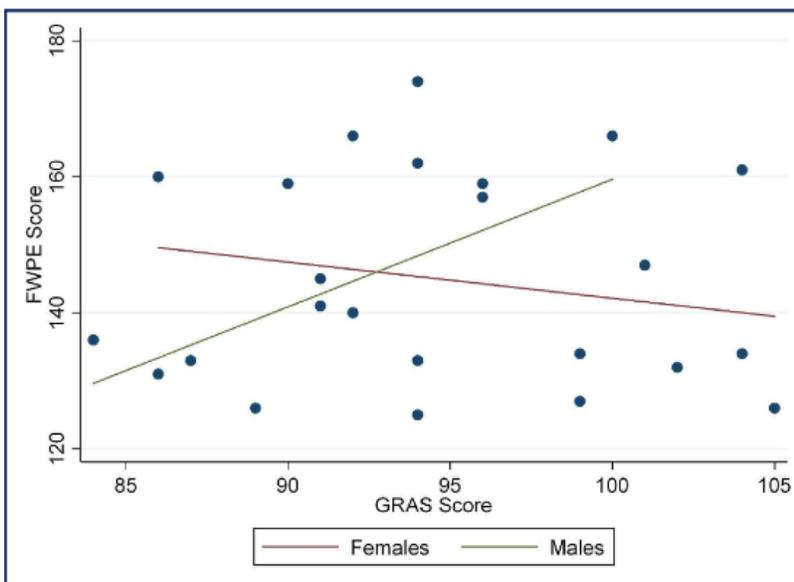
Note. GPA = grade point average; GRAS = Groningen Reflection Ability Scale; OSA = occupational self-assessment; FWPE = fieldwork performance evaluation; Other = Asian, Causasian, and Native American participants

Table 2 summarizes the regression analysis parameters for the prediction of clinical performance on the FWPE. Overall, self-reflection (GRAS score) did not predict clinical performance (FWPE). A modest interaction of gender with GRAS was found to be associated with FWPE scores ( $p = 0.08$ ). Specifically, GRAS scores of males were more predictive of FWPE scores than GRAS scores of females, although the interaction between gender and GRAS was not statistically significant (see Figure 2).  $R^2$  for the FWPE model was only 0.14, which indicates that self-reflection (GRAS) accounts for 14% of the variance in clinical performance in this sample.

**Table 2:** Clinical Performance (FWPE) Regression Model

Parameter	Estimate	Standard Error	t Value	Pr >  t
Intercept	-27.8750000	107.7626158	-0.26	0.7985
Gender	223.0939107	121.9759205	1.83	0.0824
GRAS	1.8750000	1.1664233	1.61	0.1236
Gender*GRAS R <sup>2</sup> = 0.14	-2.4057680	1.3112555	-1.83	<b>0.0815</b>

Note. GRAS = Groningen Reflection Ability Scale



**Figure 2.** The interaction effect between gender and self-reflection (GRAS score) on clinical performance (FWPE score)

The final reduced regression model is summarized in Table 3. Results revealed self-reflection as a predictor of occupational competence. Regardless of gender, there was a statistically significant interaction between self-reflection (GRAS scores) and occupational competence (OSA scores) ( $p = 0.0053$ ). In addition,  $R^2$  for the OSA model was 0.38, which indicates that self-reflection (GRAS) can account for more than one third or 38% of the variance in occupational competence or OSA scores, and falls within a hypothesized range corresponding to the sample size obtained in the study ( $n = 24$ ). In summary, self-reflection was discovered to be a predictor of occupational competence scores and not clinical performance.

**Table 3:** Occupational Competence (OSA) Regression Model

Parameter	Estimate	Standard Error	t Value	Pr >  t
<b>Intercept</b>	15.83608371	17.14631535	0.92	0.3662
<b>Gender</b>	-6.42811737	2.72088037	-2.36	0.0279
<b>GRAS</b> R <sup>2</sup> = 0.38	0.57227675	0.18418347	3.11	<b>0.0053</b>

Note. GRAS = Groningen Reflection Ability Scale

## DISCUSSION

This study set out to determine whether self-reflection was a predictor of occupational competence and clinical performance for occupational therapy students during Level II Fieldwork. A key finding is that self-reflection, as measured by the GRAS, was determined to be a predictor of occupational competence, meaning that increased self-reflection was related to increased occupational competence, as measured by the OSA, of students during fieldwork. This finding suggests that students who self-reflect on a regular basis during fieldwork are more likely to have greater occupational competence or ability to self-manage everyday life tasks in a more proficient way (e.g. balancing work and play). Perhaps “knowing thyself” can impact the way you participate in your daily occupational lives as an occupational therapy student.

In contrast, self-reflection was not a predictor of clinical performance on the FWPE. Possible explanations are that the most capable students were more anxious about their clinical performance and were hardest on themselves in terms of rating their self-reflection, while the least able students had less awareness of their weaknesses and may have over-rated their self-reflection. On the other hand, it may be that highly clinically confident students were dismissive of feedback and self-evaluation, thus limiting their skill development and performance, whereas less confident students were more open to reflecting on feedback to improve their performance. Also, self-reflection might not predict clinical performance on the FWPE because there are not enough items on the FWPE related to self-reflection. This may have weakened the findings of this study. Perhaps future research will lead to further refinement of the FWPE to include new self-reflection items, or to the development of a new instrument measuring clinical performance in occupational therapy that includes specific self-reflective items (e.g. responds to feedback, able to self-evaluate and make necessary changes to interventions and treatment plans, modifies self to work therapeutically with clients, etc.).

Findings also suggest a need for clinical educators to receive training in self-reflection tools, so that they can support students in developing the self-reflective capacity to seek and integrate feedback. This process should include training clinical educators to engage in their own self-reflective process. Moreover, accurate self-appraisal (e.g., being able to evaluate one's personal and professional competencies) is part of the accreditation standards for masters-level occupational therapy programs and may influence clinical performance and skill development.<sup>36</sup> This is important because difficulty accepting and responding to feedback is a documented problem that leads to fieldwork failure for occupational therapy students.<sup>3,38</sup>

## Educational and Clinical Implications

In health profession education, findings suggest that self-reflection may promote occupational competence by supporting one's ability to better manage life's challenges. Self-reflection could be considered a vehicle or intervention approach to promote clinical performance skill building in students who are preparing for clinical rotations. Furthermore, the practice of self-reflection may increase a student's self-awareness, thus facilitating their progress during clinical rotations. Setting routine times and structured opportunities for feedback and reflection can potentially increase a student's awareness and accountability for their personal, educational, and clinical performance.

## Limitations and Recommendations

One limitation of this study is the underpowered convenience sample. It is representative of just one cohort of students at one American state university, limiting the extent to which findings may be generalized. Another limitation is the subjectivity of the self-assessment questionnaires used and the participant bias that may have occurred. For example, participants may have unconsciously given themselves unrealistically high scores, based on what they thought the research team wanted to hear. This in turn may have produced biased data. The utility of the FWPE is in question as to its ability to accurately measure clinical

performance in a manner that accurately reflects the strengths and needs of the student. In addition, interrater reliability between CIs on the FWPE was not conducted, so variability in strictness of raters may have influenced results. Since the type of setting was not considered as a variable, it is possible that the complexity of different settings may have also influenced the study results.

Replication studies with larger samples from diverse universities are recommended to strengthen the power and generalizability of the current study. Perhaps analyzing only questions that specifically relate to self-reflection would have yielded a different result in this study. Further exploration of the forms of assessment employed by health profession programs to evaluate students' self-reflection abilities, occupational competence, and clinical performance may be beneficial in optimizing student competencies related to fieldwork or clinical education. A study comparing the OT students' self-reflective ability at their first fieldwork to their second fieldwork may be informative because if they are in similar settings, the students might be more comfortable and find reflection easier. Additional research exploring the role that self-reflection plays in experienced healthcare practitioners' occupational competence and performance skills is also recommended. In the future, health profession educators' conceptions about the uses of self-reflection both in the classroom and in the clinic will need to be investigated.

## CONCLUSIONS

The purpose of this research was to inform health profession educators, administrators, and accrediting bodies about the importance of teaching self-reflection. Self-reflection was found to be a predictor of occupational competence, although not a predictor of clinical performance. This evidence suggests that intentional habits of self-reflection may be important in maintaining a healthy, balanced lifestyle which supports professional development during clinical rotations. The authors hope that our study findings will facilitate the creation of additional self-reflection methods and interventions in health professions education. New tools to build or remediate the self-reflective capacities of health profession students, as well as educators, may better prepare them to adaptively respond to the ever-changing healthcare climate and workforce.

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