Occupational Therapy Student Learning on Interprofessional Teams in Geriatric Primary Care

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Importance: Geriatric, interprofessional primary care training for occupational therapy students is needed.

Objective: To measure occupational therapy student-reported knowledge, attitudes, and skills after participation in interprofessional geriatric educational programs.

Design: Prospective, observational study with pre- and posttests for the three programs.

Participants: Fifty-nine entry-level and postprofessional occupational therapy master's students.

Outcomes and Measures: Self-reported familiarity with other professionals' roles, perceptions of interprofessional training, capabilities to conduct assessments, and attitudes of older adults.

Results: Students of the three programs (Interprofessional Geriatrics Curriculum [IPGC], Student Senior Partnership Program [SSPP], and Geriatric Assessment Program [GAP]) reported different improvements in familiarity of roles, capabilities of assessment, and Geriatric Attitudes Scale (GAS) scores. For example, IPGC and SSPP students had changes in total GAS score (3.91–4.08, $p = .002$, and 3.84–3.99, $p = .003$, respectively), but no change was found for GAP students (3.85–3.91, $p = .523$).

Conclusions and Relevance: More structured interprofessional education with older adults appeared to help prepare occupational therapy students to work on geriatric interprofessional teams in primary care.

What This Article Adds: This article expands on growing evidence to support occupational therapy's role in primary care by addressing the need to train future generations to work on interprofessional geriatric primary care teams.

Primary health care is the accessible frontline service for patients and their families over a lifespan (Institute of Medicine [IOM], 1994). In primary care, disease prevention and management are efficiently managed in the appropriate setting, by the appropriate provider, and in a manner consistent with the patient's values. Because of medical advances and chronic disease management, the geriatric population is projected to reach 98 million by 2060 (Colby & Ortman, 2015). A large group of older adults with a multitude of complex chronic diseases is expected to be managed by primary care teams. Given the shortage of primary care providers, a team-based approach is more essential than ever to improve patient satisfaction and health outcomes and to decrease costs (Chapman & Blash, 2017; Meyers et al., 2019; Reiss-Brennan et al., 2016; Ritchie et al., 2016).

Occupational therapy practitioners' distinct knowledge and skills provide an invaluable impact on primary care teams by focusing on areas such as chronic disease management, care coordination, and wellness and prevention. Although there has been an increasing focus on developing and supporting the role of occupational therapy in primary care for many years, practitioners need to be better prepared to provide services in primary care settings (Halle et al., 2018). The American Occupational Therapy Association (2018) stated that to prepare practitioners to provide these services, academic programs need to more explicitly address primary care education in their curricula.

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To prepare health professional students to provide effective primary care services, interprofessional (IP) training is needed (IOM Committee on the Health Professions Education Summit, 2003; Patient-Centered Primary Care Collaborative, 2014; World Health Organization, 2010). Specifically, future health care team members need to be trained to improve attitudes toward IP work, establish confidence in their professional skills, and understand others' roles (Abu-Rish et al., 2012; IOM Committee on the Health Professions Education Summit, 2003; Patient-Centered Primary Care Collaborative, 2014; World Health Organization, 2010). Moreover, for those working in geriatric primary care, there may be a need to address attitudes toward caring for older adults to improve willingness to work with this population (Horowitz et al., 2014; Samra et al., 2015).

To better prepare occupational therapy students for working on IP geriatric primary care teams, we gave students from our entry and postprofessional master's program the opportunity to voluntarily participate in a geriatric IP program as a part of fieldwork and two different courses. Students could participate in the Geriatric Assessment Program (GAP), the Interprofessional Geriatrics Curriculum (IPGC), or the Student Senior Partnership Program (SSPP). The purpose of this study was to investigate whether occupational therapy students improved their perception of knowledge, skills, and attitudes after participating in one of the three programs delivered in a primary care setting. We examined changes in four student-specific areas: (1) their familiarity with professional roles and responsibilities, (2) their perceptions of the value of IP training, (3) their self-reported capability to conduct assessments with older adults, and (4) their attitudes toward caring for older adults.

Interprofessional Geriatric Primary Care Programs

Although the IPGC was already in existence, GAP and SSPP were created specifically for the purposes of this study. GAP is an IP primary care clinic for older adult patients with cognitive concerns that focuses on promoting function, balancing independence and safety, and supporting family caregivers. IPGC exposes students to IP teamwork, geriatric competencies, and practice assessment skills commonly used in primary care. Teams of IP students met five times over the course of an academic year. SSPP partnered IP students with a successful senior volunteer from the community in hopes of broadening their understanding of healthy aging.

Participation in all three programs involved students observing or interacting on IP geriatric primary care teams that included occupational therapy faculty supervision. However, the programs varied in the extent to which they were integrated into the occupational therapy curriculum and in their design. For example, the GAP clinic involved occupational therapy students as part of their fieldwork requirements. In contrast, students participating in IPGC and SSPP self-selected to participate for a grade and did not engage in patient care (see the Appendix for further details).

Method

Data Source

Two cohorts of GAP, IPGC, and SSPP students were included in this analysis, involving the 2016–2017 and 2017–2018 academic years. Students were sent an invitation to the study via an online survey about 2 wk before program start, and they were sent an identical follow-up online survey 1 wk after each program. This analysis focused only on occupational therapy students ($N = 59$) who participated in one of the programs and who completed both the baseline and the follow-up surveys. The overall response rate was 82% (including 87% for GAP, 88% for IPGC, and 72% for SSPP). The study was approved by the University of Southern California Office for the Protection of Human Subjects.

Measures

The survey gathered student demographics, including age, gender, ethnicity, level of training (master's degree vs. postprofessional), prior experience with IP work (yes–no), and geriatrics or gerontology experience (yes–no). The four areas presented next were the focus of the survey.

Student Familiarity With Professional Roles and Responsibilities.

Students were asked to report their familiarity with seven other major professional disciplines involved in care for older adults, most of which were represented in the IP programs. Students answered the question “How familiar are you with the roles and responsibilities of the following professions?” using a 5-point Likert-type scale ranging from 1 (*very unfamiliar*) to 5 (*very familiar*).

Student Perceptions of Interprofessional Training.

Students were asked to what extent they agreed or disagreed with four statements borrowed from the Readiness for Interprofessional Learning (Parsell & Bligh, 1999) about the value of IP training, using a 5-point Likert-type scale ranging from 1 (*strongly disagree*) to 5 (*strongly agree*). The following statements were included: (1) “Learning with other students helps me be more effective as a member of a care team,” (2) “Shared learning with other health care students increases my ability to understand clinical problems,” (3) “IP health care training exercises help me appreciate other professionals,” and (4) “Patients ultimately benefit if IP health care students learn together to solve patient problems.”

Student-Reported Capability to Conduct Assessments With Older Adults.

Students were asked to report their capability to conduct nine types of health assessments that are common in caring for older adults. These assessments included taking a health history, assessing areas such as mental health concerns and risk of falling, identifying home safety issues, and identifying resource gaps. They rated their capability using a 5-point Likert-type scale (1 = *not capable at all*, 5 = *extremely capable*). Their capabilities were also summarized by counting the number of health assessments for which students reported being “very” or “extremely” capable.

Geriatric Attitudes Scale.

Students' attitudes toward caring for older adults was assessed with the Geriatric Attitudes Scale (GAS; Reuben et al., 1998), which is a widely used, reliable, and valid 14-item measure of general attitudes toward older people and geriatric patient care. The GAS asks respondents the degree to which they agree or disagree with statements about caring for older adults using a 5-point Likert-type scale (1 = *strongly disagree*, 5 = *strongly agree*). The GAS produces an overall score (average of the 14 items) and four attitudinal domains regarding older adults: (1) perceived *social value*, (2) experience of providing *medical care*, (3) *compassion* toward older adults, and (4) perceptions of the appropriate distribution of *societal resources* toward older adults. Responses in each domain were averaged to create the domain scores. The GAS total and domain scores range from 1 to 5, with 5 being the most positive attitude.

Analysis

Analyses were completed with Stata (Version 13; StataCorp, College Station, TX), establishing the observations as “panel” data to account for the autocorrelation among respondents at baseline and follow-up. Baseline demographics of the students were examined and compared across programs with χ^2 or Fisher's exact test (for age and ethnicity variables with 0 observations in at least one cell). Proportions are presented along with standard errors. Differences in mean scores for each of the outcome variables were examined at baseline versus follow-up. Means, standard deviations, and the *p* values (cutoff for statistical significance, *p* < .05) from paired *t* tests are presented.

Table 1. Demographics of Participating Occupational Therapy Students

Variable	Proportion (Standard Error)				Total Students (N = 59)
	GAP (n = 10)	IPGC (n = 29)	SSPP (n = 20)	Difference by Program p	
Age 20–29 yr (vs. 30+)	100.0	86.2 (0.65)	85.0 (0.08)	.654	88.1 (0.04)
Female	90.0 (0.10)	96.6 (0.03)	95.0 (0.05)	.718	94.9 (0.03)
Ethnicity					
Asian	70.0 (0.15)	58.6 (0.09)	30.0 (0.11)	.143	50.9 (0.07)
Black	0	0	5.0 (0.05)		1.7 (0.02)
Latino	10.0 (0.10)	6.8 (0.05)	30.0 (0.11)		15.3 (0.05)
White	20.0 (0.13)	27.6 (0.08)	35.0 (0.11)		28.8 (0.06)
Other	0	6.9 (0.05)	0		3.4 (0.02)
Prior experience					
With interprofessional education	50.0 (0.17)	65.5 (0.89)	55.0 (0.11)	.614	59.3 (0.06)
With geriatrics or gerontology	90.0 (0.10)	55.2 (0.09)	70.0 (0.11)	.121	66.1 (0.06)
Occupational therapy master's program					
Entry level	50.0 (0.17)	86.2 (0.07)	95.0 (0.05)	.007	83.1 (0.03)
Postprofessional	50.0 (0.17)	13.8 (0.07)	5.0 (0.05)		16.9 (0.03)

Note. GAP = Geriatric Assessment Program; IPGC = Interprofessional Geriatrics Curriculum; SSPP = Student Senior Partnership Program.

Results

Table 1 shows the demographics of the student participants in each program. Overall, at baseline, most students were younger than age 30 yr (88.1%), mostly female (94.9%), and predominantly Asian (50.9%) or White (28.8%). Before participation, more than half of the students were already familiar with IP work (59.3%) or geriatrics or gerontology (66.1%). No statistically significant differences in demographics were found across cohorts, although the race/ethnicity

Table 2. Familiarity of Occupational Therapy Students With Roles and Responsibilities of Other Professions

Variable	Mean (Standard Deviation)											
	GAP (n = 10)			IPGC (n = 29)			SSPP (n = 20)			Total (N = 59)		
	Pre	Post	p	Pre	Post	p	Pre	Post	p	Pre	Post	p
Role familiarity												
Dentistry	3.40 (0.96)	3.63 (0.74)	.693	3.55 (1.06)	4.07 (0.65)	.002	4.10 (0.79)	3.70 (0.92)	.043	3.71 (0.98)	3.88 (0.78)	.260
Medicine	3.90 (0.74)	4.38 (0.52)	.060	4.00 (0.85)	4.34 (0.55)	.010	4.20 (0.52)	3.95 (0.61)	.155	4.05 (0.73)	4.21 (0.59)	.129
Pharmacy	4.00 (0.47)	4.13 (0.64)	.566	3.62 (0.86)	4.07 (0.53)	.008	3.90 (0.85)	3.75 (0.85)	.497	3.78 (0.81)	3.96 (0.68)	.129
PA	2.60 (1.07)	3.13 (0.64)	.156	3.07 (0.92)	3.59 (0.78)	.001	3.40 (0.68)	3.50 (0.69)	.570	3.10 (0.90)	3.49 (0.73)	.001
Psychology	4.00 (0.47)	4.38 (0.52)	.027	3.79 (0.90)	4.07 (0.75)	.163	3.90 (0.79)	4.15 (0.67)	.280	3.86 (0.80)	4.14 (0.69)	.043
PT	4.40 (0.52)	4.63 (0.74)	.320	4.34 (0.61)	4.65 (0.49)	.019	4.35 (0.59)	4.45 (0.51)	.533	4.36 (0.58)	4.58 (0.53)	.016
Social work	3.90 (0.74)	4.25 (0.71)	.034	3.69 (0.81)	4.07 (0.76)	.037	3.70 (0.86)	3.95 (0.83)	.296	3.73 (0.81)	4.05 (0.77)	.009
IP training												
Helps to become a more effective team member	4.50 (0.53)	4.70 (0.48)	.317	4.69 (0.54)	4.79 (0.62)	.367	4.65 (0.59)	4.70 (0.57)	.661	4.64 (0.55)	4.75 (0.58)	.177
Patients benefit from IPE training	4.60 (0.70)	4.60 (0.52)	1.000	4.86 (0.35)	4.93 (0.26)	.317	4.80 (0.41)	4.80 (0.52)	1.000	4.80 (0.45)	4.83 (0.42)	.566
Helps to understand clinical problems	4.60 (0.53)	4.70 (0.48)	.317	4.83 (0.38)	4.80 (0.62)	.799	4.70 (0.47)	4.80 (0.41)	.474	4.73 (0.45)	4.78 (0.53)	.566
Helps to appreciate other professionals	4.60 (0.52)	4.70 (0.48)	.577	4.86 (0.35)	4.82 (0.39)	.629	4.90 (0.31)	4.45 (1.15)	.090	4.83 (0.38)	4.67 (0.76)	.142

Note. Responses were rated on a 5-point scale ranging from 1 (*very unfamiliar*) to 5 (*very familiar*). Bold values indicate statistically significant results. GAP = Geriatric Assessment Program; IP = interprofessional; IPE = interprofessional education; IPGC = Interprofessional Geriatrics Curriculum; PA = physician assistant; PT = physical therapy; SSPP = Student Senior Partnership Program.

composition across programs appeared to be quite different (e.g., more than two-thirds of GAP students were Asian vs. only about one-third of SSPP students).

Table 2 shows the familiarity with the roles and responsibilities of other professions and general perceptions of IP training. Students in IPGC and GAP reported improvements in their knowledge of the health professions, whereas students in SSPP reported no improvements (there was also a statistically significant decline in their understanding of dentistry; from 4.10 to 3.70, $p = .042$). No statistically significant differences were observed in student perceptions of IP education. Scores were high at baseline for students in each program (at least 4.5 out of 5 for all four questions). Those scores remained high at follow-up, with the exception of a borderline statistically significant decline among SSPP students in their perceptions of whether IP education helps in appreciation of other health professionals (from 4.90 to 4.45, $p = .090$).

Table 3 shows student reports of their capabilities to conduct health assessments with older adults. Students in IPGC reported improvements for all nine health assessments, and those in GAP reported improvements in six assessments. Students in SSPP reported a sizable improvement in the ability to identify resource gaps for older adults (from 3.05 to 4.00, $p < .001$). Improvements in two other assessments were borderline statistically significant for SSPP students (taking a history, $p = .080$; assessing mental status, $p = .094$), but no other improvements were observed. The summary count of assessments to which students responded “very” or “extremely” capable improved for each program (GAP, from 1.40 to 3.80, $p < .001$; IPGC, from 2.34 to 4.52, $p < .001$; SSPP, from 3.30 to 4.60, $p = .011$).

Table 4 shows the changes in reported attitudes to working with older adults measured by the GAS. Improvements were observed in the total GAS score for IPGC (from 3.91 to 4.08, $p = .002$) and SSPP (from 3.84 to 3.99, $p = .003$) students but not for GAP students. Both IPGC and SSPP students improved in two of the four GAS domains, although they shared improvement in only one of the two domains (social value).

Discussion

The three programs had different effects on the occupational therapy student-reported measures. Occupational therapy students in GAP and IPGC reported improved familiarity with professional roles and responsibilities. However, students in SSPP showed no improvement and even a statistically significant decline in their understanding of dentistry. This finding may be due to faculty not being present for all SSPP meetings, whereas faculty were present for all GAP and IPGC sessions and could help clarify various professionals’ responsibilities and roles in the team.

Table 3. Occupational Therapy Student Self-Reported Capability for Assessments With Older Adults

Variable	Mean (Standard Deviation)											
	GAP ($n = 10$)			IPGC ($n = 29$)			SSPP ($n = 20$)			Total ($N = 59$)		
	Pre	Post	p	Pre	Post	p	Pre	Post	p	Pre	Post	p
Take a history	2.90 (0.32)	3.50 (0.53)	<.001	3.59 (0.78)	4.10 (0.72)	<.001	3.65 (0.75)	3.90 (0.55)	.080	3.49 (0.75)	3.93 (0.66)	<.001
Assess medication use	2.30 (0.82)	2.60 (1.07)	.448	1.97 (0.78)	2.72 (0.75)	<.001	2.35 (1.03)	2.45 (1.00)	.661	2.15 (0.89)	2.61 (0.89)	.001
Assess mental status	2.70 (0.48)	3.20 (0.63)	.003	3.17 (0.71)	3.79 (0.73)	<.001	3.35 (0.93)	3.70 (0.66)	.094	3.15 (0.78)	3.66 (0.71)	<.001
Assess fall risk	3.10 (0.74)	3.90 (0.74)	.001	3.34 (0.86)	4.10 (0.67)	<.001	3.47 (0.77)	3.75 (0.79)	.182	3.34 (0.81)	3.94 (0.73)	<.001
Assess gait and balance	3.00 (0.67)	3.60 (0.84)	<.001	2.55 (0.94)	3.10 (0.82)	.001	3.00 (0.97)	3.20 (0.95)	.511	2.78 (0.93)	3.22 (0.87)	.002
Assess nutritional status	2.40 (0.70)	2.90 (0.74)	.120	2.24 (0.83)	3.10 (0.93)	<.001	2.55 (1.09)	2.65 (0.75)	.676	2.37 (0.91)	2.92 (0.86)	<.001
Perform a basic oral evaluation	1.90 (0.99)	2.00 (1.25)	.577	1.21 (0.49)	2.24 (0.87)	<.001	1.25 (0.55)	1.55 (0.94)	.170	1.34 (0.66)	1.97 (1.00)	<.001
Identify home safety issues	3.60 (0.70)	4.20 (0.79)	.050	3.90 (0.77)	4.41 (0.57)	<.001	3.85 (0.99)	4.10 (0.91)	.402	3.83 (0.83)	4.27 (0.74)	<.001
Identify resource gaps	2.70 (0.95)	3.60 (0.70)	.010	2.90 (1.05)	3.54 (0.64)	.003	3.05 (0.94)	4.00 (0.92)	<.001	2.92 (0.99)	3.71 (0.77)	<.001
Count of capabilities	1.40 (1.17)	3.80 (2.70)	.001	2.34 (1.99)	4.52 (2.10)	<.001	3.30 (2.15)	4.60 (1.90)	.011	2.51 (2.02)	4.42 (2.13)	<.001

Note. The count of capabilities is the number of assessments for which students reported being “very” or “extremely” capable (score is out of nine assessments). Responses were rated on a 5-point scale ranging from 1 (*not capable at all*) to 5 (*extremely capable*). Bold values indicate statistically significant results. GAP = Geriatric Assessment Program; IPGC = Interprofessional Geriatrics Curriculum; SSPP = Student Senior Partnership Program.

Table 4. GAS Subdomains and Total Score

Subdomain	Mean (Standard Deviation)											
	GAP (n = 10)			IPGC (n = 29)			SSPP (n = 20)			Total (N = 59)		
	Pre	Post	p	Pre	Post	p	Pre	Post	p	Pre	Post	p
Social value	4.10 (0.74)	4.15 (0.97)	.750	4.33 (0.70)	4.60 (0.59)	.006	4.16 (0.83)	4.50 (0.65)	.043	4.23 (0.74)	4.49 (0.69)	.001
Medical care	3.65 (0.54)	3.70 (0.54)	.788	3.62 (0.52)	3.78 (0.67)	.214	3.54 (0.56)	3.89 (0.55)	<.001	3.60 (0.53)	3.80 (0.60)	.009
Compassion	3.65 (0.34)	3.80 (0.32)	.246	3.78 (0.49)	3.93 (0.58)	.095	3.73 (0.63)	3.78 (0.41)	.724	3.74 (0.52)	3.86 (0.49)	.084
Resources	4.14 (0.56)	4.10 (0.44)	.826	4.10 (0.51)	4.28 (0.59)	.036	4.01 (0.59)	4.05 (0.65)	.684	4.08 (0.54)	4.17 (0.59)	.145
GAS total score	3.85 (0.40)	3.91 (0.36)	.523	3.91 (0.40)	4.08 (0.47)	.002	3.84 (0.42)	3.99 (0.42)	.003	3.86 (0.40)	4.02 (0.43)	<.001

Note. Responses were rated on a 5-point scale ranging from 1 (*strongly disagree*) to 5 (*strongly agree*). Bold values indicate statistically significant results. GAP = Geriatric Assessment Program; GAS = Geriatric Attitudes Scale; IPGC = Interprofessional Geriatrics Curriculum; SSPP = Student Senior Partnership Program.

Interestingly, occupational therapy students in SSPP appeared to rate their familiarity at baseline higher (specifically the role of dentistry) than other students. The students in SSPP may have been more familiar with professional roles at baseline, or they may have initially overestimated their knowledge of and participation in SSPP-identified knowledge gaps.

No statistically significant changes in occupational therapy student perceptions of IP education were found in any of the three programs, although baseline scores were high for all programs. It is possible that we had a ceiling effect, which may be due to all occupational therapy students self-selecting to participate in the programs, and therefore already having positive perceptions of the value of teams.

With regard to their capability to conduct geriatric health assessments, occupational therapy students participating in these programs reported increased capability. Interestingly, students participating in IPGC were the only ones to show statistically significant improvement in all nine health assessment areas. Students participating in GAP demonstrated statistically significant improvements in the majority of the assessment areas, and students in SSPP showed statistically significant improvement in only one area.

This large differential may be due to the design of the programs. The IPGC provides brief didactic content on the different assessments and opportunities for students to practice using the assessments and to observe the assessments being administered. However, in GAP, students observe professionals administering the assessments with less opportunity to practice and limited introduction to the assessments. The minimal changes for occupational therapy students in SSPP are likely because its design had the least faculty exposure, fewest didactic presentations, and least illness evaluation.

Total scores on the GAS demonstrate that occupational therapy students' attitudes toward working with older adults improved significantly in IPGC and SSPP but had no statistically significant improvement in GAP. This finding is likely due to the older adult participant characteristics of each program. IPGC and SSPP exposed students to seniors who were managing much of their own issues with sufficient help from their current care providers and living independently in the community. However, older adults in GAP were experiencing some amount of cognitive impairment and often had multiple comorbidities and poorly managed complex care situations. These findings seem to suggest that student attitudes regarding older adults are more positive if students are exposed to healthier independent older adults in the community rather than dependent older adults.

Limitations

This study has many limitations. First, the small sample size, particularly in the GAP program, limits our ability to draw strong conclusions about the relative impact of the programs. Second, the self-selection of students into these programs means that the students were already at least somewhat interested in IP education, geriatrics, or both. It is possible the observed results were somewhat muted by the initial interest, and we could expect larger results if the programs were

delivered to less interested students. Third, the survey instrument relies on student self-report of their knowledge and capabilities, which may not coincide with actual clinical skills. Fourth, all the survey questions, except for the GAS, were developed by a committee of faculty involved with the three IP programs. The questions were tested with additional faculty and then revised, but no formal reliability or validity has been established for them.

Another limitation is that occupational therapy students in early and later stages of their training may have differences in their prior experiences that affect whether and how much they benefit from the programs. For example, in separate analyses not shown here, postprofessional occupational therapy students at baseline reported having less familiarity with the professions of dentistry, medicine, and physician assistant compared with entry-level occupational therapy students. They also reported less positive attitudes at baseline toward caring for older adults and no differences in reported capabilities to conduct assessments. With the small number of postprofessional students, accounting for these differences is statistically difficult and therefore a limitation of this study.

Implications for Occupational Therapy Education

The results of this study have the following implications for occupational therapy education:

- Although occupational therapy students in the three programs reported improvement in three of the four areas under study, students participating in IPGC seemed to experience the most positive changes among the outcomes studied. These findings suggest that IP programs that combine more structured didactic information with observation and practice could be of greater benefit than those that emphasize observation alone (i.e., GAP) or unsupervised practice (i.e., SSPP).
- With the growing geriatric population, occupational therapy practitioners play an invaluable role in primary care teamwork. Developing effective IP training programs for occupational therapy students is essential to prepare them adequately.
- Here, we studied the effectiveness of distinct IP geriatric primary care educational programs. This study will help occupational therapy programs consider options for training and suggests that further research is needed on how to best measure these programs.

Conclusion

Further research is needed to develop effective educational programs for teamwork in geriatric primary care to better prepare providers for practice. Current students need not only the knowledge but also the confidence in their skills with the right attitude for geriatric team care. Overall, findings from this study suggest that IP educational programs may help prepare occupational therapy students to work on geriatric primary care teams.

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Appendix. Geriatric Assessment Program

The Geriatric Assessment Program (GAP) is an interprofessional geriatric teaching clinic in which health professional students voluntarily participate. This program was created for the purposes of this study and is ongoing. Multimorbid older adult patients with evidence of cognitive change are evaluated in the GAP clinic at an academic medical center by an interprofessional team. Common reasons for referral include concerns related to function, balancing independence and safety, and supporting family caregivers.

This program has three phases: (1) a home evaluation performed by an occupational therapy practitioner or social worker; (2) a 3-hr clinic assessment with an interprofessional team that includes a dentist, geriatrician, occupational therapy practitioner, pharmacist, physical therapist, physician assistant, and psychologist; and (3) a family conference to review results, discuss recommendations, and assist with planning the next steps. Occupational therapy students assigned to either Level I or Level II fieldwork participate in one or more of these phases.

Occupational therapy students in this study were primarily involved in the GAP clinic assessment (Phase 2), with only 1 student observing a home evaluation (Phase 1), and no students observing the family conference (Phase 3). Although students were welcome to observe home evaluations and family conferences, logistical barriers (e.g., conflicts with class schedules) made attendance extremely difficult.

Occupational therapy students participated in the clinic assessment (Phase 2) for the duration of their fieldwork. All student participants observed the entire team working with the GAP patient and were then provided an opportunity to engage faculty with questions during the postclinic team meeting. This program provided students the ability to observe in-practice formal cognitive assessments, falls and balance assessments, polypharmacy evaluations, dental examinations, psychosocial assessments, and depression evaluations. They were then able to discuss with faculty any areas that needed further clarification. Students reported appreciation of other viewpoints from other professional trainees during the debrief.

Only 1 student participated as a Level I student. This student observed the clinic assessment for the majority of the student's fieldwork. In the last few weeks of fieldwork, the student trained with the occupational therapist and provided portions of the occupational therapy assessment with the older adult GAP patient after having demonstrated competency (e.g., taking an occupational history, screening for edema and vision concerns). This training was performed under the direct supervision of the occupational therapist.

Level II students began by observing the entire team assess the GAP patient. After this first observation of the full team, students subsequently followed the occupational therapist. The occupational therapist trained students to provide portions of the occupational therapy assessment and evaluated their competencies. Although the Level I student performed only parts of the occupational therapy assessment by the end of her experience, Level II students increasingly performed more and more of the occupational therapy assessment, eventually performing the assessment in its entirety under the supervision of the occupational therapist.

We did not analyze differences between Level I and Level II fieldwork students because we did not believe that we could make meaningful comparisons given the small sample size ($n = 1$) of Level I students.

Interprofessional Geriatrics Curriculum

The Interprofessional Geriatrics Curriculum (IPGC) is an interprofessional geriatric educational course in which students of various professional schools may voluntarily participate. This program existed prior to the purposes of this study and is ongoing. It provides education on interprofessional teamwork, geriatric competencies, and practice assessment skills commonly used in primary care. Teams of interprofessional students meet five times over the course of an academic year, which includes an orientation, three visits with an older adult resident at his or her independent living facility, and a wrap up. The orientation consists of team-building activities, learning about the sites and needs of the older adults living at those sites, and basic training on common issues (e.g., sensitivity in the home environment, expectations of working on a team, how to use a translator).

The three onsite visits consist of (1) a didactic session in which faculty provide a brief lecture and case study discussion on a topic such as cognitive assessments, fall and gait evaluation, polypharmacy evaluation, dental assessment, psychosocial assessment, and depression screening; (2) a small group premeeting to plan their visit with faculty as facilitators; (3) an in-home visit with the older adult resident to learn from him or her and to practice the assessments with faculty facilitation; (4) a small group debrief with faculty as facilitators; and (5) a large group debrief

with faculty as facilitators to ask questions on any areas that need further clarification. The wrap-up session consists of faculty-led discussion regarding feedback on their overall experience, lessons learned across sites, and a final reminder to take the survey.

Occupational therapy students were given the option to participate in this experience as a part of a course. Students who chose to participate in this experience submitted reflective assignments related to IPGC that were graded as a part of either OT 538: Adulthood and Aging or OT 563: Occupational Therapy in Primary Care Environments.

Student Senior Partnership Program

The Student Senior Partnership Program (SSPP) was an interprofessional geriatric teaching program in which students of various professional schools could voluntarily participate. This program was created for the purposes of this study and ended when the grant ended because there is no current funding to continue to support it. Students of various professions were organized into teams with a faculty facilitator and a senior partner, similar to the IPGC program. Senior participants in the SSPP were healthier and had fewer needs than older adults in the IPGC and GAP. Students met on three occasions with their senior, as in the IPGC program, but unlike the IPGC, students in the SSPP were without direct faculty supervision and met in a prearranged location in the community instead of at a living facility.

Faculty provided indirect supervision and facilitated student discussion about three geriatric assessment topics: biopsychosocial well-being, social support and community resources, and cognition. Faculty facilitated discussions with the student teams before and after each visit. This process provided an opportunity for the students to ask questions, clarify concerns, review the assessments from the previous community visit, and prepare for the assessments for the upcoming visit. They learned by practicing these assessments on their community outing with the older adult. Occupational therapy students were given the option to participate in this experience as a part of a course. Students who chose to participate in this experience submitted reflective assignments related to IPGC that were graded as a part of either OT 538: Adulthood and Aging or OT 563: Occupational Therapy in Primary Care Environments.