

Examining Patient Outcomes at a Faculty-Led Clinic for Uninsured and Underserved Clients

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Importance: Routine measurements used in clinical settings can foster evidence-based interventions and show the treatment effectiveness.

Objective: To examine the efficacy of occupational therapy services for health outcomes, as determined by modified self-care and mobility items of the Continuity Assessment Record and Evaluation Tool, also known as Section GG.

Design: Retrospective and longitudinal. Data were obtained from medical records at four time points over 1 yr.

Setting: The study took place at a pro bono, faculty-led clinic.

Participants: Ninety-one client charts were reviewed; 64 (70%) clients met the inclusion criteria and were enrolled.

Interventions: Interventions were provided by registered occupational therapists and entry-level occupational therapy students under supervision.

Outcomes and Measures: Self-care and mobility function were measured using modified GG0130 and GG0170 items from the Centers for Medicare & Medicaid Services Quality Reporting Program; three additional functional items were added. The 36-Item Short Form Health Survey, Version 2[®] (SF-36v2) was used to evaluate clients' quality of life at intake.

Results: Self-care and mobility composites significantly improved throughout the 1-yr intervention period. The additional functional composite significantly improved during the first 6 mo. Clients' scores on the physical function subdomain of the SF-36v2 were significantly related to their self-care, mobility, and additional functional items.

Conclusions and Relevance: Faculty-led clinics can improve the occupational performance of clients in need of occupational therapy services, particularly in the areas of self-care and mobility, which have previously been identified as top priorities for clients.

What This Article Adds: This study addressed health disparities in unique and effective ways. By using objective measures of functional mobility and self-care, the study provides robust evidence of the faculty-led clinic's impact in providing underserved and uninsured communities with effective client-centered occupational therapy services.

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Healthy People 2020 defines health disparity as “a particular type of health difference that is closely linked with social, economic, and/or environmental disadvantage” (Office of Disease Prevention and Health Promotions [ODPHP], 2022a, para. 5). Healthy People 2030 strives to continue health promotion efforts via five overarching goals. Among these goals are the elimination of health disparities, increased health equity, and improvement of the well-being of all

populations (ODPHP, 2022b). Lack of health insurance coverage is a type of health disparity for individuals with chronic conditions, because it delays necessary care and increases mortality (Choi et al., 2020; Sommers et al., 2012; Wilper et al., 2009). One surveillance study conducted among adults ages 18 to 64 yr showed that the South Atlantic region (including Florida, Georgia, North Carolina, South Carolina, Virginia, and West Virginia) has the highest unmet health

care needs in the United States; 20.3% of adults in this region cannot afford to access health care services (Okoro et al., 2017). Another study found that uninsured participants experienced more functional limitations than those with private health insurance (Choi et al., 2020). In addition, people with chronic illnesses who need rehabilitation services often face an additional barrier: Coverage for services may be denied because of a plateau or lack of adequate progress in their recovery journey (O'Brien et al., 2017).

The American Occupational Therapy Association (AOTA) has strived to involve occupational therapy practitioners in developing and delivering affordable, accessible health care services for those in need (AOTA, 2020). Providing services to individuals with limited access to health care is considered an occupational justice challenge, which is consistent with the main priority of the occupational therapy profession (Kinsella & Durocher, 2016). Many academic institutions offer free health care services, which may help close this gap in services for the under- and uninsured populations (Stillmank et al., 2019). These clinics provide a coverage net to expand community participation by reducing costs for clients with chronic conditions who are under- or uninsured (Kent & Keating, 2013) to improve function, an opportunity that they may otherwise not receive (O'Brien et al., 2017). Furthermore, these clinics allow students to gain earlier exposure to service populations, develop clinical reasoning in an applied learning atmosphere, and enhance their interprofessional collaboration experiences (Chen et al., 2020; Kruger et al., 2015). This service model has been applied frequently across health care disciplines (Govindarajan et al., 2018; Gupta et al., 2020; Verma, 2016). In this model, faculty can adopt proper learning objectives to ensure academic and clinical quality. A recent study indicated that occupational therapy students increased their confidence and improved their clinical reasoning skills after participating in faculty-led fieldwork experiences (Keptner & Klein, 2019). Also, graduates who participated in free clinics were more likely to serve in rural communities and other areas of need after graduation (Petranj et al., 2017).

Prior evidence shows that free rehabilitation clinics generate promising patient outcomes. For example, clients who received free physical therapy services showed improved functional mobility (O'Brien et al., 2017), increased physical health quality of life (QoL), and reduced pain (Stickler et al., 2016). In addition, a recent study, which used the Canadian Occupational Performance Measure (COPM) to examine client-perceived outcomes at a university-based occupational therapy clinic, showed statistically significant increases in the COPM Satisfaction and Performance scores (Zylstra & Doyle, 2020). Another study served clients with acquired brain injuries in a free occupational therapy clinic and discovered large effects for improved upper extremity function, goal improvement,

and functional balance (Doherty et al., 2020). These preliminary results establish the foundation that the academic-affiliated, free rehabilitation clinics are improving the potential for occupational performance and participation from the clients' perspectives. However, more research is needed to validate the efficacy of free clinics that academic institutions support (Doherty et al., 2020; O'Brien et al., 2017; Rogers et al., 2017; Zylstra & Doyle, 2020). Furthermore, most studies that examined client outcomes at free clinics measured the clients' satisfaction with the services received (Ellett et al., 2010; Kent & Keating, 2013; Wilson, 2014) rather than quantifying the effectiveness of treatment through objective functional measures. Thus, occupational therapists must advocate for more implementation research (Juckett et al., 2019), enabling objective measurements of the clients' function and performance.

Therefore, in the present study, we reviewed data from the medical charts of clients who received free occupational therapy services at an academic-affiliated, faculty-led clinic. We aimed to determine the effectiveness of occupational therapy treatments using the objective measures that were already routinely used in the clinic. We hypothesized that clients who received occupational therapy services at the faculty-led clinic would significantly change their self-care and mobility function over the 1-yr intervention period. The clients' QoL was also measured at the initial occupational therapy evaluation. We expected that the clients' QoL would be significantly related to their level of independence at the intake.

Method

Research Design

This study used a retrospective, repeated-measures design to evaluate the clients' self-care and functional mobility changes over four time points during a 1-yr intervention period. The study was approved by the AdventHealth Institutional Review Board (IRB No. 1664469-1) before data collection.

Setting

The participating rehabilitation center, HOPE (Healing through Occupation, Purpose and Excellence) Clinic, established in 2011, is operated by faculty members at AdventHealth University in Orlando, Florida. HOPE Clinic contains a large, open gym space and two fully equipped private treatment rooms. Additionally, a fully functional kitchen, training bathroom, bedroom, and laundry facilities are available for use during treatment sessions. An outdoor field and garden area are also available for leisure activities, such as gardening and sports.

HOPE Clinic initially provided occupational therapy services to underserved and uninsured individuals in the area, treating a broad range of diagnoses and serving children and adults who would otherwise not

receive necessary rehabilitation services. With ongoing work and development, this faculty-led clinic expanded over the past 3 yr to offer comprehensive outpatient rehabilitation services. Occupational therapists, occupational therapy assistants, physical therapists, and a nurse practitioner are available to clients. In this faculty-led clinic, each therapy session may have up to four students who observe in a group and may assist with faculty practitioner-directed treatment but do not independently treat clients.

Services at HOPE Clinic are available to all community members who cannot afford health insurance benefits. Furthermore, community members who do not qualify for outpatient services (e.g., those who have exhausted therapy benefits but would benefit from continued therapy; slow progression toward goals) can receive services. Because of the number of community members in need of the services provided at HOPE Clinic, clients are typically seen once weekly.

Instruments

Modified CARE Tool and Section GG Items

At HOPE Clinic, an assigned occupational therapist used the Self-Care and Mobility sections of the Continuity Assessment Record and Evaluation (CARE) Tool, also known as Section GG, every 3 mo in a one-on-one treatment session to document clients' progress. Section GG is a standardized tool established by the Centers for Medicare & Medicaid Services Quality Reporting Program (Gage et al., 2012).

The GG0130 Self-Care section is completed by therapists to rate clients' functional ability to complete self-care activities by examining the level of assistance needed for each activity. It can be used to quantify the effectiveness of occupational therapy treatments (AOTA, 2018). The GG0130 consists of eight items: eating, oral hygiene, toilet hygiene, wash upper body, shower/bathe self, upper body dressing, lower body dressing, and putting on/taking off footwear. A composite self-care score was derived by summing the scores for the eight items.

The GG0170 Mobility section is constructed similarly to the GG0130 but rates the functional ability of clients to complete mobility tasks. Because GG items can be used for populations across the postacute-care continuum, some items (roll left and right, sit to lying, lying to sitting on side of bed, etc.) are considered too easy for clients in outpatient settings. Therefore, this study used only two items from the GG0170 (i.e., toilet transfer and picking up objects) because they are clients' common occupational therapy goals in the participating clinic. A composite mobility score was derived by summing the scores for the two items.

In addition to the standard items of the GG0130 and the GG0170, three additional functional items were added—meal preparation, participation in leisure activities, and shower transfer—because they are the frequent top goals for clients at this clinic. A

composite additional functional score was derived by summing the scores for these three items.

All the items were rated on a 6-point Likert scale, on which 1 = *dependent*; 2 = *substantial/maximal assistance*; 3 = *partial/moderate assistance*; 4 = *supervision or touching assistance*; 5 = *setup or cleanup assistance*; and 6 = *independent*. Each client was rated by the same treating occupational therapy clinician every 3 mo.

36-Item Short Form Health Survey, Version 2[®]

The 36-Item Short Form Health Survey, Version 2[®] (SF-36v2) is a 36-item self-rated measure consisting of two main constructs: physical and mental components of QoL (Ware & Kosinski, 1996). Four subdomains were established in each component: physical functioning, role-physical, bodily pain, and general health subdomains in the physical component; and vitality, social functioning, role-emotional, and mental health subdomains in the mental component. The SF-36v2 items were scored with a Likert-type scale, with 10 items requiring reversed coding. The raw subdomain scores were (1) summed across items in the same subdomain and (2) transformed into a scale ranging from 0 to 100. A higher score indicates a better health state or a better quality of life. The SF-36v2 was self-rated by the clients at their initial occupational therapy evaluation (Time 1 [T1]).

Interventions

At HOPE Clinic, client-centered, occupation-based interventions are central to providing whole-person care. Treatment goals for each client are established according to the client's individual priorities. Sample treatment goals include: "Patient will be able to safely pick up self-care and household items from the floor in 6 mo," "Patient will be able to use compensatory strategies to prepare a meal safely in 6 mo," and "Patient will independently put her hair in a ponytail using adaptive devices as needed in 3 mo." All interventions were individualized on the basis of close collaborations among the therapists, clients, and caregivers. Individual sessions with clients are the norm at the HOPE Clinic; however, the availability of individual, group, or community sessions is based on individual needs.

Procedures

Retrospective data were collected from all medical records at a faculty-led clinic for clients who received occupational therapy services from September 2019 to April 2021. The clinic used modified Section GG items as the main outcome measurement. The modified Section GG items were used at intake and reassessed every 3 mo to follow clients' progression for 1 yr across four time points. The research team reviewed a total of 91 client charts. Inclusion in the study sample required clients to have data for the modified Section GG items and the SF-36v2. However, because the

SF-36v2 is not recommended for children (Pless, 1996), the clinic did not administer the SF-36v2 to the pediatric population, thus excluding all children from the final sample.

During the last week of March 2020, HOPE Clinic closed because of the rising numbers of illnesses and deaths related to coronavirus disease 2019 (COVID-19). Services resumed in the following week through the telehealth method. However, not all clients wanted to participate in this treatment delivery method. Clients who continued occupational therapy services were treated by clinicians who guided their interventions remotely. Their reevaluations with the modified Section GG items continued on schedule but were gauged by means of telehealth observations and client self-report. Clients who declined telehealth services resumed in-person treatment and reevaluation in September 2020, when the clinic was approved for reopening.

Demographics, modified Section GG items, and QoL measures were extracted from the identified list of client charts. A trained research assistant then entered the data into a secure Microsoft Excel spreadsheet containing no personal identifiers. Quality control was completed to ensure data entry accuracy by randomly selecting 20% of the client records to compare entered data with the original paper records. After data collection was completed, the Excel spreadsheet was imported into IBM SPSS Statistics (Version 27) for analysis.

Data Analysis

The data were analyzed using IBM SPSS Statistics. Demographics were analyzed using descriptive statistics (mean, standard deviation, percentage, etc.). Because of the ordinal nature of the data, Friedman's analysis of variance was used to determine whether the clients' performance improved over time, with $p < .05$ set as the critical value. Furthermore, the Wilcoxon signed-rank test was used to evaluate the pairwise comparisons across four time points for the self-care, mobility, and additional functional item composite scores and for each item individually.

In addition, we calculated the effect size (Kendall's W ; Tomczak & Tomczak, 2014) to ensure that the results were independent of sample size and quantified the magnitude of changes across time (Lakens, 2013). The following thresholds, which are based on Cohen's (1988) interpretation guidelines, were used: $.2 = \textit{small}$, $.5 = \textit{moderate}$, and $.8 = \textit{large}$.

We conducted Spearman's correlations to explore the relationship between clients' QoL and their level of independence with self-care, mobility, and additional functional items at intake. The criteria were set as follows: correlation coefficients of $.1$ to $.3 = \textit{weak}$, $.4$ to $.6 = \textit{moderate}$, and $\geq .7 = \textit{strong}$ (Akoglu, 2018).

Results

A total of 64 clients who received occupational therapy services during the study period were included in the

final data analysis (men = 56.3%; women = 43.8%). Of these, 50, 34, and 24 clients completed the Time 2 (T2), Time 3 (T3), and Time 4 (T4) follow-up evaluations, respectively. Thirty-eight (59.3%) enrolled participants also received physical therapy services once a week. The average age was 55 yr old ($SD = 15.05$), with ages ranging from 21 to 83 yr. Client demographics, represented by the highest percentage within each category, include 39.1% White, 31.3% married, and 34.4% with a high school education. Most clients (62.5%) were diagnosed with cerebrovascular accident, and 59.4% had one occupational therapy service visit per week. See Table 1 for a complete list of demographics.

Changes in Section GG Self-Care

Friedman's test revealed a significant change over the four data collection points for the self-care composite, $\chi^2(3) = 46.34, p < .001$. Furthermore, a Wilcoxon signed-rank test revealed a significant pairwise difference between T1 and T2 ($Z = -5.31, p < .001$), T2 and T3 ($Z = -2.34, p = .02$), and T3 and T4 ($Z = -2.23, p = .03$). Kendall's W demonstrated a moderate effect size for T1 to T2 ($W = .740, p < .001$) and a small effect size for both T2 to T3 ($W = .265, p < .01$) and T3 to T4 ($W = .250, p < .05$). When the self-care items were analyzed individually, Upper body dressing showed significant improvement across all four time points; Shower/bathe self showed significant improvement from T1 to T3, and all the other items (Eating, Oral hygiene, Toilet hygiene, Wash upper body, Lower body dressing, and Putting on/taking off footwear) showed significant improvement from T1 to T2. See Table 2 for further details.

Changes in Section GG Mobility

The results of Friedman's test demonstrated a significant difference across the four data collection points in the mobility composite, $\chi^2(3) = 46.27, p < .001$. A Wilcoxon signed-rank test identified significant differences between T1 and T2 ($Z = -4.43, p < .001$), T2 and T3 ($Z = -2.88, p = .004$), and T3 and T4 ($Z = -2.46, p = .01$). Furthermore, Kendall's W demonstrated a moderate effect size for T1 to T2 ($W = .500, p < .001$) and a small effect size for both T2 to T3 ($W = .294, p < .01$) and T3 to T4 ($W = .292, p < .01$). Each mobility item was also individually analyzed to determine differences over time. Picking up objects significantly improved across four time points, $\chi^2(3) = 41.58, p < .001$, and Toilet transfer showed significant improvement from T1 to T2. See Table 2 for further details.

Changes in Additional Functional Items

Three items (i.e., Meal preparation, Participation in leisure activities, and Shower transfer) were added to evaluate additional functional outcomes relevant to the clients at the participating clinic. Friedman's test results revealed significant changes over the four data collection periods, $\chi^2(3) = 35.61, p < .001$. A Wilcoxon

Table 1. Demographic Characteristics of the Study Sample (N = 64)

| Characteristics | n (%) |
|-------------------------------------|-----------|
| Gender | |
| Male | 36 (56.3) |
| Female | 28 (43.8) |
| Ethnicity | |
| White | 25 (39.1) |
| Hispanic, Latino, or Spanish | 16 (25.0) |
| Black or African American | 18 (28.1) |
| Other ^a | 3 (4.7) |
| Missing | 2 (3.1) |
| Education level | |
| No formal education | 1 (1.6) |
| High school | 22 (34.4) |
| College | 14 (21.9) |
| Vocational training | 2 (3.1) |
| University | 7 (10.9) |
| Doctorate | 1 (1.6) |
| Missing | 17 (26.6) |
| Marital status | |
| Married | 20 (31.3) |
| Widowed | 3 (4.7) |
| Divorced | 19 (29.7) |
| Separated | 1 (1.6) |
| Never married | 13 (20.3) |
| Domestic partnership | 2 (3.1) |
| Missing | 6 (9.4) |
| Diagnosis categories | |
| CVA | 40 (62.5) |
| UE injury | 11 (17.2) |
| LE injury | 4 (6.3) |
| Back/neck injury | 2 (3.1) |
| Parkinson's disease | 2 (3.1) |
| Spinal cord injury | 2 (3.1) |
| Other ^b | 3 (4.8) |
| Treatment frequency | |
| 1×–2×/mo | 1 (1.6) |
| 1×/wk | 38 (59.4) |
| 1×–2×/wk | 11 (17.2) |
| 2×/wk | 9 (14.1) |
| >2×/wk (as clinic schedule permits) | 1 (1.6) |
| Missing | 4 (6.3) |

Note. M age = 55.00 yr (*SD* = 15.05; range = 21.00–83.00). Percentages may not total 100 because of rounding. CVA = cerebrovascular accident; LE = lower extremity; UE = upper extremity.

^aWestern Indian (*n* = 1) and Brazilian (*n* = 2).

^bGuillain-Barré syndrome and complications (*n* = 1), cerebral palsy (*n* = 1), and lymphedema (*n* = 1).

signed-rank test revealed that pairwise changes occurred from T1 to T2 ($Z = -4.67, p < .001$) and from T2 to T3 ($Z = -2.72, p = .006$) for the composite of these items. There was no significant difference from T3 to T4 ($Z = -1.51, p = .13$). Kendall's *W* demonstrated a moderate effect size for T1 to T2 ($W = .602, p < .001$) and a small effect size for T2 to T3 ($W = .265, p < .01$). All three items individually showed significant improvement from T1 to T2. The individual items showed improved averages from T2 to T3 and a slight decrease at T4, but no significant differences were found. See Table 2 for more information.

Correlations Between Section GG Composite Functioning and SF-36v2 Health Domains

Using Spearman correlations, we analyzed the participants' QoL (which was evaluated at intake) in relation to their self-care, mobility, and additional functional item composites at T1. The clients' physical component of QoL demonstrated a weak but significant correlation with self-care ($r = .359, p < .01$; Akoglu, 2018). Additionally, the physical function subdomain of the SF-36v2 demonstrated a moderate and significant association with self-care ($r = .678, p < .01$), mobility ($r = .598, p < .01$), and the additional functional items ($r = .464, p < .01$). Furthermore, the role-physical subdomain showed a weak but significant correlation with the clients' self-care ($r = .297, p < .05$). The other subdomains of the SF-36v2 (i.e., bodily pain, general health, vitality, social functioning, role-emotional, and mental health) did not show significant correlation with the self-care, mobility, and additional functional composites (see Table 3).

Discussion

The study results support the hypothesis that clients who received occupational therapy services in a faculty-led free clinic would experience a significant improvement in their self-care, mobility, and other relevant daily living areas (i.e., additional functional items) during a 1-yr intervention period. Specifically, the improvement was explicit among all three composites within the first 3 mo (T1 to T2) with a moderate effect size. From T2 to T3, all three composites continued to improve with a small effect size; from T3 to T4, only self-care and mobility showed improvement with a small effect size. All individual items also showed significant improvement within the first 3 mo (T1 to T2). Additionally, two items (i.e., upper body dressing from the GG0130 self-care section and picking up objects from the GG0170 mobility section) showed significant improvement across four time points; one item (shower/bathe self from Section GG, self-care) showed significant improvement across three time points. Furthermore, this study revealed that the clients' level of independence did relate to their QoL, especially on the physical components and its subdomain.

Table 2. Changes in Modified Section GG Items Across Time

| Items | M (SD) | | | | Friedman ANOVA (<i>p</i> *) | Pairwise Comparisons | | | | | |
|---------------------------------|-----------------|-----------------|-----------------|-----------------|------------------------------|----------------------|----------|-------|----------|--------|----------|
| | Time 1 (n = 64) | Time 2 (n = 50) | Time 3 (n = 34) | Time 4 (n = 24) | | T1-T2 | | T2-T3 | | T3-T4 | |
| | Z | <i>p</i> * | Z | <i>p</i> | | Z | <i>p</i> | Z | <i>p</i> | Z | <i>p</i> |
| Self-care composite | 35.98 (10.13) | 40.58 (8.18) | 41.50 (7.91) | 41.75 (7.83) | 46.34 (<.001) | -5.31 | <.001 | -2.34 | .02* | -2.23 | .03* |
| Eating | 5.32 (1.04) | 5.64 (0.72) | 5.68 (0.64) | 5.67 (0.64) | 18.06 (<.001) | -2.88 | .004 | -0.45 | .66 | 0.00 | 1.00 |
| Oral hygiene | 5.23 (1.08) | 5.64 (0.66) | 5.59 (0.74) | 5.67 (0.71) | 20.35 (<.001) | -3.35 | .001 | 0.00 | 1.00 | -1.34 | .18 |
| Toilet hygiene | 4.86 (1.62) | 5.24 (1.35) | 5.15 (1.48) | 5.13 (1.54) | 19.24 (<.001) | -3.08 | .002 | -0.45 | .66 | -1.00 | .32 |
| Wash upper body | 4.53 (1.44) | 5.22 (1.15) | 5.35 (1.10) | 5.33 (1.09) | 31.24 (<.001) | -3.81 | <.001 | -1.89 | .06 | -1.00 | .32 |
| Shower/bathe self | 4.23 (1.53) | 4.90 (1.30) | 5.00 (1.21) | 5.08 (1.14) | 35.29 (<.001) | -4.45 | <.001 | -2.24 | .03* | -1.41 | .16 |
| Upper body dressing | 4.19 (1.48) | 4.84 (1.27) | 5.15 (0.99) | 5.29 (0.86) | 35.29 (<.001) | -4.56 | <.001 | -2.24 | .03* | -2.45 | .01* |
| Lower body dressing | 3.89 (1.72) | 4.62 (1.46) | 4.85 (1.33) | 4.83 (1.34) | 33.42 (<.001) | -4.48 | <.001 | -1.89 | .06 | -1.00 | .32 |
| Putting on/taking off footwear | 3.73 (1.79) | 4.48 (1.71) | 4.74 (1.48) | 4.75 (1.57) | 35.01 (<.001) | -4.47 | <.001 | -1.89 | .06 | -1.73 | .08 |
| Mobility composite | 8.75 (3.15) | 9.98 (2.40) | 10.24 (2.32) | 10.50 (1.98) | 46.27 (<.001) | -4.43 | <.001 | -2.88 | .004* | -2.46 | .01* |
| Toilet transfer | 4.73 (1.65) | 5.16 (1.27) | 5.26 (1.19) | 5.33 (1.13) | 26.65 (<.001) | -3.35 | .001 | -1.89 | .06 | -1.73 | .08 |
| Picking up objects | 4.02 (1.81) | 4.82 (1.41) | 4.97 (1.24) | 5.17 (1.01) | 41.58 (<.001) | -3.99 | <.001 | -2.64 | .008* | -2.33 | .02* |
| Additional functional composite | 11.97 (5.02) | 14.04 (4.15) | 14.56 (3.79) | 14.21 (3.73) | 34.15 (<.001) | -4.67 | <.001 | -2.72 | .006* | -1.51 | .13 |
| Meal preparation | 3.56 (1.90) | 4.42 (1.62) | 4.64 (1.56) | 4.50 (1.56) | 15.46 (.001) | -3.59 | <.001 | -1.84 | .07 | -1.41 | .16 |
| Leisure | 3.88 (1.44) | 4.52 (1.28) | 4.65 (1.10) | 4.46 (1.06) | 28.22 (<.001) | -4.06 | <.001 | -1.73 | .08 | -0.577 | .56 |
| Shower transfer | 4.53 (1.68) | 5.10 (1.25) | 5.27 (1.13) | 5.25 (1.11) | 33.32 (<.001) | -3.82 | <.001 | -1.63 | .10 | -1.73 | .08 |

Note. ANOVA = analysis of variance; Section GG = self-care and mobility items of the Continuity Assessment Record and Evaluation Tool; T = time.

**p* < .05.

Table 3. Spearman Correlations Between Modified Section GG Items and SF-36v2 at T1

| SF-36v2 Measure | Self-Care | Mobility | Additional Functions |
|--------------------|-----------|----------|----------------------|
| Physical component | .359** | .178 | .224 |
| Physical function | .678** | .598** | .464** |
| Role-physical | .297* | .128 | .162 |
| Bodily pain | .186 | .057 | -.032 |
| General health | .278 | .116 | .060 |
| Mental component | .109 | .084 | .065 |
| Vitality | .137 | .040 | -.044 |
| Social functioning | .183 | .054 | .105 |
| Role-emotional | .148 | .083 | .042 |
| Mental health | .279 | .249 | .180 |

Note. Section GG = self-care and mobility items of the Continuity Assessment Record and Evaluation Tool; SF-36v2 = 36-Item Short Form Health Survey, Version 2[®]; T = time.

* $p < .05$. ** $p < .01$.

Section GG Outcomes

The CARE Tool, or Section GG, allows practitioners to collect data regarding functional performance changes in postacute care settings (Kroll & Fisher, 2018), which enables occupational therapists to quantify the profession's value through the documentation of standardized outcome measures (Sandhu et al., 2018). Additionally, Section GG has been reported as a reliable measure (Gage et al., 2012) and has been found to correlate significantly with the FIM[®] (Li et al., 2021), a well-established assessment (Granger, 2008).

In the present study, the clients' mobility demonstrated significant improvements during each of the four time points over the 1-yr intervention. These findings might be explained by how the clients prioritize their rehabilitation goals. For example, Waldersen et al. (2017) asked 226 low-income older adults who participated in a home-based program to identify their functional goals. They found that the top three goals among these older adults related to functional mobility: transferring, changing or maintaining body position, and stair climbing. Furthermore, Tuntland et al. (2020) explored older adults' rehabilitation goals in Norway. Among the 738 participants, functional mobility was, again, the most frequently identified and prioritized area. Another study examined self-perceived occupational performance in community-dwelling adults with stroke (Jaber et al., 2018). Results showed that functional mobility was one of the top three greatest challenges that cerebrovascular accident survivors experienced. Another review study summarized 43 articles and highlighted the participatory needs of stroke survivors from the caregiver's perspective (Krishnan et al., 2017). The results showed that two of the most common participatory needs are physical activity and independence. Therefore, occupational therapists would most likely use meaningful occupations to address

functional mobility concerns when providing client-centered practice, resulting in continued improvement over the rehabilitation course.

The present study results were promising, because the self-care composite also demonstrated significant improvement during each of the four time points over the 1-yr intervention, especially the upper body dressing and shower/bathe self items, which significantly improved over time. Independent self-care has always been a prime concern for occupational therapy treatment because it is essential to enabling a client's return to daily routines; however, activities related to self-care have been rated as lower priorities for clients (Tuntland et al., 2020; Waldersen et al., 2017). For example, Chang and Wang (2013) interviewed nine clients with neurological impairments and their caregivers. The results showed that self-care activities were sometimes considered "nontherapeutic" and often completed by the caregivers with pragmatic consideration to save time and ensure safety. The present study again validated that self-care independence can be achieved with continued occupational therapy service. Therefore, it is suggested that health care professionals on the rehabilitation team should purposefully create opportunities for clients to learn appropriate self-care skills (van Diemen et al., 2021). Additionally, future studies could evaluate the most valued to the least valued self-care items to determine whether they affect the clients' goal attainment and occupational performance over time.

Self-Care, Mobility Items, and Quality of Life

The present results support a positive correlation between the physical function component of QoL and the clients' level of independence with self-care and mobility items, which is consistent with the findings of prior studies (Feng et al., 2020; Pucciarelli et al., 2017). The physical function aspect of the SF-36v2 explores the extent to which daily activities are constrained by the person's current health. Participants' self-rated limitations with daily activities are concerning because of their importance in independent living and the impact that feelings of security have on one's occupational performance of daily activities (Magne & Vik, 2020). Therefore, functional mobility would influence their level of participation in occupations (Suttiwong et al., 2018), which is related to the physical function aspect of QoL (Neri et al., 2018). The results of the present study are consistent with prior findings. Kim et al. (2021) found that clients' level of physical activity affected their overall physical function, but it did not affect the mental component, measured by the SF-36v2, at three different time points.

Notably, none of the mental component subdomains significantly correlated with the modified Section GG items, which may be explained by previous studies. Nichols (2016) surveyed 2,329 community-dwelling adults with ostomies residing in the United States. The results indicated that clients'

mental health subdomain scores varied with participants' age. Specifically, the mental health aspect was within the normative range of the general population when participants were age 55 yr or older; however, participants aged 55 yr and younger had significantly lower mental health QoL. Another study had similar findings. [Netuveli et al. \(2006\)](#) conducted a secondary analysis to explore influences on QoL in a large, national sample of older English residents ($N = 11,234$). They also found that QoL varied with the aging process. Specifically, participants' QoL increased at the age of 50 yr, peaked at 68 yr, and then gradually declined until the age of 86 yr, when it reached the same level as that for the 50-yr-olds. Considering the mean age of the present study's participants (i.e., 55 yr), it is reasonable to surmise that participants have learned to manage chronic conditions; this may sustain a sense of purpose, which allows them to demonstrate proper coping strategies and resilience ([Palmer et al., 2021](#)). Therefore, this may provide an explanation for the lack of correlation between the mental component of QoL, self-care, mobility, and additional functional items at T1.

Studies have shown that the SF-36v2 can effectively document improved QoL after interventions ([Farshi et al., 2020](#); [Wang & Wu, 2022](#); [Zaborova et al., 2021](#)). However, the present study administered the SF-36v2 only at T1; thus, no conclusion can be made about the long-term influence of QoL and whether certain self-care or mobility items may correlate or predict a client's QoL in the 1-yr intervention period. Future research should explore this prospect.

Limitations and Suggestions for Future Study

Considering the present study's limitations is important to ensure that the results are generalized to the appropriate contexts and populations. First, the number of available data points was reduced because HOPE Clinic was closed during the last week of March 2020 because of the COVID-19 pandemic. Although services resumed the following week by means of telehealth, not all patients were interested in participating in this treatment method, which affected the sample size. Next, telehealth services may have certain impacts on clients' progress, but they are beyond the scope of this study. Whether in-person or telehealth services might influence the outcomes should be investigated in the future.

Second, the pediatric population was not included because of the lack of QoL assessment. Therefore, the study results can only be applied to the adult and older adult populations. Additional studies should be conducted to explore longitudinal outcomes for the pediatric population. Also, because most enrolled participants were stroke clients (63%), the progress investigation of different diagnoses could not be performed. Future studies should consider evaluating

how different diagnoses and their severity might affect clients' functional outcomes over time.

Third, this study did not collect the clients' self-ascribed value for mobility, self-care, and additional functional areas of daily living. Therefore, it is unknown whether functional mobility items were a higher priority for clients included in this study, as other research has reported. Additionally, the notion that greater independence is related to QoL can only be implied on the basis of the clients' initial evaluation. Therefore, future research may expand on this and monitor the clients' change in QoL over time to quantify and investigate the impact of these two variables.

Last, the intensity level of rehabilitation services correlates to functional outcomes, particularly for functional mobility and self-care ([Kroll & Fisher, 2018](#)). At HOPE Clinic, because of limited faculty and staff available, clients are typically seen once a week. This intensity of treatment may affect functional outcomes and should be explored in a future study. Moreover, in addition to receiving occupational therapy service, 38 of the 64 enrolled participants (59.3%) also received weekly physical therapy services. Potential cointervention bias should be considered, because the increased treatment intensity could affect the outcome of interest. A recent study warned that more than two-thirds of recent randomized clinical trials did not properly report cointerventions, which was a concern for interpreting results ([Moutzouri et al., 2020](#)).


Implications for Occupational Therapy Practice

The faculty-led clinic provided underserved and uninsured communities with effective client-centered occupational therapy services. Results showed positive changes in clients' modified Section GG items during a 1-yr follow-up. This study has the following implications for occupational therapy practice:

- This study used the routine outcome measurements administered in a clinical setting to foster evidence-based interventions. It demonstrated the benefits of routine assessments in an effort to present and understand clients' ongoing needs.
- Participants demonstrated improvements in self-care, mobility, and other relevant functions in performing activities of daily living over time, which may have also reduced hospitalizations and readmissions after care was provided to manage chronic needs ([Trumbo et al., 2018](#)). Faculty-led clinics contribute to improving the functional mobility, self-care, and overall well-being of vulnerable populations as well as promoting a more equitable health care system in the United States.

Conclusions

In conclusion, routine outcome measurements used in clinical settings help document intervention progress

and promote evidence-based practice. This study supports the effectiveness of a community-based, faculty-led clinic. The clients' mobility, self-care, meal preparation, and leisure participation improved over time. 

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