Journal of Hand Therapy xxx (xxxx) xxx

Contents lists available at ScienceDirect

Journal of Hand Therapy

journal homepage: www.elsevier.com/locate/jht

Psychosocial factors addressed by occupational therapists in hand therapy: A mixed-methods study

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ARTICLE INFO

Article history:
Received 20 August 2021
Revised 22 June 2022
Accepted 3 July 2022
Available online xxx

Keywords:
Symptoms of Mental Disorders
Psychosocial well-being
Quality of life rehabilitation
Occupational Therapist
Assessments

ABSTRACT

Background: Occupational therapists address occupations, performance skills, and client factors that interfere with the successful occupational engagement in everyday activities, including psychosocial factors. However, due to the biomechanical model focus within hand therapy clinics, provision of a holistic care plan remains challenging for occupational therapists. If a client's psychosocial functioning is not addressed, progress toward a full recovery may be limited.
Purpose: The purpose of this study was to identify how occupational therapists who are certified hand therapists (CHTs), address and provide interventions to clients with psychosocial factors that negatively impact function.
Study Design: Mixed-Method.
Methods: CHTs completed an electronic survey (n = 117) followed by a virtual focus group (n = 9). Survey data analysis included descriptive and correlational statistics to highlight frequencies, ranges, and relationships between the participant demographics and the selection of assessment and the intervention approaches. Thematic analysis guided the qualitative coding of the focus group transcripts.
Results: Of the 117 survey respondents, 79% reported frequent use of the biomechanical approach. The most frequently administered assessment included the Quick-Disabilities of the Arm, Shoulder, and Hand (n = 45; 40.9%). Five themes emerged from the focus groups: hand dysfunction impacts roles and routines; client rapport building takes time; CHT hesitation to address psychosocial factors; standardized assessments need to evaluate psychosocial factors that impact client function; and education and communication are critical intervention approaches.
Conclusions: Occupational therapy practitioners primarily utilize the biomechanical approach and are less likely to assess or treat psychosocial factors that impact a client's function. However, participants reported a need for a standardized assessment to identify the psychosocial factors that impact their clients' functional performance. Further research is warranted to increase the measurement and the use of holistic theoretical models of practice, assessments, and intervention approaches.

Introduction

Traumatic injuries to the upper extremity may result in psychosocial sequelae that can further limit participation in everyday activities, which has been reported in up to 20% of people with a traumatic upper extremity injury.[1,2] Pain, fear, avoidant behavior, anxiety, depression, and symptoms of post-traumatic stress disorder (PTSD) are common psychological symptoms that adversely impact function following upper extremity injuries.[1,3] Additionally,

Conflict of interest: All named authors hereby declare that they have no conflicts of interest to disclose.

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https://doi.org/10.1016/j.jht.2022.07.006

traumatic injuries have been shown to negatively impact the fulfillment of life roles such as spouse, parent, and worker.[2,4] For example, a person with a hand injury may require assistance from their spouse to perform activities of daily living (ADLs), a parent may no longer be able to independently care for their child, or a worker may not be able to perform essential job functions.[2] The impact of these psychosocial sequelae have not been widely studied with regard to successful return to participation in everyday activities. However, early identification and intervention of adverse psychosocial factors has been recognized as important for successful return to the worker role following injury.[5,6]

The psychosocial factors of hand injuries, and their impact on participation in everyday living has been discussed in the literature.[5-10] Most psychosocial sequelae following a hand injury improve within the first 3 months after injury.[7,10] However, if these psychosocial sequelae do not abate, they may lead to prolonged dysfunction in tasks of everyday living.[5] Given that some people may experience psychosocial sequelae following a hand injury, it is likely that a certified hand therapist (CHT) will treat clients who experience dysfunction due to psychosocial factors resulting from their injuries. As such, it is critical that CHTs identify psychosocial factors that may impact their clients' function, early in the rehabilitation process, to ensure that these factors are addressed in treatment.[7,8]

Occupational therapists are trained to provide holistic care centered on the belief that engagement in occupation (meaningful and purposeful everyday activities) is a dynamic mechanism of health. Therefore, occupational therapy care plans should reflect the integration of how personal factors (eg sensorimotor, psychosocial, and cognitive factors) and environmental factors (eg natural and built environment, tools, and materials) interact to influence the client's ability to participate in meaningful occupations.[11] As 85% of CHTs in the United States are licensed occupational therapists, their interventions should reflect the holistic nature of the occupational therapy profession by addressing all of the factors that adversely impact participation and performance.[12]

However, occupational therapists can struggle to apply a holistic approach to care.[13-17] It is common for occupational therapists who are CHTs to primarily utilize a biomechanical frame of reference to address the client's neuromusculoskeletal limitations with limited consideration of the impact of psychosocial factors on function.[14-18] The primary assumption of the biomechanical frame of reference is that remediation of sensorimotor deficits will result in a direct improvement in the client's functional performance.[19] This limited focus on sensorimotor factors can result in an unawareness of any psychosocial factors that may be impacting the client's participation in their important life roles and routines.[14-19] A holistic approach may be more beneficial for successful client functional outcomes due to its focus on identifying clients' psychosocial function as well as tailoring interventions that promote engagement in everyday activities individualized to each client.[16,20] There is evidence that occupational therapists have tried to apply a holistic approach to treatment in hand therapy practice but the extent to which occupational therapists who are CHTs are addressing psychosocial client factors is not known.[21]

The purpose of this study was to identify how occupational therapists who are CHTs, assess and treat clients with psychosocial client factors that negatively impact participation in everyday activities. A secondary focus was to explore the reported frequency of use of practice approaches by occupational therapists who are CHTs. The research questions included:

1. Which assessments are frequently administered by occupational therapists who are CHTs that assess psychosocial client factors that impact participation in everyday activities?
2. How do occupational therapists who are CHTs address psychosocial client factors during the occupational therapy intervention process?
3. To what extent do occupational therapists who are CHTs use the biomechanical and occupation-based treatment approaches in clinical practice?
4. What relationships exist, if any, among occupational therapy practitioners' demographics and intervention approaches utilized in hand therapy?

Method

Research design

This study used a complementarity mixed method design to investigate how occupational therapists who are CHTs address psychosocial client factors during the evaluation and the intervention processes.[22] The quantitative component of the study consisted of an electronic survey. This approach to data gathering was selected because it is efficient, economical, and anonymous.[23] The exploratory qualitative component of the study, through utilization of focus groups, was chosen to afford a deeper understanding of the topic and to provide added context to the analysis of the quantitative data. Focus groups are economical, quick, and efficient allowing for an increased potential to gain insight from multiple participants at one time.[24] Furthermore, commonalities among the participants provided a sense of trustworthiness for the participants' willingness to share their experiences within the group.[24] To provide meaningfulness to the data, both the survey and focus group findings were analyzed separately.[22] This capitalized on the strength of the mixed method design.[22] The study received Institutional Review Board approval and all participants provided consent.

Participants

Using purposive and snowball sampling, the researchers recruited currently practicing registered occupational therapists designated as a CHT in the United States with the following inclusion criteria, aged 19 years or older, provided occupational therapy services to a minimum of one adult client (aged 18 or older) per month with an upper extremity injury, spoke English, and had access to phone and internet. There were no specific exclusion criteria. Participants were encouraged to forward the survey invitation to other CHTs who met the study inclusion criteria to increase the sample size.

Instruments

The researchers developed an electronic survey after completion of a literature review and reflection on clinical expertise. A research expert panel ($N = 4$) reviewed the survey for face validity, leading to editing of multiple choice and open-ended questions for clarity, quantifying Likert scales, and modifying Likert scale questions for ease of use for the survey format. Finally, 5 occupational therapy practitioners piloted the survey with no further revisions suggested. The survey consisted of 23 questions that queried demographic information, such as gender, age, years of experience, and professional credentials. Additionally, the survey included multiple choice questions, Likert scale questions (scaled 1-7), and open-ended questions that further explored the participants' experiences with treating clients who presented with psychosocial factors that negatively impacted participation in hand therapy and everyday activities.

Please cite this article as: M.B. Kurrus, V.D. Jewell, S. Gerardi et al., Psychosocial factors addressed by occupational therapists in hand therapy: A mixed-methods study, Journal of Hand Therapy, https://doi.org/10.1016/j.jht.2022.07.006

The researchers developed a focus group guide through the same development process as the survey (ie literature review, clinical expertise, expert panel review, and pilot with practitioners). Following the experts' feedback, redundant questions were deleted, and the wording was clarified. The semi-structured interview guide included 8 open-ended questions, with allotment for probing questions as needed.

Procedures

The primary researcher emailed the recruitment flyer, information letter, and survey link to practitioners found on the Hand Therapy Certification Commission website, the American Occupational Therapy Association's Community Survey Requests page, and 3 social media pages on Facebook and LinkedIn. After survey completion, the participants entered their contact information to express interest in a virtual focus group. The primary researcher emailed interested participants an information letter, scheduled a date and time for the focus group, and conducted and recorded the focus group via video conferencing. The virtual focus group lasted approximately 60 minutes. Due to technological difficulties, approximately 5 minutes of the virtual focus group was not recorded at the beginning of the session. The primary researcher took detailed notes during the focus group and manually transcribed the audio recording verbatim.

Data analysis

The researchers completed all survey data analysis with SPSS Version 25.[25] Descriptive statistics determined the frequency distributions for the demographics and the participants' intervention approaches. Concurrently, an independent samples t-test assessed the impact of various practice settings on the use of the intervention approaches. The researchers performed a Chi-square test to investigate potential relationships between the demographics and the practice settings with routine screening for clients' psychosocial factors. Additionally, a non-parametric Spearman test evaluated the correlation between the years of experience and the intervention approach utilization.

The researchers used conventional content analysis to code the responses to the open-ended survey questions. This allowed the researchers to immerse themselves in the data for gained insight and description of the phenomenon being studied.[26] The first and second authors highlighted words and phrases to capture key concepts. After repeated readings of the responses, the researchers established 194 initial codes that were then separated into 27 categories and given a final label to answer each of the 4 open-ended survey questions.[26]

Thematic analysis guided coding of the focus group transcriptions.[27] The researchers generated 137 initial codes from repeated readings, immersion, and familiarization of the transcriptions. The researchers placed the initial codes into thematic maps and identified 15 broad themes. The researchers further refined the themes by naming and defining 5 final themes. [27]

The researchers established trustworthiness through member checking and the elimination of single-researcher bias. Use of member checking allowed for assurance that the interpretations accurately depicted the participants' responses.[28] The researchers eliminated single-researcher bias by discussing the initial codes, followed by identifying and modifying the final themes collaboratively.[29] Furthermore, the researchers practiced reflexivity to remove biases through electronic journaling and kept an audit trail through detailed process notes.

Table 1
Survey participants' demographics.

	n	%
Total	117	100.0
Gender		
Male	21	17.95
Female	96	82.05
Age (years)		
20-29	2	1.71
30-39	31	26.50
40-49	44	37.61
50-59	30	25.64
60 +	10	8.55
OT Degree held (n = 116)		
Entry-level BS	48	39.67
Combined BS/MOT or MSOT	17	14.05
Entry-level MOT or MSOT	35	28.93
MSOT/MOT and OTD	9	7.44
Entry-level OTD	1	0.83
Post-professional OTD	11	9.09
Years of OT experience (n = 117)		
< 1	0	0
1-5	4	3.42
6-10	18	15.38
11-15	13	11.11
16-20	30	25.64
21-25	22	18.80
> 25	30	25.64
Years of CHT experience (n = 115)		
< 1	7	6.09
1-5	34	29.57
6-10	25	21.74
11-15	17	14.78
16-20	14	12.17
21-25	6	5.22
> 25	12	10.43
Years in hand therapy (n = 116)		
< 1	1	0.86
1-5	7	6.03
6-10	21	18.10
11-15	23	19.83
16-20	26	22.41
21-25	17	14.66
> 25	21	18.10
Practice setting		
Outpatient clinic		
Hospital owned	86	33.08
Corporate owned	48	18.46
Therapist owned	39	15.00
Inpatient hospital	25	9.62
Private practice	25	9.62
Physician's office	33	12.69
Regions		
Northeast		
New England	9	6.62
Middle Atlantic	17	12.50
Midwest		
East North Central	24	17.65
West North Central	13	9.56
South		
South Atlantic	25	18.38
East South Central	6	4.41
West South Central	16	11.76
Mountain	13	9.56
Pacific	13	9.56
Caseload in past 12 months		
0%-60%	5	4.27
61%-70%	4	3.42
71%-80%	4	3.42
81%-90%	15	12.82
91%-100%	89	76.07
Average number of visits		
0-5	3	2.56
6-10	39	33.33
11-15	49	41.88

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Table 1 (*continued*)

	n	%
16-20	24	20.51
> 20	2	1.71
Average length of visit		
15 min	1	0.85
30 min	22	18.80
45 min	46	39.32
60 min	45	38.46
> 60 min	3	2.56

Note. Totals may not equal 117 due to non-responses.
BS = bachelor of science; MOT= master's of occupational therapy; MSOT = master's of science in occupational therapy; OT= occupational therapy; OTD = occupational therapy doctorate.

Results

Demographics

A total of 117 (male $n = 21$, female $n = 96$) participants responded to the electronic survey, with 39 incomplete surveys, leaving 78 completed surveys. Through convenience sampling, 9 of the 15 participants who indicated interest in completing the focus group (male $n = 3$, female $n = 6$) participated in the focus group. The largest demographic groups included participants aged 40-49 years ($n = 44$, 38%), had a Bachelor of Science degree in occupational therapy ($n = 48$, 40%), and worked as an occupational therapy practitioner for 16 years or more ($n = 82$, 70%). See Table 1 for all participant demographics.

Quantitative survey results

Approximately one-quarter of the participants reported utilizing the biomechanical approach in their practice with 90%-99% of their hand therapy clients. Nearly 90% of the participants ($n = 105$) used the biomechanical approach with 50% or more of their clients, and all participants reported using the biomechanical approach at least 10% of the time. Approximately one-quarter of the participants reported using an occupation-based approach with at least half of their clients ($n = 30$). Twenty-five participants reported using a combination approach with over half of their clients ($n = 25$). See Table 2 for more details.

Approximately half of the participants routinely screened for psychosocial factors in their clients ($n = 56$, 48%). Thirty-nine percent of the participants ($n = 45$) reported that the frequency their clients present with psychosocial factors is at least weekly. Of the assessments grounded in a biomechanical approach, The Quick-Disabilities of the Arm, Shoulder, and Hand (Quick-DASH; $n = 45$, 40.9%) and the Disabilities of the Arm, Shoulder, and Hand (DASH; $n = 17$, 15.2%) were the 2 most frequented reported assessments used with hand therapy clients. The participants reported that they administer the following assessments at least 75% of the time; the Quick-DASH ($n = 23$, 20.9%), followed by the DASH ($n = 9$, 8%), Patient-Specific Functional Scale (PSFS; $n = 7$, 6.8%), Patient-Rated Wrist and Hand Evaluation (PRWHE; $n = 3$, 2.9%), and the Patient Evaluation Measure (PEM; $n = 1$, 1.0). See Table 3 for more details.

Additionally, participants rated the frequency of their use of psychosocial assessments in hand therapy. Eighty participants (68%) responded that they never administer psychosocial assessments. Approximately 4% ($n = 5$) of the participants administered the Beck Depression Inventory (BDI) 25% of the time to their hand therapy clients. The participants responded that they administer the Hospital Anxiety and Depression Scale (HADS), Impact of Events Scale-Revised (IES-R), and the Primary Care PTSD Screen (PC-PTSD) less than 10% of the time ($n = 2$; 1.8% each respectively). See Table 3.

Significant differences were found between the mean frequency of combined biomechanical and occupation-based approaches and participants who worked in an inpatient hospital setting and those who did not ($P < .01$). Significant differences were also demonstrated between the participants who worked in a physician's office and those who did not ($P = .01$) and between participants in a single setting and those in multiple settings ($P = .01$) throughout their occupational therapy career. A significant mean frequency difference ($P= .03$) indicated that participants who worked in private practice used an occupation-based approach more often than those who worked in other settings. See Table 4 for further details.

No significant differences were found between the years of experience as an occupational therapist or years of experience as a CHT and the frequency of use of the biomechanical, occupation-based, or combined intervention approaches. Furthermore, no statistically significant relationships were found between gender, age, years of experience as an occupational therapist, or years of experience as a CHT and routine psychosocial screening. However, there was a significant relationship between the participants working in a hospital-owned outpatient setting and routinely screening clients for psychosocial factors ($P = .014$).

Open-ended survey questions

Participants identified the following 8 categories as indicators of needing to complete a psychosocial screen as part of the care plan: past medical history ($n = 84$, 77.1%), limited engagement in ADLs ($n = 69$, 63.3%), failure to progress ($n = 27$, 24.8%), poor coping skills ($n = 19$, 17.4%), pain issues ($n = 15$, 13.8%), limited social support ($n = 8$, 7.3%), and communication with the client ($n = 7$, 6.4%).

Table 2
Intervention approaches ($n = 117$).

Participants' % of use of an intervention approach	Biomechanical *n (%)*	Occupation-based *n (%)*	Combined *n (%)*
Do not use	0 (0.00)	1 (0.85)	2 (1.71)
< 10	0 (0.00)	25 (21.37)	38 (32.84)
10-19	2 (1.71)	20 (17.09)	19 (16.24)
20-29	4 (3.42)	19 (16.24)	15 (12.82)
30-39	4 (3.42)	13 (11.11)	8 (6.84)
40-49	2 (1.71)	9 (7.69)	10 (8.55)
50-59	12 (10.26)	8 (6.84)	7 (5.97)
60-69	8 (6.84)	4 (3.42)	3 (2.56)
70-79	14 (11.97)	3 (2.56)	5 (4.27)
80-89	30 (25.64)	8 (6.84)	4 (3.42)
90-99	30 (25.64)	1 (0.85)	3 (2.56)
100	11 (9.40)	6 (5.13)	3 (2.56)

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Table 3
Common assessments used in hand therapy.

Common biomechanical assessments (*n*, %)						
Participants' % of use of assessments	DASH (n = 112)	Quick-dash (n = 110)	MHQ (n = 99)	PEM (n = 98)	PRWHE (n = 102)	PSFS (n = 103)
100%	17 (15.2)	45 (40.9)	0 (0)	0 (0)	3 (2.9)	8 (7.8)
75%	9 (8.0)	23 (20.9)	0 (0)	1 (1.0)	3 (2.9)	7 (6.8)
25%	5 (4.5)	10 (9.1)	0 (0)	0 (0)	10 (9.8)	9 (8.7)
< 10%	16 (14.3)	14 (12.7)	4 (4.0)	5 (5.1)	16 (15.7)	8 (7.8)
0%	65 (58.0)	18 (16.4)	95 (96.0)	92 (93.9)	70 (68.6)	71 (68.9)
Common psychosocial assessments (*n*, %)						
Participants' % of use of assessments	BDI (n = 115)	HADS (n = 112)	IES (n = 112)	IES-R (n = 112)	PC-PTSD (n = 111)	
100%	0 (0)	1 (0.9)	0 (0)	0 (0)	0 (0)	
75%	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)	
25%	5 (4.3)	0 (0)	0 (0)	0 (0)	0 (0)	
< 10%	5 (4.3)	2 (1.8)	1 (0.9)	2 (1.8)	2 (1.8)	
0%	105 (91.3)	109 (97.3)	111 (99.1)	110 (98.2)	109 (98.2)	

Note. Totals may not add up to 117 due to non-responses or use of multiple assessments.
BDI = beck depression inventory; DASH = disabilities of the arm shoulder and hand; HADS = hospital anxiety and depression scale; IES = impact of events scale; IES-R = impact of events scale-revised; MHQ = Michigan hand outcomes questionnaire; PC-PTSD = primary care PTSD screen; PEM = patient evaluation measure tool; PRWHE = patient-rated wrist and hand evaluation; PSFS = patient specific functional scale; Quick-Dash = quick-disabilities of the arm shoulder and hand.

Table 4
Mean ratings of percentage of use of intervention approaches by practice setting.

	Biomechanical		Occupation-based		Combined	
	Mean ± SD	*P*-value	Mean ± SD	*P*-value	Mean±SD	*P*-value
Outpatient (Hospital-owned)	8.37 ± 2.07	.65	4.14 ± 3.06	.48	3.37±2.72	.34
Not-outpatient (Hospital-owned	8.16 ± 2.46		3.71 ± 2.51		3.94±3.08	
Outpatient (Corporate-owned)	7.96 ± 2.34	.14	4.43 ± 2.88	.23	2.93±2.44	.07
Not outpatient (Corporate-owned)	8.57 ± 2.03		3.75 ± 2.93		3.91±3.0	
Outpatient (Therapist owned)	8.41 ± 2.26	.74	4.63 ± 3.21	.12	3.16±2.91	.33
Not outpatient (Therapist owned)	8.27 ± 2.14		3.73 ± 2.74		3.70±2.78	
Inpatient hospital	7.60 ± 2.20	.06	4.12 ± 2.70	.86	2.32±2.08	**< .01**
Not inpatient hospital	8.51 ± 2.14		4.00 ± 3.00		3.86±2.92	
Private practice	7.64 ± 2.81	.16	5.16 ± 3.38	**.03**	3.20±2.38	.52
Not private practice	8.50±1.94		3.71 ± 2.72		3.61±2.94	
Physician's office	8.76 ± 1.90	.17	4.75 ± 3.16	.10	2.58±1.95	**.01**
Not physician's office	8.14 ± 2.26		3.75 ± 2.79		3.87±3.02	
Single setting	8.67 ± 2.05	.13	3.45 ± 2.71	.06	4.39±3.22	**.01**
Multiple settings	8.04 ± 2.25		4.48 ± 2.98		2.91±2.31	

Note. Independent samples t-test. Percentage of Interventional Approach was rated on a 10-point scale: 1 = less than 10%, 2 = within 10%-19%, 3 = within 20%-29%, 4 = within 30%-39%, 5 = within 40%-49%, 6 = within 50%-59%, 7 = within 60%-69%, 8 = within 70%-79%, , 9 = within 80%-89%, 10 = within 90%-99%, 11 = within 100%.

The participants reported screening or addressing these psychosocial factors through the following means: discussing psychosocial factors that influence recovery and participation (n = 100, 91.7%), using a non-standardized observation (n = 32, 29.4%), performing a standardized screen (n = 23, 21.1%), and completing a standardized assessment (n = 12, 11%).

Participants reported that unfamiliarity with standardized assessments (n = 54, 51.9%), time restraints (n = 51, 49.0%), and unavailable preferred assessments (n = 13, 12.5%) were reasons why they limited the administration of assessments or screens that identify psychosocial factors that impact participation in everyday activities. Additional reasons were fear of a client negative response (n = 7, 6.7%), the need to focus on other client factors (n = 4, 3.8%), perceiving that addressing psychosocial factors are outside the occupational therapy scope of practice (n = 4, 3.8%), not covered for reimbursement with worker's compensation clients (n = 4, 3.8%), wanting to build therapeutic rapport (n = 3, 2.9%), and lack of reimbursement for assessment administration (n = 3, 2.9%).

Participants were asked what interventions they use when clients present with psychosocial factors that negatively impact their functional outcomes. Participants reported that referring for mental health support (n = 68, 62.4%) is an intervention they use followed by educating the client on effective coping strategies and pain management (n = 66, 60.6%). The remaining responses were using cognitive behavioral therapy (CBT) techniques (n = 26, 23.9%), building rapport (n = 21, 19.3%), communicating with the client and the health care team (n = 17, 15.6%) identifying support network and community resources (n = 12, 11%), using graded motor imagery (n = 6, 5.5%), and referring the client to alternative therapies (n = 3, 2.8%).

Focus-group results

Five themes emerged from the focus group including hand dysfunction impacts roles and routines, client rapport building takes time, certified hand therapists are hesitant to address psychosocial factors, standardized assessments need to evaluate psychosocial factors that impact client function, and education and communication are critical intervention approaches.

Hand dysfunction impacts roles and routines

Participants identified that clients may experience role changes following a hand injury due to psychosocial factors. One participant stated that their client could no longer provide caregiving to their aging parents, and another client was unable to fulfill his role working in a manufacturing plant due to anxiety symptoms when returning to the site of where his injury occurred. Partic-

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ipants further identified stress, fear, shame, and embarrassment as responses observed in some clients with hand injuries. Further, participants stated that symptoms associated with PTSD, anxiety, and depression are also occasionally noticed. The psychosocial sequelae were viewed as contributors to avoidance of participation in everyday activities including intermittent therapy attendance. One participant shared how their client was unable to perform her normal ADLs, such as playing with her grandchildren and hiking due to psychosocial factors. Another participant shared the story of a client who was not able to wear the clothing she wore the day of her injury because it elicited a post-traumatic stress reaction. Another participant shared the story of one of their clients whose participation in therapy decreased due to symptoms of depression.

Client rapport building takes time

Focus group participants discussed their evaluation process and assessment of their clients' psychosocial factors that negatively impact roles, routines, and occupations. Participants indicated the need for therapists to build a rapport with clients before addressing psychosocial factors. One participant stated that she uses the therapeutic use-of-self to help clients relax. Another participant stated that they first establish a rapport with their clients before asking sensitive questions regarding psychosocial factors. When clients avoid answering questions regarding psychosocial factors on intake forms, participants stated that therapists should take note of the questions left blank so that they can become alert to signs related to psychosocial factors throughout the therapeutic process. If, on subsequent visits, the therapists observe client behaviors that indicate psychosocial factors that impact function, the therapists can then address the psychosocial factors that they have observed. One participant, however, responded that she immediately addresses psychosocial factors as they are presented by the client.

CHT hesitation to address psychosocial factors

Consensus showed among the focus group participants that acknowledging clients' psychosocial factors is pertinent for holistic care. However, participants stated that they are hesitant to address psychosocial factors during the therapeutic process. One participant explained that physicians are opposed to therapists addressing psychosocial factors because clients are referred to therapy to address their neuromusculoskeletal limitations, not psychosocial factors. Likewise, another participant indicated that payers of worker's compensation cases are reluctant to pay for services focused on psychosocial factors.

Standardized assessments need to evaluate psychosocial factors that impact client function

Participants identified common assessments they administer in practice which included: Quick-DASH, PSFS, Orebro Musculoskeletal Pain Questionnaire (OMPQ), Pain Catastrophizing Scale (PCS), and the Tampa Scale of Kinesiophobia (TSK). They choose assessments based on their clients' needs. However, consensus among the participants indicated that there is a lack of standardized assessments that solely identify psychosocial factors related to participation in everyday activities.

Education and communication are critical intervention approaches

Participants discussed interventions they implement when clients present with psychosocial factors. They educate clients on effective coping strategies and pain management. One participant indicated that it is important for therapists to empathize, encourage, and calm clients' fears. Further, participants stated that it is imperative to educate clients on how psychosocial factors and pain can negatively influence participation in everyday activities. The participants discussed providing clients with community resources for mental health counselors or referring clients to mental health counseling as being important interventions. Participants also valued communicating with the physician regarding observations. Like in the open-ended survey results, one participant responded that she finds it effective to engage her clients in graded activities or graded motor imagery.

Mixed method results

For this study, a mixed-methods design was used to collect and analyze the data. Integration of the quantitative and qualitative results allowed for the identification of a connection between the phases.[30] Having a qualitative component, such as the focus group, was beneficial for expanding upon the survey's data. Responses from this study's focus group supported the survey results and answered all research questions.

In the identification of assessments that the participants administered in their practice, there was a contraindication between the quantitative and the qualitative data in that the results of the survey's qualitative questions only identified 2 of the 5 assessments typically administered by therapists in hand therapy: Quick-DASH, PSFS. Additionally, 2 routinely administered assessments, the OREBRO and the TSK were not asked about in the survey but were both identified by one focus group participant. None of the participants in the focus group identified that they administer any of the commonly administered psychosocial assessments presented in the survey. Two participants responded as using the PCS when appropriate. A key finding from the focus group is that there is a need for a standardized assessment tool that focuses on psychosocial factors related to participation in everyday activities.

Regarding the assessment of psychosocial client factors, the survey participants indicated that, during the evaluation process, psychosocial factors are identified by clinical observation, screening, formal and informal assessments, and communication with the clients. The participants in the focus group expanded upon this by describing how hand injuries can negatively affect their clients' participation in everyday activities and roles, such as a worker, family member, or caregiver. However, before psychosocial factors can be addressed, both survey and focus group participants emphasized the importance of utilizing therapeutic use-of-self to build rapport with their clients.

Results from both the focus group and the survey indicated that education and communication were the interventions most used with clients who had psychosocial factors related to their condition. Additionally, participants in both the survey and focus group stated that they use CBT techniques, refer clients to a mental health counselor, educate clients on effective coping strategies and pain management, and communicate with physicians regarding psychosocial factors observed.

Discussion

The findings from this study suggest that occupational therapists who are CHTs do assess and provide interventions for clients with psychosocial factors that negatively impact participation in everyday activities. However, the results suggest that the process is predominately informal, without the use of standardized or norm-referenced assessment tools.

Occupational therapists who are CHTs primarily utilize the biomechanical approach during the intervention process, which is consistent with the findings of a mapping review of hand therapy interventions and outcomes.[18] From 191 articles reviewed, Takata et al.[18] identified exercise, home exercise programs, and orthotic/prosthetic training as the most used interventions in hand

Please cite this article as: M.B. Kurrus, V.D. Jewell, S. Gerardi et al., Psychosocial factors addressed by occupational therapists in hand therapy: A mixed-methods study, Journal of Hand Therapy, https://doi.org/10.1016/j.jht.2022.07.006

therapy. Less than half of the articles reviewed reported the use of occupation-based interventions,[18] which is also consistent with this study's findings.

Results in this study showed that despite the participants' primary use of the biomechanical approach for intervention, a holistic approach was attempted during the intervention process by utilizing principles from both biomechanical and occupation-based approaches. Similarly, Colaianni and Provident[17] surveyed 105 occupational therapists working in hand therapy to examine their perspectives on hand therapy practice. Findings showed that participants used occupation-based interventions with 41%-50% of their clients, while the biomechanical approach was used with 81%-90% of their clients. Previous studies have attributed the predominant use of the biomechanical frame of reference, over a more holistic approach, to the lack of time, space, resources, setting, and cost containment.[14,15,17]

Commonly used assessments in hand therapy also reflect the biomechanical approach.[31] Findings in this study showed that the Quick-DASH, the DASH, and the PSFS were the 3 most administered assessments. Similarly, survey studies conducted by Valdes et al.[32] and Grice[15] showed that hand therapists most commonly administered the DASH and Quick-DASH. The Quick-DASH and DASH may have higher reported frequencies than other assessments secondary to their ease of use, ease of scoring, and because they contain physical, social, and psychological items that gather a more comprehensive inquiry of clients' limitations.[33]

Since the biomechanical approach is prominent in hand therapy, it is not surprising that findings from this study show that most participants do not administer psychosocial assessments. Like the reported findings from Valdes et al.[32] and Grice[15], this study reported unfamiliarity, unavailability, and time constraints as reasons given for not administering psychosocial assessments. Furthermore, participants in the Valdes et al.[32] study, reported that patient-rated outcomes were not useful. Participants in this study reported that administering psychosocial assessments were not appropriate but instead preferred to build a rapport and focus on their clients' physical rehabilitation needs.

In this study, the participants' reported hesitation to address psychosocial factors with worker's compensation clients was an unexpected result. Participants feared a decrease in physicians' referrals and a loss of remuneration from worker's compensation insurers. Similarly, Kilgour et al.[34] showed that health care providers preferred not to treat worker's compensation clients because their professional expertise was often ignored by the worker's compensation insurers. Additionally, remuneration denials and delays in approving treatment decreased health care providers' interest to treat the worker's compensation population.[34] Furthermore, MacDermid et al.[10] indicated that hand therapy clients have experienced discrimination and received poorer medical treatment when psychosocial sequelae were known. As such, occupational therapists who choose to apply a holistic approach to practice, can address the many facets of the client, including their physical, and psychosocial client factors, and in so doing, rectify the practice discrepancies for the worker's compensation population.

While this study found that occupational therapists who are CHTs may not typically perform a formal assessment of clients' psychosocial factors, these factors are not ignored. Participants reported they assess client psychosocial factors primarily through observations and discussion with the clients during the evaluation and the intervention processes. Participants in this study reported that they implemented a variety of psychosocial interventions, such as therapeutic use of self, education, CBT techniques, and graded motor imagery if clients presented with psychosocial factors. These interventions are consistent with a systematic review of effective occupational therapy interventions for clients with work-related low back injuries.[35] In the rehabilitation of individuals with work-related low back injuries, Snodgrass[35] indicated that occupational therapists typically utilize multiple intervention approaches, such as: environmental modifications, therapeutic exercise, and physical agent modalities. This practice is consistent with the common biomechanical and occupation-based interventions utilized by occupational therapists who engage in hand therapy. Unlike Snodgrass,[35] participants in this study reported that they communicate with physicians and other providers regarding clients' presentation of psychosocial factors that negatively impact participation in everyday activities and engagement in therapy. Hannah[4] suggested that early detection of clients' needs for mental health support following a hand injury can determine if clients need to be referred to a physician, mental health counselor, or support group. The results of this study indicate that occupational therapists who are CHTs are aware of clients' psychosocial factors and will refer clients for mental health support when necessary.

Limitations

Limitations of this study include the use of a self-developed survey without established reliability and validity. All survey and focus group questions may have been biased by the primary researcher's own experience as an occupational therapist and CHT. The first author mitigated this risk of instrument bias by receiving feedback from experienced researchers and practitioners, then revising the questions before the survey and focus group were conducted.

Accuracy of the participants' responses could not be determined, and it is unknown if the participants understood or misinterpreted the survey questions. Incomplete responses are a further limitation. The use of an electronic survey may have contributed to a low response rate.[23,28] Additionally, purposive sampling was biased to only include occupational therapists who are CHTs. As such, the results of this study may not be representative of all occupational therapists who treat clients with hand injuries, or of all CHT's. Focus group participants' responses may have been influenced by misperceived expectations and having to interact with other participants and the researcher.[24] The use of a virtual platform to conduct the focus group also posed limitations. Specifically, potentially valuable data were missing due to portions of the focus group session not being recorded. Furthermore, participants' responses are only indicative of the sample and may not be generalizable to all occupational therapists who are CHTs.

Future research

The results of this study raise even more questions about occupational therapy practice among CHTs, indicating the need to conduct further research. For example, the topic of this study could be replicated with a larger sample size and include CHTs from both the occupational therapy and the physical therapy professions. Further research could examine hand therapists' perspectives regarding the development of an assessment of psychosocial client factors related to participation in everyday activities. Future research could also examine how psychosocial client factors differ between the worker's compensation population and non-worker's compensation population treated in the hand therapy setting. Researchers could explore if implementing a holistic approach to intervention, with a purposeful focus on psychosocial client factors, improves patient outcomes. Additional research could identify what factors within hand therapy practice settings support the use of a holistic treatment approach.

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Conclusion

Consistent with previous research, this study showed that occupational therapists in hand therapy practice utilize a biomechanical approach more often than a holistic or occupation-based approach during the intervention process. As previous studies have indicated, the Quick-DASH is the most frequently administered assessment in hand therapy practice.[15,31,32] This study was also consistent with the literature in that it showed that formal psychosocial assessments are not routinely administered by occupational therapists in hand therapy practice.[15,31,32] However, findings from this study indicate that occupational therapists who are CHTs do consider the client from a holistic perspective in that they informally assess psychosocial client factors that limit participation in everyday activities. Future research should focus on approaches to address psychosocial factors in hand therapy clients among both occupational therapists and physical therapists. Additionally, the development of a standardized assessment tool to address the psychosocial client factors of hand therapy clients, may assist occupational therapists to provide a more holistic approach to care.

Author contribution

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Acknowledgments

The primary researcher would like to thank Kathleen Flecky, OTD, OTR/L for her guidance and intellectual contribution to this study.

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Please cite this article as: M.B. Kurrus, V.D. Jewell, S. Gerardi et al., Psychosocial factors addressed by occupational therapists in hand therapy: A mixed-methods study, Journal of Hand Therapy, https://doi.org/10.1016/j.jht.2022.07.006