

Conduct a remote hand therapy course in times of the Covid-19 pandemic

Introduction

With the advent of the corona virus pandemic, many teaching activities have come to a halt, especially activities that require travel. This meant that a 5-day course planned with two therapists from Switzerland traveling to Sri Lanka to teach therapists hand therapy could not occur. However, thanks to the innovation and cooperation of three therapists, the course did take place! The challenges and solutions for making this happen are described here.

Initial plan

Our initial plan to teach a 5-day workshop in Colombo, Sri Lanka in January 2021 was thwarted by Covid-19. The uncertainty about the course of the pandemic and the sudden travel restrictions made travel to Sri Lanka not possible. Since planning this course was already quite advanced, we did not want to simply back out and disappoint our colleagues in Sri Lanka. Since the participants in Sri Lanka had internet access, it was possible to adapt and take on the challenge of planning and teaching an online course instead.

Connections

At the 2013 International Federation of Societies for Hand Therapy (IFSHT) Congress in New Delhi, India, Sarah Ewald met and kept in touch with the Sri Lankan delegate Kalyani Weerasinghe OT, BSc. Sarah's work colleague Birgit Loos went on vacation to Sri Lanka and also visited the clinic at which Kalyani works. Kalyani then invited Sarah and Birgit to conduct a course in hand therapy in Sri Lanka. A 5-day course covering the fundamentals of hand therapy was initially planned and scheduled for the last week in January 2021.



The Basics of Hand Therapy

About the course

In planning this course, we relied heavily on our local connection, Kalyani. Of course, we also needed to know more about the needs and requests of the attendees. An instrument such as the "Hand Therapy Assessments for Use with International Technicians" (HTAIT) (Vargo 2018) might have been helpful. Given that we had no direct access to the participants, we were concerned that asking potential participants to complete a 40-question test might discourage them from participating. Instead, we created an online information needs questionnaire combined with a registration form in 'Google Forms'. These documents inviting participants to sign up for this free online course were mailed to Kalyani, who then distributed these to therapists in Sri Lanka. The Therapists then registered for the course and provided information what they would like to get from this course. They also rated their familiarity with a variety of hand therapy topics.

Twenty-five occupational therapists registered for the course; 48% were women, and 52% were men. Their experience with hand therapy was varied: 16% had no experience, 32% 1-2 years, 32% 3-5 years, and 20% reported six or more years' experience in hand therapy. Of the group, only 8% indicated that 100% of their caseload consisted of patients with hand conditions. Regarding hand therapy topics, the responses were variable, and it appeared that all the topics listed were relevant to the participants.

The information gained aided us in preparing for the course. Preparations included identifying common topics, creating a course schedule, verifying with Kalyani that the proposed dates were acceptable, eg did not conflict with a national holiday in Sri Lanka. Two-hour long sessions on Wednesdays seemed to be the best for both their and our schedules. A subscription to Zoom was purchased. An online resource center was set up for the course, using the 'groupspaces.com group management program', with a free account. From this point on, emails with the participants would take place through the 'groupspaces.com' account. Handouts, learning materials, links to relevant YouTube videos, and assignments would be uploaded there for both students and instructors to access. A virtual learning center was created (Figure 1).



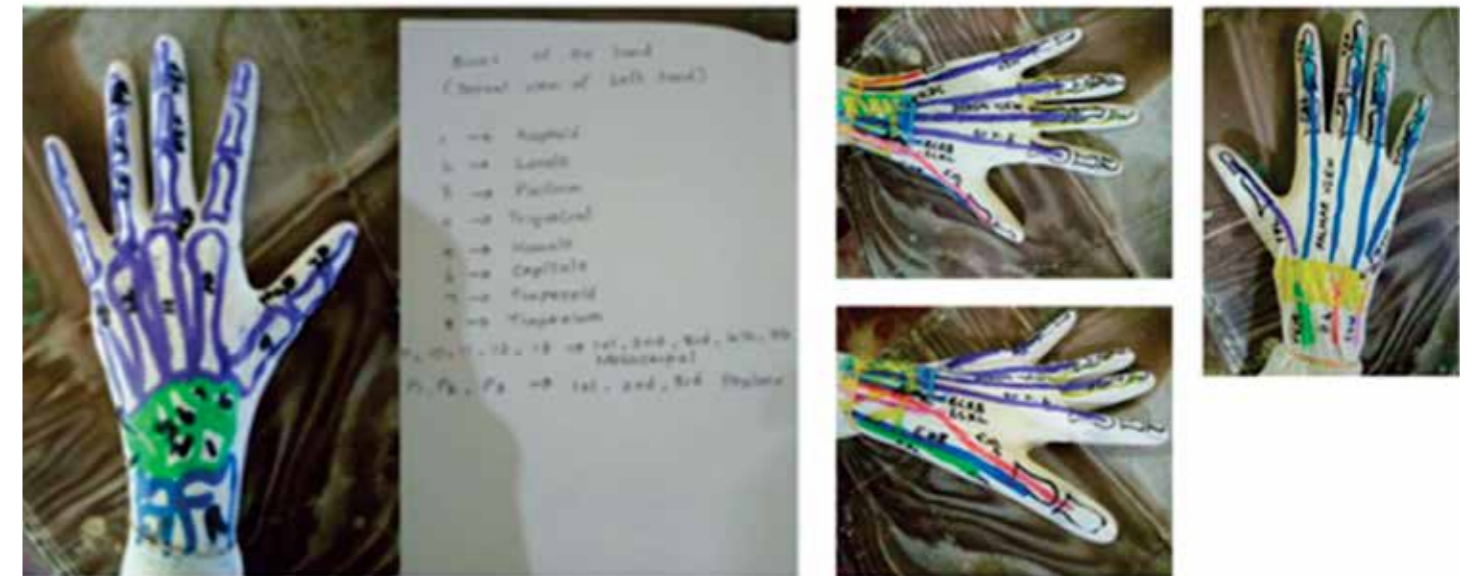
Figure 1:
Participants of the Zoom online course

Participants were sent a schedule with the course dates, the times of the course, login information for the Zoom classroom and the topics: anatomy and physiology, evaluation, treatment of edema and scars, management of distal radius fractures, CMC1 arthritis, and common compression neuropathies. The first online session with 24 occupational therapists from Sri Lanka took place at the end of June 2020. The course spanned three and a half months, consisting of six sessions with 2-4 weeks intervals. Global times of instruction were chosen to suite both lecturers in Switzerland and the participants in Sri Lanka.

The sessions included PowerPoint presentations, question and answer sessions, video sequences, and hands-on activities. The participants worked on assignments in small groups and posted them online before the next session. The assignments focused on elements of evaluation and patient education. Upon completion of the course, our aim was that participants had created an evaluation form and relevant patient education materials for use in their clinics.

The first assignment asked participants to draw the anatomy of the hand on a latex glove (Figure 2A and B). Other instructors have utilized this strategy to teach anatomy (Thacoor et al., 2019; Persson et al., 2019). A recent study found that using a 3-dimensional glove enhanced the anatomical knowledge of students (Lisk et al., 2015).

Figure 2A and B : Assignment 1 : Anatomy gloves



In the following sessions, the assignments were reviewed with the group. Participants were given the option to do the assignments in their language, but to our surprise, all assignments were completed in English.

Ongoing instruction vs. a face-to-face course over a few days

Teaching practical skills virtually such as goniometry or palpation of the carpal bones was challenging. However, we recognized that the online course, spread over several sessions with 2-4-week breaks, offered some distinct advantages (Figure 3).

Example of Assessment Form

Date of Assessment _____
 Clinic No _____ OT No _____

1. Demographic Data
 Name _____ Date of Birth _____
 Age _____ Civil Status _____
 Gender _____ Telephone No _____
 Address _____ Onset of Injury _____
 Occupation _____ Affected hand _____
 Dominant hand _____
 How was the injury happened _____
 Medical interventions done so far? _____


2. Pain Evaluation
 i. Type of pain: Burning Sharp Stinging Superficial Deep
 ii. When / Duration: Day Night When using hand Constant Intermittent

Assignment 1



Group Member
 • Chamika Malwana

Wong-Baker FACES® Pain Rating Scale



0 No Hurt 2 Hurts Little Bit 4 Hurts Little More 6 Hurts Even More 8 Hurts Whole Lot 10 Hurts Worst

3. Scar Evaluation

i. Type of the Scar:
 Hypertrophic Keloid Contraction Adhesion Hypersensitive

ii. Observations
 Color/ Pigmentation _____ Thickness _____
 Length _____ Height _____

4. Grip Evaluation (Poor/ Below Average/ Average/ Above Average/ Good)
 Gross Grip: Cylindrical _____ Finer: Grip Pincer _____
 Spherical _____ Tripoid _____
 Hook _____ Lateral key _____

5. Oedema Evaluation
 Circumference of oedema: Day 1 Day 2 Day 3 Day 4 Day 5

6. Range of Motion Evaluation

Wrist	Day1	Day2	Day3	Thumb	Day1	Day2	Day3
Flexion MCP Flexion				MCP Flexion			
Extension MCP Extension				MCP Extension			
Ulnar Deviation Abduction				Abduction			
Radial Deviation Adduction				Adduction			
Index Finger IP Flexion				IP Flexion			
MCP Flexion IP Extension				IP Extension			
MCP Extension Ring Finger				Ring Finger			
MCP Abduction MCP Flexion				MCP Flexion			
MCP Adduction MCP Extension				MCP Extension			
PIP Flexion MCP Abduction				MCP Abduction			
PIP Extension MCP Adduction				MCP Adduction			
DIP Flexion PIP Flexion				PIP Flexion			
DIP Extension PIP Extension				PIP Extension			
Middle Finger DIP Flexion				DIP Flexion			
MCP Flexion DIP Extension				DIP Extension			
MCP Extension Little Finger				Little Finger			
MCP Abduction MCP Flexion				MCP Flexion			
MCP Adduction MCP Extension				MCP Extension			
PIP Flexion MCP Abduction				MCP Abduction			
PIP Extension MCP Adduction				MCP Adduction			
DIP Flexion PIP Flexion				PIP Flexion			
DIP Extension PIP Extension				PIP Extension			
DIP Flexion							
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Figure 3: Hand Evaluation Assignment: Assessment Form.


Incorporating assignments into the course increased participant engagement and facilitated relevancy to their practice (Figure 4). In turn, the assignments allowed us to evaluate the learning and knowledge levels of the participants. As a result, we could design the subsequent sessions to meet learning needs. The participants had time to process what they had learned and to apply this in practice. We had the opportunity to provide students with constructive feedback on their assignments. In turn, we observed a growth in knowledge as demonstrated in their assignments during the course (see image below). In a short intensive course onsite, this would not have been possible.

PAIN EVALUATION FORM

Name:
 Age:
 DOA:

1) Mention the areas of pain?

L R



2) Is the pain increasing with activity?
 Yes No

3) Duration of pain?
 For a week For two weeks More than 2 weeks

4) Rate your pain level

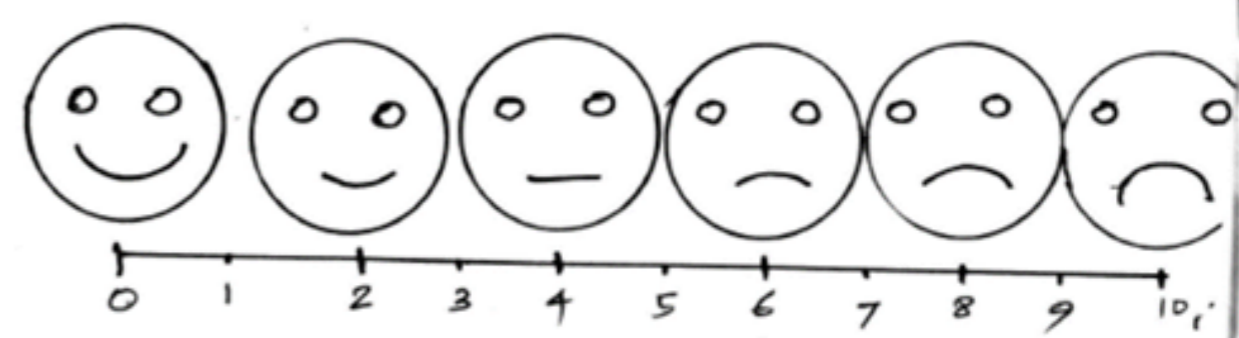


Figure 4: Example of evaluation form designed by student to incorporate in own practice.

Instructional strategies

As English was not the native language of the participants, we endeavored to speak slowly and clearly. After the initial session, we designed the subsequent sessions to alternate the speakers several times to make it livelier for the participants. We also included more videos and hands-on activities to facilitate the transfer of information (Figure 5).



Figure 5: Video sequences

Challenges

As participants' cameras were switched off most of the time, it was not always easy for us to gauge if the session's content was easily understood and/or relevant. Use of the chat function in Zoom meant participants who were primarily on smartphones would not be able to see the presentation; thus, participants did not use the chat, and they rarely turned on their microphone to ask questions. To gauge comprehension, we needed to have more input from participants during each session. We implemented the use of poll questions, a function available in Zoom. We created several poll questions for each session. We quickly discovered that participants only answered poll questions after they were made aware that their responses were anonymous!

Remaining connected to the Zoom platform was a challenge that many participants faced. Many of them had to reconnect often or change to a different device midway through a session. We asked ourselves: would we have been so dedicated, given this situation? We admired their tenacity and obvious desire to learn.

Upon conclusion of the course

We asked students to complete an online evaluation of the course. Fifteen participants responded: 93,3% rated the course as very good, 60% percent felt that six sessions over 3.5 months were ideal, 93,3% felt the course learning materials were comprehensive, 73% felt that the amount of time required to complete assignments between sessions was justified as the assignments were helpful in clinical practice. All students indicated that they were able to access learning materials on the 'groupspaces.com' website. Some comments were as follows: "The hand therapy workshop was very comprehensive. Ms. Sarah and Ms. Birgit you have done a great job. Explanations were very clear. Both of you refreshed our knowledge regarding anatomy of the hand, assessments and occupational therapy approach for hand injuries." "I learnt about new techniques in hand therapy." "It was a great opportunity to increase practical knowledge and being updated".

Financial implications

Both instructors volunteered their time to prepare and teach the course. A zoom pro account was utilized, and instructors paid the fees for this account. A free online resource center was created using 'groupspaces.com'. There was no fee to participate in the course for participants, but they did need to have access to the internet, which for some of them was a relatively large expense.

Conclusions

When traveling to a country is not feasible, teaching colleagues about hand therapy does not have to come to a halt. In this case, the Covid-19 pandemic pushed us all to look for alternative solutions instead of planned onsite courses. This first attempt at delivering online education for therapists was not without challenges, but it was possible! Finally, the initial course described in this article was completed, but at the request of the participants, it continued in 2021, with additional instructors from Canada, the USA, Sweden, the UK, and the Netherlands volunteering their time and expertise. Additionally, the group of participants has been expanded to include therapists from nearby Bangladesh, also a connection made through IFSHT.

A local partner who can facilitate connections in a country and provide feedback about cultural habits, knowledge levels, and specific information about ideal dates and times is essential. The willingness of instructors to donate their time, do careful preparation, and adapt their instructional style to an online format is also essential. As Kruger and Chowers (2020) have pointed out, delivering medical education through an online platform brings the cost of education within reach of many more medical professionals, which allows a more extensive and more diverse group of medical professionals to access educational offerings. Our experience demonstrates that an online hand therapy course for therapists is cost-effective, can be delivered effectively, is environmentally friendly, and supports the development of hand therapy around the world.

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IFSHT is excited to introduce their new quarterly newsletter namely REACH. This new publication aims to collate Research, Education, Achievement and Countries (Clinicians) in Hand and upper limb therapy around the world. The first issue was published in May 2021 and a link to it can be found at <https://ifsht.org/publications>. Future issues will also be archived here.

Each issue presents a list of pertinent recent research in hand therapy. In the July 2021 edition there is also a profile of a study from the Netherlands which examined if aspects of the patient's mindset were associated with outcome following carpal tunnel release (CTR).

Each issue of REACH will provide readers with an informative article on different types of research evidence and how to make informed decisions from these. In the July 2021 issue Mia Erickson, a CHT from Midwestern University, discusses Level 1 types of research evidence and what to consider when interpreting or choosing different study designs.

At the 2019 IFSHT Triennial Congress, there were a number of recipients of the Lifetime Achievement Award. In the July 2021 issue of

REACH, we profile two of those recipients, Adiel Estrada and Lynne Feehan.

In this current issue we highlight Debbie Larson's work on the effectiveness of health coaching and mindfulness within Hand Therapy programmes. Debbie is an Accredited Hand Therapist and a Mindfulness Based Cognitive Therapy (MBCT) and Mindfulness Based Stress Reduction (MBSR) Teacher. She highlights the enhancement of her own skills to support patients especially those with psychosocial risk factors within her role as a Hand Therapist.

Each issue will provide a spotlight on a different IFSHT member society. In this issue learn more about the Polish society.

In 2020-2021, the world faced an unprecedented year of disruption due to the COVID 19 pandemic. We saw organisations display creative approaches to continue to meet the aims and objectives of their organisations. The committee overseeing the British Association of Hand Therapy (BAHT) offered the 2020 BAHT annual conference 100% online and free. Read the July issue of REACH to read more on this event.

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REACH

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