## **Short Report**

# Experience and attitudes in relation to telepsychiatry use among non-consultant doctors

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## Abstract

Introduction: In order to minimise physical interaction during the COVID-19 pandemic, telepsychiatry became a key part of clinical practice for many psychiatrists.

**Methods:** This study involved an exploratory, cross-sectional, opt-in online survey circulated to non-consultant doctors in psychiatry working in Ireland. It assessed experience and attitudes in relation to telepsychiatry use.

**Discussion:** The response rate was 11.6% (n = 61). Forty-eight individuals (78.6%) had delivered clinical care using telepsychiatry. Fifty-nine individuals (96.7%) were unfamiliar with telepsychiatry prior to the pandemic. Most respondents had not received specific training around use of a telepsychiatry platform (86.9%, n = 63) and were unaware of published guidelines around its optimal use (54.1%, n = 33). Respondents' concerns included issues around connectivity, medico-legal uncertainty and clinical effectiveness.

**Conclusion:** Conclusions drawn are limited by the potential for selection bias in this study. Nonetheless the paper has highlighted important issues including the need for more research assessing telepsychiatry clinical and curricular experience. Additional curricular interventions during training could build skillset and confidence in telepsychiatry.

Keywords: COVID-19; psychiatry; telemedicine

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## Introduction

In 2020, attempts to contain the COVID-19 virus cataclysmically changed psychiatric care (Kelly 2020; Lyne *et al.* 2020; Whaibeh *et al.* 2020). Throughout healthcare, telemedicine use exponentially increased, bringing challenges and opportunities (Hollander and Carr 2020; Whaibeh *et al.* 2020). Telemedicine utilises technologies and telecommunications to deliver healthcare where patients are geographically separated from providers (Harst *et al.* 2019)

Telemedicine has had success internationally, including in psychiatry (Haxhihamza et al. 2020; Kapoor *et al.* 2020; Kissi *et al.* 2020; Uscher-Pines *et al.* 2020). It has been touted as key in addressing healthcare challenges, but obstacles impede widespread adoption (Kho *et al.* 2020) including deficiencies in training and experience (Punatar *et al.* 2022). The importance of training in this area is acknowledged by the European Psychiatric Association (2024), with the European Board Examination in Psychiatry, due to begin in 2025, listing digital psychiatry as a part of the syllabus.

## **Methods**

## Study design

This study involved an exploratory, cross-sectional, opt-in online survey.

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Study aim

This study aimed to explore the experience and attitudes of non-consultant doctors working in Ireland to using telepsychiatry. It was conducted, following the experiences of the COVID-19 pandemic, to identify future training needs.

## Study objectives

The study was conducted among non-consultant doctors working in Ireland to establish:

- 1. the level of clinical experience and interest in telepsychiatry
- 2. attitudes towards use of telepsychiatry
- 3. the training experience in relation to telepsychiatry

## Study procedures

## Participant selection

Participants were selected based on their being a non-consultant doctor, working in psychiatry in Ireland, whose details were registered on the College of Psychiatrists of Ireland (CPsychI) database. In Ireland, psychiatry training is divided into two parts—basic specialist training (BST) and higher specialist training (HST).

## Participant recruitment

The CPsychI sent an invitation email to participate to all eligible doctors. Two reminder email links followed. The invitation contained an explanatory statement with a link to the

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questionnaire, which was designed using SurveyMonkey. It was made clear that participation was voluntary and that responses would be anonymous. Consent was implied by return of the completed survey. The survey was disseminated between late 2021 and early 2022.

#### Survey instrument

The survey used Likert-scale, yes/no and true/false answer types. It ended with a free-text response area. Telepsychiatry was stated to refer to the use of information technology platforms with both audio and visual access which facilitate remote clinical reviews. Previously used questionnaires were adapted for use in the survey. These included a survey used by Orchard et al. (2021) assessing telepsychiatry use, which was formed from five existing questionnaires (Horvath and Greenberg 1989; Robillard and Bouchard 2004; Schneider 1999; Stiles et al. 1994; Yip et al. 2003), and the Telemedicine Utility Questionnaire (TUQ) (Langbecker et al. 2017; Parmanto et al. 2016). However, in a systematic review of telemedicine assessment tools and their measurement properties, none of the surveys reviewed, the TUQ included, demonstrated a rigorous validation process to support their use (Barsom et al. 2020). Also while the survey used by Orchard et al. (2021) was iteratively developed, piloted, and revised before use, reliability and validity were not studied (Cruz et al. 2021).

## Analysis plan

Descriptive analysis was completed using IBM SPSS 29.

## Results

The response rate was 11.6% (n = 61). Of respondents, 39.3% (n = 24) were in BST, 52.5% (n = 32) were in HST and 8.2% (n = 5) were not in a training post.

Most respondents were 'interested' or 'very interested' in using telepsychiatry in their clinical practice (62.3%, n = 38), with 16.4% (n = 10) 'disinterested' or 'very disinterested' and 21.3% (n = 13) 'undecided'. Respondents had varying levels of experience of telepsychiatry: none (n = 13, 21.3%), one hour (n = 1, 1.6%), two to five hours (n = 10, 16.4%), six to twenty hours (n = 12, 19.7%) and more than twenty hours (n = 25, 41%). Most were unfamiliar with telepsychiatry prior to the COVID-19 pandemic (96.7%, n = 59).

## Telepsychiatry training

The 'true/false' and 'yes/no' questions were answered by all 61 respondents. There was a near even split as to whether individuals felt that they had sufficient experience to provide telepsychiatry services, with 50.8% (n = 31) feeling inadequately experienced to deliver care through this medium. Forty-four respondents (72.1%) felt psychiatric training, as is, is insufficient to become competent in telepsychiatry. Only eight individuals (13.1%) had received specific training around use of a telemedicine/telepsychiatry platform. Thirty-nine respondents (63.9%) felt there were no experts in the field of telepsychiatry to provide mentorship. Most were unaware of guidelines around telemedicine/telepsychiatry use in Ireland (54.1%, n = 33). See Table 1 for more details on 'yes/no' questions.

## Opinions on use

Most respondents felt that telepsychiatry could be used to provide adequate follow-up (82%, n = 50), establish therapeutic alliance (78.7%, n = 48), express empathy (95.1%, n = 58), and that adverse

Table 1. Yes/no responses

Statement	No. of Respondents (%) Answering Yes	No. of Respondents (%) Answering No
l was unfamiliar with telepsychiatry prior to the COVID-19 pandemic	59 (96.7%)	2 (3.3%)
I feel I have insufficient experience of telepsychiatry to deliver care through it	31 (50.8%)	30 (49.2%)
BST and HST psychiatric training, as is, is insufficient for one to become competent in telepsychiatry	44 (72.1%)	17 (27.9%)
I have received specific training around use of a telemedicine/ telepsychiatry platform	8 (13.1%)	53 (86.9%)
I am aware of specific guidelines around telemedicine/ telepsychiatry use in Ireland (e.g. those issued by the HSE National Covid 19 Telehealth Steering Committee, the State Claims Agency, the Irish Medical Council, the Medical Protection Society and the College of Psychiatrists of Ireland)	28 (45.9%)	33 (54.1%)
There are no experts in the field of telepsychiatry to provide mentorship	39 (63.9%)	22 (36.1%)

outcomes were not more common than for face-to-face reviews (57.4 %, n = 35). Most disagreed with the statements that patients do not like telepsychiatry (70.5%, n = 43), and that they prefer telephone reviews to using teleconferencing technology (59%, n = 36). However, the majority felt that telepsychiatry is not as effective as face-to-face psychiatry (73.8%, n = 45) and that there is a lack of evidence for its efficacy (55.7%, n = 34).

The respondents had concerns regarding some patient subgroups. The majority felt certain cultures would not accept telepsychiatry (86.9%, n = 53) and that particular mental illnesses could not be treated using it (67.2%, n = 41), including managing paranoid patients (65.6%, n = 40). Most felt that care could be provided through telepsychiatry for those with physical or mental disabilities (83.6%, n = 51) and children (90.2%, n = 55).

Thirty-one respondents (50.8%) felt that disruptive behaviour could not be managed using telepsychiatry. Most felt non-verbal cues could be missed (63.9%, n = 39) and that eye contact (54.1%, n = 33) and social interactions (52.5%, n = 32) could not be properly assessed using telepsychiatry. While the majority felt patients did not find telepsychiatry to be too impersonal (52.5%, n = 32), most felt that clinicians did (54.1%, n = 33), and that at least one face-to-face session would be needed before utilising telepsychiatry (52.5%, n = 32).

## Practical concerns

Most respondents felt that the technology setup was not too complicated for clinicians (78.7%, n = 48). However this reduced to 50.8% (n = 31) when it came to patients. This was especially clear in relation to older patients where it was believed that using

#### Table 2. True/false responses

Statement	No. of Respondents (%) answering True	No. of Respondents (%) answering False
One cannot do individual therapy with telepsychiatry	7 (11.5%)	54 (88.5%)
Adequate follow-up services cannot be provided with telepsychiatry	11 (18%)	50 (82%)
There are more adverse outcomes with telepsychiatry than face-to-face psychiatry	26 (42.6%)	35 (57.4%)
One cannot see more than one person at a time using telepsychiatry	21 (34.4%)	40 (65.6%)
Patients do not like telepsychiatry	18 (29.5%)	43 (70.5%)
Patients prefer telephone reviews to those using teleconferencing technology	25 (41%)	36 (59%)
Telepsychiatry is not as effective as face-to-face psychiatry	45 (73.8%)	16 (26.2%)
There is lack of evidence for the efficacy of telepsychiatry	34 (55.7%)	27 (44.3%)
One cannot use hands-on tools to assess functioning or to provide therapy with telepsychiatry	32 (52.5%)	29 (47.5%)
One cannot establish therapeutic alliance with telepsychiatry	13 (21.3%)	48 (78.7%)
One cannot perform a physical exam with telepsychiatry	56 (91.8%)	5 (8.2%)
One cannot manage emergencies related to safety with telepsychiatry	33 (55.1%)	28 (45.9%)
One cannot do family/group therapy with telepsychiatry	14 (23%)	47 (77)
One cannot use telepsychiatry to treat certain mental illnesses	41 (67.2%)	20 (32.8%)
Setting professional boundaries is a problem with telepsychiatry	15 (24.6%)	46 (75.4%)
Paranoid patients do not like telepsychiatry	40 (65.6%)	21 (34.4%)
People with physical or mental disabilities cannot use telepsychiatry	10 (16.4%)	51 (83.6%)
Disruptive behaviour cannot be managed with telepsychiatry	31 (50.8%)	30 (49.2%)
Certain cultures will be less accepting of telepsychiatry	53 (86.9%)	8 (13.1%)
Telepsychiatry cannot be performed in foreign languages with interpreters	10 (16.4%)	51 (83.6%)
One cannot properly perform developmental and neurological assessments with telepsychiatry	46 (75.4%)	15 (24.6%)
Patients find telepsychiatry to be too impersonal	29 (47.5%)	32 (52.5%)
Clinicians find telepsychiatry to be too impersonal	33 (54.1%)	28 (45.9%)
Children are not able to talk to a screen	6 (9.8%)	55 (90.2%)
One would need at least one face-to-face session before applying telepsychiatry	32 (52.5%)	29 (47.5%)
One cannot express empathy with telepsychiatry	3 (4.9%)	58 (95.1%)/
Non-verbal cues are missed with telepsychiatry	39 (63.9%)	22 (36.1%)
Eye contact cannot be assessed with telepsychiatry	33 (54.1%)	28 (45.9%)
One cannot properly assess social interactions with telepsychiatry	32 (52.5%)	29 (47.5%)
The technology setup required by clinicians for telepsychiatry is too complicated	13 (21.3%)	48 (78.7%)
The technology setup required by patients for telepsychiatry is too complicated	30 (49.2%)	31 (50.8%)
Poor internet connection is a roadblock to implementing telepsychiatry	60 (98.4%)	1 (1.6%)
Older patients struggle to use the necessary technology	59 (96.7%)	2 (3.3%)
Rotating jobs makes it difficult for NCHDs to get set up with the necessary hardware and software	53 (86.9%)	8 (13.1%)
Telepsychiatry favours patients who have means	54 (88.5%)	7 (11.5%)
The liability risks involved in telepsychiatry are unknown	55 (90.2%)	6 (9.8%)
Privacy is an issue with telepsychiatry	49 (80.3%)	12 (19.7%)
Telepsychiatry is not properly regulated	48 (78.7%)	13 (21.3%)
Performing telepsychiatry from home would be uncomfortable	25 (41%)	36 (59%)
Coordination of obtaining vital signs and labs with telepsychiatry is not feasible	36 (59%)	25 (41%)

technology could be a struggle (96.7%, n = 59). Telepsychiatry was also felt to favour patients who have means (88.5%, n = 54). Poor internet connection was felt to be a roadblock to use (98.4%, n = 60). Rotating jobs was felt to impede doctors in getting set up

with the necessary hardware and software (86.9%, n = 53). In addition, most believed that the liability risks involved in telepsychiatry are unknown (90.2%, n = 55), that telepsychiatry is not properly regulated (78.7%, n = 48) and had privacy concerns

(80.3%, n = 49). See Table 2 for more details on 'true/false' questions.

## Discussion

In this study 78.6% of respondents had delivered clinical care through telepsychiatry. Most respondents (59%) felt that patients preferred assessment using teleconferencing technology compared to reviews using telephone only. Videoconferencing allows visualisation, which is important in assessing a patient's mental state (Looi and Pring 2020). A qualitative study showed telepsychiatry was superior to telephoning in clinical consultation (Donaghy *et al.* 2019).

In this study, 96.7% of respondents were unfamiliar with telemedicine prior to the pandemic. While most felt telepsychiatry added to patient care, the majority (86.9%) had received no telemedicine training, with 54.1% unaware of guidance issued by governing bodies. In a UK National Health Service survey, the majority of healthcare professionals surveyed were unfamiliar with telemedicine prior to the COVID-19 pandemic (Elawady *et al.* 2020). Like in this study, most felt that telemedicine enhanced patients' care but had not received training and were unaware of General Medical Council guidance concerning remote consultations (Elawady *et al.* 2020).

While it is accepted that telemedicine increases access to care, this does not necessarily translate to an increase in quality of care. One way to narrow that gap is through optimising training (Punatar et al. 2022). Telemedicine training literature has identified needs for both technical proficiency and care delivery quality assurance (Pathipati et al. 2016; Waseh and Dicker 2019). Paucity of training means that non-consultant doctors based in Ireland may not be adequately prepared to provide high-quality care via telemedicine, and may feel it is beyond their scope to do so. The American Telemedicine Association notes that most major medical associations recommend training in both the technical elements of telemedicine, and patient introduction to the virtual clinic space, which should include addressing scope and limitations of use (American Telemedicine Association, 2020). This is reflected in guidelines around telemedicine use in Ireland (College of Psychiatrists of Ireland 2020; HSE National Covid 19 Telehealth Steering Committee 2020), which most of the respondents in this study were unaware of. Indeed in this study 72% of respondents felt their training did not provide for them to become competent in telepsychiatry delivery. Lawrence et al. (2020) found that while most postgraduate medical trainees were digital natives, this did not necessarily translate into competency with telemedicine use. This is inkeeping with previous literature (Pathipati et al., 2016). Thirteen respondents (21.3%) in this study felt the technology setup for telemedicine for clinicians was too complicated, with this increasing to thirty (49.2%) in relation to patients.

While the pandemic accelerated the addressing of technical, regulatory and financial barriers to telemedicine (Scott Kruse *et al.* 2018), the success of long term implementation of telemedicine rests on the concurrent management of cultural (Shore *et al.* 2006), human (Gagnon *et al.* 2003; Demiris *et al.* 2010) and organisational change (Jennett *et al.* 2003; Faife 2008; Cresswell and Sheikh 2013). The challenges for non-consultant doctors in Ireland are well documented (Humphries *et al.* 2018; Humphries *et al.* 2020). In this study, issues using telemedicine arising from rotating jobs, unknown liability risks, perceived lack of regulation and poor internet connection were noted. An Irish study on video-enabled

healthcare found that technical issues were experienced by 34% of patients with video appointments, particularly those in rural settings (Lane and Clarke 2021)

In this study, most respondents felt that telepsychiatry was not as effective as face-to-face psychiatry (73.8%, n = 45) and that there is a lack of evidence for its efficacy (55.7%, n = 34). While in randomised trials, use of videoconferencing compared with traditionally-delivered clinical care, had no substantive negative impacts on disease progression or service use and resulted in reduced costs, of note, most of these studies were underpowered (Armfield *et al.* 2015; Abimbola *et al.* 2019; Ignatowicz *et al.* 2019).

While in this study only 38.2% of clinicians agreed to liking using telepsychiatry, most (70.5%) felt patients found it acceptable. The literature demonstrates overall satisfaction with telemedicine among clinicians and patients (Hanson *et al.* 2019; Kissi *et al.* 2020; Haxhihamza *et al.* 2021). However, telepsychiatry is not without its challenges for both groups (Cowan *et al.* 2019; Lopez *et al.* 2019; Uscher-Pines *et al.* 2020), and despite remote assessment options, some patients still require in-person review (Kapoor *et al.* 2020). In this study limitations were acknowledged including in the areas of physical examination, management of emergencies and its use in certain patient subgroups and illnesses.

## Conclusion

There are limitations to this study. The selection bias resulting from the low response rate suggests that the sample included are not truly representative of the population to be studied, and limits conclusions drawn. Given that the survey was disseminated electronically, it is possible that those who responded are more computer literate and more likely to be positively disposed to information technology generally. We might even infer that they represent a higher proportion of early adopters of telepsychiatry. There were also constraints due to the questionnaire used. A shorter survey distributed through different means may have improved response rates. Future research efforts could include the use of a control group, with comparisons on the duration and numbers of appointments, outcomes, and discussion of specific risks arising from remote interviewing.

That said, this study provides an important insight into the experience and attitudes of non-consultant doctors regarding telepsychiatry use and allows an opportunity to assess the impact of its rapid uptake during the COVID-19 pandemic. The integration of information technology innovations into large healthcare organisations, like the HSE, can be challenging (Sligo *et al.* 2017) so it is encouraging to see the ability to urgently adapt demonstrated. While telepsychiatry has not been maintained in anyway near the scale of usage during the peak of the pandemic, it is still a useful tool and lessons can be learned for the training of non-consultant doctors in psychiatry in Ireland, and beyond, into the future. More research is needed to assess telepsychiatry clinical and curricular experience, interest, and concerns. Additional curricular interventions during training could build skillset and confidence.

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Competing interests. The authors declare none.

Ethical standard. All procedures contributing to this work comply with the ethical standards of the relevant national and institutional committee on human experimentation and with the Helsinki Declaration of 1975, as revised in 2008. Ethical approval for publication of this research has been provided by the local Ethics Committee.

#### References

- Abimbola S, Keelan S, Everett M, Casburn K, Mitchell M, Burchfield K, Martiniuk A (2019). The medium, the message and the measure: a theory-driven review on the value of telehealth as a patient-facing digital health innovation. *Health Economics Review* 9(1), 21.
- American Telemedicine Association (2020). Practice Guidelines and Resources. (https://www.americantelemed.org/resource/learning-development/). Accessed 19 March 2020.
- Armfield N, Bradford M, Bradford N (2015). The clinical use of Skype—For which patients, with which problems and in which settings? *International Journal of Medical Informatics* 84, 737–742.
- Barsom E, van Hees E, Bemelman W, Schijven M (2020). Measuring patient satisfaction with video consultation: a systematic review of assessment tools and their measurement properties. *International Journal of Technology Assessment in Healthcare* **36**(4), 356–362.
- College of Psychiatrists of Ireland (2020). Telepsychiatry and its use. Draft form. (https://collegeofpsychiatryireland.newsweaver.co.uk/icfiles/1/32854/ 58674/6317427/52c68b6abc1fa80ae9780506/draft%205%20college%20position %20statement%20on%20telepsychiatry%20-%20post%20managemen\_2.pdf). Accessed 4 January 2024.
- Cowan K, McKean A, Gentry M, Hilty D (2019). Barriers to use of telepsychiatry: clinicians as gatekeepers. *Mayo Clinic Proceedings* 94(12), 2510-2523. Elsevier.
- Cresswell K, Sheikh A (2013). Organizational issues in the implementation and adoption of health information technology innovations: an interpretative review. *International Journal of Medical informatics* 82, e73–e86.
- Cruz C, Orchard K, Shoemaker E, Hilty D (2021). A survey of residents/ fellows, program directors, and faculty about telepsychiatry: clinical experience, interest, and views/concerns. *Journal of Technology in Behavioral Science* **6**, 327–337.
- Demiris G, Charness N, Krupinski E, Ben-Arieh D, Washington K, Wu J, Farberow B (2010). The role of human factors in telehealth. *Telemedicine and e-Health* 16, 446–453.
- Donaghy E, Atherton H, Hammersley V, McNeilly H, Bikker A, Robbins L, Campbell J, McKinstry B (2019). Acceptability, benefits, and challenges of video consulting: a qualitative study in primary care. *British Journal of General Practice* 69, 586–e594.
- Elawady A, Khalil A, Assaf O, Toure S, Cassidy C (2020). Telemedicine during COVID-19: a survey of health care professionals perceptions. *Monaldi Archives for Chest Disease* **90**, 1424, 582-584.
- European Psychiatric Association (2024). European Board Examination in Psychiatry. List of Psychiatry Topics 2024-2025. (https://www.europsy.net/ european-board-exam/). Accessed 4 October 2024.
- Faife D (2008). Reflections on developing an assistive technology/telecare service as a model for change management, creative thinking and workforce development. *Housing, Care and Support* 11, 34–42.
- Gagnon M, Godin G, Gagne C, Fortin J, Lamothe L, Reinharz D, Cloutier A (2003). An adaptation of the theory of interpersonal behaviour to the study of telemedicine adoption by physicians. *International Journal of Medical informatics* **71**, 103–115.
- Hanson R, Truesdell M, Stebbins G, Weathers A, Goetz C (2019). Telemedicine vs office visits in a movement disorders clinic: comparative satisfaction of physicians and patients. *Movement Disorders Clinical Practice* 6, 65–69.
- Harst L, Lantzsch H, Scheibe M (2019). Theories predicting end-user acceptance of telemedicine use: systematic review. *Journal of Medical Internet Research* **21**, e13117.
- HSE National Covid 19 Telehealth Steering Committee (2020). Clinical governance guidance on secure video and audio consultations during the emergency measures to address Covid 19. (https://healthservice.hse. ie/filelibrary/staff/clinical-telehealth-governance-guidance.pdf). Accessed 4 January 2024.
- Haxhihamza K, Arsova S, Bajraktarov S, Kalpak G, Stefanovski B, Novotni A, Milutinovic M (2021). Patient satisfaction with use of telemedicine in

university clinic of psychiatry: Skopje, North Macedonia during COVID-19 pandemic. *Telemedicine and e-Health* **27**, 464–467.

- Hollander J, Carr B (2020). Virtually perfect? Telemedicine for COVID-19. New England Journal of Medicine 382, 1679–1681.
- Horvath A, Greenberg L (1989). Development and validation of the Working Alliance Inventory. *Journal of Counseling Psychology* **36**, 223–233.
- Humphries N, Crowe S, Brugha R (2018). Failing to retain a new generation of doctors: qualitative insights from a high-income country. BMC Health Services Research 18, 1–9.
- Humphries N, McDermott A, Creese J, Matthews A, Conway E, Byrne J (2020). Hospital doctors in Ireland and the struggle for work-life balance. *European Journal of Public Health* **30**, 32–35.
- Ignatowicz A, Atherton H, Bernstein C, Bryce C, Court R, Sturt J, Griffiths F (2019). Internet videoconferencing for patient-clinician consultations in long-term conditions: a review of reviews and applications in line with guidelines and recommendations. *Digital Health* 5, 2055207619845831.
- Jennett P, Yeo M, Pauls M, Graham J (2003). Organizational readiness for telemedicine: implications for success and failure. *Journal of Telemedicine and Telecare* 9, 27–30.
- Kapoor A, Guha S, Das M, Goswami K, Yadav R (2020). Digital healthcare: the only solution for better healthcare during COVID-19 pandemic? *Indian Heart Journal* 72, 61–64.
- Kelly B (2020). Coronavirus disease: challenges for psychiatry. The British Journal of Psychiatry 217, 352–353.
- Kho J, Gillespie N, Martin-Khan M (2020). A systematic scoping review of change management practices used for telemedicine service implementations. BMC Health Services Research 20, 1–16.
- Kissi J, Dai B, Dogbe C, Banahene J, Ernest O (2020). Predictive factors of physicians' satisfaction with telemedicine services acceptance. *Health Informatics Journal* 26, 1866–1880.
- Lane D, Clarke V (2021). Report on the findings of the first national evaluation of the use of video enabled health care in Ireland. Health Services Executive. (https://healthservice.hse.ie/filelibrary/onmsd/report-on-the-findings-of-the-firstnational-evaluation-of-the-use-of-video-enabled-health-care-in-ireland.pdf). Accessed 4 January 2024.
- Langbecker D, Caffery L, Gillespie N, Smith A (2017). Using survey methods in telehealth research: a practical guide. *Journal of Telemedicine and Telecare* 23, 770–779.
- Lawrence K, Hanley K, Adams J, Sartori D, Greene R, Zabar S (2020). Building telemedicine capacity for trainees during the novel coronavirus outbreak: a case study and lessons learned. *Journal of General Internal Medicine* 35, 2675–2679.
- Looi J, Pring W (2020). To tele-or not to telehealth? Ongoing COVID-19 challenges for private psychiatry in Australia. *Australasian Psychiatry* 28, 511–513.
- Lopez A, Schwenk S, Schneck C, Griffin R, Mishkind M (2019). Technologybased mental health treatment and the impact on the therapeutic alliance. *Current Psychiatry Reports* 21, 76.
- Lyne J, Roche E, Kamali M, Feeney L (2020). COVID-19 from the perspective of urban and rural general adult mental health services. *Irish Journal of Psychological Medicine* **37**, 181–186.
- Orchard K, Cruz C, Shoemaker E, Hilty D (2021). A survey comparing adult and child psychiatry trainees, faculty, and program directors' perspectives about telepsychiatry: implications for clinical care and training. *Journal of Technology in Behavioral Science* **6**, 338–347.
- Pathipati A, Azad T, Jethwani K (2016). Telemedical education: training digital natives in telemedicine. *Journal of Medical Internet Research* 18, e193.
- Parmanto B, Lewis A, Graham K, Bertolet M (2016). Development of the telehealth usability questionnaire (TUQ). *International Journal of Telerehabilitation* 8, 3–10.
- Punatar S, Khan B, Carrillo A, Rajnarayanan R (2022). Telemedicine education amidst COVID-19: review of literature and call to action. *Future of Medical Education Journal* 12(2), 3-8.
- Robillard G, Bouchard S (2004). The sense of presence in videoconferencing and emotional engagement. *CyberPsychology and Behavior* 7, 280–281.
- Schneider P (1999). Mediators of distance communication technologies in psychotherapy: Development of a measure. Poster presented at the 107th Annual Convention of the American Psychological Association, Boston, MA.

- Scott Kruse C, Karem P, Shifflett K, Vegi L, Ravi K, Brooks M (2018). Evaluating barriers to adopting telemedicine worldwide: a systematic review. *Journal of Telemedicine and Telecare* 24, 4–12.
- Shore J, Savin D, Novins D, Manson S (2006). Cultural aspects of telepsychiatry. *Journal of Telemedicine and Telecare* 12, 116–121.
- Sligo J, Gauld R, Roberts V, Villa L (2017). A literature review for large-scale health information system project planning, implementation and evaluation. *International Journal of Medical Informatics* 97, 86–97.
- Stiles W, Reynolds S, Hardy G, Rees A, Barkham M, Shapiro D (1994). Evaluation and description of psychotherapy sessions by clients using the session evaluation questionnaire and the session impacts scale. *Journal of Counseling Psychology* 41, 175–185.
- Whaibeh E, Mahmoud H, Naal H (2020). Telemental health in the context of a pandemic: the COVID-19 experience. *Current Treatment Options in Psychiatry* 7, 198–202.
- Uscher-Pines L, Sousa J, Raja P, Mehrotra A, Barnett M, Huskamp H (2020). Suddenly becoming a "virtual doctor": experiences of psychiatrists transitioning to telemedicine during the COVID-19 pandemic. *Psychiatric Services* **71**, 1143–1150.
- Waseh S, Dicker A (2019). Telemedicine training in undergraduate medical education: mixed-methods review. *JMIR Medical Education* 5, e12515.
- Yip M, Chang A, Chan J, MacKenzie A (2003). Development of the telemedicine satisfaction questionnaire to evaluate patient satisfaction with telemedicine: a preliminary study. *Journal of Telemedicine and Telecare* 9, 46–50.