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Remote Forensic Evaluations and Treatment in the Time of COVID-19: An International Survey of Psychologists and Psychiatrists

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Workplace restrictions associated with the coronavirus (COVID-19) pandemic have resulted in increased tele-service use by forensic psychologists and psychiatrists. This article describes the results of a survey of 295 psychologists and psychiatrists concerning their experiences and opinions of forensic tele-service work. Participants identified a range of benefits to using audiovisual (AV) conferencing technologies, including efficiency, convenience, ease of access, safety, client comfort, and flexibility. However, issues were also reported, including concerns that some aspects of the mental status examination, specifically appearance and behavior and affect, may be difficult to assess. There were also some clinical conditions that were considered by participants to be unsuitable for tele-servicing. Although most participants believed that the therapeutic relationship was less satisfactory when using AV conferencing as compared with face-to-face interactions, on average, participants were satisfied with the therapeutic relationship that was developed. Further, some participants (n = 38, 27.1%) reported that clients had expressed a preference for remote engagement, but a similar number reported that some had expressed concerns about receiving treatment remotely (n = 38, 26.4%). Although recent training and experience were associated with confidence, perceived confidence, and satisfaction with tele-services, fewer than half of participants (n = 112, 44.8%) had received training in tele-service use. Overall, there appears to be a range of benefits to using tele-services for remote forensic assessment and treatment practice, but there are issues that need to be considered, and best-practice guidelines require development.

Keywords: tele-services, COVID-19, psychology, psychiatry

Supplemental materials: https://doi.org/10.1037/law0000308.supp

The use of tele-services¹ to provide mental health care is becoming increasingly common (Sales et al., 2018), with unprecedented uptake during the workplace restrictions associated with the global coronavirus (COVID-19) pandemic. Forensic mental health practice has been profoundly transformed by COVID-19. Professionals have been forced to consult with clients remotely in the context of public health restrictions, due in part to the recognition of prisons as particularly vulnerable settings (World Health Organization, 2020).

Workplace restrictions associated with COVID-19 may pass, but at the time of writing (mid-2020-early 2021), it appears that these restrictions will likely remain for the foreseeable future. It is also possible that the demand for tele-services during these COVID-19 workplace restrictions will result in increased familiarity and even a preference for this type of work over face-to-face consultations in the future. Determining whether face-to-face assessments should be prioritized when this is possible and determining whether there is a role for tele-service use within forensic practice demands rigorous interdisciplinary (i.e., psychiatry, psychology, and law) scrutiny. In particular, it is important to determine the degree to which the use of tele-services can meet accepted practice standards and to develop specific guidance for those using tele-services for forensic mental health work, all while recognizing the relative merits and limitations of remote and faceto-face practice. If it can be established that remote practice can produce outcomes equivalent-if not identical-to those resulting from in-person contact, then this will constitute powerful support for the use of tele-services. This equivalence has been discussed as

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¹ "Tele-services" is the term most often employed in the literature and the one we have chosen to describe a range of mental health services delivered via audio/video or telephone communication technologies. "Teleconferencing" is used occasionally throughout this article to refer to the use of telephone (no visual capability) communication, and "audio-visual (AV) conferencing" is used to describe videoconferencing facilities where both audio and visual communication is employed.

a form of reliability by some authors (e.g., Sales et al., 2018), and we will use the terms "reliability," "consistency," and "equivalence" throughout this article. Importantly, this would allow practitioners to proceed with confidence in the defensibility of remote practice against possible challenges from colleagues, legal advocates, courts, and clients.

A preference for face-to-face assessments is fairly common among psychologists and psychiatrists (Manguno-Mire et al., 2007), although several studies have reported that mental health service users and professionals are satisfied with tele-services as a form of mental health care in clinical (Batastini et al., 2016; O'Reilly et al., 2007; Thomas et al., 2005) and forensic settings (Farabee et al., 2016; Lexcen et al., 2006; Morgan et al., 2008). Some have championed the responsible use of tele-services for forensic work (e.g., Adjorlolo & Chan, 2015; Dale & Smith, 2020). Indeed, evidence exists to suggest that tele-services may be particularly helpful under some circumstances. For example, Tucker et al. (2006) found that some prisoners felt more comfortable discussing their history of sexual abuse victimization during tele-service consultations. Despite this, some clients have expressed doubts concerning the privacy (Myers et al., 2006) of tele-service consultations, and clinicians have expressed a range of concerns, including those relating to admissibility of evidence gained through tele-service work within court (Batastini et al., 2020). These latter fears are not unfounded. Despite the lack of robust data on consensus within the judiciary, some judges have expressed concern with expert evidence derived from the use of tele-service platforms (see, e.g., judicial comments in Department of Public Prosecutions v. Wardle [2019] and Department of Public Prosecutions v. Amerasekera [2019]), although such negative views are apparently not unanimous (cf. Batastini et al., 2020).

Ultimately, doubts about the consistency between face-to-face and remote forensic mental health practice are best resolved empirically. Until there is a substantial independent evidence base supporting its use, the legitimacy of tele-practice relies on its consistency with face-to-face practice. Some researchers have demonstrated that information obtained during forensic tele-service and face-to-face interviews is similar (Lexcen et al., 2006; Manguno-Mire et al., 2007). However, this work is limited and dated. Critically, the implications of tele-service use for the therapeutic relationship,² standardized testing, and other related areas must be adequately understood.

Norwood et al.'s (2018) recent meta-analysis found mixed results with respect to the often-presumed disparity between therapeutic relationships established through face-to-face and teleservice contact. Across studies, key clinical outcomes were equivalent (cf. Urness et al., 2006; in which *only* telepsychiatry—and not clients receiving face-to-face consultation—showed symptomatic improvement). Although there was some evidence that the therapeutic relationship was initially inferior via tele-service contact, the overall pattern of results indicated that the therapeutic relationship was nevertheless consistently strong. Further, the perceived modality difference in the therapeutic relationship was both more pronounced among clinicians than clients and attenuated over subsequent sessions (Norwood et al., 2018).

Standardized testing "represents one of the core areas of forensic psychology practice" (Adjorlolo & Chan, 2015, p. 193). On its face, administering and scoring some psychological tests presents a range of significant challenges for practitioners conducting assessments using tele-services. Published tests have more or less rigid administration protocols, departures from which may risk invalidating test results. Many have not been standardized for teleservice administration (or even oral administration during a faceto-face assessment). Although some tests produce high levels of agreement between videoconference and face-to-face interviews (Manguno-Mire et al., 2007), it has been observed that some tests are more difficult to administer using tele-services (Hubley et al., 2016), particularly those that require manual manipulation of test items. This concern notwithstanding, a recent meta-analysis broadly supported the use of videoconferencing technology for neuropsychological testing, despite caveats about slow connections, older clients, and specific assessment tasks with motor components (Brearly et al., 2017). Given these cautions, optimal testing practice must involve the selection of appropriate tests, including those least affected by any limitations due to the administration medium.

Tele-services have generally become a reliable medium for mental health service (treatment) delivery, with several reviews finding comparable clinical outcomes between people treated via traditional face-to-face interventions and those who receive interventions delivered remotely (Hubley et al., 2016; Langarizadeh et al., 2017; Richardson et al., 2009). More recently, forensic psychologists and psychiatrists have used tele-services to assess and treat forensic clients, often in conjunction with face-to-face consultations (Luxton et al., 2019). Several studies have found that tele-services are a viable way of providing mental health care for underserviced and difficult-to-reach forensic populations, including incarcerated youth (Nelson & Sharp, 2016), adult prisoners (Leonard, 2004; Richardson et al., 2009), and victims of family violence in rural areas (Thomas et al., 2005). Although some courts have used videoconferencing to facilitate the provision of testimony and witness examination in both criminal and civil cases (Miller et al., 2005), the standing of tele-services in relation to the acquisition of expert evidence (i.e., the assessment of clients) in criminal cases remains unclear.

It is also important to identify any limitations in the range of tasks (e.g., mental state evaluations, competency/fitness to stand trial, criminal responsibility/insanity assessments) and populations for whom tele-services are appropriate. Tele-services may be unsatisfactory or impractical for use with some clients with personal histories, qualities, or clinical problems for whom such a modality would be contraindicated (Myers et al., 2006). For instance, significant visual or hearing impairments, acute clinical symptoms (e.g., psychosis), or intellectual disability could affect the reliability and efficacy of tele-service assessments (Luxton & Lexcen, 2018). Similarly, although some authors have considered whether tele-services may be useful to enhance the reach of mental health services for, for example, Indigenous Australians in regional and remote locations (Caffery et al., 2017), there is a general lack of research on the use of tele-services among people with various ethnic, cultural, or linguistic backgrounds.

Moving beyond simple comparisons with face-to-face practice, the most important question is whether remote practice using teleservices can meet objective standards of adequacy. Several

 $^{^{2}}$ We have used the term "therapeutic relationship" to refer to the concept of the "working alliance," as characterized by Bordin (1979).

practical and ethical issues are pertinent when considering the use of tele-services with forensic populations. Threats to the security of confidentiality, privacy, and security and issues pertaining to assessors obtaining written informed consent arise with tele-service practice (Batastini et al., 2020; Khalifa et al., 2008; Myers et al., 2006). Difficulties obtaining written informed consent to access information from third-party sources may result in consent being waived or assessors simply not seeking corroboration from others. This may undermine the reliability and validity of assessment findings. Finally, equipment failure, maintenance and sustainability costs, and bandwidth or connectivity issues (Adjorlolo & Chan, 2015; Sales et al., 2018); threats from computer viruses or hackers; and theft or damage to hard drives or portable drives, failure of security systems, faulty software, and malfunctioning or outdated technology may all compromise the privacy of confidential assessment data and the efficiency and flow of forensic assessments (American Psychological Association, 2013). Although some solutions to these problems are beginning to emerge, much more effort is required to ensure appropriate procedures are developed and used.

Ultimately, evidence supporting the use of tele-services for forensic evaluations and interventions remains limited. Questions remain regarding the extent to which assessments conducted via tele-services are reliable. Despite a growing evidence base about the acceptability of such modalities among forensic psychologists and psychiatrists, legal practitioners, clients, and courts, existing research remains preliminary, typically relying on smaller samples from one or only a few jurisdictions. Although reviews and meta-analyses are critical for generalizing research findings, they are limited by the volume and breadth of the extant literature. As such, further study is clearly warranted to replicate and extend existing findings about remote tele-service practice versus face-to-face practice, along with the breadth of suitable applications, relative merits, and objective adequacy of forensic tele-practice.

The Current Study

We developed a survey to explore tele-service use among forensic psychologists and psychiatrists, along with issues of training, acceptability, reliability, applicability, and integrity of tele-services. We aimed to rapidly collect insights to guide practice and to assist courts in understanding the implications of tele-service work from the perspective of practitioners. Surveys provide a swift, inexpensive, and straightforward method of gathering information from a relatively large and diverse sample of practitioners. Given the urgent and unprecedented changes to correctional services, forensic mental health, and court operations during the workplace restrictions associated with the COVID-19 pandemic, we considered a survey of practitioners' perspectives to be a relevant foundation for this task. We also sought to explore the role of practical experience and specific training in confidence, perceived competence, and satisfaction with the use of tele-services for forensic work.

Method

Participants

Four hundred and six people from a range of professions and with a variety of experiences with forensic work responded to the survey. Because we were interested in the experiences of psychologists and psychiatrists with forensic experience and expertise, we excluded respondents if they were not psychologists or psychiatrists and if they lacked either specialized forensic accreditation (as recognized in their jurisdictions) or had not yet gained at least 2 years of forensic practice experience. This left a final sample of 295 participants aged between 26 and 82 years (mean [M] = 47.69, standard deviation [SD] = 12.05), who reported between 6 months and 49 years (M = 14.42, SD = 10.13) of forensic experience. Most were psychologists (n = 224, 75.9%), and a slight majority identified as female (n = 167, 56.6%). Most reported that they mainly practiced in Anglophone jurisdictions, including Australia (n = 122, 41.4%), the United States (n = 73, 27.4%), New Zealand 20, 6.8%). However, 14 (4.7%) reported practicing primarily in either non-Anglophone or multiple jurisdictions, and 8 (2.7%) did not provide this information.

Materials

The authors developed a survey specifically for this project (the full survey is available in the online supplemental materials). The survey included questions pertaining to forensic psychologists' and psychiatrists' use of tele-services for assessment and treatment prior to and during the workplace restrictions associated with the COVID-19 pandemic. The initial questions asked about experiences with both telephone services and AV conferencing (see Table 1). All subsequent questions focused on the use of AV conferencing (Tables 2-5), including experiences of training in the use of AV conferencing and psychologists' and psychiatrists' confidence, perceived competence, and satisfaction with the use of AV conferencing technology (questions about confidence and perceived competence were asked separately for clinical/diagnostic, risk, competency, and other assessments, along with treatment). The items pertaining to confidence, perceived competence, and satisfaction were each rated on a 5-point scale, from 1 (Not at all) to 5 (Very). Questions regarding practitioners' perspectives on the reliability, applicability, acceptability, and integrity of tele-services included questions pertaining to experiences of being challenged by clients or the courts for presenting expert testimony or conducting forensic treatment via tele-services, whether psychologists and psychiatrists could identify limitations to using AV conferencing, barriers to using AV technologies, whether there are particular aspects of clients' mental state that are more difficult to assess with tele-services, and whether there are any personal or clinical qualities of clients that compromise tele-service assessments.

Most survey questions returned categorical (including dichotomous) or ordinal data. A number of questions invited free-text responses. Some of these items allowed for the inclusion of supplementary information to other questions (i.e., an "Other [please elaborate]" response). To present these data in a meaningful, concise fashion, some variables were recoded into a series of categorical variables (e.g., the responses 0n the free-text conferencing

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Table 1

Use of Remote Communication Technology Before and After the Commencement of COVID-19 Workplace Restrictions

	Asses	sment	Treatment		
Teleservice type and use	Before	After	Before	After	
Telephone					
Yes	43 (14.6)	85 (28.8)	23 (7.8)	78 (26.4)	
No	249 (84.4)	195 (66.1)	261 (88.5)	200 (67.8)	
Missing/unknown	3 (1.0)	15 (5.1)	11 (3.7)	17 (5.8)	
Telephone episodes					
0	249 (84.4)	195 (66.1)	261 (88.5)	200 (67.8	
1-5	16 (5.4)	50 (16.9)	10 (3.4)	31 (10.5	
6-10	7 (2.4)	23 (7.8)	5 (1.7)	19 (6.4)	
11-20	5 (1.7)	8 (2.7)	4 (1.4)	14 (4.7)	
21-30	4 (1.4)	1 (0.3)	2 (0.7)	7 (2.4)	
31-40	1 (0.3)	0 (0)	1 (0.3)	0 (0)	
41-50	2 (0.7)	2 (0.7)	0 (0)	1 (0.3)	
More than 50	4 (1.4)	1 (0.3)	1 (0.3)	4 (1.4)	
Missing/unknown	7 (2.4)	15 (5.1)	11 (3.7)	19 (6.4)	
Audiovisual conferencing					
Yes	107 (36.3)	177 (60.0)	48 (16.3)	84 (28.5	
No	181 (61.4)	103 (34.9)	236 (80.0)	190 (64.4	
Missing/unknown	8 (2.7)	15 (5.1)	11 (3.7)	21 (7.1)	
Audiovisual episodes	· · /			· · · ·	
0	181 (61.4)	103 (34.9)	236 (80.0)	190 (64.4	
1-5	45 (15.3)	93 (31.5)	24 (8.1)	32 (10.8	
6-10	14 (4.7)	37 (12.5)	4 (1.4)	18 (6.1)	
11-20	14 (4.7)	27 (9.2)	6 (2.0)	17 (5.8)	
21-30	7 (2.4)	10 (3.4)	2 (0.7)	6 (2.0)	
31-40	5 (1.7)	2 (0.7)	5 (1.7)	4 (1.4)	
41-50	3 (1.0)	2 (0.7)	0 (0.0)	1 (0.3)	
More than 50	17 (5.8)	5 (1.7)	6 (2.0)	5 (1.7)	
Missing/unknown	9 (3.1)	16 (5.4)	12 (4.1)	22 (7.5)	
Lifetime audiovisual episodes		sment		tment	
0	89 (30.2)	184 ((62.4)	
1-10	· · · · · · · · · · · · · · · · · · ·	(36.6)		16.3)	
More than 10		30.5)		17.3)	
Missing/unknown	· · · · · · · · · · · · · · · · · · ·	2.7)		(4.1)	

platform were recoded into both specific platforms and grouped into platform types). In most cases, responses to free-text questions were manually reviewed by Daniel E. Shea, with common themes identified and specific, illustrative quotations included as appropriate. Themes were identified using a "bottom-up" approach based on actual responses rather than predefined categories. Some questions pertained to the use of tele-services more generally, whereas others focused specifically on the use of AV platforms only. Where AV was the focus of the question, this is noted.

Procedure

The survey was distributed via various forensic psychology and forensic psychiatry, or related, organizations: Australian and New Zealand Association of Psychiatry, Psychology and Law; Canadian Psychological Society; New Zealand Psychological Society-Forensic Division; American Psychology Law Society (Division 41 of the American Psychological Association), International Association of Forensic Mental Health; Asia Pacific Association of Threat Assessment Professionals; Forensic Faculty of the Royal Australian and New Zealand College of Psychiatrists; and the Royal College of Psychiatrists Quality Network for Forensic Mental Health. Some of these organizations alerted members/ subscribers to the research via an email, whereas others posted information about the survey on their websites. Additionally, we used personal contacts and encouraged a snowballing methodology to facilitate recruitment.

Because it was not possible to determine how many people received the survey link, it was not feasible to determine the response rate. The survey was launched on April 29, 2020, and closed on June 3, 2020. Ethical approval to conduct the research was granted by the Swinburne University of Technology Human Research Ethics Committee (Reference: 20202986-4291).

Statistical Analyses

All statistical analyses were conducted using Statistical Package for the Social Sciences (SPSS), Version 26. Comparisons between pre- and postrestriction technology usage of tele-services were made using Wilcoxon signed-ranks tests. Discipline comparisons for the timing of training in the use of AV technologies were undertaken using chi-squared tests of independence with Bonferroni-adjusted (overall $\alpha = .05$) post hoc testing. Logit ordinal regressions were used to isolate differences in confidence, perceived competence, and satisfaction.

Table 2

Predictors of Confidence	With Using Audiovisual	Conferencing for Assessments

Predictors and test statistic	β	Wald	p	OR	95% CI
C	onfidence with	clinical/diagnostic ass	essment		
Professional discipline	-0.17	$LR \chi^2 = 0.26$.607	0.14	[0.03, 0.58]
Gender identity	0.78	LR $\chi^2_2 = 7.33$.007	2.18	[1.24, 3.86]
Age in years	-0.04	LR $\chi^2 = 7.33$ LR $\chi^2 = 0.12$ LR $\chi^2 = 4.41$.725	1.00	[0.97, 1.02]
Trained in AV technology	df = 2	LR $\chi^2 = 4.41$.110		
Within last year vs. none	0.56	3.83	.050	1.75	[1.00, 3.05]
>1 year ago vs. none	-0.10	0.07	.791	0.91	[0.44, 1.88]
Previous uses of AV technology	df = 2	LR $\chi^2 = 36.52$	>.001		
11+ vs. 0	2.04	34.07	>.001	7.65	[3.65, 15.16]
1–10 vs. 0	1.05	11.46	.001	2.84	[1.55, 5.20]
Goodness-of-fit statistic	16 560	2 (04.02	075		
Pearson	df = 769	$\chi^2 = 694.03$ $\chi^2 = 533.58$.975		
Deviance	df = 769	$\chi = 533.58$	>.999		
Proportional odds	16 21	·· ² 20.52	092		
Test of parallel lines	df = 21	$\chi^2 = 30.53$.082		
		e with risk assessmen			
Professional discipline	0.15	LR $\chi^2 = 0.21$ LR $\chi^2 = 1.65$.649	1.17	[0.60, 2.25]
Gender identity	0.37	LR $\chi^2_2 = 1.65$.199	1.46	[0.82, 2.59]
Age in years	-0.17	LR $\chi^2 = 1.72$ LR $\chi^2 = 1.75$.190	0.98	[0.96, 1.01]
Trained in AV technology	df = 2		.417		
Within last year vs. none	0.30	1.11	.292	1.35	[0.77, 2.36]
>1 year ago vs. none	-0.20	0.29	.593	0.82	[0.39, 1.72]
Previous uses of AV technology	df = 2	LR $\chi^2 = 30.17$	<.001		
11 + vs. 0	1.89	28.37	<.001	6.62	[3.30, 13.28]
1–10 vs. 0	1.05	11.38	.001	2.85	[1.55, 5.23]
Goodness-of-fit statistic					
Pearson	df = 737	$\chi^2 = 731.05$ $\chi^2 = 548.60$.555		
Deviance	df = 737	$\chi^2 = 548.60$	>.999		
Proportional odds					
Test of parallel lines	df = 21	$\chi^2 = 29.07$.112		
	Confidence wi	th competency assess	ment		
Professional discipline	-0.23	$LR \chi^2 = 0.40$.528	0.80	[0.39, 1.62]
Gender identity	0.78	LR $\chi^2 = 5.68$.017	2.19	[1.14, 4.19]
Age in years	-0.01	LR $\chi^2 = 0.40$ LR $\chi^2 = 5.68$ LR $\chi^2 = 0.41$ LR $\chi^2 = 4.58$.520	0.99	[0.97, 1.02]
Trained in AV technology	df = 2	LR $\chi^2 = 4.58$.101		
Within last year vs. none	0.52	2.57	.109	1.68	[0.89, 3.18]
>1 year ago vs. none	-0.38	0.87	.351	0.68	[0.31, 1.52]
Previous uses of AV technology	df = 2	LR $\chi^2 = 11.21$.004		
11+ vs. 0	1.25	10.53	.001	3.50	[1.64, 7.45]
1-10 vs. 0	0.79	5.21	.022	2.20	[1.12, 4.32]
Goodness-of-fit statistic					
Pearson	df = 601	$\chi^2 = 588.50$ $\chi^2 = 441.58$.634		
Deviance	df = 601	$\chi^2 = 441.58$	>.999		
Proportional odds		2			
Test of parallel lines	df = 21	$\chi^2 = 20.12$.514		
	Confidence	e with other assessmen	nt		
Professional discipline	-3.52	LR $\chi^2 = 9.85$.002	0.03	[0.03, 0.31]
Gender identity	-1.35	$LR \chi^2_2 = 2.53$.112	0.26	[0.05, 1.40]
Age in years	-0.09	$LR \chi^2 = 4.71$.030	0.92	[0.84, 0.99]
Trained in AV technology	df = 2	$LR \chi^2 = 6.26$.044	0.72	[010 1, 0155]
Within last year vs. none	2.40	5.51	.019	11.00	[1.49, 81.44]
>1 year ago vs. none	0.66	0.45	.503	1.93	[0.28, 13.27]
Previous uses of AV technology	df = 2	$LR \chi^2 = 4.38$.112	1.75	[0.20, 13.27]
11 + vs. 0	<i>uj</i> = 2 1.86	3.08	.079	6.43	[0.81, 51.23]
1-10 vs. 0	0.37	0.12	.725	1.44	[0.19, 11.09]
Goodness-of-fit statistic	0.57	0.12	.125	1.77	[0.17, 11.07]
Pearson	df = 117	$\chi^2_2 = 349.00$.000		
Deviance	df = 117 df = 117	$\chi^2 = 349.00$ $\chi^2 = 80.28$.000		
Proportional odds	uj — 117	$\lambda = 00.20$.770		
Test of parallel lines	df = 21	$\chi^2 = 79.56$	>.999		
			~ .)77		
		ence with treatment		_	
Professional discipline	-0.38	LR $\chi^2 = 1.09$.296	0.69	[0.34, 1.39]
	6				
Gender identity	0.06	$LR \chi^2 = 0.03$.858	1.06	[0.56, 2.01] (table continues)

Predictors and test statistic	β	Wald	р	OR	95% CI
Age in years	-0.02	LR $\chi^2 = 2.42$.120	0.98	[0.95, 1.01]
Trained in AV technology	df = 2	LR $\chi^2 = 6.29$.043		
Within last year vs. none	0.83	6.20	.013	2.30	[1.19, 4.44]
>1 year ago vs. none	0.29	0.46	.498	1.34	[0.58, 3.10]
Previous uses of AV technology	df = 2	LR $\chi^2 = 8.03$.018		
11+ vs. 0	0.94	7.18	.007	2.57	[1.29, 5.12]
<u>1-10 vs. 0</u>	0.59	2.79	.095	1.81	[0.90, 3.62]
	Goodi	ness-of-fit statistic			
Pearson	df = 585	$\chi^2_{2} = 510.87$.988		
Deviance	df = 585	$\chi^2 = 412.96$	>.999		
Proportional odds	-				
Test of parallel lines	df = 21	$\chi^2 = 32.40$.053		

Note. OR = odds ratio; CI = confidence interval; LR χ^2 = chi-squared test statistic based on likelihood ratio for predictor in final model; AV = audiovisual; df = degrees of freedom. Multicollinearity tested for each outcome analysis. No qualifying cases in final analysis.

Results

Table 2 (continued)

Use of Tele-Services

The use of tele-services by participants, both before and after the imposition of COVID-19 workplace restrictions in their jurisdiction, is included in Table 1. The original survey requested separate estimates of uses of AV services for assessment and treatment tasks for the pre- and postrestriction time frames. Despite this, we deemed total experience with the technology to be most relevant. As such, we combined pre- and postrestriction AV-usage variables into lifetime values indicating 0 uses (naïve), 1-10 uses (exposed), and 11 or more uses (experienced). To do this, we summed the ranges of the pre- and postrestriction variables in each case such that, for example, 0 uses prior to restrictions and 6-10 uses following their imposition would produce a range of 6-10 total uses, falling into the exposed range (1-10). There was only one combination (i.e., 1-5 and 6-10 uses) for which the combined range (7-15) spanned across the exposed (1-10) and experienced (11 or more) ranges. We classified these cases by assigning the middle possible value (11), which fell into the experienced (11 or more) range. We produced separate variables in this way for assessment and treatment uses.

Overall, a total of 232 (78.6%) participants reported any lifetime use of AV conferencing as part of their practice. They used a wide range of platforms, including general AV conferencing solutions such as Cisco Jabber, Google Hangouts, Microsoft Teams, and Adobe Connect (n = 160, 54.2%); dedicated tele-service solutions such as Coviu, HotHealth, and Doxy.me (n = 33, 11.2%); integrated practice management solutions such as PowerDiary and SimplePractice (n = 3, 1%); and dedicated inmate communication platforms such as CIDNET and HomeWAV (n = 4, 1.4%).

Assessment

Participants reported significantly greater use of tele-services (Z = -2.73, p = .006, r = .11) and AV conferencing (Z = -2.75, p = .006, r = .12) technologies to conduct assessments following the imposition of workplace restrictions associated with COVID-19.

Treatment

Participants also reported significantly greater use of tele-conferencing (Z = -5.32, p < .001, r = .22) and AV conferencing (Z = -3.48, p = .001, r = .15) technologies to deliver treatment since the imposition of workplace restrictions.

Training in Tele-Services

Fewer than half of participants (n = 112, 44.8%) had received any training in tele-service use, although the timing differed between disciplines, with psychologists significantly more likely to have received training in the year prior to completing the survey (34.7% vs. 16.7%), and less likely to have received training more than 10 years ago (.5% vs. 6.7%). Due to small numbers in some of these categories, training recency was recoded for subsequent analyses into the categories of within the last year (n = 76, 25.8%), longer than a year ago (n = 36, 12.2%), and never trained (n =138, 46.8%), with no data available for the remaining participants (n = 45, 15.3%). Of the 250 participants who responded to all relevant items, less than half (n = 94, 37.6%) were both trained in AV conferencing technology and had used this in practice. Put another way, this meant that 83.9% of trained participants (n = 112) had used AV conferencing, but 45.2% of those who had used the technology (n = 208) had never received training in its use. For those who had completed training, the training was received via online professional development (n = 72, 66.7%), workplace training (n = 30, 27.8%), in-person professional development (n = 24, 3%)27.8%), or as part of obtaining qualifications (n = 2, 1.9%). Others reported learning about the use of tele-service technologies through clinical supervision (n = 10, 9.3%); consultation with knowledgeable others, including peers (n = 3, 2.8%); or selfdirected learning (n = 2, 1.9%).

Attitudes Toward Audiovisual Conferencing Technology

A series of analyses was conducted to gauge the relative contributions of professional discipline, age, gender identification, training, and prior experience with conducting assessment or treatment using AV conferencing technology on perceived confidence,

Table 3

Predictors and test statistic	В	Wald	р	OR	95% CI
Perceive		with clinical/diagnos	tic assessme		
Professional discipline	-0.34	LR $\chi^2 = 0.83$ LR $\chi^2 = 3.44$ LR $\chi^2 = 0.01$ LR $\chi^2 = 7.37$.362	0.71	[0.34, 1.49
Gender identity	0.60	LR $\chi^2 = 3.44$.064	1.82	[0.96, 3.45
Age in years	0.00	LR $\chi^{2} = 0.01$.978	1.00	[0.97, 1.03
Trained in AV technology	df = 2	$LR \chi^{2} = 7.37$.025		L ,
Within last year vs. none	0.84	6.17	.013	2.31	[1.19, 4.46
>1 year ago vs. none	-0.16	0.15	.703	0.86	[0.39, 1.90
Previous uses of AV technology	df = 2	$LR \chi^2 = 27.20$	<.001	0.00	[0.57, 1.70
	$u_{j} = 2$ 1.91			6 77	[2 10 14 2
11+ vs. 0		24.74	<.001	6.77	[3.19, 14.3
1–10 vs. 0	1.09	10.73	.001	2.99	[1.55, 5.74
Goodness-of-fit statistic		2			
Pearson	df = 371	$\chi^2 = 350.58$ $\chi^2 = 332.06$.770		
Deviance	df = 371	$\chi^2 = 332.06$.928		
Proportional odds					
Test of parallel lines	df = 7	$\chi^2 = 8.15$.320		
I	Perceived comp	etence with risk asse	ssment ^a		
Professional discipline	0.06	LR $\gamma^2 = 0.03$.874	1.06	[0.52, 2.15
Gender identity	0.55	$LR \gamma^2 = 2.85$.091	1.73	[0.91, 3.29
Age in years	-0.03	LR $\chi^2 = 0.03$ LR $\chi^2 = 2.85$ LR $\chi^2 = 3.72$ LR $\chi^2 = 2.12$.054	0.98	[0.95, 1.00
Trained in AV technology	df = 2	$LR \chi^2 = 2.12$.347	0.70	[0.95, 1.00
Within last year vs. none	$u_{f} = 2$ 0.36	1.24	.265	1.44	[0.76, 2.72
•					
>1 year ago vs. none	-0.26	0.43	.513	0.77	[0.36, 1.68
Previous uses of AV technology	df = 2	$LR \chi^2 = 24.70$	<.001	F 6 1	10 01 10
11+ vs. 0	1.78	21.92	<.001	5.91	[2.81, 12.4
1–10 vs. 0	1.21	13.06	<.001	3.37	[1.74, 6.50
Goodness-of-fit statistic					
Pearson	df = 359	$\chi^2 = 355.93$ $\chi^2 = 356.53$.536		
Deviance	df = 359	$\chi^2 = 356.53$.527		
Proportional odds	v				
Test of parallel lines	df = 7	$\chi^2 = 9.50$.218		
· ·	v		accecement		
Professional discipline	-0.21	the with competency $I R \gamma^2 = 0.33$.564	0.81	[0.40, 1.64
*		$LR \chi = 0.55$ $LP \chi^2 = 6.52$			-
Gender identity	0.83	LR $\chi^2 = 0.33$ LR $\chi^2 = 6.52$ LR $\chi^2 = 0.90$ LR $\chi^2 = 6.88$.011	2.28	[1.21, 4.32
Age in years	-0.01	$LR \chi^{-} = 0.90$.343	0.99	[0.96, 1.01
Trained in AV technology	df = 2	LR $\chi^2 = 6.88$.032		
Within last year vs. none	0.82	6.23	.013	2.27	[1.19, 4.33
>1 year ago vs. none	-0.06	0.02	.889	0.95	[0.43, 2.08
Previous uses of AV technology	df = 2	LR $\chi^2 = 18.91$	<.001		
11+ vs. 0	1.67	18.10	<.001	5.32	[2.46, 11.5
1–10 vs. 0	0.90	6.93	.008	2.46	[1.26, 4.79
Goodness-of-fit statistic					,
		2			
Pearson	df = 605	$\gamma^2 = 635.68$	188		
Pearson	df = 605 df = 605	$\chi^2 = 635.68$ $\chi^2 = 453.34$.188		
Deviance	df = 605 $df = 605$	$\chi^2 = 635.68$ $\chi^2 = 453.34$.188 >.999		
Deviance Proportional odds	df = 605		>.999		
Deviance Proportional odds Test of parallel lines	df = 605 df = 21	$\chi^2 = 17.60$	>.999 .674		
Deviance Proportional odds Test of parallel lines P	df = 605 df = 21 Perceived comp	$\chi^2 = 17.60$ etence with other ass	>.999 .674 essment	0.27	10.05 2.05
Deviance Proportional odds Test of parallel lines Professional discipline	df = 605 df = 21 Perceived comp -0.94	$\chi^2 = 17.60$ etence with other ass LR $\chi^2 = 0.86$	>.999 .674 essment .355	0.37	-
Deviance Proportional odds Test of parallel lines Professional discipline Gender identity	df = 605 $df = 21$ $df = comp$ -0.94 0.03	$\chi^2 = 17.60$ etence with other ass LR $\chi^2 = 0.86$	>.999 .674 essment .355 .976	1.03	[0.19, 5.49
Deviance Proportional odds Test of parallel lines Professional discipline Gender identity Age in years	df = 605 df = 21 erceived comp -0.94 0.03 -0.07	$\chi^2 = 17.60$ etence with other ass LR $\chi^2 = 0.86$	>.999 .674 essment .355 .976 .114		[0.19, 5.49
Deviance Proportional odds Test of parallel lines Professional discipline Gender identity	df = 605 $df = 21$ $df = comp$ -0.94 0.03	$\chi^2 = 17.60$ etence with other ass LR $\chi^2 = 0.86$	>.999 .674 essment .355 .976	1.03	[0.19, 5.49
Deviance Proportional odds Test of parallel lines Professional discipline Gender identity Age in years	df = 605 df = 21 erceived comp -0.94 0.03 -0.07	$\chi^2 = 17.60$ etence with other ass	>.999 .674 essment .355 .976 .114	1.03	[0.19, 5.49 [0.86, 1.02
Deviance Proportional odds Test of parallel lines Professional discipline Gender identity Age in years Trained in AV technology	df = 605 $df = 21$ $df = 21$ $df = 0.94$ 0.03 -0.07 $df = 2$	$\chi^2 = 17.60$ etence with other ass LR $\chi^2 = 0.86$ LR $\chi^2 = 0.00$ LR $\chi^2 = 2.50$ LR $\chi^2 = 0.83$ 6.91	>.999 .674 essment .355 .976 .114 .659	1.03 0.94 14.57	[0.19, 5.49 [0.86, 1.02 [1.98, 107.
Deviance Proportional odds Test of parallel lines Professional discipline Gender identity Age in years Trained in AV technology Within last year vs. none >1 year ago vs. none	df = 605 df = 21 Terceived comp -0.94 0.03 -0.07 df = 2 2.68 0.97	$\chi^2 = 17.60$ etence with other ass LR $\chi^2 = 0.86$ LR $\chi^2 = 0.00$ LR $\chi^2 = 2.50$ LR $\chi^2 = 0.83$ 6.91 0.79	>.999 .674 essment .355 .976 .114 .659 .009 .374	1.03 0.94	[0.19, 5.49 [0.86, 1.02 [1.98, 107.
Deviance Proportional odds Test of parallel lines Professional discipline Gender identity Age in years Trained in AV technology Within last year vs. none >1 year ago vs. none Previous uses of AV technology	df = 605 df = 21 Terceived comp -0.94 0.03 -0.07 df = 2 2.68 0.97 df = 2	$\chi^2 = 17.60$ etence with other ass LR $\chi^2 = 0.86$ LR $\chi^2 = 0.00$ LR $\chi^2 = 2.50$ LR $\chi^2 = 0.83$ 6.91 0.79 LR $\chi^2 = 8.60$	>.999 .674 essment .355 .976 .114 .659 .009 .374 .014	1.03 0.94 14.57 2.63	[0.19, 5.49 [0.86, 1.02 [1.98, 107. [0.31, 22.0
Deviance Proportional odds Test of parallel lines Professional discipline Gender identity Age in years Trained in AV technology Within last year vs. none >1 year ago vs. none Previous uses of AV technology 11+ vs. 0	df = 605 df = 21 terceived comp -0.94 0.03 -0.07 df = 2 2.68 0.97 df = 2 2.68	$\chi^2 = 17.60$ etence with other ass LR $\chi^2 = 0.86$ LR $\chi^2 = 0.00$ LR $\chi^2 = 2.50$ LR $\chi^2 = 0.83$ 6.91 0.79 LR $\chi^2 = 8.60$ 6.91	>.999 .674 essment .355 .976 .114 .659 .009 .374 .014 .009	1.03 0.94 14.57 2.63 14.57	[0.19, 5.49 [0.86, 1.02 [1.98, 107. [0.31, 22.0 [1.98, 107.
Deviance Proportional odds Test of parallel lines Professional discipline Gender identity Age in years Trained in AV technology Within last year vs. none >1 year ago vs. none Previous uses of AV technology 11+ vs. 0 1-10 vs. 0	df = 605 df = 21 Terceived comp -0.94 0.03 -0.07 df = 2 2.68 0.97 df = 2	$\chi^2 = 17.60$ etence with other ass LR $\chi^2 = 0.86$ LR $\chi^2 = 0.00$ LR $\chi^2 = 2.50$ LR $\chi^2 = 0.83$ 6.91 0.79 LR $\chi^2 = 8.60$	>.999 .674 essment .355 .976 .114 .659 .009 .374 .014	1.03 0.94 14.57 2.63	[0.19, 5.49 [0.86, 1.02 [1.98, 107. [0.31, 22.0 [1.98, 107.
Deviance Proportional odds Test of parallel lines Professional discipline Gender identity Age in years Trained in AV technology Within last year vs. none >1 year ago vs. none Previous uses of AV technology 11+ vs. 0 1-10 vs. 0 Goodness-of-fit statistic	df = 605 df = 21 Perceived comp -0.94 0.03 -0.07 df = 2 2.68 0.97 df = 2 2.68 2.22	$\chi^2 = 17.60$ etence with other ass LR $\chi^2_2 = 0.86$ LR $\chi^2_2 = 0.00$ LR $\chi^2 = 2.50$ LR $\chi^2 = 0.83$ 6.91 0.79 LR $\chi^2 = 8.60$ 6.91 4.07	>.999 .674 essment .355 .976 .114 .659 .009 .374 .014 .009 .044	1.03 0.94 14.57 2.63 14.57	[0.19, 5.49 [0.86, 1.02 [1.98, 107. [0.31, 22.0 [1.98, 107.
Deviance Proportional odds Test of parallel lines Professional discipline Gender identity Age in years Trained in AV technology Within last year vs. none >1 year ago vs. none Previous uses of AV technology 11+ vs. 0 1-10 vs. 0 Goodness-of-fit statistic Pearson	df = 605 df = 21 Perceived comp -0.94 0.03 -0.07 df = 2 2.68 0.97 df = 2 2.68 2.22 df = 101	$\chi^2 = 17.60$ etence with other ass LR $\chi^2 = 0.86$ LR $\chi^2 = 0.00$ LR $\chi^2 = 2.50$ LR $\chi^2 = 0.83$ 6.91 0.79 LR $\chi^2 = 8.60$ 6.91 4.07 $\chi^2 = 117.00$	>.999 .674 essment .355 .976 .114 .659 .009 .374 .014 .009 .044 .132	1.03 0.94 14.57 2.63 14.57	[0.19, 5.49 [0.86, 1.02 [1.98, 107. [0.31, 22.0 [1.98, 107.
Deviance Proportional odds Test of parallel lines Professional discipline Gender identity Age in years Trained in AV technology Within last year vs. none >1 year ago vs. none Previous uses of AV technology 11+ vs. 0 1-10 vs. 0 Goodness-of-fit statistic Pearson Deviance	df = 605 df = 21 Perceived comp -0.94 0.03 -0.07 df = 2 2.68 0.97 df = 2 2.68 2.22	$\chi^2 = 17.60$ etence with other ass LR $\chi^2_2 = 0.86$ LR $\chi^2_2 = 0.00$ LR $\chi^2 = 2.50$ LR $\chi^2 = 0.83$ 6.91 0.79 LR $\chi^2 = 8.60$ 6.91 4.07	>.999 .674 essment .355 .976 .114 .659 .009 .374 .014 .009 .044	1.03 0.94 14.57 2.63 14.57	[0.19, 5.49 [0.86, 1.02 [1.98, 107. [0.31, 22.0 [1.98, 107.
Deviance Proportional odds Test of parallel lines Professional discipline Gender identity Age in years Trained in AV technology Within last year vs. none >1 year ago vs. none Previous uses of AV technology 11+ vs. 0 1-10 vs. 0 Goodness-of-fit statistic Pearson Deviance Proportional odds	df = 605 df = 21 Perceived comp -0.94 0.03 -0.07 df = 2 2.68 0.97 df = 2 2.68 2.22 df = 101	$\chi^{2} = 17.60$ etence with other ass LR $\chi^{2} = 0.86$ LR $\chi^{2} = 0.00$ LR $\chi^{2} = 2.50$ LR $\chi^{2} = 0.83$ 6.91 0.79 LR $\chi^{2} = 8.60$ 6.91 4.07 $\chi^{2} = 117.00$ $\chi^{2} = 71.32$	>.999 .674 essment .355 .976 .114 .659 .009 .374 .014 .009 .044 .132	1.03 0.94 14.57 2.63 14.57	[0.19, 5.49 [0.86, 1.02 [1.98, 107. [0.31, 22.0 [1.98, 107.
Deviance Proportional odds Test of parallel lines Professional discipline Gender identity Age in years Trained in AV technology Within last year vs. none >1 year ago vs. none Previous uses of AV technology 11+ vs. 0 1-10 vs. 0 Goodness-of-fit statistic Pearson Deviance	df = 605 df = 21 Perceived comp -0.94 0.03 -0.07 df = 2 2.68 0.97 df = 2 2.68 2.22 df = 101	$\chi^2 = 17.60$ etence with other ass LR $\chi^2 = 0.86$ LR $\chi^2 = 0.00$ LR $\chi^2 = 2.50$ LR $\chi^2 = 0.83$ 6.91 0.79 LR $\chi^2 = 8.60$ 6.91 4.07 $\chi^2 = 117.00$	>.999 .674 essment .355 .976 .114 .659 .009 .374 .014 .009 .044 .132	1.03 0.94 14.57 2.63 14.57	[0.19, 5.49 [0.86, 1.02 [1.98, 107. [0.31, 22.0 [1.98, 107.
Deviance Proportional odds Test of parallel lines Professional discipline Gender identity Age in years Trained in AV technology Within last year vs. none >1 year ago vs. none Previous uses of AV technology 11+ vs. 0 1-10 vs. 0 Goodness-of-fit statistic Pearson Deviance Proportional odds	$\dot{df} = 605$ df = 21 Perceived comp -0.94 0.03 -0.07 df = 2 2.68 0.97 df = 2 2.68 2.22 df = 101 df = 101 df = 21	$\chi^{2} = 17.60$ etence with other ass LR $\chi^{2} = 0.86$ LR $\chi^{2} = 0.00$ LR $\chi^{2} = 2.50$ LR $\chi^{2} = 0.83$ 6.91 0.79 LR $\chi^{2} = 8.60$ 6.91 4.07 $\chi^{2} = 117.00$ $\chi^{2} = 71.32$ $\chi^{2} = 21.88$	>.999 .674 essment .355 .976 .114 .659 .009 .374 .014 .009 .044 .132 .989 .407	1.03 0.94 14.57 2.63 14.57	[0.19, 5.49 [0.86, 1.02 [1.98, 107. [0.31, 22.0 [1.98, 107.
Deviance Proportional odds Test of parallel lines Professional discipline Gender identity Age in years Trained in AV technology Within last year vs. none >1 year ago vs. none Previous uses of AV technology 11+ vs. 0 1-10 vs. 0 Goodness-of-fit statistic Pearson Deviance Proportional odds Test of parallel lines	df = 605 df = 21 Perceived comp -0.94 0.03 -0.07 df = 2 2.68 0.97 df = 2 2.68 2.22 df = 101 df = 101 df = 21 Perceived comp	$\chi^{2} = 17.60$ etence with other ass LR $\chi^{2} = 0.86$ LR $\chi^{2} = 0.00$ LR $\chi^{2} = 2.50$ LR $\chi^{2} = 0.83$ 6.91 0.79 LR $\chi^{2} = 8.60$ 6.91 4.07 $\chi^{2} = 117.00$ $\chi^{2} = 71.32$ $\chi^{2} = 21.88$ mpetence with treatm	>.999 .674 essment .355 .976 .114 .659 .009 .374 .014 .009 .044 .132 .989 .407 ment ^a	1.03 0.94 14.57 2.63 14.57 9.23	[0.19, 5.49 [0.86, 1.02 [1.98, 107. [0.31, 22.0 [1.98, 107. [1.07, 79.9
Deviance Proportional odds Test of parallel lines Professional discipline Gender identity Age in years Trained in AV technology Within last year vs. none >1 year ago vs. none Previous uses of AV technology 11+ vs. 0 1-10 vs. 0 Goodness-of-fit statistic Pearson Deviance Proportional odds	$\dot{df} = 605$ df = 21 Perceived comp -0.94 0.03 -0.07 df = 2 2.68 0.97 df = 2 2.68 2.22 df = 101 df = 101 df = 21	$\chi^{2} = 17.60$ etence with other ass LR $\chi^{2} = 0.86$ LR $\chi^{2} = 0.00$ LR $\chi^{2} = 2.50$ LR $\chi^{2} = 0.83$ 6.91 0.79 LR $\chi^{2} = 8.60$ 6.91 4.07 $\chi^{2} = 117.00$ $\chi^{2} = 71.32$ $\chi^{2} = 21.88$	>.999 .674 essment .355 .976 .114 .659 .009 .374 .014 .009 .044 .132 .989 .407	1.03 0.94 14.57 2.63 14.57	[0.05, 3.07 [0.19, 5.49 [0.86, 1.02 [1.98, 107. [0.31, 22.0 [1.98, 107. [1.07, 79.9 [0.24, 1.13 [0.70, 2.80

Predictors and test statistic	В	Wald	р	OR	95% CI
Age in years	-0.03	LR $\chi^2 = 4.53$.033	0.97	[0.94, 1.00]
Trained in AV technology	df = 2	LR $\chi^2 = 12.65$.002		
Within last year vs. none	1.31	11.68	.001	3.71	[1.75, 7.87]
>1 year ago vs. none	0.27	0.34	.561	1.31	[0.53, 3.26]
Previous uses of AV technology	df = 2	LR $\chi^2 = 12.39$.002		
11+ vs. 0	1.23	9.51	.002	3.41	[1.56, 7.43]
1–10 vs. 0	0.90	5.42	.020	2.47	[1.15, 5.28]
Goodness-of-fit statistic					
Pearson	df = 291	$\chi^2 = 272.21$.779		
Deviance	df = 291	$\chi^2 = 281.93$.638		
Proportional odds	2				
Test of parallel lines	df = 7	$\chi^2 = 6.54$.478		

Note. OR = odds ratio; CI = confidence interval; LR χ^2 = chi-squared test statistic based on likelihood ratio for predictor in final model; AV = audiovisual; df = degrees of freedom. Multicollinearity tested for each outcome analysis.

^a Due to a violation of the proportional odds assumption, perceived competence ratings were converted to low (1-2), medium (3), and high (4–5) for these analyses.

competence, and satisfaction with using AV platforms (see Tables 2–4).

Table 3 (continued)

Confidence

For the whole sample, confidence ratings were relatively consistent across treatment (M = 3.41, SD = 1.04, median [Md] = 4) and the various types of assessment (clinical, M = 3.43, SD = 1.09, Md = 4; risk, M = 3.33, SD = 1.10, Md = 3; competency, M =3.05, SD = 1.13, Md = 3; other, M = 3.00, SD = 1.34, Md = 3). The most consistent predictor of assessment confidence was greater experience using AV conferencing technology. This only failed to reach statistical significance for "other" assessments, which was better predicted by being a psychiatrist, more recent training, and younger age. After controlling for other possible predictors, psychiatrists were more confident than psychologists only for "other" assessments, and males were more confident than females for clinical or diagnostic and competency assessments. The full results appear in Table 2.

Perceived Competence

Overall ratings of perceived competence were broadly similar for treatment (M = 3.40, SD = 1.08, Md = 4) and assessment tasks (clinical, M = 3.59, SD = 1.03, Md = 4; risk, M = 3.44, SD = 1.09, Md = 4; competency, M = 3.15, SD = 1.20, Md = 3; other, M =3.00, SD = 1.24, Md = 3). For treatment, clinical/diagnostic and risk assessments, analysis using the original 5-point Likert-type perceived competence variables violated the assumption of proportional odds. To address this, we recoded these variables: 1-2became low, 3 became medium, and 4-5 became high perceived competence.

Previous experience with AV conferencing technology consistently predicted greater perceived competence with assessment and treatment. More recent training was generally associated with higher perceived competence for assessment and treatment, although this relationship failed to reach statistical significance for risk assessment. After controlling for other variables, males reported higher perceived competence than females for most assessment tasks, although this only reached statistical significance for competency assessments. Psychiatrists reported higher perceived competence for most tasks, but this failed to reach statistical significance when accounting for covariates. Younger age significantly predicted greater perceived competence for treatment. Although a similar trend for age was observed for risk assessment, this failed to reach statistical significance. See Table 3 for comprehensive results.

Satisfaction

Clinician satisfaction ratings for assessment (M = 3.28, SD = 1.15, Md = 3) and treatment (M = 3.15, SD = 1.13, Md = 3) were equivalent. With respect to satisfaction, greater experience was associated with greater assessment satisfaction, whereas more recent training was related to greater satisfaction with treatment delivered via AV conferencing technology. The results are presented in Table 4.

Clinician Concerns About the Use of Audiovisual Conferencing Technology

Mental State Examination

Apart from appearance and behavior and affect, most participants did not believe that the use of AV conferencing compromised the standard mental state examination (see Table 5). Still, the numbers varied considerably across the elements. In terms of within-sample differences, more psychiatrists (51%) than psychologists (34%) felt that the assessment of cognition was compromised, $\chi^2(1, N = 209) = 4.85$, p = .028, odds ratio (*OR*) = 1.99, 95% confidence interval (CI) [1.07, 3.70]. Specific concerns with the use of remote communication technologies included the following: limited field of view restricts observation, cannot review discrepancies between environment and responses (e.g., to identify responding to internal stimuli), loss of fidelity such as audio distortion, compromised rapport, cannot complete physical or paperbased testing, specific responsivity issues (e.g., ideas of reference or paranoia regarding technology), difficult to detect and account for possible distractions, increased difficulty with using interpreters, privacy concerns, and demand characteristics such as using "phone voice" or changing interpersonal style due to medium.

Predictors and test statistic	В	Wald	р	OR	95% CI
	Satisfacti	on with assessment			
Professional discipline	0.07	LR $\chi^2 = 0.04$.838	1.07	[0.56, 2.03]
Gender identity	0.55	LR $\chi^2 = 3.34$.067	1.73	[0.96, 3.11]
Age in years	0.01	LR $\chi^2 = 3.34$ LR $\chi^2 = 0.88$.347	1.01	[0.99, 1.04]
Trained in AV technology	df = 2	LR $\chi^2 = 2.45$.294		
Within last year vs. none	0.38	1.73	.189	1.46	[0.83, 2.58]
> 1 year ago vs. none	0.45	1.29	.255	1.56	[0.73, 3.36]
Previous uses of AV technology	df = 2	LR $\chi^2 = 14.19$.001		
11+ vs. 0	1.43	13.84	<.000	4.17	[1.97, 8.85]
1–10 vs. 0	0.89	6.20	.013	2.42	[1.21, 4.86]
Goodness-of-fit statistic					
Pearson	df = 705	$\chi^2 = 678.35$.758		
Deviance	df = 705	$\chi^2 = 678.35$ $\chi^2 = 528.13$	>.999		
Proportional odds					
Test of parallel lines	df = 21	$\chi^2 = 539.86$.789		
	Satisfact	tion with treatment			
Professional discipline	-0.34	LR $\chi^2 = 0.65$.420	0.72	[0.32, 1.61]
Gender identity	0.06	LR $\chi^2 = 0.02$.882	1.06	[0.50, 2.23]
Age in years	0.01	LR $\chi^2 = 0.39$.532	1.01	[0.98, 1.04]
Trained in AV technology	df = 2	LR $\chi^2 = 5.91$.052		
Within last year vs. none	0.81	4.77	.029	2.25	[1.09, 4.68]
> 1 year ago vs. none	0.78	2.57	.109	2.19	[0.84, 5.69]
Previous uses of AV technology	df = 2	LR $\chi^2 = 1.28$.528		
11+ vs. 0	0.35	0.84	.361	1.42	[0.67, 2.98]
1–10 vs. 0	0.39	0.99	.321	1.47	[0.69, 3.14]
Goodness-of-fit statistic					
Pearson	df = 477	$\chi^2 = 489.12$.341		
Deviance	df = 477	$\chi^2 = 363.98$	>.999		
Proportional odds					
Test of parallel lines	df = 21	$\chi^2 = 20.97$.461		

Table 4		
Predictors of Satisfaction	With Audiovisual	Conferencing for Assessments

Note. OR = odds ratio; CI = confidence interval; LR $\chi^2 = \text{chi-squared test statistic based on likelihood ratio for predictor in final model; AV = audiovisual; <math>df = \text{degrees of freedom}$. Multicollinearity tested for each outcome analysis. No qualifying cases in final analysis.

Unsuitable Client Issues or Presentations for Tele-Service Provision

Participants identified various clinical features and presentations for which the use of AV technologies were unsuitable (see Table 5). Psychologists (65%) were more likely than psychiatrists (41%) to state that it was unsuitable to use remote conferencing technologies to work with those experiencing acute psychosis, $\chi^2(1, N = 227) =$ 10.66, p = .001, OR = .37, 95% CI [.20, .68].

Impacts of Audiovisual Conferencing Technology Use on Therapeutic Relationships

Most participants believed that the therapeutic relationship with treatment clients was worse using AV conferencing compared with face-to-face approaches (survey question: "When providing treatment services, is the therapeutic relationship you develop with clients better or worse than when using audio-visual conferencing?"). Ratings ranged between 1 (*much worse*) and 5 (*much better*), with most believing that the therapeutic relationship was worse compared with face-to-face contacts (M = 2.39, SD = .80, $Q_1 = 2$, Md = 2, $Q_3 = 3$). Ratings did not differ between psychologists and psychiatrists. Reported satisfaction with the quality of therapeutic relationships (survey question: "In general, are you satisfied with the therapeutic relationship you have developed with

clients using audio-visual conferencing compared to face-to-face service delivery?") ranged between 1 (*not at all*) and 5 (*very satis-fied*; M = 3.17, SD = 1.02, $Q_1 = 3$, Md = 3, $Q_3 = 4$).

Roughly a quarter of participants reported that some clients had expressed either a preference for (n = 38, 27.1%) or concerns about (n = 38, 26.4%) receiving treatment remotely. Participants were given the opportunity to respond freely about the effects of using AV conferencing on therapeutic relationships. Several key themes emerged, with participants reporting a reduced or inconsistent sense of connection, particularly with new clients and earlier within a session; increased intimacy when clients and/or clinicians are comfortable at home; the need to formally measure sessions and outcomes; an increased need to verbally direct sessions to compensate for a reduced ability to detect nonverbal cues; a preference for remote communication by some clients presenting with anxiety or avoidance; and negotiating the issues posed by additional observers or other distractions on the client end.

Limitations and Barriers to Using Audiovisual Conferencing

Almost all participants (99%) identified at least one limitation associated with using AV technologies (see Table 5). Although most (72.3%) psychologists identified serious limitations with

Table 5	
Rates of Respondents Endorsing Concerns Related to AV Conferencing	

Predictors and test statistic	n (%)		n (%)	
MSE elements compromised by using	AV technology	Issues unsuitable for working via AV technology		
Appearance and behavior	170 (78.7)	None	11 (4.8)	
Speech	75 (35.5)	Acute psychosis	133 (58.6)	
Mood	85 (41.1)	Mental illness ^a	43 (18.9)	
Affect	133 (61.9)	Language impairment	153 (67.4)	
Thought	57 (27.4)	Language barrier	140 (61.7)	
Perception	82 (39.4)	Mood disorders	18 (7.9)	
Cognition	81 (38.8)	Acute confusion or delirium	164 (72.2)	
Insight and judgment	57 (27.7)	Substance intoxication or withdrawal	108 (47.6)	
Perceived limitations of working via A	AV technology	Sensory or visual impairment	171 (75.3)	
None	2 (1.0)	Cognitive impairment	128 (56.4)	
Technology failure	136 (65.1)	Cultural issues	71 (31.3)	
Poor connection or equipment	177 (84.7)	Other ^b	24 (10.6)	
Information paucity	145 (69.4)	Barriers to using AV technology		
Cannot administer psychological tests	123 (58.9)	None	7 (3.3)	
		Lack confidence with technology	47 (22.0)	
Rapport	84 (40.2)			
Otherc	28 (13.4)	Lack training	45 (21.0)	
Additional measures used with A	AV work	Lack standards	79 (36.9)	
None	5 (2.4)	Client inability with technology	129 (60.3)	
Discuss with client	164 (78.8)	Poor engagement	84 (39.3)	
Encrypted software	158 (76.0)	Ethical concerns	78 (36.4)	
Password-protect data	80 (38.5)	Reduced efficacy	118 (55.1)	
Use earphones	70 (33.7)	Fear of managing client crisis	75 (35.0)	
Show client room via camera	40 (19.2)	Lack equipment	60 (28.0)	
Hide personal material	160 (76.9)	Lack bandwidth	155 (72.4)	
Other ^d	33 (15.9)	Cannot charge clients full fees	13 (6.1)	
		Other ^e	19 (8.9)	

Note. AV = audiovisual; MSE = Mental Status Examination.

^a Symptoms of psychopathology, including personality disorder. ^b For example, physical examination, autism spectrum disorder, attention-deficit/hyperactivity disorder, brain injury, elevated risk level, severe anxiety, trauma, suicidality. ^c For example, risk of being overheard, technology or access problems, being rushed, testing limitations, distractions, test copyright issues, building and maintaining rapport with child clients. ^d For example, close doors, use only electronic notes, do not use from home, use physical privacy screen/shield or virtual background, use same software/hardware as tele-court or for virtual legal visits to ensure equivalent level of privacy, clear desk. ^e For example, client reluctance to pay full fee, client privacy, technology security, competition for equipment or software resources, lack of client access to technology, logistical issues with interpreter use.

testing, only 20.4% psychiatrists did so, $\chi^2(1, N = 209) = 44.52$. p < .001, OR = .10, 95% CI [.05, .21].

Similarly, virtually all (96.7%) participants identified at least one barrier to using AV technology (see Table 5). Although patterns of endorsement were broadly similar across disciplines, compared with psychiatrists, psychologists were more likely to identify ethical concerns (42.1% vs. 20.0%), $\chi^2(1, N = 214) =$ 8.65, p = .003, OR = .34, 95% CI [.17, .71]; reduced efficacy (61.0% vs. 38.2%), $\chi^2(1, N = 214) =$ 8.61, p = .003, OR = .40, 95% CI [.21, .74]; a lack of formal guidelines or standards (40.9% vs. 25.5%), $\chi^2(1, N = 214) =$ 4.18, p = .041, OR = .49, 95% CI [.25, .98]); or financial disincentives (8.2% vs. 0%), $\chi^2(1, N =$ 214) = 4.79, p = .029, OR = .92, 95% CI [.88, .96], as barriers.

Perceived Advantages Compared With Face-to-Face Contact

Participants identified some significant advantages of using AV conferencing over conducting face-to-face sessions, including efficiency, convenience, ease of access, safety, client comfort, and flexibility. They believed that these features would reduce attrition and that observing clients in their normal environments could deepen understanding of their clients' functioning. Participants were invited

to freely answer the following question: "Please list the key advantages to audio-visual conferencing." Responses focused on the following themes: low resource cost (e.g., travel expenses, travel time, less wasted time if session canceled or rescheduled), convenience and ease of access (e.g., geographical reach, sessions may be impossible in person, fewer unpleasant interactions with custodial staff, and that this accessibility facilitates continuity of care), safety (e.g., risk of assault by client, infection control), and flexibility (e.g., easy to schedule or reschedule sessions, improved work-life balance due to lack of travel time). It was further reported that the increased convenience of remote sessions may lead to fewer cancellations. Participants also described several advantages linked to working with clients in their normal environments. Specifically, they reported that clients can be more relaxed and that it is possible to observe relevant environmental features (e.g., pictures, decorations) that are undetectable when sessions are conducted in clinics or institutional locations.

Privacy and Confidentiality Concerns and Precautions When Using Audiovisual Conferencing

When asked to comment on considerations of privacy and confidentiality, a broad range of views emerged, including the following: avoiding or managing the presence of third-party observers, such as prison officers, clinical staff, or household members (e.g., "I do ask them to ensure nobody can hear them at their end, and do the same at mine"; "I use headphones so other people in my house can't hear the conversation"; "I use a separate room with a 'session in progress' sign so housemates know to avoid the area"); contingency planning around possible technical or risk-related issues (e.g., "very detailed risk and safety considerations prior to commencing an assessment"; "an added full informed consent procedure about risks, emergency and crisis plan, plan if technology fails"); transparency about measures taken, known factors limiting privacy or confidentiality, and possible distractions (e.g., "Discuss the technical aspects of platform and associated risks"); reassuring clients (e.g., "sending unique password and link to meeting and locking meeting once both attending"; "I describe sitting at my desk with no others in the vicinity and that I am wearing headphones"); warning clients about threats to privacy or confidentiality due to possible security breaches (e.g., "Explained the potential security breach using VC [videoconferencing] although also stated that the system we used was the most secure available"); and increased focus on ensuring client understanding of obligations and limits to privacy and confidentiality (e.g., "[Seek the] client's assurance that they are not recording the session"; "Consent form is completed remotely, so I read it out [while interrupting myself to explain it in layman's terms with examples], and then I ask them to explain it to me when I am finished so I can ensure that they have understood what I have said and can actually provide informed consent"). Participants identified measures they used to promote privacy and confidentiality when working with clients over an AV connection (see Table 5).

Adaptations to Informed Consent Procedures When Using Audiovisual Conferencing

Participants reported making various adaptations to their standard procedures for obtaining informed consent. The most frequently noted themes were focused on the increased difficulty of using traditional physical consent forms. The 112 participants who responded to this free-text item identified a range of solutions for addressing this, including the use of proxies (e.g., prison officers or clinical staff) to relay forms (n = 7, 6.3%), scanning signed forms or using digital signatures (n = 9, 8.0%), and posting written forms in advance to discuss in the session (n = 1, .9%). By far, the most dominant theme was an increased emphasis on conducting careful verbal consent procedures, including emphasizing the distinctive features of AV conferencing compared with face-to-face sessions (n = 30, 26.8%).

Psychological Testing and Reporting of Audiovisual Conferencing Technology Use

Participants were asked, "What limitations, if any, did you perceive to be associated with the administration of psychological tests over audio-visual conferencing?" Key themes included issues with performing physical tasks (e.g., block-based subtests of cognitive test batteries), limited or impaired observation of the client (e.g., due to limited field of view or poor video/audio or connection quality), difficulty with sending clients actual questionnaires, reduced privacy, increased socially desirable responding if others are present or the client is required to speak rather than write responses, increased testing times, limited client or clinician technological proficiency, and reduced or unknown test validity with adapted procedures.

Further, participants reported making a range of adaptations to testing protocols when performing psychological testing in conjunction with AV conferencing solutions (survey question: "Please elaborate on how you modified the tests and/or addressed differences in remote vs. in-person testing conditions [e.g., read the questions allowed (sic) to client, showed client images over audio-visual]"). By far, the most common theme was reading test instructions or items aloud, followed by showing visual material using either screen-sharing or the AV stream itself. Also prominent was the use of specific online testing solutions, whereas some indicated that they provided physical test materials and/or used proxies to assist with providing materials or supervising testing. Another key theme was adaptations to test selection or administration.

The acknowledged adaptations required for conducting forensic work using AV technologies, along with the resulting limitations, were formally documented to varying degrees. Among those who responded to all of the relevant items on AV usage and documentation, 185 clinicians had used AV conferencing technologies. Of these, most (n = 168, 90.8%) acknowledged this in their written reports. Despite this, almost a third of these (n = 54, 29.3%) merely noted their use and did not report the perceived effects or limitations of this practice.

How Often Was the Use of Audiovisual Conferencing Technology Questioned by Clients or Others?

Participants reported that their use of AV conferencing technology was rarely challenged with respect to either forensic assessment (9.5%) or treatment (5.6%) work.

Discussion

This article outlines the results of a survey relating to the experiences of and attitudes toward remote practice of a relatively large, gender-balanced, international sample of forensic psychologists and psychiatrists. Data were collected during a time when, due to the global COVID-19 pandemic, urgent answers were being sought about the validity and legitimacy of using tele-services to deliver forensic services. Although a minority of participants reported using tele-services previously, the number increased sharply following the imposition of workplace restrictions. Notably, the reported prepandemic use of AV conferencing for forensic assessments (36.3%) is equivalent to that reported by Batastini et al. (2020; 34.8%); this study's data collection predated the pandemic by 2 years. Almost two thirds of participants reported the use of AV conferencing for forensic assessments since the imposition of workplace restrictions. This finding is particularly notable because the analysis compared the usage frequencies of participants' entire pre-COVID-19 careers very early in the pandemic (April-June 2020). It is possible that the use of tele-services has increased even further since this time. For example, the Australian state of Victoria commenced one of the world's longest and strictest lockdowns scarcely a month after data collection ended (Mercer, 2020). The dramatic increase in the use of new and emerging technology emphasizes the importance of investigating the implications of its use further.

Training in Audiovisual Conferencing Technology

Although a minority of clinicians (44.8%) had received training in the use of AV technology, many of these had done so within the last year. Despite this rather predictable surge in training coinciding, for many people, with workplace restrictions, it is noteworthy that many participants had received training within the last 5 years but not in the last year-that is, prior to any pandemic-related effects. This may reflect a general increase in the acceptability of using AV conferencing technology for forensic work and the concomitant proliferation of remote-conferencing technologies. There are several possible reasons for the observed discipline differences in the recency of training. The survey did not ask whether the most recent training in remote-conferencing technology was the first such training received; however, assuming that this was the case, it may be that conducting forensic work remotely has been more acceptable among psychiatrists. If so, it follows that psychiatrists might have received training earlier, such as when they first incorporated the use of remote-communication media into their regular practice. The uptake in technology by psychiatrists may also reflect the growing acceptance of telehealth services more generally (Caffery et al., 2017).

The vast majority of trained clinicians (83.9%) had used videoconferencing services during their work. Of potential concern was the finding that almost half of those who had used such technology had not been trained in its use. Because the survey did not ask about planned training, the degree to which this training-utilization gap reflects the rushed shift toward remote contact in the early days of a starkly different professional ecosystem is unclear. In other words, the group of untrained tele-service users includes an unknown number who had commenced remote practice while awaiting scheduled training. It is also unknown how many participants had made use of peer consultation or other supports not explicitly noted in the survey. It must also be acknowledged that despite existing recommendations (e.g., Adjorlolo & Chan, 2015), specific training in the use of tele-services is not currently an accepted formal (or even de facto) requirement for their use in forensic tasks. The lack of training is remarkable given some of the concerns with tele-service provision raised by participants in this study and the fact that many had learned to adjust their practice to cater to differences in the communication modality.

Certainly, the expressed preference of many participants for face-to-face contact implies some reluctance to adopt tele-services and some lack of confidence in its use. Further, although there is a notion that specialized training might improve clinicians' attitudes toward the technology, the idea that completing such training is a necessary precondition for using tele-services is not established. To warrant inclusion in best-practice guidance, training should ideally be formally accredited, prescriptive, competence based, and sensitive to the specific issues posed by forensic mental health work (Adjorlolo & Chan, 2015). Although it is a limitation of the current study that we did not ask participants about training details, exploring the nature and content of specific training programs is a fruitful area for future research toward developing meaningful practice guidance.

It bears emphasizing that under exigent circumstances like those of pandemic-related restrictions during 2020, setting prerequisites for the use of tele-services for forensic practice can be a vexed ethical issue. Where face-to-face practice is impossible, the relevant comparison is not between tele-service and face-to-face contact but between tele-service contact and no contact at all. This highlights the critical issue that practice guidance must consider not only the "best case" but also the best-available solution, given less-than-ideal conditions. This involves anticipating any adaptations required to address these challenges, along with any additional limitations or caveats associated with those compromises. Still, the obvious importance of adequate training in building both confidence and genuine expertise is such that subsequent topics will be discussed to some degree through the lens of training needs.

Attitudes Toward Audiovisual Conferencing Technology

More recent training and greater experience in the use of AV solutions were associated with higher levels of confidence, perceived competence, and satisfaction with assessment and treatment. The effects of experience are broadly consistent with previous research (Batastini et al., 2020), and the finding that training improves attitudes toward the use of tele-services makes sense, given anticipated effects of increasing familiarity and actual competence. The specific value of training recency suggests that in addition to providing opportunities to communicate recent advances, repeated training might also boost confidence in the use of tele-services.

Interestingly, age and gender also predicted attitudes toward the use of tele-services. Younger clinicians reported higher perceived competence with delivering treatment. This comfort with the technology might explain why younger forensic practitioners have previously been observed to use videoconferencing at higher rates than their older colleagues without the immediate pressure of workplace restrictions (Batastini et al., 2020). The picture was more complex with respect to gender identity. Males reported higher confidence and perceived competence for clinical and competency assessments but not risk assessments, even after controlling for other factors. This may be due to the differing demands of risk and other assessments. Forensic risk assessments are typically characterized by a focus on medium- to long-term prediction; reliance on multiple sources of information (e.g., clinical interview, file information, informant); the use of relatively stable, evidencebased predictors; and structured or even algorithmic decision making. Although structured protocols can assist with clinical and competency assessments, these assessments rely heavily on an individual's actual presentation. If the use of AV conferencing technology compromises the ability to gauge mental state (as suggested by participants in this survey), this will produce an incomplete clinical picture, and clinical and competency assessments may be disproportionally affected. Put another way, if risk assessments are less reliant on interviews, it holds that they would be less affected by doubts about the quality of interview information due to the use of tele-services. The pattern of gender differences may thus reflect greater self-reported optimism by males under conditions of uncertainty.

The current methodology did not allow for direct comparison between attitudes toward face-to-face and AV-based assessments. Still, beliefs that the use of AV conferencing compromises elements of assessment and is unsuitable for working with some clinical issues were common among participants. Lacking objective outcome measures, we are unable to comment on the degree to which observed age or gender differences reflect differences in actual (rather than perceived) proficiency. Still, it bears emphasizing that training was associated with improved attitudes and standardized structure with attenuated group differences. As such, it is plausible that appropriate training would increase self-reported and actual competence, producing more consistently high-quality outcomes across clinicians and contexts.

Perceived Merits and Challenges of Using Audiovisual Conferencing

Consistent with past research, identified advantages of tele-service over face-to-face sessions included those based on efficiency, convenience and access, physical safety, and flexibility (Batastini et al., 2020; Sales et al., 2018). Specific concerns about technical issues (i.e., technology failure or a lack of proficiency), privacy, reduced visibility of clients, testing, and the general lack of concrete guidelines were similarly consistent with those identified in the literature (Adjorlolo & Chan, 2015; Dale & Smith, 2020; Khalifa et al., 2008).

It is important to distinguish here between perceived limitations and actual ones. Despite apparent clinical consensus about the limitations of tele-service contact, the evidence is inconclusive about how much these genuinely impair effective practice. Clinicians doubt the capacity of tele-services to allow accurate inferences about how clients are feeling. However, empathic accuracy depends mainly on verbal and contextual cues, and early research suggests no differences between videoconference, telephone, and face-to-face contact (Dale & Smith, 2020). Perceived obstacles or limitations reported by expert practitioners cannot be ignored but must be evaluated in the context of the growing empirical literature. Where the evidence is lacking or inconclusive, the perceptions form a prima facie basis for further investigation. When the evidence is plainly incompatible with such perceptions, this constitutes an open invitation to incorporate this information into an appropriate training program. Both the current results and those reported in the literature (Batastini et al., 2020; Sales et al., 2018) suggest that direct exposure or "hands-on" experience can also help to allay misgivings.

The specific features and presentations that clinicians identified as posing challenges for working via AV conferencing were characterized by an apparent reliance on nonverbal (e.g., appearance and behavior) or environmental cues (e.g., reality-testing based on discrepancies between actual and perceived surroundings). With respect to specific presentations, participants were most concerned with features that directly affect communication (e.g., language impairment, language barrier, acute confusion, sensory or cognitive impairment). It is worth recognizing that any such features, which interfere with coherent verbal communication, affect the capacity to conduct effective interviews, regardless of modality. This remains true even if these challenges are greater for tele-service contact. Although this was not explicitly explored in the current study, it is likely that communication strategies that are useful during in-person sessions (e.g., pointing or gesturing, observing client body language) might be difficult or impossible when relying on AV conferencing. For example, participants emphasized the importance of verbally checking client understanding when seeking informed consent via AV conferencing because it was more difficult to detect nonverbal signals of comprehension. There is a strong case for consolidating and strengthening the research base to inform best practice in this area. Toward this aim, it is critical to confirm which clinical features are incompatible with AV conferencing and which are compatible with appropriate practice modifications and to identify, validate, and codify these adaptations.

Working Alliance and Client Sentiments

Given the influence of cooperation on the quality of assessment information and treatment outcomes, implications of tele-service use on the therapeutic or working alliance is an area of keen interest (Sales et al., 2018). Although most participants reported worse therapeutic relationships when using AV conferencing, less than a quarter expressed dissatisfaction. This suggests that even if the use of tele-services reduces clinician-rated relationship quality, it is nevertheless still sufficient, which is consistent with past research (as reviewed in Dale & Smith, 2020). It is possible that clinicians tend to underrate the strength of the alliance possible via tele-services. Three quarters of current participants had no clients who had expressed concerns about AV conferencing. The survey asked about the presence and nature of concerns expressed by even some clients, so it is possible that clients voicing complaints were rare even among the minority of clinicians who reported any such issues. Indeed, more than a quarter of clinicians reported having clients who openly preferred AV conferencing sessions for a variety of reasons, including convenience, anxiety or perceived stigma, and capacity for increased contact frequency. The finding that clients are more positively disposed than are clinicians to the use of tele-services is not unprecedented, particularly among younger clients (Dale & Smith, 2020; Sales et al., 2018) and this discrepancy requires further research attention.

These findings have a number of possible implications. It is possible that clinicians are overly pessimistic (or clients are overly optimistic) about the working alliance during tele-servicing. Perhaps, as speculated in Sales et al.'s (2018) review, face-to-face and teleservice alliances are "no better or worse, just different" (p. 396). Even if remote working alliances are truly poorer, there is growing support for the notion that they are nevertheless often adequate to produce good and equivalent outcomes to those of face-to-face practice (summarized in Dale & Smith, 2020).

There is a strong case to be made that objective adequacy is more important than equivalence when it comes to the medium of practitioner-client contact. Even if it were conclusively demonstrated that remote contact was valid and fit for purpose but inferior to in-person contact, it would qualify as an acceptable alternative. One trend that emerged in the current study was that participants felt that early sessions were most important for establishing a therapeutic relationship and that this could be more easily maintained than developed via AV conferencing. This may indicate the benefits of more face-to-face contact during the early stage of treatment, as has been suggested by some authors (Sales et al., 2018). Some participants highlighted the need to adapt practice by being more verbally directive to compensate for the reduced ability to detect nonverbal cues. One pointed out that relying on clinicians' retrospective impressions of session and relationship quality was flawed and might be improved by using formal rating scales.

Choice of Tele-Service

Most participants reported using general AV conferencing solutions such as Zoom and Skype. A key concern is whether such general-purpose technologies meet the security, privacy, and confidentiality requirements of forensic mental health work. Zoom has been specifically criticized for its security (Brodkin, 2020), and although Skype allows users to manually enable end-to-end encryption (Al-Heeti, 2018), it is unclear how many participants use this feature. Only a small minority used a dedicated telehealth solution such as Coviu, dedicated inmate communication, or integrated practice management technology to communicate with clients. These solutions have the benefit of being intended to meet the relevant technological security and privacy requirements of remote forensic consultations.

One likely reason for the widespread use of relatively insecure technology platforms stems from direct responses to the COVID-19 pandemic. The imposition of workplace restrictions has led to an unexpected surge in the reliance on remote communication technology. The urgency of these changes presumably left many forensic mental health professionals and services scrambling to meet levels of demand that could be challenging even under prepandemic conditions (Batastini et al., 2020). It is thus possible that the diverse, nonoptimal selection of platforms was due to the need to respond in real time to a dramatic shift in requirements without a dedicated preparation period. Also, security advances are being made rapidly by the various technology services, with, for example, Zoom implementing end-to-end encryption in November 2020 (Barrett, 2020).

A general lack of practically useful guidelines and policies would have left many clinicians and health and justice services needing to swiftly improvise solutions. To establish genuinely usable standards of best practice, it will be important to identify and codify the requirements for tele-services to be considered suitable for forensic practice. Ideally, this would include a curated list of approved tele-services that have been shown to meet the standards required for forensic mental health work. Guidance must go beyond the choice of software (e.g., Zoom) and consider related issues such as data transmission, AV fidelity, and data security (Adjorlolo & Chan, 2015). Such information could be disseminated via formal guidelines or suitable training programs.

Specific Adaptations to Practice Due to Using Audiovisual Conferencing Technology

Distinguishing client from evaluatee can be a vexed issue in the case of forensic work, let alone that conducted via tele-services (Adjorlolo & Chan, 2015). Even when informed consent is not, strictly speaking, required from the evaluatee, requesting cooperation, discussing limitations of confidentiality, and requesting permission to access collateral records or contact informants such as relatives can be extremely valuable. Such tactics may assist with building trust and strengthening the working alliance. With these considerations in mind, the current participants acknowledged that obtaining informed consent via AV conferencing can be challenging. Reported changes to informed consent procedures emphasized interactive, verbal consent processes and the need to use mail, proxies, and electronic signatures to allow the use of conventional forms. With respect to privacy and confidentiality, most

participants discussed medium-specific considerations with clients, used secure software, hid personal material from view, and encouraged or facilitated similar measures at the client's location. Clinicians emphasized the importance of managing the risk of being overheard, contingency planning for risk or technical issues, transparent and reassuring communication with clients, disclosing risks associated with security breaches, and ensuring client understanding of obligations and limits to privacy and confidentiality. Meanwhile, others relied on institutional norms or expressed concerns about the limited privacy afforded to those in forensic settings.

Ultimately, these responses largely reflect the practical realities and difficulties of delivering services to forensic populations using tele-services. The fundamental requirement of any remote communication technology is that all parties have adequate access to the relevant hardware and software. Community-based clients might be able to access telephones, computers, and the Internet privately (e.g., from home); however, those based in institutional settings may not have unmonitored access to the relevant technology. This poses distinctive challenges to privacy for such clients. Although privacy is limited for those in institutional settings, in-person professional visits still typically provide greater privacy than AV conferencing. Participants commonly expressed concern about thirdparty observers. Potential advantages of in-home assessment via tele-services notwithstanding, pitfalls might stem from a lack of control or knowledge of an evaluatee's behavior or environment if this falls "out of frame." The notion that individuals might be more prone to deception when they are less visible is plausible, although the preliminary finding that empathic accuracy may be unimpaired by mode of communication (videoconference, telephone, or face to face) is promising (Reese et al., 2016).

In addition to access, the quality and stability of the relevant technology are also critical to the viability of forensic assessment and treatment conducted via AV conferencing technology. Participants reported discussing the prospect of technology failure with clients and seeking to reestablish contact, reschedule, or cancel sessions when necessary. Perhaps the most interesting finding was that some participants reported that the shared adversity of technology failure actually improved their therapeutic bonds. The reported adaptations to normal practice appear to reflect goodfaith, commonsense attempts to address practical challenges faced when delivering conventional in-person services remotely. Still, the heterogeneous, improvised character of such changes invites the development and dissemination of more standardized and rigorous practical guidance.

Psychological Testing and Reporting the Use of AV Conferencing

With respect to formal psychological testing, participants highlighted a range of practical challenges related to observation, rapport, and the demands of specific assessment tasks. They reported that the use of tele-services influenced both test selection and administration protocols. It is appropriate that the mode of delivery (i.e., remote vs. in person) is a critically important factor in psychological testing. If the medium used requires a departure from standardized administration procedures, this can limit the validity of the assessment (Adjorlolo & Chan, 2015). Despite this, it is also important not to simply abandon tests that were designed and validated for face-to-face administration. Previous research broadly supports the validity of neuropsychological testing by videoconference, particularly for verbally mediated tasks, although the evidence for motor-dependent tasks is inconclusive (Brearly et al., 2017). It is also plausible, although unproven, that many standardized questionnaire-style tests might be easily adapted to remote administration by, for example, reading items aloud, sending printed materials by post, or through computerized testing solutions. Each of these methods was endorsed by some participants.

If nothing else, it is clearly important that adapted procedures and any associated limitations be acknowledged because these may limit the confidence of conclusions relying on such assessments. Although almost all participants acknowledged the use of AV technology for forensic assessment and treatment in formal reporting, a significant minority indicated that they failed to outline any related limitations in their reports. This may be because these limitations have not been elucidated or are not widely known.

It is possible that some clinicians believe that the limitations of shifting from face-to-face to remote sessions are self-evident and hence unnecessary to report. Certainly, the current results suggest that clinicians have little difficulty with identifying potential issues or challenges posed by the change of medium. Still, an assumption of self-evident limitations would appear to be ill-founded in the context of an expert-witness model. This leaves it to legal advocates, decision makers, or clients to recognize and, when appropriate, challenge the use of AV conferencing technology. For such challenges to be valid, they necessarily rely on a certain specialized knowledge of how the choice of medium might affect outcomes. Possession of this knowledge might be reasonably expected of the experts conducting such assessments but not of others. At best, omitting information that affects the confidence of expert conclusions is unhelpful. In practice, participants reported that their use of AV conferencing technology was very rarely challenged, and when it was, this was typically not done by decision makers, more often falling to clients or others.

Another possibility is that clinicians fail to report perceived limitations due to the medium of assessment because they have simply not been told to report them. In other words, the general lack of clear, well-known, and established reporting guidelines for the use of AV conferencing technology is to blame. Although this may seem more benign or at least less deserving of censure than the assumption of self-evidence, it has similar practical implications. Clearly, there is a need to disseminate appropriate guidance to promote consistently adequate reporting, perhaps through structured programs of training.

Conclusions

The COVID-19 pandemic has forced forensic mental health professionals and institutions to deliver services remotely via teleservices. The pace of this change has contributed to some anxiety and heterogeneity in practice as providers improvised solutions to unique challenges. The results of this survey show that a large, gender-balanced, international sample of forensic psychologists and psychiatrists perceived significant advantages as well as some challenges to the use of tele-services in place of face-to-face contact for forensic assessment and treatment work. Scrutiny of the results reveals an unexpected level of complexity that is valuable for informing emerging best practice. It is important that guidance is developed for when and how to best incorporate AV conferencing into routine practice. This will require a clear acknowledgment of its relative strengths and limitations, along with any required adaptations associated with this medium. Despite challenges to the incorporation of AV conferencing into routine forensic work, bestpractice guidance is required. Some solutions for technological privacy and informed consent are proposed here, but these suggestions require testing and refinement. Guidance must also offer recommendations for the best available options when such exemplars are impossible and specify the nature and consequences of any compromises. Although the current findings do not constitute necessary and sufficient best-practice guidelines, they contribute to a critical foundation from which further research can be conducted and guidelines can be developed.

Perhaps the most important issue highlighted is the urgent need to develop programs to educate practitioners in the technical and practical aspects of remote practice. Such programs should be reviewed and revised in response to the growing evidence base. Many clinicians are reluctant to fully incorporate tele-service use into their routine practice. Periodic training, perhaps linked to formal professional development, would promote confidence and skill with the available technologies and provide an environment to disseminate recent advances. Such programs would benefit from a practical approach that (a) openly addresses both ideal-case best practice and likely compromises; (b) incorporates guidance about prerequisites for remote service delivery (see, e.g., Adjorlolo & Chan, 2015); (c) explicitly addresses the required features of an acceptable tele-service solution, with a curated list of acceptable options; (d) dispels common myths about the use of tele-services; (e) transparently outlines testing considerations in light of contemporary research, including test selection and endorsed testing adaptations and limitations; and (f) clearly outlines standard protocols for reporting the use and limitations of tele-services for forensic practice.

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