Comparison of novel hybrid and traditional physiotherapy clinical placement models: A pilot study

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This mixed-methods observational pilot study compared clinician-supervisor and student satisfaction (surveys and semi-structured interviews), and final placement scores for two different physiotherapy clinical placement models: hybrid (half-onsite, half-remote) and traditional (onsite). All supervisors and students involved were invited to participate; ten supervisors and seven students completed the survey, and nine supervisors and one student participated in interviews. Qualitative data were analyzed using reflexive thematic analysis. Students and supervisors reported similar levels of satisfaction for either model. Supervisors reported some reservations and higher workloads with the hybrid model. The interviews identified three themes for satisfying placements: it is structure, not location that matters; managing competing demands on clinician-supervisors; and learning requires psychologically safe relationships. Final scores for both placement models were comparable. This pilot study with a small sample found the hybrid model was acceptable and achieved comparable outcomes to the traditional model. Remote structured learning has potential to innovate and support sustainable clinical placements.

Keywords: Clinical education, physical therapy, professional placement, COVID-19, mixed methods evaluation.

Clinical placements within healthcare settings are an integral part of entry to practice physiotherapy degrees offered by universities (Australian Physiotherapy Council, 2023). The placements enable physiotherapy students to get exposure to patients and to be immersed in healthcare delivery. Despite utilising a range of clinical placement models, there is a paucity of evidence to determine the best model, which can lead to a reliance upon opinions, perceptions and historical approaches when planning clinical placements (Lekkas et al., 2007). The approach for traditional clinical placements is largely modelled on apprenticeship practice and involves one supervisor working with one or two students as they undertake practice-based learning in a clinical setting (Lekkas et al., 2007). The traditional model can be staff-intensive and can limit the number of students who attend, placing considerable demand on universities and clinical settings to meet the growing demand to train a physiotherapy workforce (Fairbrother et al., 2016). Alternative models that incorporate adjunctive

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learning strategies can assist to innovate and inform more sustainable clinical placements models (Dario & Simic, 2021).

The recent COVID-19 pandemic further restricted student attendance, and staff ability to provide suitable supervision and exposure for physiotherapy clinical placements in Australia (Dario & Simic, 2021). The pandemic compelled many clinical schools to implement innovative placement models (Barradell, 2023; Dario & Simic, 2021; Salter et al., 2020; Twogood et al., 2020). For our setting, the Victorian State Government and the Department of Health declared strict COVID-19 pandemic restrictions in August 2020 (Department of Health State Government of Victoria, 2020), which limited in-person attendance at hospitals for non-essential services, including student education. Governments, universities, hospitals and registration bodies worked closely to design innovative and safe clinical placements that could ensure suitable training and avoid future shortages of essential healthcare workers, such as physiotherapists. This process led to our design of a novel "hybrid" clinical placement model, which involved 50% remote learning (i.e., online) and 50% "traditional" face-to-face, on-site clinical education. The hybrid's overall structure and assessment processes aligned with the traditional placement model (see method for details). The hybrid model permitted the clinical educator to continue with tuition and exposure to clinical practice via online methods. Given the hybrid model was a new approach for our clinical placements, we conducted a pilot evaluation.

Research Question

The purpose of this pilot study was to explore and compare satisfaction of staff-supervisors and physiotherapy students involved in the hybrid versus traditional clinical placement model. We also aimed to compare the students' final competency scores at completion of the two placement models. We hypothesized that the hybrid model would be acceptable for students and staff-supervisors, and would deliver similar outcomes to the traditional model for professional standards and pass rates.

METHOD

This was a pragmatic study undertaken whilst two consecutive physiotherapy student cohorts completed two different clinical placements models at a large metropolitan teaching hospital. In Victoria, student placements were negotiated by universities and teaching hospitals, and then administered centrally. As such, the university student year-group attend a variety of clinical placements. This study involved only those students allocated to the teaching hospital for the hybrid placement in 2020, and the traditional placement in 2021. The placements provide work integrated learning (WIL) opportunities, allowing students to integrate theory into meaningful practice with suitable supervision as a component of the physiotherapy course curriculum. All students who attended and all staff-supervisors who delivered the placements were invited to participate after they had completed their respective placement. All participants provided written informed consent. The study had ethical approvals from both Austin Health (HREC/81150/Austin-2021) and Swinburne University Human Research Ethics Committee (20226703-10476).

The study was a mixed-methods observational study that compared descriptive information and qualitative data arising from the two participant groups (physiotherapy students and staff-supervisors) that were exposed to one of two different clinical placement models: a) hybrid (n = 10 students, 6 supervisors) or b) traditional (n = 10 students, 5 supervisors) in 2020 or 2021 respectively. The hybrid and traditional placements had many of the same features: overall hours, staff-student ratio, clinical setting, group workshops, objectives and marking format, as outlined below. Both placements occurred in the subacute inpatient or community setting offering experience with a mixed diagnostic

and varied clinical caseload. Both placements occurred over a five-week period (four days/week; ~7.5 hours/day) at the same phase (final year) of the Swinburne University of Technology Master of Physiotherapy degree, two-year, entry to practice course.

Traditional Clinical Placement – All Activities Onsite

The traditional placement involved two students allocated to each supervisor. The staff-supervisors were senior physiotherapists who have clinical and teaching duties. Each supervisor organized graduated hands-on clinical exposure and practice under supervision (allowing students to progress to independent practice as deemed competent), or directed independent study and preparation for clinical exposure. Additional learning opportunities, such as demonstrations, participation in team meetings or multidisciplinary care, or debriefing sessions, were provided under the discretion of the supervisor. Whilst the clinical education approach was largely based on an apprenticeship model (Lekkas et al., 2007), students also participated in five two-hour workshops over the placement. The placement objectives were guided by the Assessment of Physiotherapy Practice (APP) instrument (Dalton et al., 2011), with the students receiving formal feedback on their performance at half-way and end of placement. All supervisors had training to use the APP. Supervisors also provided regular feedback and guidance during the placement.

Hybrid Clinical Placement –Two Days per Week Remote; Two Days per Week Onsite.

The key difference for the hybrid model was that 50% of the placement (2 days a week) was delivered remotely, which involved online tuition or feedback sessions (check-ins), observation or involvement in clinical sessions using telehealth, virtual multidisciplinary meetings, and self-directed learning. For the remaining two days a week (50% onsite), students received face-to-face, hands-on clinical practice as directed by the staff-supervisor, as would occur during the traditional model. Covid-19 person-density limits meant that some student pairs needed to attend the clinic on separate days. Given the logistics, learning activities were tightly planned and timetabled.

Outcome Measures

Both participant groups were asked to complete an online survey about their respective placement. The survey focused on overall satisfaction, usefulness of resources and support, and whether the learning goals, professional standards [as guided by the APP instrument (Dalton et al., , 2012)] and expectations were met. Respondents could also provide information about general strengths, weaknesses and their experiences. Staff were asked additional questions about workload management. The surveys included 5-point Likert scales and open text responses. All responses were anonymous.

Both participant groups also had the opportunity to participate in a semi-structured interview, involving 3 open-ended questions. The questions explored aspects of the placement that were satisfying or not satisfying, and how the two placement models compared. All participants were interviewed by one researcher (JB) who used probing to clarify and unpack the interviewee's responses. The interviews took between 20 and 45 minutes, and were conducted via a videoconference, recorded (audio only), and later transcribed verbatim. The transcriptions were sent to each participant to verify accuracy, as part of a member check process (Lincoln & Guba, 1985, p. 314).

The students' final scores from the two clinical placements were extracted in a de-identified format. Scores were allocated by the primary staff-supervisor according to the APP instrument (Dalton et al., 2012), which is a reliable and validated instrument to assess standards required for physiotherapy

practice and registration within Australia and New Zealand. The APP involves 20 questions covering seven domains (professional behaviors, communication, assessment, analysis and planning, intervention, evidence-based practice and risk management). Each APP item is rated on a 0 (infrequently/rarely demonstrates) to 4 (demonstrates most performance indicators to an excellent standard) scale. A score of 2 reflects a pass standard. The APP also provides the option of "not assessable" when professional behavior cannot be observed. The APP may also be reported as two separate subscales: "employability skills" covering professional behavior and communication (APP Items 1-6); and "clinical skills" covering assessment, treatment, risk management (APP Items 7-20) (Lawton, Jones, & Dean, 2021).

Data Analyses

Results for online surveys were collated and reported using descriptive statistics for the participant group (supervisor/student) and placement type (hybrid/traditional). Group data were then summarized for placement models. No statistical comparisons were conducted due to small sample sizes.

Two researchers (JB, EK) independently reviewed each interview transcript and performed a reflexive thematic analysis (Braun & Clarke, 2019). This involved deep immersion by reading and re-reading the transcripts to explore explicit and implicit meaning arising from the interviews. Both researchers kept a reflective journal to outline their thoughts, reflections and decisions when interpreting the data. The researchers preferred to use inductive reasoning to generate latent themes, as opposed to preplanned themes and deductive reasoning. The researchers met on several occasions to discuss, generate and refine the themes and concepts arising from the interviews. Given both researchers were clinical educators within the hospital network, the researchers openly acknowledged potential factors and biases that could have contributed to assumptions when interpreting the interview data. Relevant factors included staff-supervisor personalities and their educator style, workload pressures, impact of uncertainty and change during the pandemic, awareness of the growing demand for clinical placements and a desire to adopt more sustainable teaching practices.

Final placement scores on the APP instrument were compared on various levels (i.e., overall score, domain scores, subscales [employability/clinical skills] and number of items that were not assessable) for the two student groups attending the hybrid and traditional placements.

RESULTS

Participants

Ten of the possible eleven supervisors (6/6 for hybrid, 4/5 for traditional) completed the online survey and nine were interviewed. One supervisor from the traditional model chose not to participate as they continued to use the hybrid placement model in 2022. The supervisors had a range of experience in clinical supervision (50% with more than five years), and postgraduate qualifications (50% held or were undertaking). All supervisors had prior experience delivering and supporting both types of placement models. For instance, if they were not a primary staff-supervisor for the hybrid model, they had supervised or supported other variants of remote placements during the COVID-19 pandemic.

Of the twenty students, (two blocks of ten, for each model- Note, one student did not complete the hybrid placement), seven students (three hybrid, four traditional) completed the online survey and only one (hybrid) participated in the interview.

Survey Findings

Responses for the online surveys were tabulated for ease of comparison (Table 1), and indicate that both supervisors and students were satisfied with either placement model. As mentioned previously, response rate for supervisors was high (91%), yet low for students (37%). While the students who responded to the survey felt that either placement model prepared them for hospital work, the supervisors preferred the traditional model for students to develop clinical skills and workforce readiness. Both the students and supervisors raised minor concerns as to whether the hybrid model provided enough opportunity for students to consolidate clinical skills such as assessment, treatment delivery, discharge planning, and be involved with patient education and the multidisciplinary team.

Supervisors and students recognized strengths and suggested improvements for both models. For the hybrid model, students reported that structured timetables gave flexibility to prepare for patients, review theory and investigate relevant topics. The planned schedule, and ability to avoid the peak hour traffic commute limited potential fatigue and was considered helpful for student learning. Students also appreciated the opportunity to see real patients and develop clinical skills. They recommended more time to be involved in clinical practice, peer-to-peer learning, and to limit the duration of online sessions or tutorials. The hybrid supervisors said strengths of the model were built-in time for self-reflection and preparation, and scheduled "check-ins". Supervisors felt these attributes promoted accountability and enhanced quality of the clinical and feedback sessions. The opportunity to be exposed to different service models, such as telehealth, and be involved in online team communication were also advantages for the hybrid model. Improvements recommended by the supervisors included more time within the clinic (i.e., not 50:50), ensuring the schedule supported continuity of patient care, having students in pairs, and sharing departmental resources for remote education/supervision sessions. One supervisor who enjoyed the hybrid model felt that nothing needed to change.

For the traditional model, both students and supervisors commented that exposure and hands-on practice with real patients, and working closely within the supervisory staff-student pair were strengths. The students particularly appreciated the encouragement and support from their supervisors. One student mentioned that being in the clinic was more engaging than online learning. One supervisor mentioned more time within the clinical setting assisted students to understand the patient journey and holistic care, and provided opportunities to work with other clinicians (physiotherapists and other disciplines). One student suggested the traditional model could be improved by more regular and timetabled "check-ins" with the supervisor. The other three students explicitly said nothing in the traditional model needed changing. The supervisors felt continuing with workshops (as delivered during the hybrid model), increasing support to manage supervisor workloads, and using a departmental approach to coordinate and share resources and deliver group reflective practice sessions would improve the traditional model.

TABLE 1: Summary of online survey responses for student and supervisors involved in the hybrid and traditional placements.

Thematic area	Score details	Student		Supervisor	
		HYB	TRAD	HYB	TRAD
		n = 3	*n* = 4	*n* = 6	*n* = 4
Satisfaction					
Satisfaction with the placement involved in	Rating 0 highly unsatisfactory to 10 excellent	8.7/10	9.5/10	7.3/10	7.5/10
	Percentage that Agreed/ strongly agreed they were satisfied	100%	75%	83%	100%
Clinical skill development					
Prepared student for hospital work	Percentage that Agreed/ strongly agreed	100%	75%	50%	75%
Hybrid enabled students to achieve same clinical level as Traditional[a]	Percentage that Agreed/ strongly agreed	N/A	N/A	17% [a]	0% [a]
Components of the placements					
Peer-peer student involved for the Hybrid was similar to the Traditional.	Percentage that Agreed/ strongly agreed	67%	50%	N/A	N/A
Online guided learning helped develop clinical reasoning skills	Percentage that Agreed/ strongly agreed	100%	100%	83%	50%
Supervisor check ins were essential to integrate reflective practice within the clinical placement	Percentage that Agreed/ strongly agreed	N/A	N/A	67%	100%
Organization and Scoring					
Supervisor workload for Hybrid was comparable to Traditional.	Percentage that agreed.	N/A	N/A	17%	25%
	Estimated increase time for the Hybrid (hour per week)			2 to 5 hours	2 to 4 hours.
APP was a suitable scoring tool.	Percentage that Agreed/ strongly agreed	N/A	N/A	83%	75%

Note. Responses are presented using themes, the 5-point Likert scales responses are summarized as percentage of overall agreement (agree and strongly agree). HYB = Hybrid model, TRAD = Traditional model, N=number, N/A = Not applicable, APP= Australian Physiotherapy Practice Instrument.
[a]Staff-supervisors from both models were asked this question, regardless of the model they delivered.

Interview Findings: General Overview

While the two models differed for degree and type of structure, both models had similarities, perceived benefits and challenges. The interview findings aligned with general considerations and recommendations to inform the design of satisfying clinical placements, regardless of the model. Our reflexive analyses revealed three main themes around structure, supervisor workload and psychological safety. These will be presented with the support of selected quotes, labeled according to placement type (TRAD = Traditional, HYB = Hybrid) or participant group (SV = Supervisor, STUD = Student).

Theme 1: It's Structure, Not the Location That Matters

All interviewees valued structure within the placements, as it helped to plan, prepare, prioritize learning opportunities, and use time well. The hybrid model required tightly designed learning content with an organized timetable. In contrast, the traditional model tended to involve a flexible timetable that was open to learning opportunities as they arose. For both placements, the learning and teaching activities models relied on the supervisors' style and organizational skills. A clear learning and teaching structure was considered helpful to plan and scaffold suitable learning activities, provide explicit and clear expectations, and formalize feedback sessions. A guiding structure may also assist to standardize the content of placements.

> We had really regular check-ins and reflections sessions in that [hybrid] model. With [students] doing the traditional model, we [supervisors] probably went back to what we'd done previously where we don't necessarily schedule in those sessions. You look at your schedule and there's free bits of time throughout the week. But things come up in during the week and then the explicit feedback session might get deprioritized. [TRADSV4]

> Regarding inconsistency, what I teach them in one placement may vary to another. [TRADSV3]

Sub-theme 1-1: Structure requires clarity of content and explicit learning objectives

A structured program required clarity about content and explicit learning objectives, as identified by assessing the student's knowledge and skills, and guided by the placement's objectives. Structure assisted the supervisor and student to set explicit learning goals, tailor relevant activities, and establish expectations with timeframes. The supervisors did however mention that the hybrid model took them more time and effort to organize. Supervisors did wonder if self-directed learning, as emphasized in the hybrid model, suited all students as it may be dependent on level of experience or learning style. These aspects reinforce the importance of educational principles when planning a placement, regardless of the model delivered.

> [Learning activities] are deliberately built in to complement the clinical work that they're doing face to face. It's not just stuff for the sake of stuff. Giving [students] the time to do [clinical preparation], to then come into clinic and have a plan of how to approach it, sets them up for success. It's a lot better than just throwing patient quantity at them. [HYBSV2]

> [Time away from clinic/supervisor] encourages them to go and solve their own problem. Or they've formed their own question before they come to me. So again, this develops that reflective self-education practice. [HYBSV2]

> [Hybrid] may work better for the more advanced student, who enjoys more independence, but maybe harder for the person who needs more support. [HYBSV1]

Sub-theme 1-2: Structure needs planning to overcome logistics

The need to manage time effectively, especially when students were remote, and the competing work demands of the clinician-supervisor raised discussion about optimal use of available resources to deliver a satisfying placement. Relevant resources discussed included student and staff time, access to clinical space and patients, and harnessing peer-engagement, technology, or educational materials. Incorporating processes, such as those used in the hybrid model, seemed pragmatic and readily implementable to improve the efficiency and coordination of any placement. In turn, those processes may enhance supervisor workload, access to clinical placements, and improve learner experience.

Suggested improvements included sharing of "check-in" sessions, utilizing peer-to-peer learning and group reflective practice discussions, and coordinating educational resources. More flexible schedules, such as morning-afternoon attendance, that consider the local clinical setting could also be beneficial by enabling better access to patients and more consistent clinical practice.

> We need some flexibility to suit the area you are in. Like I know when we did the hybrid, we had one day on one day off and that wasn't great. It could have been structured better. They also had master classes [group tutorials run in the afternoon] that take a big chunk out of that day. And for us, the afternoons are our prime treatment time. [TRADSV4]

> The other thing was they did not get much peer review time with other students. It was quite different to a [traditional] clinical placement when they get a lot of time to discuss or share ideas amongst peers. The peer learning is really important. [HYBSV1]

> Then once you have done the hard setting up [resources], you can almost copy that for the following [students] and tweak it as you need. That would be great for efficiency. Currently, we've tended to do something different each time, as we kind of re-invent the wheel. [HYBSV5]

> Maybe with a model where they've got some other sort of catch-up sessions with clinicians that aren't necessarily on the floor doing our clinical work. That type of model could take a bit of the pressure off the clinicians. [TRADSV4]

Sub-theme 1-3: The 50:50 arrangement was not optimal

While all interviewees appreciated the scheduling of remote (or independent study) time, the 50:50 hybrid model examined was criticized for not providing adequate clinical exposure for students to practice clinical skills, and for supervisors to assess these. Supervisors also raised concerns that the 50:50 split impacted on consistent patient care and treatment progression, as the student's treatment plan often became redundant when the student was offsite for several days. Furthermore, limited time in the clinical setting may have disadvantaged students in terms of developing teamwork or other professional behaviors.

> The traditional placement allows you to really hone your skills, get feedback on your skills and then implement and learn from them. Whereas in a remote block, it's really challenging to hone your skills and really get good feedback. [HYBSTUD]

> [Being remote] is a disadvantage to the student as well, 'cause they don't feel like they've had the opportunity to work, or practice or demonstrate these skills. …when they come in, they don't know what they don't know. Yeah, it's going to take a while to recognize what they need to learn. [TRADSV2]

> The biggest [dissatisfier] that stands out to me was it was difficult to develop continuity with patients and sometimes patients would change day-to-day and if you weren't seeing them consistently it was hard to build rapport. It was hard to develop clear plans sometimes, if things were changing from one day. [HYBSTUD]

Theme 2: Managing the Competing Demands on Clinician-Supervisors

Both placement models were well received with all supervisors reporting that teaching and developing future peers was enjoyable and rewarding. Supervisors were also willing to reflect on their practice and educator style, and to explore alternative models for clinical placements. The supervisors did

however discuss that having many competing demands, such as patient care, student education and other roles, impacted upon their workloads. These demands may pose challenges for sustaining clinical education practices and avoiding supervisor burnout. The supervisors also recognized that rapidly implementing a new program, such as the hybrid model, was a process of change which added to their work demands. Nevertheless, these findings suggest there maybe value in exploring the assumptions of supervisors about their use their time, and their confidence to promote self-directed practice or adopt alternative teaching strategies that may facilitate student learning without adding burden to the busy supervisor.

> We did need to do a lot of checking in with [students] to see if they were online and OK. It didn't really free you up when they were off site. [HYBSV1]

> The hybrid model felt like it was a lot more work from a supervisors' view…putting together resources and putting together timetables. Working out where the students were going to be and when. We don't want to burn out our clinicians. We also want to make the student supervision satisfying and a task that we want to do. Particularly our senior grade ones who are looking to step up to a grade two role. [TRADSV2]

> Something that happens is you get student fatigue. Especially when you have them here all the time, and you've had a few [placement] blocks in a row. [TRADSV4]

> [Mentioning time to supervise was dissatisfying]. It's hard to leave or finish on time though… I'm not being able to block out time away from students and set them up do some self-learning. For me as a supervisor, I want to enrich them with as much clinical time as they can. So, I do spend a lot of clinical time with them. [TRADSV3]

Theme 3: Learning Requires Psychological Safe Relationships

Regardless of placement model, all interviewees emphasized the importance of establishing two-way psychological safety and trust for an effective supervisor-learner relationship. Practicing and learning within a clinic can be challenging for students, staff and patients. Learning also requires a strong cognitive load. As emotional status and fatigue can have a negative impact, students require support and practical strategies to develop skills, receive feedback and build their confidence to communicate effectively with patients, staff and others. Having peer support within the clinical setting was also valued by students. A few supervisors wondered if having less time together during the hybrid model impacted on ability to develop supportive relationships. Delivering feedback in-person was preferred over remote delivery. All interviewees agreed that clear structure and learning objectives reduced the likelihood of feeling overwhelmed and supported effective student-supervisor relationships.

> There is no point having a scared student as they perform terribly. [HYBSV2]

> [Students] feel a bit more confident and comfortable once they've met the supervisors a few times. …to actually know this is pretty safe place to ask questions and to try things. [TRADSV2].

> The other one [student] struggled quite significantly. They were probably the one that benefited more from the remote time because he had that processing time where he didn't feel under pressure. [HYBSV2]

> [About being solo on clinic days] You didn't really have anyone like you. I felt like you can always talk to your supervisor, but yeah, working with a peer, you can have a discussion where you feel like you're on the same level. [HYBSTUD]

Comparison of Final Scores

There was minimal difference between groups on student performance scores, as rated using the APP. It was worth noting that all APP items were assessable for the hybrid model (Table 2)

TABLE 2: Comparison of Assessment of Physiotherapy Practice scores at completion of the two placement models.

APP Category	Hybrid model 2021 Mean (SD) *n* = 9 students	Traditional model 2022 Mean (SD) *n* = 10 students
Total APP Score	64.8 (10.4)	65.4 (13.2)
Total APP Score (Percentage)	81.0 (13.0)	81.8 (16.5)
Total No of APP items "not assessable" for the group	0	0
Domain 1 Professional behaviour (APP Items 1 to 4)	14.2 (1.7)	14.1 (2.1)
Domain 2 Communication (APP Items 5 to 6)	6.3 (1.0)	6.8 (1.3)
Domain 3 Assessment (APP Items 7 to 9)	9.8 (1.6)	9.9 (1.6)
Domain 4 Analysis and planning (APP Items 10 to 13)	12.6 (2.8)	12.6 (2.8)
Domain 5 Intervention (APP Items 14 to 18)	15.2 (3.0)	15.2 (4.5)
Domain 6 Evidence based practice (APP Item 19)	3.3 (0.9)	3.3 (0.8)
Domain 7 Risk management (APP Item 20)	3.3 (0.7)	3.5 (0.7)
Employment skills items (APP Items 1 to 6)	20.6 (2.2)	20.9 (3.3)
Clinical Skills (APP Items 7 to 20)	44.2 (8.3)	44.5 (10.1)

Note. APP= Australian Physiotherapy Practice Instrument. SD= Standard Deviation. APP Items are scored on 0-4 scale.

DISCUSSION

This mixed methods observational pilot study compared outcomes and satisfaction for two models of physiotherapy clinical placements delivered in a subacute setting within a large metropolitan teaching hospital. Both models were acceptable for students and supervisors. Further, students completing either model fulfilled the requirements for Physiotherapy Board registration, despite some participants reporting concerns that reducing time within the clinical setting could be detrimental for student development. Irrespective of the model delivered, both supervisors and students identified that placement structure, and the presence of psychological safety contributed to a satisfactory clinical placement. Supervisors highlighted that manageable workloads were essential to deliver satisfactory placements.

Our findings highlight that structured timetables and learning activities were important elements of a satisfying clinical placement regardless of the model, as they promoted active learning, graded learning activities and enabled dedicated time for preparation and reflection. Structure with set tasks and

timetables also gave clear expectations and encouraged students to take responsibility for their learning. These observations are consistent with other recommendations for satisfactory clinical placements (Lekkas et al., 2007; Salter et al., 2020) and effective clinical education (Taylor & Hamdy, 2013). While it would be unfair to say the traditional model lacked structure, the hybrid model emphasized tight structure and planning, which seemed to require a change in supervisor practice and was perceived to add workload. Moreover, setting up suitable remote learning activities seemed to challenge traditional assumptions that students need a supervisor present and to be engaged in hands-on clinical practice for learning to occur. Nevertheless, despite the use of remote learning in the hybrid model, and its potential to "free up" the clinician-supervisors' time, many learning activities, such as telehealth clinical sessions, online feedback and check ins, still seemed reliant upon supervisor time. Alternative learning strategies, such as peer-based learning and simulation that were less dependent on supervisor time, were rarely included in the remote timetable.

It is possible that the rapid introduction of the hybrid model, and its associated change in practice, made it challenging for clinicians to adopt alternative teaching strategies. While resources and strategies for the remote component were provided, the plan and delivery were largely left to the allocated supervisor. Given the context of healthcare at the time of the study, it seems that the supervisors continued to use established patterns of clinical education, which strongly rely on the supervisor being present and involvement in hands-on patient care (Lekkas et al., 2007). These approaches for clinical education may not be optimal for independent, reflective practice, and could create dependency on the supervisor (Paynter et al., 2023), which could negatively impact readiness to practice (Stoikov, Maxwell et al., 2022). Our findings, and those of others (Blackstock et al., 2013; Tuttle & Horan, 2019; Wright et al., 2018), support that substituting time in a clinical setting with structured learning, or delivery of online learning (Barradell, 2023) may not be detrimental for student development, and could even enhance learning of skills and integration of theory to practice. These findings could reassure supervisors and promote them to adopt alternative teaching approaches within placements. Moreover, our supervisor participants expressed a desire to extend their skills and confidence to deliver clinical education, as consistent with recommendations for more training in clinical education (Newstead et al., 2018). Given supervisors seemed willing to embrace innovation in clinical education and improve efficiency, it would be beneficial to provide guidance, support and training to change established practice and systems within clinical teaching schools.

Regardless of model, our findings reinforce that satisfactory placements require relevant learning activities matched to the learner, delivered within a psychologically safe environment. This finding is consistent with others, who emphasize students can find it challenging to learn whilst delivering healthcare to real patients under the guidance of supervisors within a busy clinical environment (McClintock et al., 2022; Torralba et al., 2020). This type of learning context is complex, and there is potential for the student to expose vulnerabilities and feel unsafe when learning (Torralba et al., 2020). Supervisors can also find it challenging and stressful to support students in busy clinical settings, especially as they often have other work demands (Lekkas et al., 2007; Paynter et al., 2023; Stoikov, Shardlow et al., 2018), as also reported by the participants from the current study. Given the potential that students, supervisors and others within clinical setting (patients, carers and staff) may feel overwhelmed and this may impact on learning (McClintock et al., 2022), strategies are needed to ensure psychological safety and learning within chaotic and stressful healthcare environments (Gribble et al., 2019; Paynter et al., 2023; Salter et al., 2020). Given the evidence that emotional coping strategies can improve with exposure to clinical placements (Gribble et al., 2019), it was pleasing to observe that students from both placement models felt supported and valued their relationships with the supervisors, and importantly, did not seem to be impacted by spending less time in the clinic.

Moreover, despite reporting high workload, supervisors also noted high satisfaction for teaching and developing their future peers, and utilized strategies to support the emotional needs of the students.

Supervisors mentioned experiences of feeling overwhelmed and potential burnout in the interviews. Specifically, supervisors reported that having competing demands of being a clinician and supervisor was challenging, and that planning suitable learning activities for the structured timetables, particularly for the hybrid model, increased their workload. Moreover, supervisors reported that educating and supporting learners, with the high demand for clinical placements was fatiguing and may lead to supervisor burnout. These issues raised by supervisors are consistent with workforce barriers within clinical education (Fairbrother et al., 2016), reinforcing the need to innovate clinical education (Patton et al., 2013), and enable sustainable systems to train healthcare professionals (Health Workforce Australia, 2011). Our supervisor participants suggested potential solutions that may enhance their job satisfaction, and workload management, and could also improve their teaching quality. These solutions include professional development in clinical education in order to improve confidence to design and deliver meaningful learning, set up self-directed tasks, and utilize adjunctive teaching approaches, which concurs with other recommendations to upskill clinicians in clinical education (Burgess et al., 2020; Johnson et al., 2016; Newstead et al., 2018). Practical strategies involving support and organization were also suggested, including a departmental approach to coordinate teaching and resources (as opposed to arranging placements in separate clinical streams), updating technology (easier to set up audiovisual equipment and clinical spaces for remote or group teaching), and shifting from supervisor-driven activities to approaches that focus on student-led learning, including peer-learning. Further, the supervisors emphasized the need to consider local clinical situation (e.g., access to patients, treatment areas and infrastructure), to optimize success when implementing changes in clinical placements. These suggestions by participants reinforce that enhancing education approaches, and efficiencies in work practices may offset the perceived burden for clinical supervisors, consistent with the discussion by others (Fairbrother et al., 2016; Lekkas et al., 2007).

Despite being a pilot study with a small sample size, several strengths of this study warrant mention. The evaluation was undertaken at one teaching hospital with extensive experience in delivering student placements. Collaboration between the university, teaching hospital and registration board ensured the hybrid model met all criteria to be endorsed by the Australian Physiotherapy Registration Board. The hybrid model was based on established objectives and marking criteria, and all supervisors were familiar with the APP. The study compared two comparable groups of final year students. Our approach employed mixed methods, enabling comparison of placement outcomes and the interpretation of rich experiences obtained from two important user groups - students and clinician-supervisors. We had strong engagement from the supervisors. Finally, the adaptability within the system to innovate, implement and evaluate alternative teaching models during a pandemic, and still achieve suitable practice standards for registration was commendable, demonstrating willingness to update and improve approaches for future clinical education.

Readers should also interpret our findings with due caution given the study limitations. Firstly, only one iteration of each model was included in the evaluation. As such, the sample size included was small. Student participation was low, with only eight students responding to the survey and one student being interviewed, thus limiting the user-feedback about either placement model. Despite this, the placement was likely to have been a satisfactory experience for students, given all students achieved standards to enable professional registration. Given the model was designed for final year students, and promoted self-directed learning, it is unknown if this model may be suitable for students who may

be less engaged, have poor coping strategies (Paynter et al., 2023), or are earlier in their university course (Dario & Simic, 2021). Other stakeholders, such as patients and healthcare teams (Lekkas et al., 2007), who may be impacted by clinical placements and are therefore relevant to consider when investigating alternative models, were not included in our study. Given the rapid introduction of the hybrid model, the model evaluated was not clearly operationalized in terms of use of clinician time and adjunctive learning strategies. As such, our findings provide an insight into a different model of a final year clinical placement as opposed to determining the optimal time for students to spend in a clinical setting or to interact with a supervisor.

Finally, while the hybrid model achieved satisfactory standards for professional registration, it is not known if the alternative model had an impact on the graduates' confidence and independence when entering the workforce, which can be challenging for any graduate (Stoikov, Maxwell et al., 2022). One interesting finding was that the supervisors perceived that having less clinical exposure in the hybrid model lowered the clinical and professional standards achieved by the students. Despite this concern, the APP scores were similar for both placement models. There are two possible explanations for this observation. Supervisors are influenced by an intrinsic bias that students need more time performing clinical practice under their supervision, and may not recognize the beneficial learning outcomes achieved by planned and intentional learning activities incorporated into the hybrid model. The qualitative data in our study, and paradigms used in traditional models (Lekkas et al., 2007) or clinical education (Barradell, 2023) supports this possibility. The alternative explanation is that the APP tool may not be sensitive enough to translate the supervisors' perceived concerns into a lower score. While the APP is reliable measure of work-based practice within authentic practice environments (Dalton et al., 2012), sources of measurement error may have impacted on the final APP scores. Possible sources of error relevant for the APP include rater expectations of professional competence, opportunities to assess skills in complex health environment (Dalton et al., 2012; Kirwan et al. , 2019), and measurement invariance with level of competence being evaluated in various settings over a period of time (Reubenson et al., 2020). Rater variability and differences in interpreting practice-based criteria can also lead to a tendency for clinicians' scores to regress to the mean, thus reducing variability in scores and the potential risk of not failing unsatisfactory performance (Reubenson et al., 2020). Given that the hybrid group APP data showed less dispersion relative to the traditional group, and the authentic clinical exposure occurred within the context of a pandemic, it was possible that rater errors may have obscured the clinicians' concerns of attaining the anticipated clinical and professional standards. Given the various limitations, caution is therefore recommended when attempting to generalize beyond the scope of this study.

CONCLUSION

In this pilot study, we demonstrated that students were able to substitute onsite clinical placement time with remote learning while still appearing to meet professional and clinical practice proficiency standards. Use of structure, ensuring psychological safety, and considering supervisor workload were identified as elements of a satisfactory clinical placement. Further research is needed to evaluate the optimal schedules and amount of supervision needed for clinical placements. Further evaluation of entry-level competency criteria that underpins the APP seems necessary to manage expectations of graduates entering the workforce. Clinicians are keen to innovate clinical education to optimize student learning and improve placement efficiency but seek support and coordination to change practice. Further studies in this area are critical to meet the increasing demand for physiotherapy clinical education in the hospital sector.

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