

Perceptions of Allied Health Students and  
Standardised Patients towards **Virtual  
Exercise Teleconsultation  
Assessment (VETA)**  
during COVID-19

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# COVID-19 Challenges

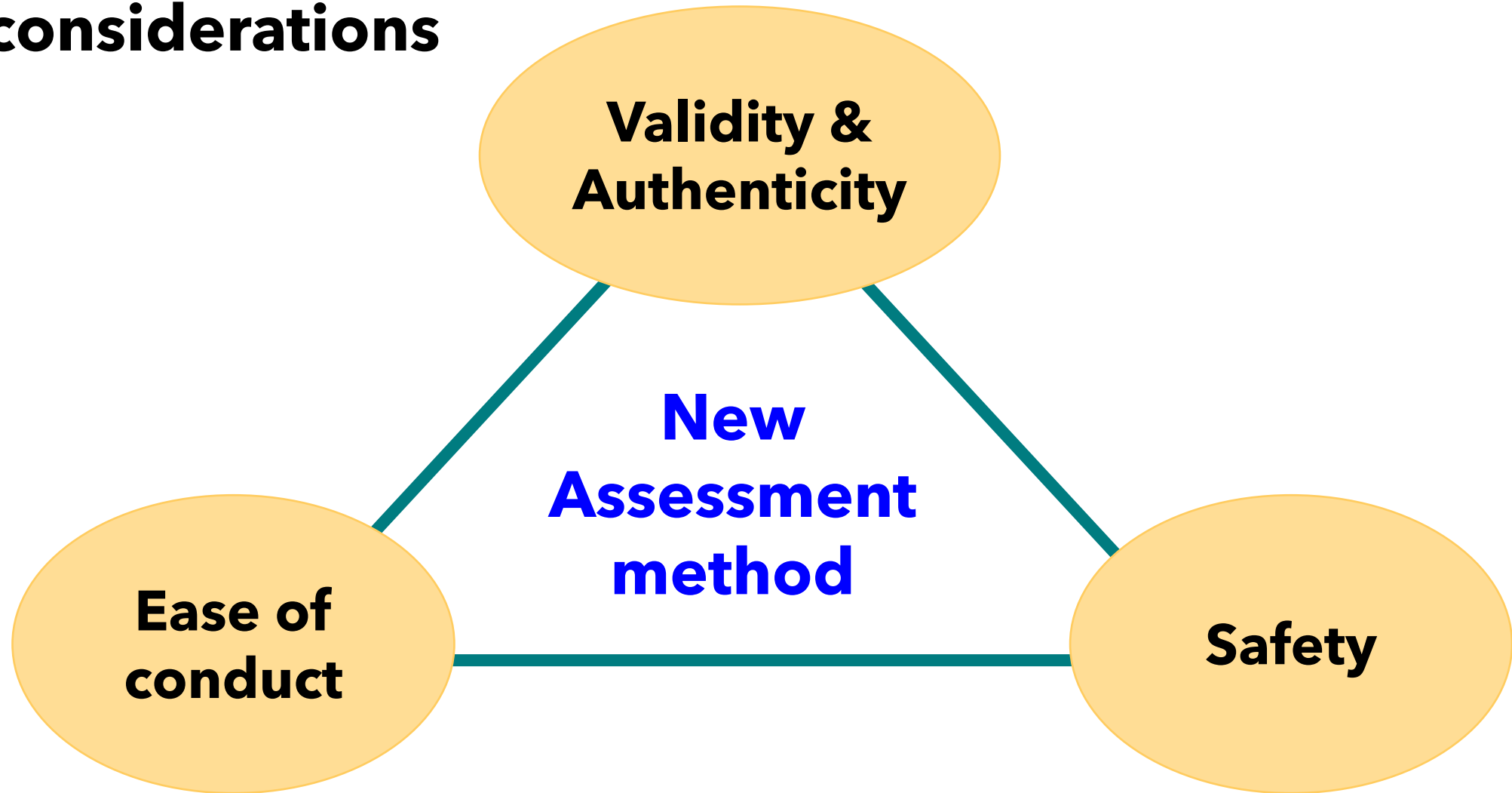
## Exercise Physiology Module:

Objective Structured Clinical Examination (OSCE) is challenging with concerns for social distancing & safety

- Mid-July surge in cases → **Mass ART on the day of exam** for students, examiners & standardised patients.
- Time-consuming + huge headache for coordination



# Key considerations



Learning outcome for Exercise Physiology:  
***To prescribe, guide and coach exercise for patients in a safe & effective manner***

# Virtual Assessment



## Virtual Exercise Teleconsultation Assessment (VETA):

Exercise prescription and coaching to “patients” via online Zoom platform →  
**Mimic a teleconsultation in clinical setting.**

- (1) Virtual assessment has been shown to be effective in medical and pharmacy courses (Blythe et al., 2021; Deville et al., 2021; Hannan et al., 2021).
- (2) Teleconsultation is likely to be more common in the future

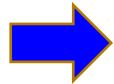
# Separate Venues within SIT campus, Similar Setup with Same Equipment provided (e.g. Dumbbells, Therabands)

**Reading station  
(10 min)**

**Venue A**  
Zoom Station for  
students  
**(10 min)**



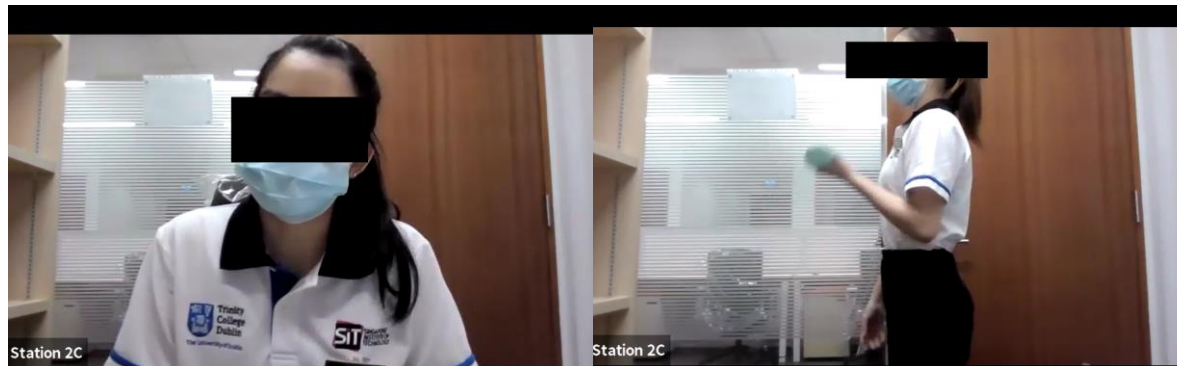
Plan Exercise  
prescription based  
on Case study



Instruct, Guide  
& Coach

**Venue B**

Zoom Station for SPs &  
Examiners (out-of-sight)



# Objectives

- To examine the **relevance and effectiveness** of VETA
- To understand the **perceptions and concerns** that physiotherapy students and SPs have towards this new mode of assessment.

## Methods:

Two separate **anonymous surveys** (including both quantitative and qualitative questions) for (1) SPs and (2) Students

# Survey results (SPs) – Positive

Items (For Standardised Patients; n=9)	Agree (%)	Neutral (%)	Disagree (%)	Themes
Briefing instructions given before the assessment were helpful and sufficient.	100	0	0	Administration
The quality of the audio/video was adequate.	100	0	0	
Instructions given by students to perform each activity were clear and I was able to follow the instructions without difficulty.	78	22	0	Student Performance
I am confident to perform the activities independently with the given instructions.	89	11	0	
Communication by the students were appropriate and professional.	100	0	0	
I am comfortable to receive instructions from a teleconsult session by a student in an exam setting.	100	0	0	Acceptability

# Survey results (Students) - Positive

Items (For Students; n=67)	Agree (%)	Neutral (%)	Disagree (%)	Themes
Briefing instructions and information given prior to the assessment were helpful.	88	8	4	Administration
Instructions to perform each activity were clear.	91	3	6	
I was aware of the information needed for each task in the assessment.	93	3	4	
Tasks asked to perform were fair.	97	2	1	
Time allocated for reading and planning (10 min) was sufficient.	94	6	0	
Time allocated for teleconsultation (10 min) was sufficient.	78	6	16	
The environment where the assessment was conducted was conducive.	90	4	6	Support
The audio/video quality of the Zoom session was adequate.	94	3	3	
Resources and equipment provided for the assessment were adequate.	82	8	10	
The standardized "patients" were believable and realistic.	93	3	4	Authenticity
Settings and context of given case scenario were authentic.	97	1	2	
The interaction with the standardized patient was authentic.	91	5	4	
Zoom VETA without the presence of an assessor was helpful.	90	9	5	
The VETA was an authentic reflection of clinical setting.	76	19	5	
The VETA helped to identify gaps in knowledge.	85	12	3	Effectiveness
The VETA helped to identify weaknesses in communication and patient-care skills.	93	6	1	
The VETA tested appropriate skills required for a Physiotherapist.	87	9	4	
The VETA covered a wide knowledge range.	88	9	3	
The VETA should remain as a form of assessment.	79	15	6	Value
The VETA offered more learning opportunities than other exams.	61	28	11	
The VETA was a valuable practice and learning experience.	93	3	4	



# Exploratory Factor Analysis – 3 Constructs

Items	C1	C2	C3	Constructs
Briefing instructions and information given prior to the assessment were helpful.	0.743			<b>Clarity of Assessment</b> $(\alpha = 0.835)$
Instructions to perform each activity were clear.	0.785			
I was aware of the information needed for each task in the assessment.	0.796			
The standardized "patients" were believable and realistic.		0.754		<b>Clinical Relevance</b> $(\alpha = 0.856)$
Settings and context of given case scenario were authentic.		0.782		
The interaction with the standardized patient was authentic.		0.790		
The VETA helped to identify gaps in knowledge.		0.548		
The VETA helped to identify weaknesses in communication and patient-care skills.		0.681		
The VETA was an authentic reflection of clinical setting.			0.741	<b>Value of Assessment</b> $(\alpha = 0.869)$
The VETA covered a wide knowledge range.			0.803	
The VETA should remain as a form of assessment.			0.518	
The VETA offered more learning opportunities than other exams.			0.788	
The VETA was a valuable practice and learning experience.			0.607	

# VETA strengths

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## 1. Reduced Assessor Anxiety

"Having the assessor off-screen and not physically beside me really helped me focus on what I wanted to deliver to the patient. It also makes me feel less nervous and anxious and it has definitely helped me perform better"

## 2. Relevance to Practice

"VETA was a great innovation with COVID-19... we might have to do telerehab for our patient and this would actually equip us with the skills to do so and experience"

## 3. Assessment Effectiveness

"Felt that the zoom VETA was well organized and helped us cover the main objective of the module"

*"The patients were great. The fact that I've never seen them before, coupled with how they responded and interacted with me during the VETA made this "consultation" more believable and **I really felt like a physiotherapist giving an exercise prescription**"*

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# VETA Areas of Improvement

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## 1. Time & Space allocation

"I think more time can be given to have more interactions with the patient. It felt like i was just instructing the patient without time for the patient to reply back."

Students  
quotes

*"would have liked more space to move backwards to demo exercise to patient, but chair was a bit in the way"*

*"When performing a task (e.g. lifting a dumbell over my shoulder), I have to adjust a few times in order to get my whole body into the screen for the candidate to see properly"*

SP  
quotes

## 2. Environment & Equipment

"a clock timer to keep track of time would have been helpful"

Students  
quotes

"The environment can be slightly better as it was rather dark and the papers were messy"

*"More weights to cater exercises that require two arms"*

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# VETA Areas of Improvement

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## 3. Assessment effectiveness

"Would be nice if rubric was released earlier"

Students  
quotes

*"resistance training component of zoom VETA was limited to upper limb exercises only"*

## 4. Technical issues

"To be allowed to remove the mask...to enable better projection of the voice"

Students  
quotes

*"Frame freeze halfway through...deprive student of the lost time"*

SP  
quotes

*"The camera has limited view..."*

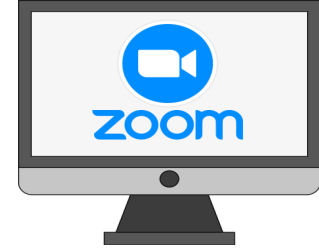
At times when the students have to show/locate certain landmarks, the camera view may not allow them to demonstrate it accurately"

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# Summary

- VETA was **generally well-received** by both **SPs and students**
- Perceived to be an **authentic** assessment.
- VETA is **relevant & useful** as an **alternative assessment** for allied health students, especially with the advent of technology and adoption of telehealth.
- However, important challenges were identified such as the **(1) time and space constraints, (2) adequacy of equipment, (3) limited exercise tasks, (4) limited camera view, and (5) reliability of connectivity.**

# Significance



- While there are still technical difficulties to consider, our current model and examination setup can provide an initial framework for others to adopt during COVID-19 pandemic.
- It may also be useful for **distant learning and remote assessment of clinical skills** (e.g., healthcare workers in rural areas).