

FANCY FOOTWORK

Radiotherapy Foot Massage Project

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Lecturer -Complementary Health

Nurse Clinician Acute Pain Services Midcentral Health
Palmerston North, New Zealand

Pacific Ocean

Central regional
cancer treatments
Approx 700,000

Population
Approx 4 million





Process

Value to
learning

Patient
benefits



Process

A full moon is positioned in the upper center of the frame against a deep blue twilight sky. Below the moon, a range of rugged mountains is visible, with some peaks covered in snow. The overall scene is serene and atmospheric.

Stage One: Planning and Paperwork

Project Aim

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- To explore the value of offering foot massage to radiotherapy outpatients as a learning experience for massage and aromatherapy students and as a comfort promoting measure for patients



The Stakeholders

- **Universal College of Learning (UCOL)-**
academic worth
- **The Students-**valuable learning experience
- **The Radiotherapy Department-**
appropriate activity
- **The Patients-**safe and beneficial experience
for them

Who Are The Students?

- **Diploma Health Science (Level 6)**
 - 2 year (2400 hours) full time diploma specialising in either massage therapy or aromatherapy
- **First time in NZ massage/aromatherapy students had such access to acute health care facility**

Why Radiotherapy Patients?

- Stable population
- Receptive/captive
- 100-150 patients per day receiving treatment for up to 6 or more weeks
- Many are from out of town
- Stressful journey to treatment time-surgery, chemo and waiting for treatment to commence
- Huge impact on daily lives

Project Characteristics

- 2 phased quasi-experimental design
- Focus on learning for students
- Patients self select (volunteer)
- Patients received a 15 minute foot massage with French chalk with pre and post physiological and psychological assessments x 1 week
- Each patient received exactly the same massage sequence by same student as far as possible

Why Feet?

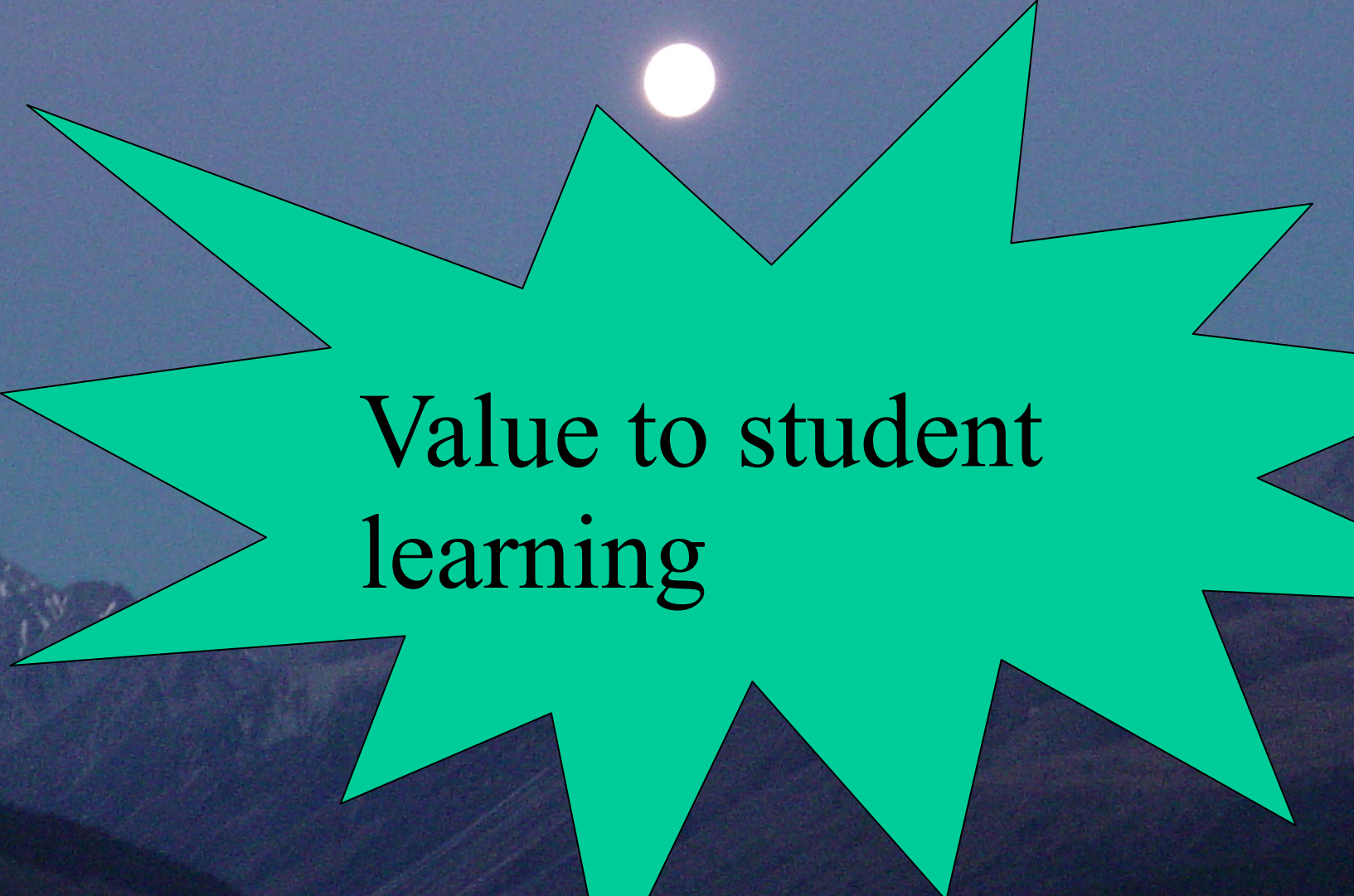
- Won't interfere with radiotherapy treatment
- Consistent body part to massage for all patients
- Did not require extra equipment
- Patient does not have to remove clothes
- French chalk-low risk of allergy, non-slip, non-messy

Demonstrating academic worth

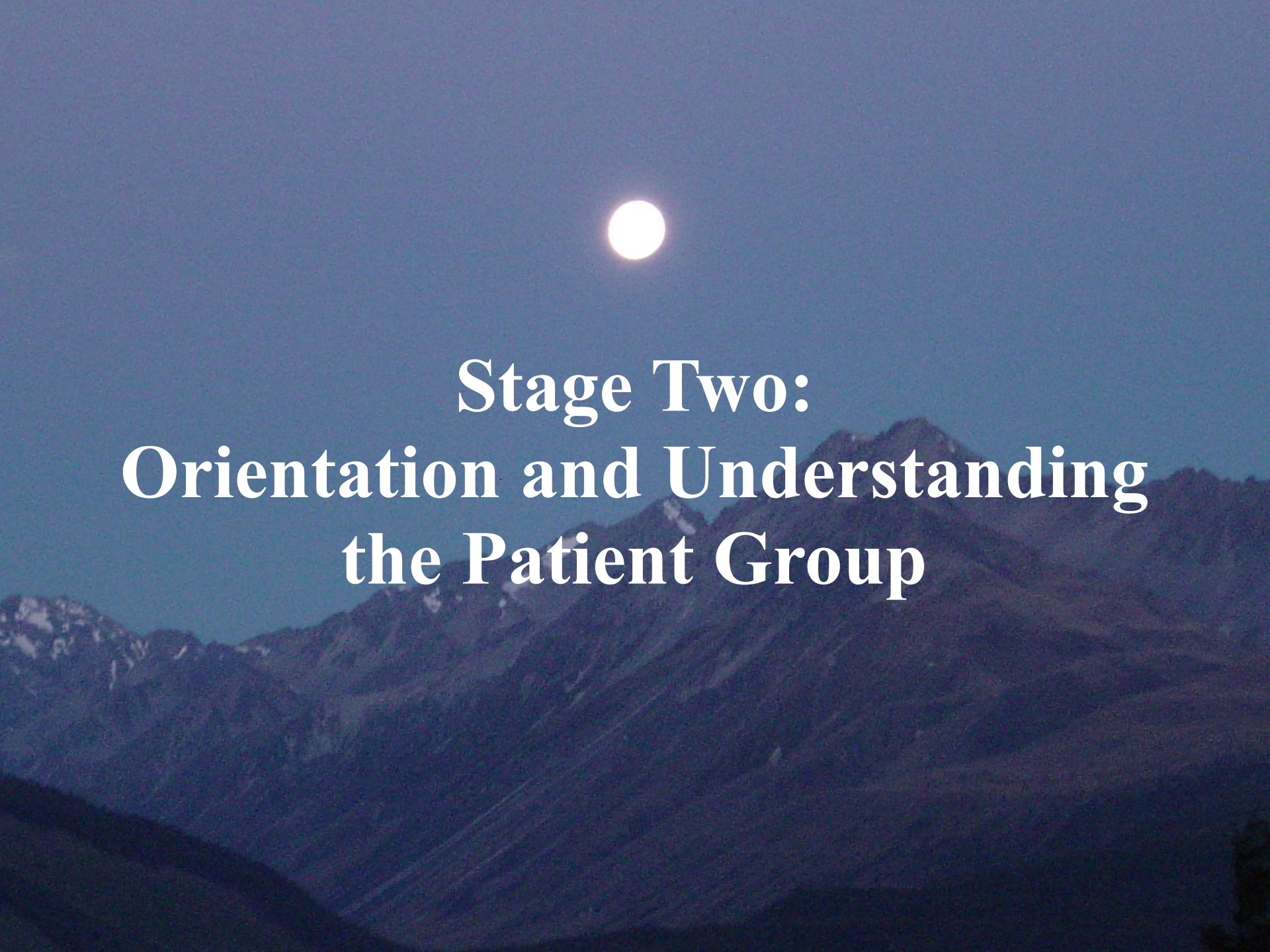
- Meet curriculum learning outcome
- Acceptable use of lecturer time (additional workload)
- Appropriate student activity
- (Academic Board of Studies and Research committee-UCOL)

Was there any likelihood of harm to patients?

- Provide evidence to support practice
- Develop protocol
- Identify potential physiological, psychological and cultural risks
- Won't interfere with treatment
- No risk of exploiting patients for financial gain
- (Midcentral Oncology Research Committee and Central Regional Ethics Committee)



Value to student
learning

A full moon is positioned in the upper center of the frame against a deep blue twilight sky. Below the moon, a range of rugged mountains is visible, with some peaks covered in snow. The overall scene is dimly lit, creating a serene and atmospheric background for the text.

Stage Two: Orientation and Understanding the Patient Group

The equipment

- 3-4 linear accelerators
- Client may be lying in uncomfortable positions for a long time



Demonstrating the simulation to undergo markings



Preparation of face mask



Student learning

- ↑ Confidence
- ↑ Communication skills
- ↑ Awareness of benefits of massage
- Refined assessment skills
- Adaptation skills
- Understand the cumulative effects of radiotherapy on a person



Benefits to
patients

A full moon is visible in the upper center of the frame, glowing against a deep blue twilight sky. Below the moon, a range of rugged mountains stretches across the horizon. The mountains are dark, with some snow or light-colored rock visible on their peaks and ridges. The overall scene is serene and atmospheric.

Stage Three: Conducting the Project

Navigating the Pilot Phase

- 6 patients mid way through radiotherapy
- 6 students ($n = 36$ massages given)
- 10 minutes total massage time given 2 x per week
- Aim to give confidence and develop protocol for longer phase
- Results suggestive of effective relaxation response

The main project

- 10 patients (8 women, 2 men)
- 5 students
- Receive 6 sessions commencing week of first radiotherapy sessions
- Massage sequence adapted to be longer (15 minutes)
- Consultation time slightly shorter

Patient details

Sex	Age	Cancer location	RT sessions	Chemo
F	47	Breast	30	No
F	61	Anal	35	Yes
F	86	Oesophagus	30	No
M	68	Prostate	41	No
M	61	Larynx	35	No
F	60	Breast	25	No
F	58	Bowel/pelvis	32	Current
F	56	Endometrium	30	No
F	46	Breast	30	No

Dancing with the data

- Phase two provided large amount of information
- $n=57$ messages
- How best to use this?
- Remember the original intention was not to collect data for analysis so many variables could occur



Heart rate (HR) pre and post massage

HR Reduction 38/57	66.6%	Range 2-34 bpm	Mean 6.27 bpm <i>P</i> =0.0095
Increase 9/57	15.7%	2-12bpm	5.15 bpm Not sig,
No change 10/57	17.5%		

Systolic (SBP) and diastolic (DBP) blood pressure pre and post massage

SBP Reduction 30/56	53.6%	Range 2-20 mmHg	Mean 6.33mmHg
DBP reduction 33/56	57%	Range 2-22 mmHg	Mean 5.6mmHg
SBP Increase 19/56	34%	2-16 mmHg	6.31 mmHg
DBP Increase 15/56	28.6%	2-20 mmHg	6.8 mmHg
No change in SBP 7/56	12.5%		
No change in DBP 8/56	14.2%		

Respiratory rate and pain/discomfort

- Non significant reduction in 52.6%
(range 2-8 breaths per min)
- Pain and discomfort (0-10) scale but not an issue for this patient group
(only patient taking regular analgesia)

Phase two emotional results

Feeling	Pre	Post	Difference
Relaxed	35/57 61.4%	48/57 84%	+13 22.8%
Sleepy	9/57 15.7%	25/57 43.8%	+16 28%
Energised	2/57 3.5%	9/57 15.8%	+7 12%
Tense	9/57 15.8%	0	-9 100%
Wide awake	18/57 31.57%	7/57 12.2%	-11 19.2%
Worried/ Nervous/Anxious	4/57 1.75%	0	-4 100%

Could we do it again?

- After the trial we returned the following year with second group of students and 3rd patient group ($n=9$).
- Emotional results were collected pre and post massage using 0-5 Likert scale rating 6 emotions/feelings
- Total number of massages $n=50$

Emotional factors (0-5 scale)

	Pre	Post	Significance
Relaxed	187/240 78%	218/240 90.8%	+31 13%
Sleepy	70/240 29%	73/240 30%	+3 1.25%
Energised	141/240 58.7%	163/240 67.9%	+22 9.1%
Anxious	48/240 20%	26/240 10.8%	-22 9.1%
Tense	48/240 20%	34/240 14.1%	-14 5.8%
Wide awake	154/240 64%	158/240 65.8%	+4 1.66%

Does this mean anything?

- **Different scales used each time so hard to compare results**
- **Different language used in trial compared to later**
- **Responses indicate a relaxation trend**

	Phase 2	Phase 3
Relaxed	22.8%	13%
Sleepy	28%	1.25%
Energised	12%	9.1%
Tense	-15.8%	-5.8%
Awake	-19.2%	1.66%

Comments from students

“I left the hospital feeling fantastic-makes you realise how precious life is and to make the most of each day”

“I felt energised and positive...feel very privileged to able to massage these clients”

“Felt positive we have provided a worthwhile service...I learnt more about people and communication”

“Massage is a good form of relaxation and making a connection for giving to another fellow being to help them”

“Seeing the positive attitudes was amazing”

Comments from patients

- *Frequent mention of feet feeling warm and tingly and feeling peaceful*
- *This has been a wonderful experience and really appreciated*
- *Thanks-enjoyed every minute, pity it was only the feet*
- *Thank you-I have really enjoyed the massages-makes you feel wonderful, looked forward to each week*



Conclusion

A full moon is positioned in the upper center of the frame against a clear, dark blue sky. Below the moon, a range of rugged mountains stretches across the horizon. The mountains are dark, with some lighter patches indicating snow or rock. The overall scene is serene and atmospheric.

Stage Five: Reaping the Rewards



- Regular learning environment for students-weekly clinic
- Protocol and relationship now established
- Possibly opportunity for trained therapist to operate there
- Profile of massage therapy raised
- Further research possibilities

Were the stakeholder objectives met?

- **UCOL**-academic processes upheld, professional image of programme, meets curriculum requirements, worth the effort
- **The Students**-excellent learning in assessment, communication and adapting to environment
- **The Radiotherapy Department**-offering something positive to patients, staff supportive, no adverse effects
- **The Patients**-safe and relaxing, used time for questioning about other positive health behaviours, effects prolonged, wanted more!

The best part of my day









Concluding Comments

A full moon is visible in the upper center of the image, set against a dark blue, twilight sky. Below the moon, a range of mountains is visible, with some peaks covered in snow or light-colored rock. The overall scene is serene and atmospheric.

- 15minute foot massage is a safe and beneficial activity for patients undergoing radiotherapy treatment
- Offering massage clinics in such a department provides unique and valuable learning for students of massage and aromatherapy

Thank you

- To the department for allowing access
- To the 20+ students who made contributions in many ways and conducted their work to a high standard
- To the patients for fitting in with our project requirement
- To UCOL and MCH for the ongoing support
- (Author received Alan Furness award for excellence for project and conducted further study in France in 2003 with this award)