# EXPLORING MOOD, WELLBEING AND NATURE CONNECTION THROUGH A MULTI-DAY SEA KAYAKING EXPEDITION IN SCOTLAND

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**Research Question**

**How does participation in a multi-day sea kayaking expedition influence mood, wellbeing, and connection to nature?**



# RATIONALE FOR THE STUDY

**Self-Determination Theory proposes that autonomy, competence, and relatedness support psychological wellbeing and intrinsic motivation (Deci and Ryan, 1985).**

## Why This Research Matters

- There is growing interest in outdoor adventure and mental wellbeing.
- Limited research explores short-term expedition experiences in student groups.
- Sea kayaking provides a unique combination of:
  - Physical challenge
  - Isolation from everyday stressors
  - Natural immersion
  - Group bonding
- Understanding participant experiences may help inform:
  - Outdoor education
  - Adventure therapy
  - Sport and wellbeing practice

# AIM AND OBJECTIVES

## AIM

To explore whether participation in a multi-day sea kayaking expedition influences participant mood, wellbeing, and connection to nature.

## OBJECTIVES

- Measure participant mood before the expedition.
- Measure emotional wellbeing using PANAS.
- Explore participants' connection to nature.
- Compare participant perceptions following the expedition through reflective feedback.
- Identify possible psychological benefits associated with outdoor adventure participation.

## HYPOTHESIS

- Increased positive emotions
- Reduced negative mood states
- Stronger connection to nature following the expedition

**The broaden-and-build theory suggests positive emotions may broaden thought-action repertoires and contribute to resilience and wellbeing (Fredrickson, 2001).**



# METHODOLOGY

## RESEARCH DESIGN

### QUANTITATIVE:

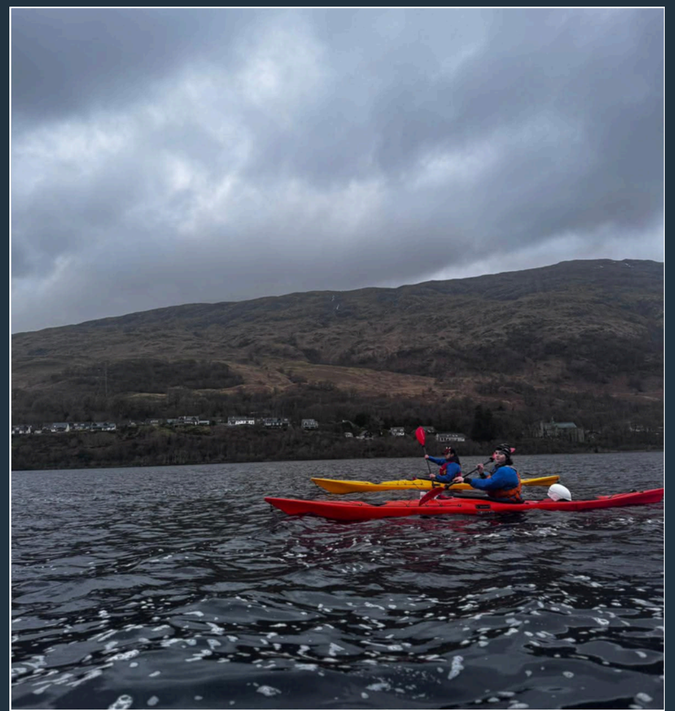
- Brunel Mood Scale (BRUMS)
- PANAS Questionnaire
- Nature Connection Survey

### PROCEDURE

- Pre-expedition questionnaires distributed.
- Participants completed surveys anonymously.
- Expedition completed over multiple days.
- Follow-up reflections collected after the trip.

### PARTICIPANTS:

- Student participants involved in a sea kayaking expedition in Scotland.
- Convenience sampling used.



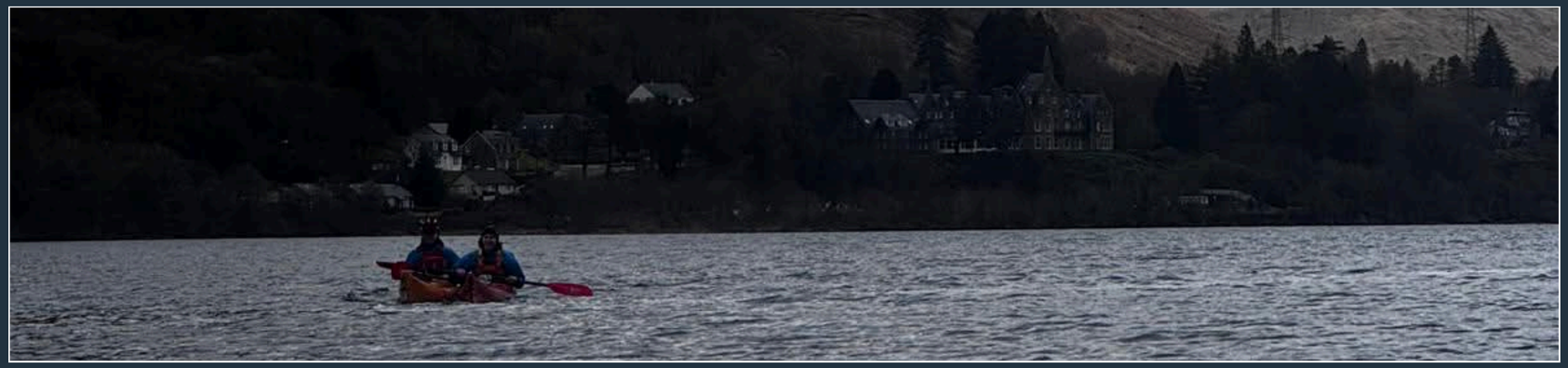
### ETHICAL CONSIDERATIONS

- Informed consent obtained.
- Anonymous participant coding used.
- Participants could withdraw at any time.

**Mixed-methods research allows quantitative data to be supported and explained through qualitative participant experiences (Creswell and Plano Clark, 2017).**

# MEASURES USED

Questionnaires



## Nature Connection Survey

Measured:

- Emotional connection to nature
- Environmental identity
- Perceived relationship with the natural world

## Brunel Mood Scale (BRUMS)

Measured:

- Anxiety
- Confusion
- Fatigue
- Depression
- Anger
- Vigour

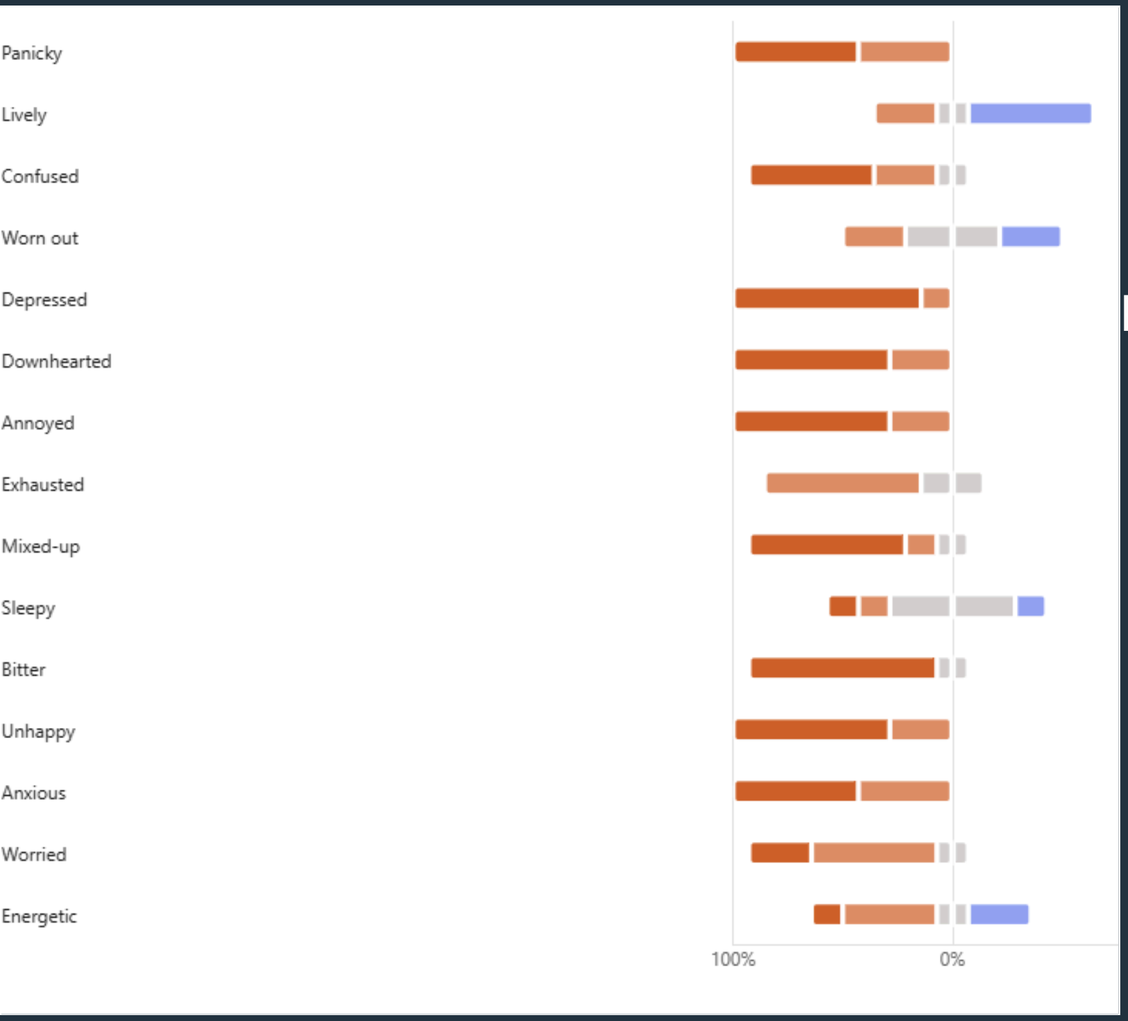
## PANAS Scale

Measured:

- Positive affect
- Negative affect

**Psychological scales improve reliability by allowing mood and emotional states to be measured systematically (Watson, Clark and Tellegen, 1988).**

# INITIAL FINDINGS




## Observed Trends

Participants reported:

- Moderate anxiety and worry
- Feelings of exhaustion and tiredness
- Low levels of depression and hostility overall
- Higher levels of liveliness and energy in some participants

## Interpretation

This may suggest:

- Anticipation before the expedition
- Nervousness regarding challenge and uncertainty
- Excitement mixed with physical fatigue from preparation/travel

**Adventure experiences often involve uncertainty, risk, and stimulation which are associated with sensation-seeking behaviours (Zuckerman, 1994).**

# PANAS FINDINGS

## POSITIVE AFFECT FINDINGS

Higher responses observed for:

- Interested
- Excited
- Determined
- Active
- Inspired

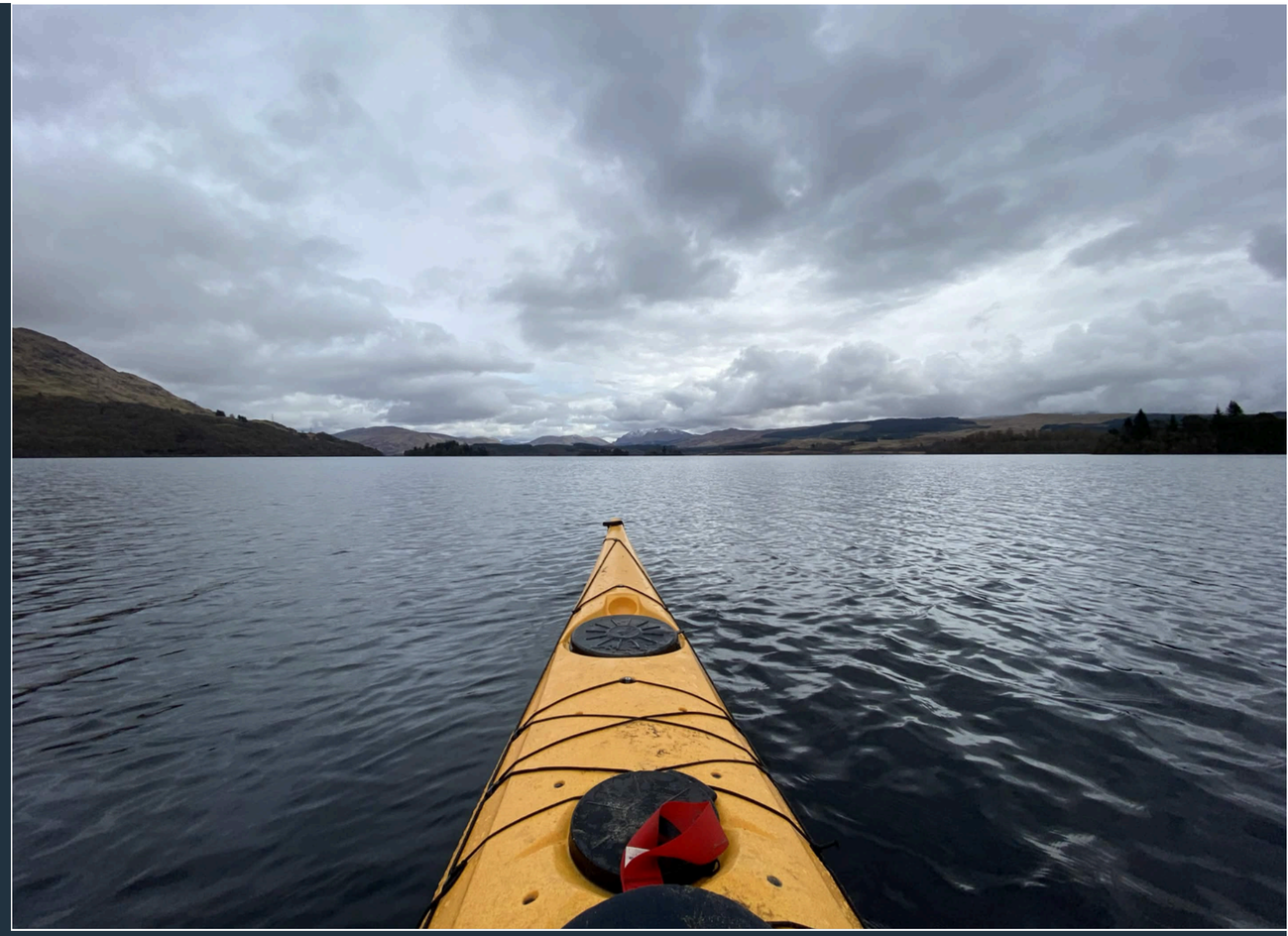
## NEGATIVE AFFECT FINDINGS

Lower responses observed for:

- Guilty
- Hostile
- Ashamed
- Upset

Interpretation:

Participants appeared psychologically engaged before the expedition despite some nervousness.



**Flow theory suggests challenging but achievable activities can produce heightened focus, engagement, and positive emotional experience (Csikszentmihalyi, 1990).**



# NATURE CONNECTION FINDINGS

## Strong Agreement Observed

Participants commonly agreed with statements such as:

- Feeling connected to living things
- Feeling part of nature
- Seeing themselves within the wider web of life

## Interpretation

Participants already demonstrated relatively strong environmental connection before the expedition.

## Strong Agreement Observed

- Human superiority over nature
- Feeling disconnected from nature

**The Biophilia Hypothesis proposes humans possess an innate tendency to seek connection with nature and other living systems (Wilson, 1984).**

# Post-Expedition Data Collection

## *Secondary Data Collection*

- *Participants completed a second round of questionnaires two weeks after the expedition.*
- *The follow-up phase aimed to explore whether changes in mood, wellbeing, and nature connection were maintained after returning to everyday life.*




## *Measures Repeated:*

*Brunel Mood Scale (BRUMS)*

*PANAS Questionnaire*

*Nature Connection Survey*

## *Purpose of Follow-Up Data*

- *Compare pre- and post-expedition responses.*
- *identify short-term psychological changes.*
- *Explore whether expedition experiences had lasting effects*

- **Longitudinal research designs strengthen reliability by tracking change over time rather than relying on single time-point measurements (Bryman, 2016).**

# WHAT DO THE FINDINGS SUGGEST?



## Key Themes

- Participants demonstrated a noticeable shift from pre-expedition nervousness and uncertainty toward increased positive affect, emotional stability, and stronger nature connection after returning to everyday life.

**Attention Restoration Theory suggests time spent in natural environments can reduce mental fatigue and support psychological recovery (Kaplan and Kaplan, 1989).**

## BRUMS Trends

Post-expedition responses suggested:

- Reduced anxiety and worry
- Lower confusion and emotional negativity
- Reduced feelings of exhaustion
- Increased energetic and lively responses

## PANAS Trends

- Higher levels of inspiration, enthusiasm, pride, and determination
- Lower levels of nervousness, fear, distress, and irritability

## Nature Connection Trends

- Participants demonstrated:
- Stronger agreement with feeling connected to living things
- Greater sense of belonging within nature
- Increased appreciation for the natural world after the expedition

# CONCLUSION

**This study suggests that sea kayaking expeditions may positively influence:**

- Mood
- Emotional wellbeing
- Feelings of connection to nature

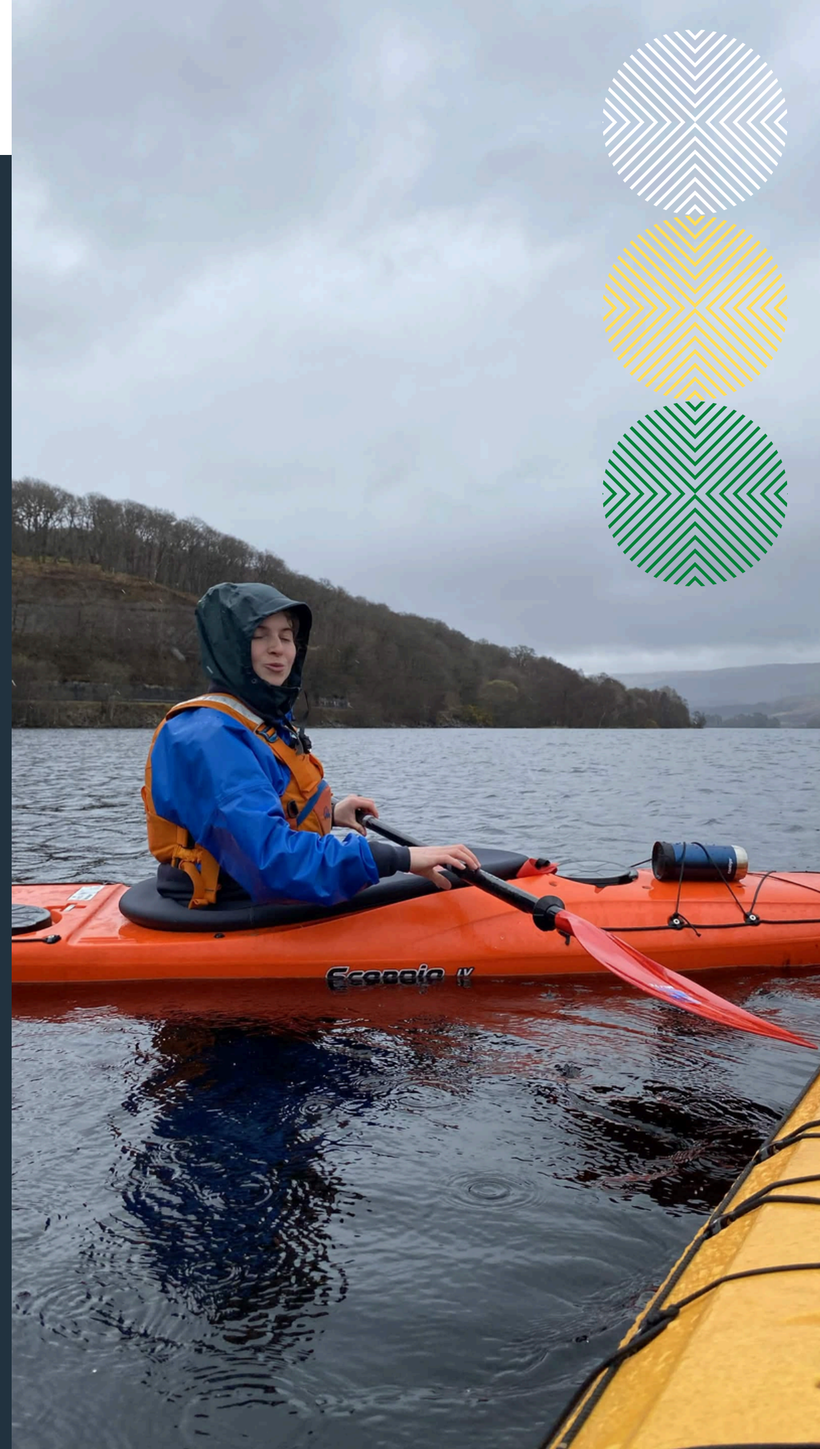
## Future Research

- Future studies should:
- Include larger participant groups.
- Collect reliable post-expedition data.
- Explore long-term psychological impacts.
- Compare different outdoor adventure activities.

## Main Takeaways

- Participants demonstrated positive emotional engagement.
- Nature immersion may support wellbeing.
- Outdoor adventure can provide meaningful psychological experiences.
- Shared challenge may strengthen resilience and confidence.

**Resilience research suggests overcoming challenge and adversity can contribute to personal growth and adaptive coping (Fletcher and Sarkar, 2013).**



# QUESTIONS AND DISCUSSION

Thank you for listening!

## Closing Concept

**Natural environments may contribute positively to psychological restoration and wellbeing (Kaplan and Kaplan, 1989).**



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