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TITLE

PSYCHO-PHYSIOLOGICAL BENEFITS OF MOUNTAIN LANDSCAPE ENVIRONMENT AS STIMULI FOR DIRECTED ATTENTION RESTORATION AND STRESS MITIGATION

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RESEARCH PROPOSAL
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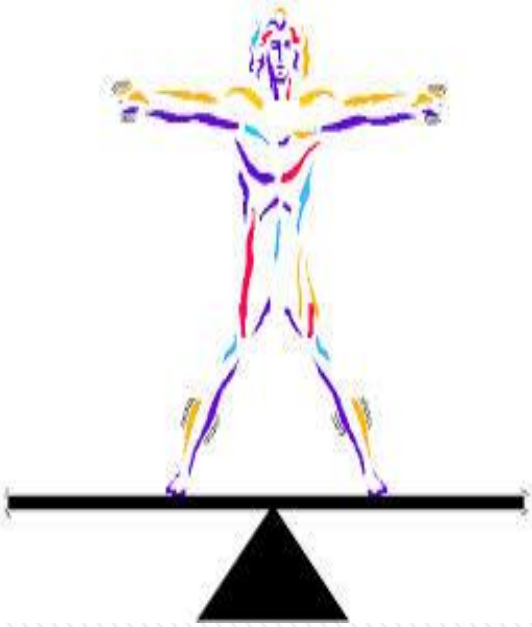
❑ INTRODUCTION

- **Cumulative effects of contact with environment** having high restorative qualities can enhance better health benefits than contact with lesser restorative quality (Hartig et al. 2011)
- **Stress** is the general response of the body to any demand while a stressor is the stress reducing agent (Selye, 1976).
- **Theory of Stress Response (TSR):** All organisms are genetically predisposed to adapt to stress and is defined as anything which enables the transactions of **psychological homeostatic process** (Burchfield, 1979).
- **Mental stress** results from interactions between persons and their environment that are perceived as straining or exceeding their adaptive capacities and threatening their well being (Annerstedt et al. 2010).
- **Directed attention phenomenon** as described by Kaplan (1995) plays a major role in human capacity and its restoration is dependent upon the components of the environment.



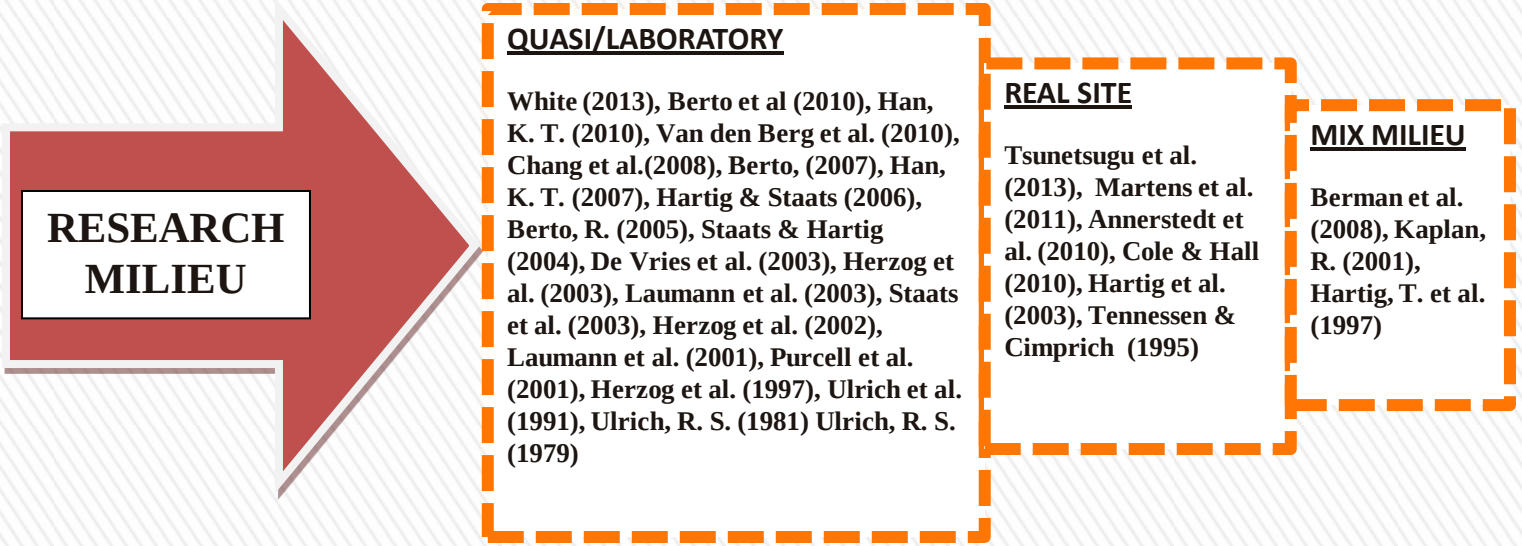
- **RESTORATION** encompasses the process that facilitates peoples recovery from stress acquired whilst trying to meet demands of everyday life (Hartig, 2011).

- While **MODERN DAY** environments are only created to suite everyday living and working which offer less restorative health benefits (Thompson, 2010), **NATURE RELATED ENVIRONMENTS** like forests, wilderness and mountains are considered to possess significantly the possibility of enhancing restoration from stress through passive and active contact.

❑ DO WE HAVE A PROBLEM?

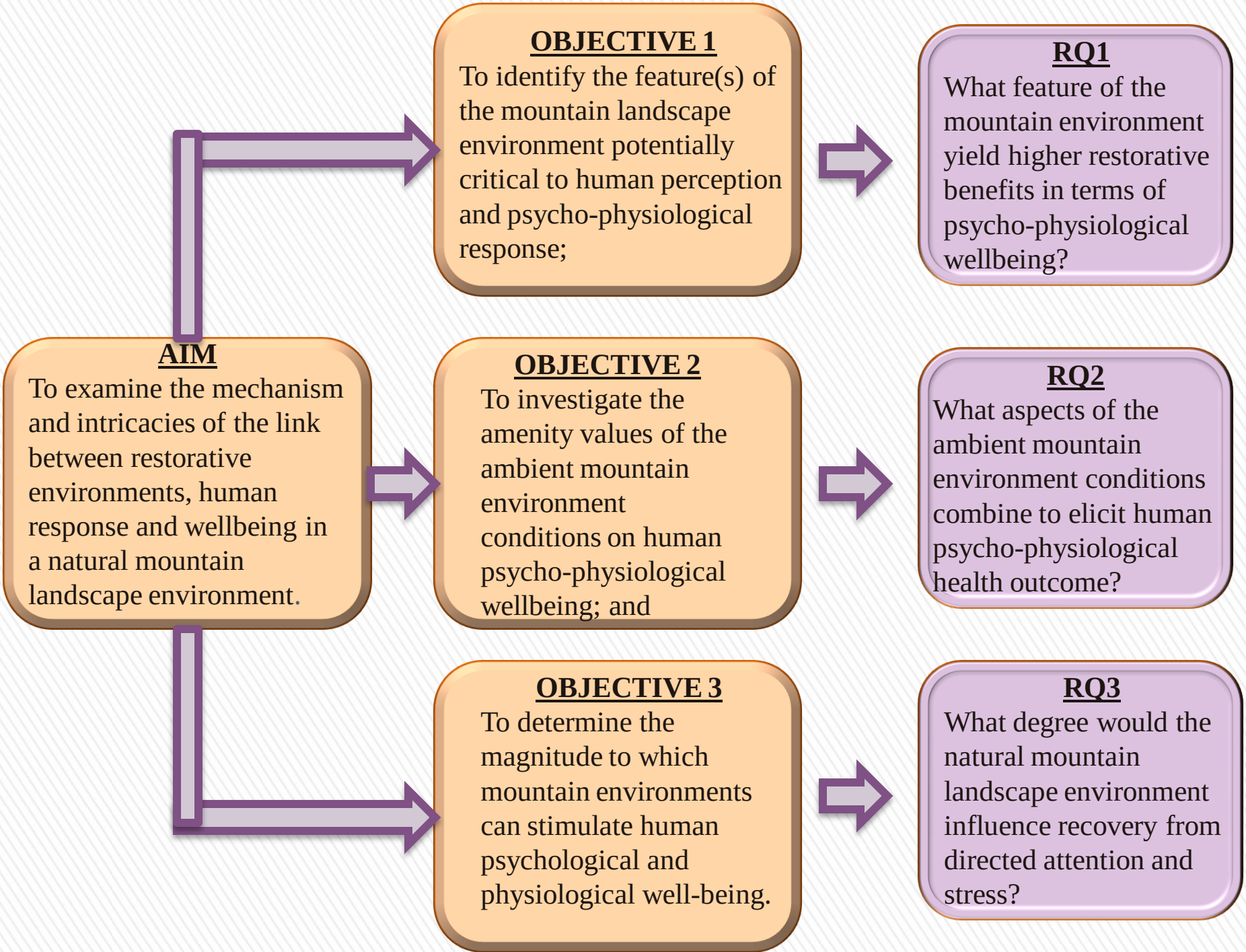
YES WE DO!

- Previous studies have been done in **quasi (confined or laboratory) environments** which involved participants viewing through a window or viewing nature scenes through video, picture slides and simulations.



- Most of the research carried out on real-site nature related environments has been largely done in **forests** while **mountain environments** have merely been mentioned as part of picture slides or video simulations.

- A large volume of published studies depended on psychometric self report measures to determine the magnitude of psychological human response to environmental stimuli.


AIM
To examine the mechanism and intricacies of the link between restorative environments, human response and wellbeing in a natural mountain landscape environment.
OBJECTIVE 1
To identify the feature(s) of the mountain landscape environment potentially critical to human perception and psycho-physiological response;
OBJECTIVE 2
To investigate the amenity values of the ambient mountain environment conditions on human psycho-physiological wellbeing; and
OBJECTIVE 3
To determine the magnitude to which mountain environments can stimulate human psychological and physiological well-being.
RQ1
What feature of the mountain environment yield higher restorative benefits in terms of psycho-physiological wellbeing?
RQ2
What aspects of the ambient mountain environment conditions combine to elicit human psycho-physiological health outcome?
RQ3
What degree would the natural mountain landscape environment influence recovery from directed attention and stress?

❑ THEORETICAL FRAMEWORK

AAT

Ulrich (1986) asserts that visual contact with most natural settings by a stressed individual is likely to foster positive feelings (emotions), hold interest and mitigate stressful thoughts resulting in recuperation. Aesthetic and affective responses are related to visual perceptions of natural environments.

SRT

An encounter with most unthreatening natural environment by stressed individuals would yield restorative benefits while many urban environment will mitigate recovery (Ulrich et al. 1991). Its focus is mainly on the emotional and physiological stress reduction benefits derivable through contact with natural environments.

UNDERPINNING

ART

Natural environments play an essential role in human functioning through the process of restorative experience (Kaplan, 1992).

BEING AWAY-novelty and escape.

EXTENT-physical or conceptual distance to a boundary.

FASCINATION- process and content.

COMPATIBILITY- personal intention and inclination.

- In-depth analysis of restoration in terms of four conceptual components of a restorative environment and
- Environmental configurations that are likely to contribute to restorative experience can be identified.

❑ OBUDU MOUNTAIN RESORT, NIGERIA

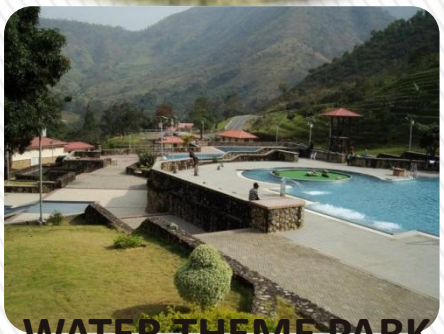
4KM CABLE CAR

RECREATION

DENSE FORESTS AND CANOPY WALKWAY

AMAZING ROAD NETWORK

MAGNIFICENT SCENERY



WATER THEME PARK

WATER FALL AND RIVER CHANNEL

❑ RESEARCH PARADIGM

Post-positivistic paradigm

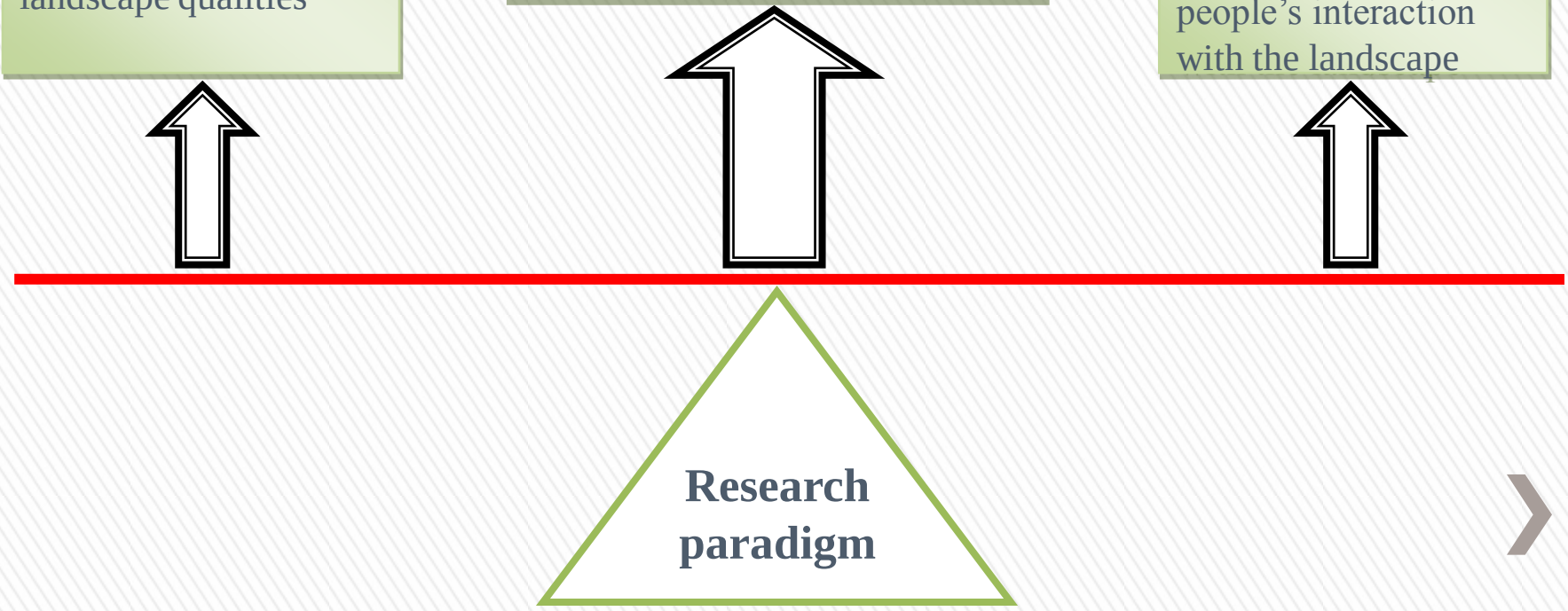
Development of numeric measures along the line of cause and effect, reduction of research to specific variables, hypothesis and questions, measurement and observation, and testing of theories.

Psychophysical paradigm

Focus on a population's preference for specific landscape qualities

Experiential paradigm

Hinged on landscape values based on the people's interaction with the landscape



❑ DATA COLLECTION

SAMPLE SIZE

Thirty five participants across industry and institutions

DATA COLLECTION
VARIABLES AND INSTRUMENTS

SAMPLING METHOD

Non probability convenience sampling

RQ 1 VARIABLES

Preference (dependent)

Environmental features (independent). Water bodies, fountain, vegetation and plant material.

INSTRUMENTS

Scenic beauty evaluation (SBE) model

RQ 2 VARIABLES

Noise, air quality, temperature, humidity, pressure and altitude (measured variables)

INSTRUMENTS

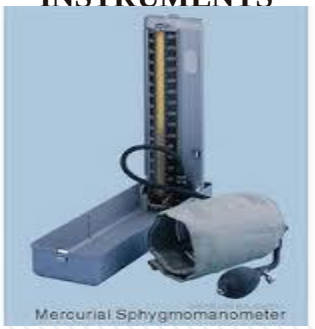
RQ 3 VARIABLES

Perceived stress (outcome/dependent)

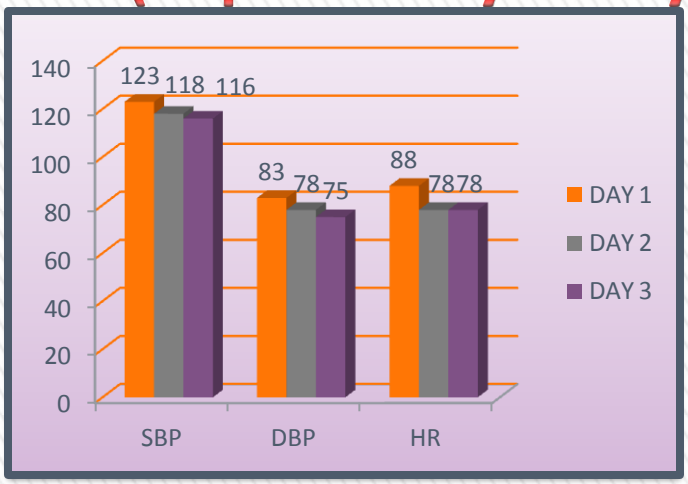
Perceived restoration (predictor) Being away, extent, fascination and compatibility.

Blood pressure and heart

INSTRUMENTS



❑ EXPERIMENTATION (Exploratory study findings)



PHYSIOLOGICAL MEASURES

Systolic/diastolic blood pressure and heart rate readings

PSYCHOLOGICAL MEASURES

Perceived Stress Scale (PSS)
Cohen et al. (1983).

Perceived restorativeness scale (PRS)
Hartig et al. (1997)

❑ SCOPE OF STUDY

•The natural environment of **Obudu mountain resort** will be compared with **selected urban environments** where study samples will originate from.

•There will be an **active engagement** of samples for **four days** within the study period.

• The study will engage **measures** that involve the Psycho-physiological processes underlying the pathways that link potential benefits of restorative environments and human response.

❑ SIGNIFICANCE OF STUDY

✓ Research into the psycho-physiological factors affecting stress and mental wellbeing have been actively conducted mainly in the **global north** countries while the **global south** especially **Africa** have recorded quite a few number of research in this context.

✓ it has become necessary to experiment with **samples** from this region in order to add to the existing body of knowledge and to further substantiate claims of the **universality** of restorative responses

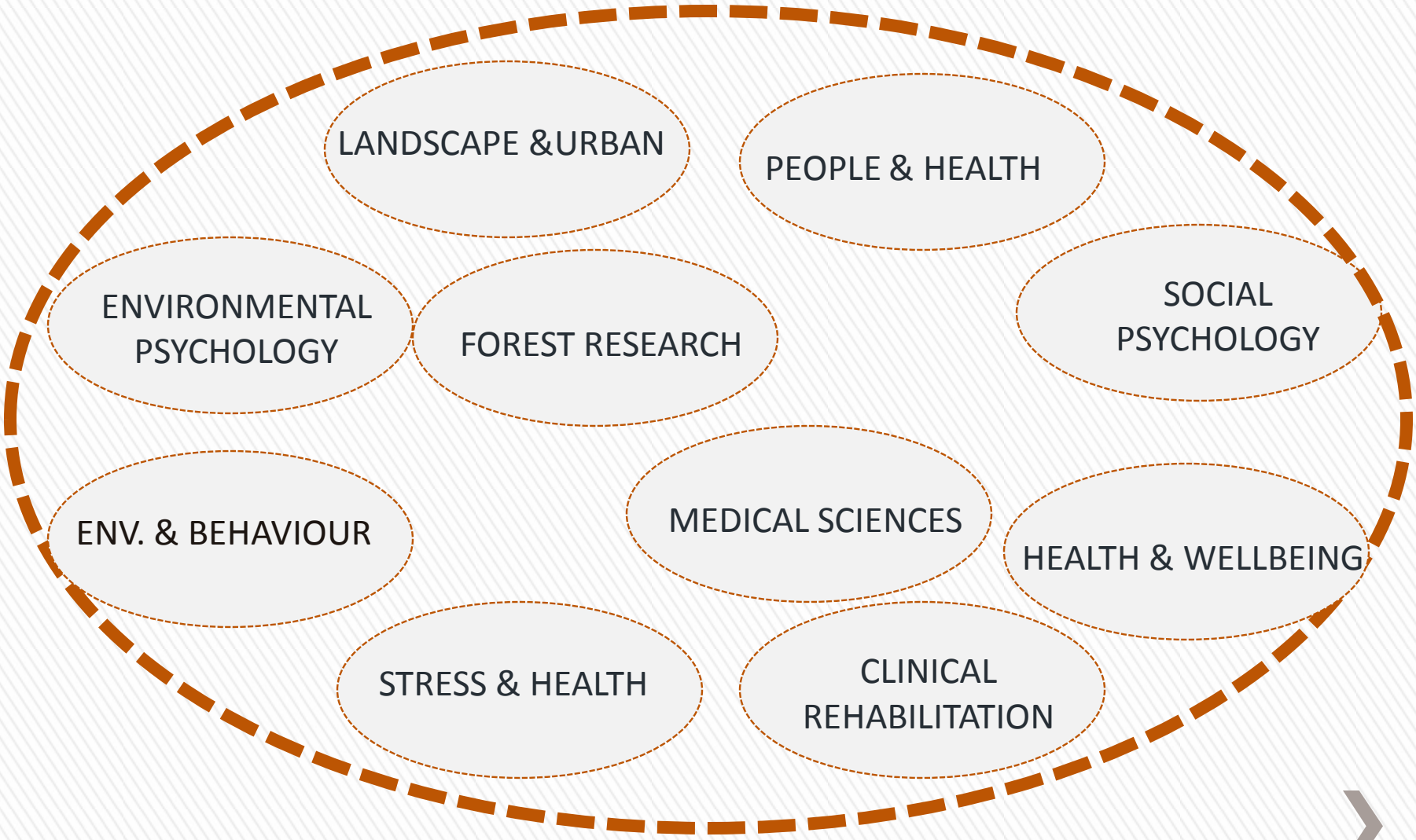
✓ Result obtained from this study may offer enough justification for landscape planners and architects for further **nature related interventions**

✓ **Policy makers, designers and developers** within the locus of creating buildings and cities would eventually refer to available evidence pertaining to the potentials of mountain environments as a promoter of mental wellbeing.

❑ EXPECTED FINDINGS

Changes in the psychological mood states and physiological changes of an individual will demonstrate that given a multi-stimulus mountain environment conditions, one can effectively experience reduced acute stress of various intensities.

LITERATURE MAP



❑ MAIN LITERATURES CITED

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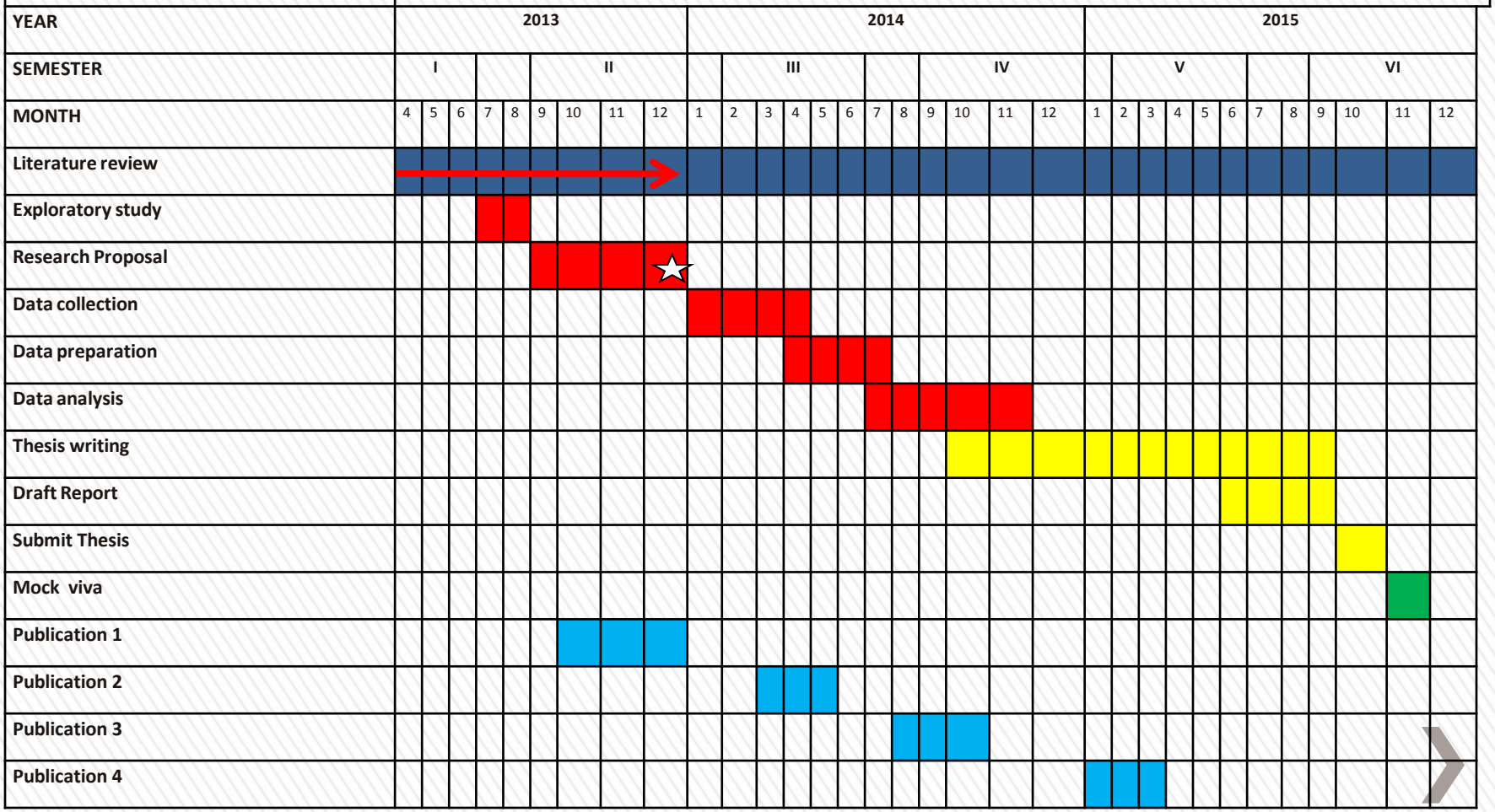
PROPOSED RESEARCH GANTT CHART

RESEARCH WORKING TITLE	**PSYCHO-PHYSIOLOGICAL BENEFITS OF MOUNTAIN LANDSCAPE ENVIRONMENT AS STIMULI FOR DIRECTED ATTENTION RESTORATION AND STRESS MITIGATION**



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THANK YOU