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The Effect of Affect Arousal on the Consolidation of Motor Memory in Adolescents: Investigating the Role of Rest Intervals

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1. Round 1

1.1. Reviewer 1

Reviewer:

The paragraph beginning with “Memory is the process of storing information and experiences...” provides a broad overview but lacks a clear funnel toward the specific research problem. Consider tightening this paragraph by reducing general definitions and more quickly positioning motor memory consolidation as the central theoretical focus.

In the paragraph citing cortisol, epinephrine, MR, and GR receptors (“Affect stimuli trigger the hypothalamus-pituitary-adrenal (HPA) axis...”), the neurobiological explanation is strong but underutilized later. Please explicitly link these mechanisms to motor memory consolidation, not just declarative or episodic memory.

The reference to “Bower’s network theory” is appropriate, but the theory is introduced briefly. Consider adding one or two sentences clarifying how associative network activation theoretically predicts differences between immediate and delayed affect arousal.

There is inconsistency between “half an hour after the last block” and later references to “30 minutes”. Please standardize terminology throughout the manuscript to avoid ambiguity.

Authors uploaded the revised manuscript.

1.2. Reviewer 2

Reviewer:

The paragraph beginning “However, several studies have highlighted the benefits of arousal effects on learning...” would benefit from a sharper articulation of the research gap. Specifically, please clarify why findings from item or source memory cannot be assumed to generalize to motor memory.

The final paragraph states the purpose clearly, but it does not include explicit research questions or hypotheses. Consider adding 2–3 directional hypotheses (e.g., immediate vs. delayed affect arousal) to strengthen theoretical coherence.

In the sentence “A total of sixty participants... were purposively selected”, purposive sampling may limit external validity. Please justify this choice and discuss how it affects generalizability beyond semi-skilled male adolescent basketball players.

The PANAS questionnaire is described, but reliability coefficients for the current sample are not reported. Please add Cronbach’s alpha values for both positive and negative affect scales as measured in this study.

The description of affect induction (“violent and injury movie clips... positive photos...”) is detailed, but manipulation validity is not demonstrated. Please report pre-post PANAS differences to empirically confirm that affect arousal was successfully induced.

Authors uploaded the revised manuscript.

2. Revised

Editor’s decision after revisions: Accepted.

Editor in Chief’s decision: Accepted.