Review Form 3

Journal Name:	**Asian Journal of Advanced Research and Reports**
Manuscript Number:	**Ms_AJARR_122194**
Title of the Manuscript:	**Strength and Deformation: Structural Characteristics of Concrete Beams Reinforced with GFRP Bars**
Type of the Article	**Original Research Article**

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PART 1: Review Comments

Compulsory REVISION comments	**Reviewer's comment**	**Author's Feedback** *(Please correct the manuscript and highlight that part in the manuscript. It is mandatory that authors should write his/her feedback here)*
Please write a few sentences regarding the importance of this manuscript for the scientific community. Why do you like (or dislike) this manuscript? A minimum of 3-4 sentences may be required for this part.	This research presents findings from experiments conducted on the structural behavior of concrete beams reinforced with Glass Fiber Reinforced Polymer (GFRP) bars and conventional steel bars as control. The mechanical properties of the GFRP bars and steel bars (10mm and 12mm nominal sizes) used were ascertained. A total of seven (7) RC beams measuring 120mm x 200mm x 2000mm mm were cast, six (6) of which were GFRP reinforced and one (1) was steel reinforced, and were loaded until failure. The findings revealed that higher concrete strength leads to a greater number of cracks, but with reduced spacing and narrower widths.	
Is the title of the article suitable? **(If not please suggest an alternative title)**	**Yes**	
Is the abstract of the article comprehensive? Do you suggest the addition (or deletion) of some points in this section? Please write your suggestions here.	**Yes**	
Are subsections and structure of the manuscript appropriate?	**Yes**	
Please write a few sentences regarding the scientific correctness of this manuscript. Why do you think that this manuscript is scientifically robust and technically sound? A minimum of 3-4 sentences may be required for this part.	The experimental results revealed that the GFRP RC beams exhibited typical bilinear elastic behavior under static loading with a reduction in stiffness after cracking. The GFRP RC beams failed by sudden concrete crushing due to shear-bond failure, diagonal tension failure in the concrete, and flexural failure in contrast to the steel-RC beam which failed due to yielding of the steel tension bars. The investigation further highlighted that increasing the concrete compressive strength and the longitudinal tensile reinforcement ratio of GFRP-RC beams significantly improved their structural performance, reducing crack widths and increasing failure loads.	
Are the references sufficient and recent? If you have suggestions of additional references, please mention them in the review form.	**Yes**	
Minor REVISION comments **Is the language/English quality of the article suitable for scholarly communications?**	English is good	
Optional/General comments	Nil	

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PART 2:

	Reviewer's comment	**Author's comment** *(if agreed with reviewer, correct the manuscript and highlight that part in the manuscript. It is mandatory that authors should write his/her feedback here)*
Are there ethical issues in this manuscript?	*(If yes, Kindly please write down the ethical issues here in details)*	

Reviewer Details:

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