

colo-rectal-anal symptoms (CRADI) of pain and dysfunction when coupled with the stabilization belt during exercise. These exercises should be completed at home, three times a week, for a total of six weeks for postpartum women diagnosed with DRA.

Limitations

Limitations of this current study include comparing the experimental group to a traditional treatment group rather than a true control group. Lack of previous research using plank exercises as a treatment option for DRA made appropriate dosage very difficult. The small sample size limited generalizability of this research. Other limitations include missing data for exercises logs, reports of inconsistent exercise by some subjects, the fact that most participants gave birth vaginally, variations in abdominal brace position, and relatively short exercise time. These limitations call for a more controlled exercise setting, and a stratified purposive random sampling of groups by birth mode and parity for future research in this area.

Future research

Future research should include also use of a true control group to increase the comparison validity of the study, a larger sample size to increase generalizability of the study, and research by birth mode and parity to see if birth mode or parity has an effect on exercise results. Future research should identify specific exercise dosage of plank exercises for the treatment of DRA. Increasing the length of the study, giving a standardized brace to each participant, and more supervised exercise sessions with objective recording of all exercises prescribed are suggested for future research.

Conclusion

The purpose of this randomized controlled study was to determine if there was a significant difference between a six week experimental core stability plank program compared to traditional supine exercise program in the closure of DRA. Additionally, this study sought to determine the relationship between DRA measurements, pain, ODI, and PFDI scores. Overall, There was not a significant difference between groups with respect to DRA closure. However, in both the experimental group and traditional exercise group there was a significant decline in the DRA measurement at the umbilicus ($F=7.28, p=0.036$), with the traditional group showing a greater decline from pre to posttest ($M(\text{pre})=10.97\pm 1.96$; $M(\text{post})=6.63\pm 1.65$) compared to the experimental group ($M(\text{pre})=8.75\pm 0.87$) ($M(\text{post})=7.58\pm 2.01$). This study also showed a significant improvement in CRADI scores for both groups from pre-test to post-test, suggesting either exercise program to be valuable in treatment of women with colo-rectal-anal symptoms in the postpartum period.

Authors' contributions

Authors' contributions	LMW	DB	AC	SM	BS
Research concept and design	✓	--	--	--	--
Collection and/or assembly of data	✓	✓	✓	✓	✓
Data analysis and interpretation	✓	--	--	--	--
Writing the article	✓	✓	✓	✓	✓
Critical revision of the article	✓	--	--	--	--
Final approval of article	✓	--	--	--	--
Statistical analysis	✓	✓	✓	✓	✓



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