

Effectiveness of Aerobic Exercise for Adults with Leukemia

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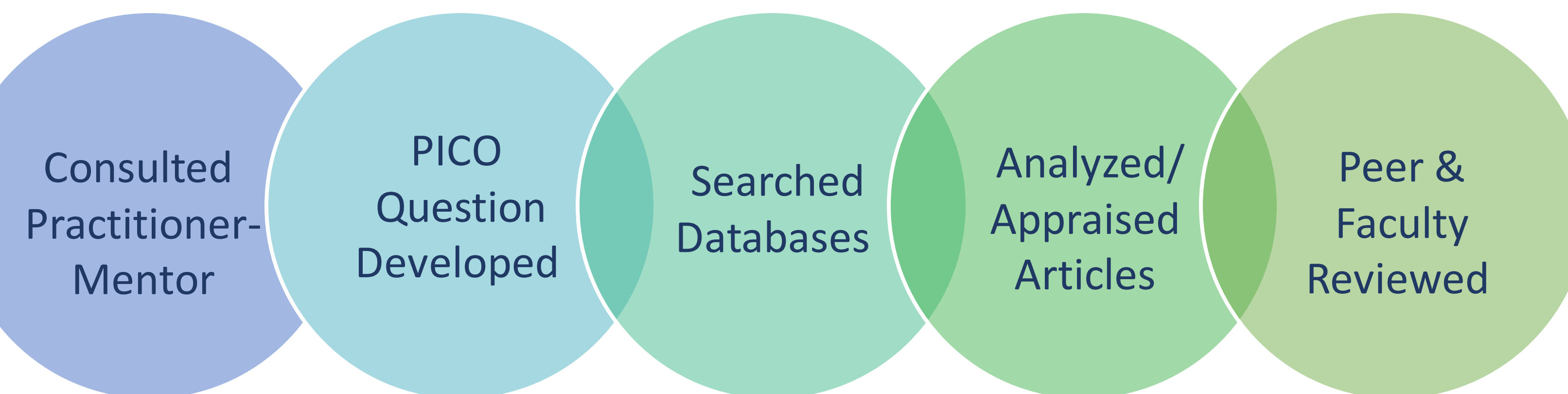
PICO Question

What are the most effective interventions for increasing strength and endurance in clients with leukemia experiencing functional decline?

Background and Rationale

- Leukemia: cancer of the blood cells.
- The incidence of individuals who are living with and recovering from leukemia is high.
- Leukemia patients experience severe functional decline that interferes with everyday activities.
- Leukemia patients also experience impaired strength and endurance which has an impact on everyday tasks.

EBP Process



Search Methodology

Databases

- Cochrane Library, CINAHL, Google Scholar, PubMed

Search Terms

- Leukemia patient, cancer intervention/treatment, strength /endurance, ADLs

Inclusion Criteria

- Blood cancer patients, adults; Published within last 10 years, English

Exclusion Criteria

- Comorbidities

Main Findings

Levels	Evidence	Intervention	Results
Level 1	Bergenthal et al. (2014) Quality Score: 94%	Compared standard care versus aerobic exercise with adults diagnosed with blood cancer	++ : Decrease in depression and fatigue ? : Quality of life, physical functioning, overall survival, anxiety
	Baumann et al. (2011) Quality Score: 62%	Moderate exercise program (aerobic endurance training and ADL training) versus standard care (gymnastics, massages, and stretching) in that facility	+ : Aerobic endurance + : Strength
Level 2	Furzer et al. (2016) Quality Score: 68%	12-week exercise rehabilitation vs. a delayed 12-weeks of usual-care	++ : Reductions in cancer-related fatigue ++ : Increased cardiovascular fitness
	Wehrle et al. (2018) Quality Score: 78%	Endurance and resistance exercise	++ : Muscular strength capacity ++ : Emotional function
Level 3	Kenji (2016) Quality Score: 56%	Analyzed standard care versus aerobic exercise using the Wii as virtual reality	+ : Strength + : Endurance ++ : Psychosocial function

++ = Positive statistically significant results + = Positive results ? = Inconclusive results - = Decline in results

Limitations and Conclusions

Limitations

- Small samples
- Intensity and duration differences
- Inability to blind participants

Bottom Line

- Moderate strength and quality of evidence
- Aerobic exercise may benefit individuals with blood cancers.
- Aerobic exercise may improve emotional function.

Recommendations

- Aerobic exercise
- More research with larger samples
- Cost-effective adaption of interventions are available.

Activity Tracking Chart Example

Aerobic Exercise: Treadmill			
Date	4/30	5/1	5/2
Duration	15 min	25 min	30 min
Distance	.5 mile	1 miles	1 mile
Client reported strength & endurance	5	7	8
Therapist's rated strength & endurance	3	7	6

Key: Low 1 2 3 4 5 (Moderate) 6 7 8 9 10 High

References



Handout



Activity Tracking Graph Example

