A Multimodal Intervention for Weight Loss in Primary Care

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Significance of Problem

- Obesity leads to disability, decreased quality of life and health outcomes, and increased health care expenditures (USPSTF, 2020)
- Obesity has tripled worldwide since 1975 and there are over 1.9 billion adults who qualify as overweight or obese (WHO, 2021)
- Arizona's obesity rate has increased by 12.2% between 2000-2019 (America's Health Rankings, 2020)
- The total estimated rate of obesity in AZ is 31.4%; while the U.S. average is 31.9% (America's Health Rankings, 2020)

PICOT Question

"Will overweight and obese adults (P) benefit from alternating biweekly telephone and face-to-face meetings and tailored weight loss feedback based on self-monitoring (I) compared to having monthly face-to-face meetings and general education (C), in a way that will reduce body mass index (O) over 12 weeks (T)?"

Review of Literature

Evidence	Database	LOE/Quality
Khanh-Dae Le (2020)	JBI	I[a]/Strong[b]
Minooee (2020)	JBI	I[a]/Strong[b]
Pamaiahgari (2021)	JBI	I[a]/Strong[b]
Bennett et al. (2018)	CINAHL	II[a]/Good[b]
Eaton et al. (2016)	CINAHL	II[a]/Good[b]
Spring et al. (2020)	CINAHL	II[a]/Good[b]
Godino, et al. (2019)	PubMed	II[a]/Good[b]
Semlitsch et al. (2019)	PubMed	I[a]/Good[b]
Schippers et al. (2017)	PubMed	II[a]/Good[b]
Spring et al. (2017)	PubMed	II[a]/Good[b]
Tang, et al. (2016)	PubMed	I[a]/Good[b]
Wadden et al. (2020a)	PubMed	I[a]/Good[b]
Wadden, et al. (2020b)	PubMed	I[a]/Strong[b]
Orringer et al. (2020)	TRIP	I[a]/Good[c]
USPSTF (2020)	TRIP	I[a]/Strong[c]
VA & DoD (2020)	TRIP	I[a]/Strong[c]

[a] Melynyk & Fineout-Overholt; [b] CASP [c] AGREEII

Best Practices

- Providers can help treat obesity through behavioral therapy, such as goal-setting, self-monitoring, and reinforcement of dietary and physical activity modifications (Bennett et al., 2018, Khanh-Dao Le 2020, Godino et al., 2019; Orringer et al., 2020; Paimaihagari, 2021; Semlitsch et al., 2019; Schippers et al., 2017; Spring et al., 2017; Wadden et al., 2020b; USPSTF, 2020; VA & DoD, 2020)
- Self-monitoring is a vital part of behavioral therapy and can be completed via paper journals or smartphone app (Spring et al., 2017; Wadden et al., 2020b)
- Regular, frequent follow-up helps maintain compliance (Khanh-Dao Le, 2021; Orringer et al., 2020; USPSTF, 2020; Wadden et al., 2020b)
- Telephone and face-to-face follow-up sessions demonstrate comparable results (Schippers et al., 2017; Wadden et al., 2020b; VA & DoD, 2020)
- Effective telephone sessions may be as brief as 5-15 minutes (Bennett et al, 2018; Godino et al., 2019; Spring et al., 2017; Wadden et al., 2020a)
- Adding weight loss medication to intensive behavioral therapy can provide increases in initial weight loss (Orringer et al., 2020; Semlitsch et al., 2019; Wadden et al., 2020b; VA & DoD, 2020)

Implementation

Setting:
- A nurse practitioner owned primary care clinic in Prescott, Arizona

Key stakeholders:
- A nurse practitioner, a medical assistant, the project leader, other health care students, patients and families

Participants:
- Two groups that each consisted of seven participants who were followed over 12 weeks

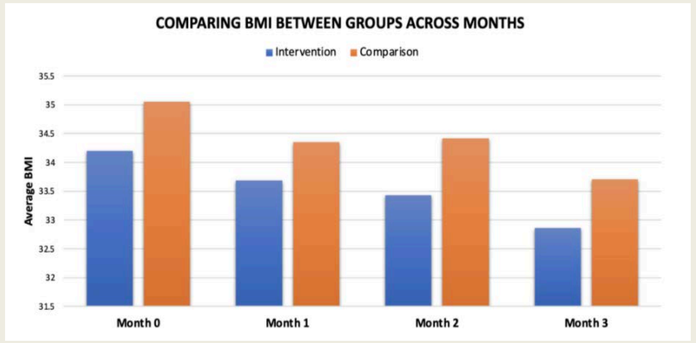
Comparison:
- Monthly face-to-face follow-up sessions
- Follow-up sessions included general education
- BMI was measured every month during follow-up sessions

Intervention:
- Face-to-face and telephone follow-up alternated every two weeks
- Participants utilized self-monitoring via paper journals or smartphone application
- Follow-up conversations included instruction, education, goal attainment, self-monitoring review, support and feedback
- BMI was collected preintervention and every month (4 weeks) until the end of the implementation period

EBP model:
- The IOWA EBP model

Evaluation

Primary Outcome: Change in BMI in the intervention group over twelve weeks, compared to the comparison group
Data analysis: An independent samples *t*-test was completed, and the change was not found to be statistically significant (p-value = 0.990)



Secondary Outcome: Change in BMI from baseline data to the BMI at the end of each month within the intervention group
Data analysis: Three matched paired *t*-tests were completed, and the changes were found to be statistically significant
- Baseline to one month (p = 0.005)
- Baseline to two months (p = 0.001)
- Baseline to three months (p = 0.003)

Conclusion, Recommendations, & Implications

Twelve weeks of self-monitoring and biweekly follow-up did not impact BMI in a statically significant way compared to previous care within the clinic. These findings were not consistent with the evidence.
The given intervention was shown to produce statistically significant changes in BMI between baseline and each month within the intervention group. These findings were congruent with the evidence.

Recommendations:
- A larger sample and longer study duration is warranted
- Primary care providers should screen all adults for increased BMI and offer multimodal interventions on weight management

Implications:
- Increased primary studies on weight loss treatment in primary care
- Further education on multimodal weight loss methods for primary care providers
- Specific recommendations for practice from professional organizations on weight loss in primary care

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