



Predictive Factors of Follow-Through in Early Lifestyle Intervention for Childhood Obesity

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INTRODUCTION

The Early Lifestyle Intervention (ELI) Clinic is an OU Physicians Pediatrics specialty clinic. It offers a multidisciplinary team approach through promoting behavioral modification in obese children between 2–18 years of age and at the 95th percentile and above for BMI. 30–40% of patients never follow-through after ELI referral, which is consistent with current literature on the high attrition rates in the management of pediatric obesity.^{1,2}

OBJECTIVE: This study assessed predictive factors of patient follow-through to appointments made for early lifestyle intervention of childhood obesity at the ELI Clinic.

METHODS

- Retrospective chart review of 121 pediatric patients with ELI referrals made between January 2010 and March 2018.
- Patients were grouped into three categories based on follow-through status for this intervention:
 - Immediate**—came to first ELI appointment made at time of referral
 - Late**—did not come to first ELI appointment but eventually saw ELI provider
 - Lost**—no follow-through
- Analyzed each patient's:
 - Comorbidities
 - Family medical history (FMH)
 - Previous medical interventions
 - Demographics
 - Home environment
- Associations between clinical and family histories and follow-through status evaluated via χ^2 test, Fisher exact test, 1-way analysis of variance, and Kruskal-Wallis H test in SPSS.

RESULTS

Figure 1: An association between comorbid musculoskeletal pain and follow-through status was observed (Fisher's Exact Probability Test, $p < 0.001$).

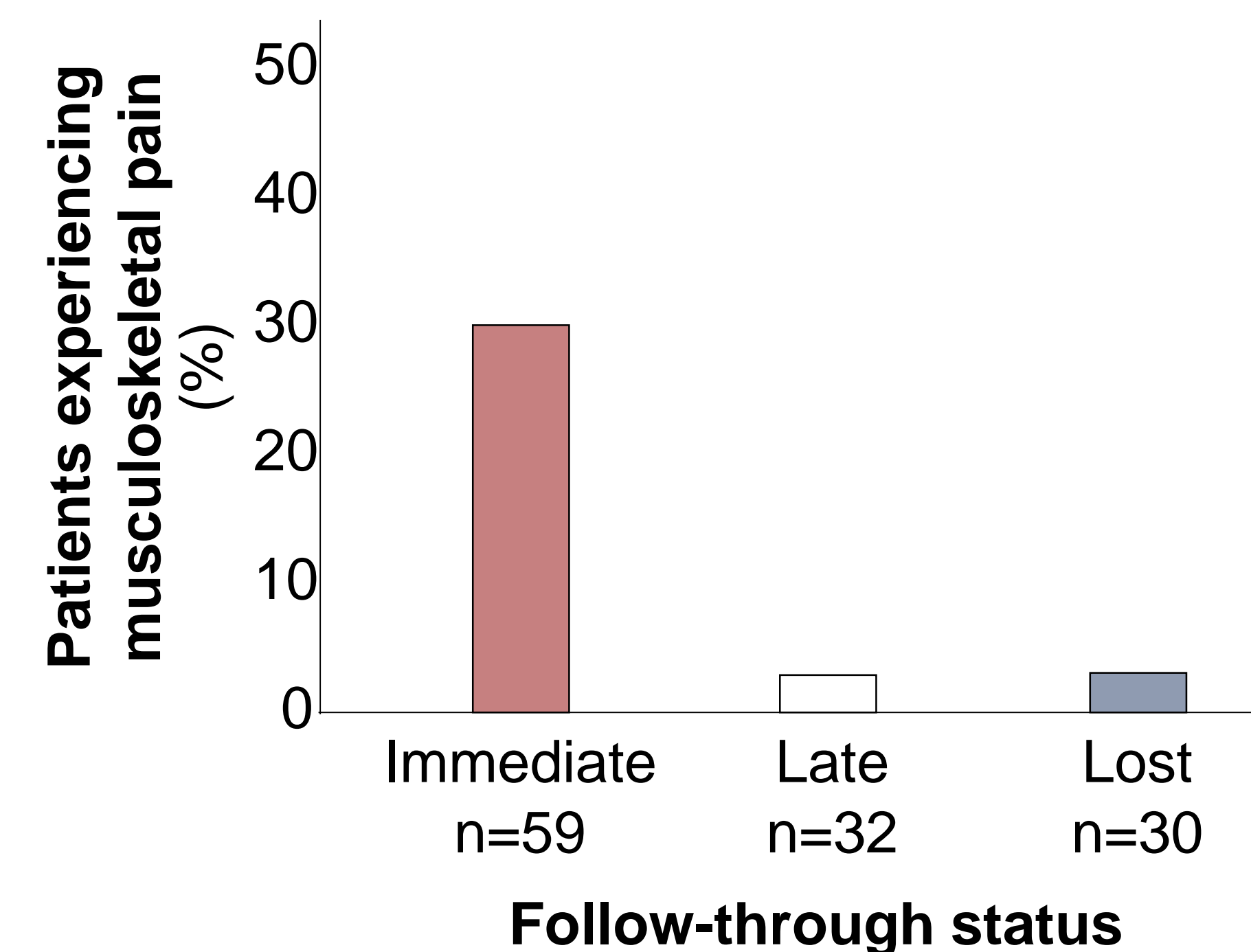
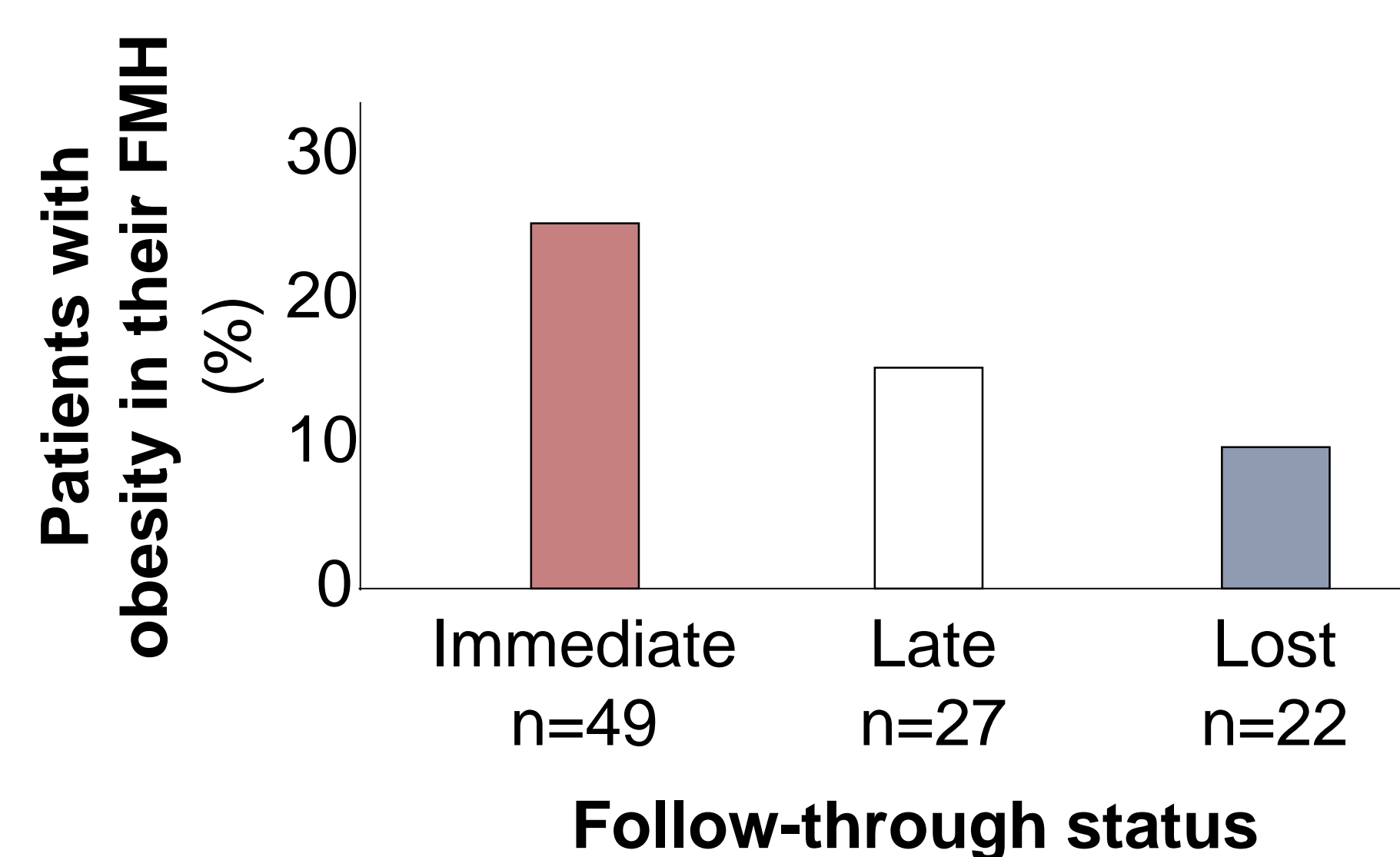
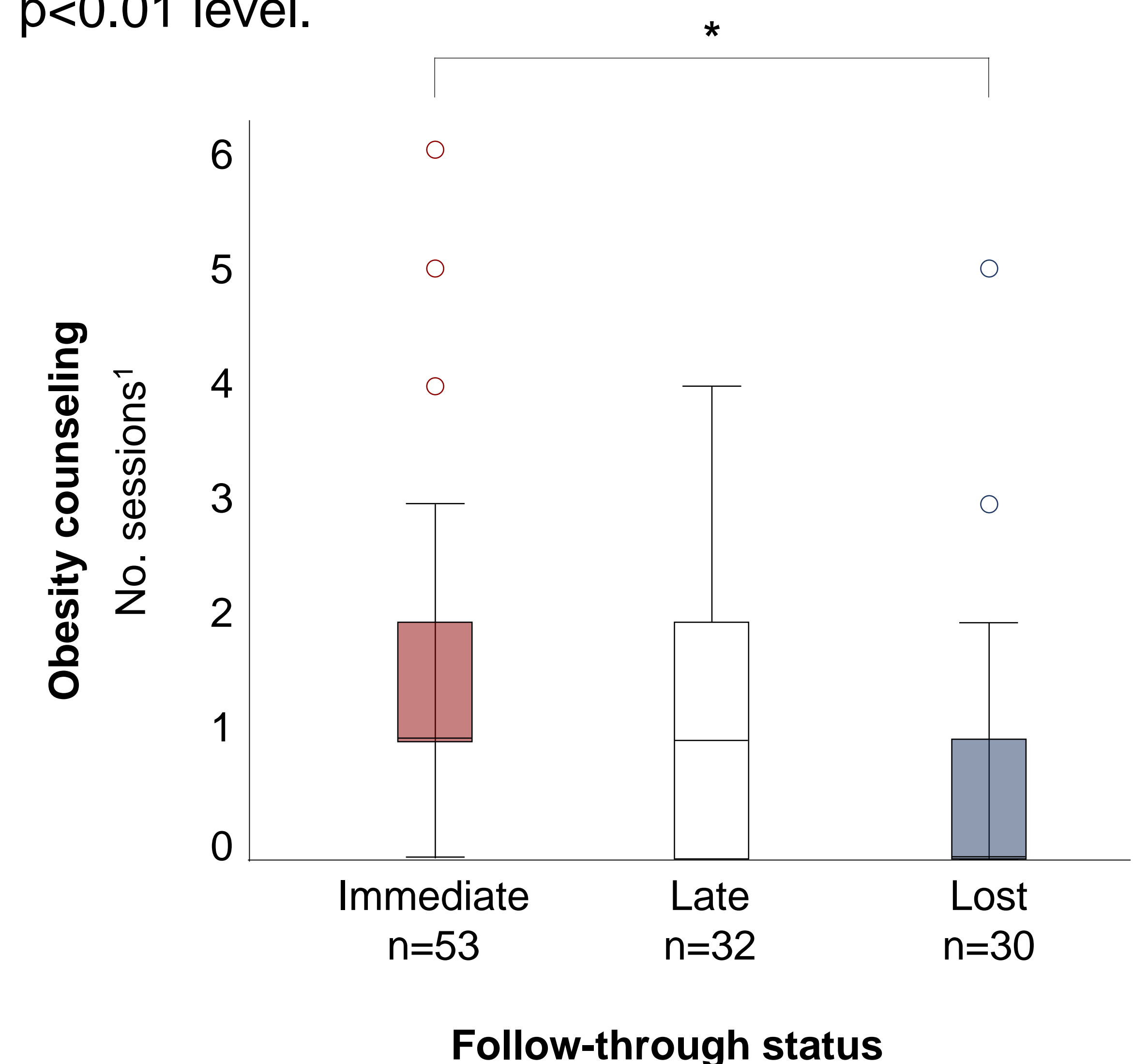


Figure 2: Twelve patients who immediately followed through had obesity (N=25%) in their FMH compared to 9% in the lost and 15% in the late to follow-through groups, but this was not statistically significant (Fisher Exact Probability Test, $p > 0.05$).



Demographics: A slight majority of patients were Hispanic (n=73, 60.3%) and male (n=65, 53.7%), with an average age of 7.81 years (\pm SD, 3.82 yrs).

Figure 3: A Kruskal-Wallis H test showed that there was a statistically significant difference in the number of counseling sessions between the different groups, $\chi^2(2)=8.78$, $p=0.012$. The asterisk indicates a Dunn's post hoc comparisons test that is significant at the $p < 0.01$ level.



¹Number of times in a 2-year span that the patient/family was counseled about obesity before they were referred to the ELI clinic.

DISCUSSION & CONCLUSION

- Providers who counsel their patients about childhood obesity more frequently prior to ELI referral may improve follow-through rates.
- In this patient cohort, most comorbid conditions associated with obesity, other than musculoskeletal pain, had a limited effect on motivating parent/patient behavior to seek longitudinal intervention.
- Future directions of this study will examine patient follow-through status by home location.³

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