

Changes in Quality of Life among Obese Latino Adolescents

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ABSTRACT

Background: Pediatric obesity is associated with lower quality of life (QOL) and populations with high obesity rates, such as Latino youth, are especially vulnerable. We examined the effects of a 12-week diabetes prevention program on changes in weight-specific QOL in Latino youth.

Methods: Fifteen obese Latino adolescents (BMI%=96.3± 1.1; age=15.0± 1.0 years) completed a 12-week intervention. Youth completed weight-specific QOL measures at baseline, post intervention, and 1-year follow-up. For comparison purposes, intervention youth were matched for age and gender with lean controls.

Results: At baseline, obese youth exhibited significantly lower weight-specific QOL compared with lean youth (70.8± 5.4 to 91.2± 2.2, p<0.005). No changes in weight were observed following the intervention (96.3± 4.4 to 95.0± 6.0, p=0.001). However, significant increases in weight-specific QOL (70.8± 20.9 to 86.2±16.9, p<0.001) were observed. Post-intervention QOL scores were no longer significantly different than lean controls (p=0.692). Data from 9 youth who returned one year follow-up indicated that increases in weight-specific QOL were maintained over time (90.53± 4.49 to 85.82± 5.93, p=0.735).

Conclusion: These results indicate that a community-based diabetes prevention program can result in sustained improvements in weight-specific QOL among obese Latino youth. These findings suggest that healthy lifestyle interventions that focus on social interaction and physical activity, rather than weight-loss are warranted.

INTRODUCTION

- The prevalence of obesity is at its highest, especially among Latino adolescents with 21.2% compared with 14.0% of non-Hispanic white youth in 2009-2010.
- The disproportionate impact places them at higher risk for developing chronic conditions such type 2 diabetes but also negatively impacts their psychosocial well-being and quality of life (QOL).
- Studies report a negative impact between obese youth and their QOL. In addition, obese adolescents reported QOL scores similar to youth with cancer.
- No interventions have been designed to specifically improve QOL among obese youth through a culturally-grounded, community-based lifestyle intervention.

METHODS

1. Generic QOL Instrument: Youth Quality of Life–Surveillance Version (YQOL-S)

- Applies to those with a wide range of conditions including healthy individuals
- 8-item survey was developed for youth ages 11-18 years through in-depth interviews
- 21-items with three domain scores (Self, Social, and Environment)

- Self: refers to the adolescents feelings about themselves
- Social: refers to the adolescents relations with others
- Environment: pertains to opportunities and obstacles in a youth’s social and cultural milieu

3. Lifestyle Program: Fifteen obese Latino adolescents were referred to the 12-week lifestyle intervention

- Weekly, 1-hour group lifestyle education classes delivered by bilingual/bicultural *promotoras* with parents
 - Addressed nutrition, physical activity, family roles and responsibilities, self-efficacy and self-esteem
- Three, one-hour physical activity sessions per week
 - Group and individual activities. Structured (aerobic and resistance) and unstructured (team sports) exercises

RESULTS

Table 1. Descriptive Characteristics (n=15)

	Pre	Post	p-values
Gender	Females 8 Males 7		
Age	15.1 ± 0.2	15.4 ± 0.2	---
BMI (kg/m²)	32.5 ± 1.6	32.0 ± 1.7	0.06
BMI percentile	96.3 ± 1.1	95.0 ± 1.5	0.02
Waist Circumference (cm)	107.0 ± 4.3	103.1 ± 5.0	0.02

Date presented as mean ± SE; Abbreviations: BMI: body mass index

Table 2. Comparison for YQOL-W for Lean, Pre, and Post

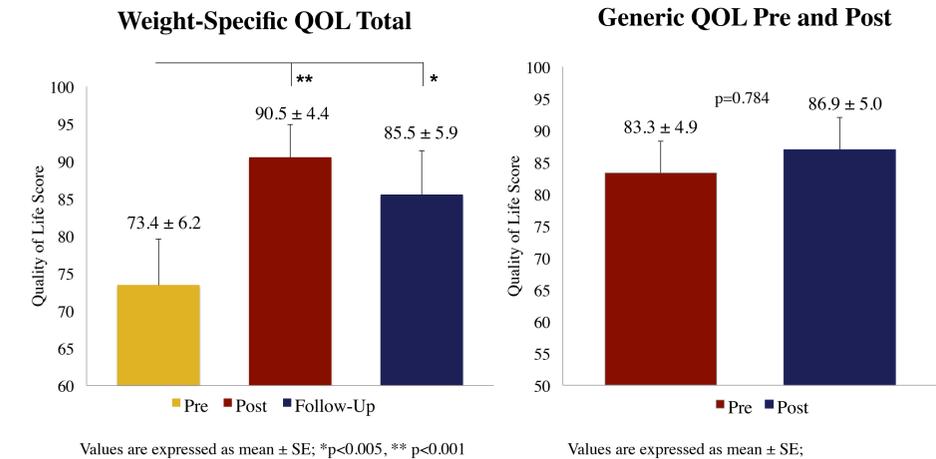
	Lean	Pre	Post	Lean vs. Pre	Pre vs. Post	Lean vs. Post
Total	91.2 ± 2.2	70.7 ± 5.4	86.2 ± 4.3	.005	.001	.692
Self	90.6 ± 2.9	53.8 ± 6.8	78.1 ± 7.1	.001	.001	.637
Social	93.6 ± 1.6	79.6 ± 5.1	89.1 ± 4.1	.047	.008	.718
Environment	88.4 ± 4.8	63.0 ± 7.1	85.8 ± 4.4	.007	.001	.479

Values are expressed as mean ± SE; Wilcoxon test for pre vs. post; Mann Whitney Test for lean vs. pre and lean vs. post

Table 3. YQOL-W Changes for Post and Follow-Up (n=9)

	Post	Follow-Up	p-values
YQOL-S	86.9 ± 5.0	93.2 ± 2.2	0.249
YQOL-W Total	89.9 ± 4.1	85.8 ± 5.9	0.735
Self	83.1 ± 7.1	82.5 ± 6.1	0.792
Social	93.1 ± 3.8	89.5 ± 5.8	0.715
Environment	90.2 ± 5.6	79.5 ± 7.3	0.271

Values are expressed as mean ± SE; Wilcoxon test for post vs. follow-up



CONCLUSION

- Increases in weight-specific quality of life were found in all domains (total, self, social, and environment) despite no observed changes for generic QOL.
- Adolescents were able to maintain high QOL scores during follow-up.
- There were no significant differences between lean comparison group and post-intervention.
- In addition, increases in the participant’s parents’ QOL were also noted.
- Improvements in weight-specific QOL occurred without weight-loss, indicating that weight-loss is not necessary to improve weight-specific QOL in obese Latino youth.
- We suspect changes in parental interaction, physical activity, behavior outcome and other mediators in the lifestyle intervention may be associated with increases in adolescents QOL.
- These findings highlight the importance of using a culturally-grounded, community-based approached to meet the needs of obese Latino adolescents.

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