

# Head to Toe: Are you ready? Assessing Readiness to Change for a Weight Management Program

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## Background

- St. Louis Children's Hospital provides Head to Toe (HTT), a 16-week interactive fitness, nutrition and social well-being class.
- Program participants are referred by area physicians and the program is facilitated by a registered dietician, a licensed social worker and an exercise specialist.
- HTT measures a participants' readiness to change in exercise, nutrition and family support.
- In Prochaska's Trans-Theoretical Model (TTM), readiness to change occurs in five stages: pre-contemplation, contemplation, preparation, action and maintenance.

## Methods

- Program staff administered a pre-post single group design that measured readiness to change, knowledge, self-concept, physical activity and nutrition behavior.
- Height, weight, BMI and physical tests including push-ups, beep test, sit-ups and sit and reach assessments were also recorded.
- Readiness to change for physical activity, nutrition behaviors and family support was assessed using the TTM and was completed online through Qualtrics Insight platform.
- Readiness to change was recoded into binary variables of high or low readiness to change. Low included pre-contemplation and contemplation. High included preparation, action and maintenance.

## Results

**Table 1: Distribution of participants exercise, nutrition and family support readiness to change within the TTM Model**

Stages of Change	Readiness to Change (n=77)		
	Exercise	Nutrition	Family Support
Pre-Contemplation	5.2%	7.8%	2.6%
Contemplation	5.2%	20.8%	2.6%
Preparation	45.5%	40.3%	9.1%
Action	22.1%	13.0%	27.3%
Maintenance	13.0%	10.4%	49.4%
No Response	9.1%	7.8%	9.1%
Total	100.0%	100.0%	100.0%

**Table 2: Chi Square Analysis of exercise readiness to change and nutrition readiness to change with weight loss and physical assessments**

	Exercise Readiness to Change			
	High (n, %)	Low (n, %)	$\chi^2$	P-value
Weight Loss	23 (29.9%)	1 (1.3%)	10.45	.03
Beep Test	28 (36.4%)	1 (1.3%)	11.84	.02
Push Ups	18 (23.4%)	0 (0%)	10.70	.03

  

	Nutrition Readiness to Change			
	High (n, %)	Low (n, %)	$\chi^2$	P-value
Weight Loss	18 (23.4%)	6 (7.8%)	11.99	.012

## Results

- Using a sample of participants from the 2016 and 2017 Head to Toe classes (n=77), hospital staff analyzed the likelihood of weight loss and improvement on physical assessments based on readiness to change.
- 45.5% and 40.3% of participants were in preparation stage regarding exercise and nutrition.
- 49.4% of participants were in maintenance stage for family support.
- There was a statistically significant relationship in exercise ( $\chi^2=10.45$ ,  $p=.03$ ) and nutrition ( $\chi^2=11.99$ ,  $p=.02$ ) readiness to change with weight loss.
- Exercise readiness to change showed significant relationships between two of four physical assessments:
  - Beep Test ( $\chi^2=11.84$ ,  $p=.02$ ) and Push ups ( $\chi^2=10.70$ ,  $p=.03$ )

## Conclusion

- Participants in higher stages of the TTM for exercise and nutrition were more likely to improve on physical assessments and lose weight.
- Participants in weight management programs can be targeted within certain stages with specific interventions to improve their readiness to change.

