

Walk to School Program: Vision to Reality

by
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A THESIS

submitted to
Oregon State University
University Honors College

in partial fulfillment of
the requirements for the
degree of

Honors Baccalaureate of Science in Exercise and Sports Science
(Honors Scholar)

Presented May 24, 2016
Commencement June 2016

AN ABSTRACT OF THE THESIS OF

Zoanne Houston McAllister for the degree of Honors Baccalaureate of Science in Exercise and Sports Science presented on May 24, 2016. Title: Walk to School Program: Vision to Reality .

Abstract approved:

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Childhood obesity and physical inactivity are significant health problems. According to the CDC (2012), only 12.5% of high school students meet the recommended requirements for physical activity. One method to reverse this trend is promoting physical activity. The Walk to School Program promotes active transportation in schools nationwide. **PURPOSE:** The purpose of this study was comparing the intentions and behaviors of principals of high schools that participate in the program and of schools that do not. **METHOD:** A total of 19 principals participated in an online survey, 13 from the program and 6 from non-participating schools. The survey contained items on behavior, intention, attitude, task and barrier efficacy, perceived control, and subjective norm. Seven one-way ANOVAs were conducted. **RESULTS:** The results reveal significant differences of attitude, $F(1,17)=12.17, p<.05, \eta^2=.45$. Only 7 of the 13 schools that were reported as participating indicated that they did. A second identical analysis was run with self-identified participating and non-participating principals. The results reveal significant intention of promoting physical activity $F(1,17)=5.05, p<.05, \eta^2=.25$ **DISCUSSION:** Although there was a high

attitude score intention and behavior did not change. Showing that the present barriers have a large impact on behavior. These results may be due to a small sample size. A larger sample size would be beneficial to find the statistical significance between the variables.

Key Words: active transportation, promotion, physical activity

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Honors Baccalaureate of Science in Exercise and Sports Science project of Zoanne Houston McAllister presented on May 24, 2016.

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I understand that my project will become part of the permanent collection of Oregon State University, University Honors College. My signature below authorizes release of my project to any reader upon request.

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Introduction

Physical activity is an important aspect of a healthy lifestyle. Regular physical activity reduces an individual's risk of developing chronic conditions such as cardiovascular diseases (CDC, 2015). With the declining rates of physical activity in today's youth, the present day generation is the first generation that is predicted to die before their parents (Olshansky et al., 2005). Many students used to fulfill their physical activity recommendations by walking or biking to school but active transportation has decreased by 40% over the last half century contributing to declines in physical activity (Ward, Linnan, Waughn, Neelon, Martin, & Fulton, 2007). In hopes to reverse this negative trend a solution must be found to increase daily physical activity.

A potential solution to the decline in active transportation is the Walk/Bike to School Program. Founded in 1997 the Walk/Bike to School Program holds an annual Walk to School Day to encourage students to walk or bike to school. The Walk/Bike to School Program aims to raise awareness of active transportation to school, through three initiatives. The "Walk to School Initiatives: Take Steps Towards A Better Way" (n.d.) describes the three initiatives as; to increase active transportation beyond the day of the event by reminding families it is an option, to advocate for the creation of safe routes to and from school for students, and to create a permanent lifestyle change towards active transportation in every aspect of the students' lives. This program provides a simple and detailed way to safely transition to more active transportation methods to school. With proper implementation and community cooperation, the

Walk/Bike to School Program has the opportunity to aid in decreasing the prevalence of overweight and obese youth in the United States.

The focus of the program is on promotion, encouragement, and lifestyle changes of students regarding active modes of transportation to and from school. This program is most effective when there is cooperation between students, schools, and the community. While the program has been implemented for the last 19 years the increase in active transportation to school has not been as dramatic as one would expect from a program with the intentions of creating healthy habits in today's youth.

To reach the long-term goal of increasing life-long physical activity habits, the "Walk to School Initiatives: Take Steps Towards A Better Way" (n.d.) demonstrates a simple method to incorporate physical activity into everyday activities as opposed to specific exercise routines. While there has been research conducted on why young children utilize active transportation to and from school, principals' intentions and beliefs of active transportation have not been explored for a high school demographic. Principals of schools participating in the Walk to School program play an influential role in its success (Vaughn, Ball, Linnan, Marchetti, Hall, & Ward, 2009). Due to their position of power, principals' intentions and behaviors may have an influential impact on the participation of students in the Walk/Bike to School program and the community as a whole.

Although despite application of the program, there has not been the increase or stability of active modes of transportation to and from school (Ward et al., 2007). With the potential impact of principals and the environment of learning an effective program to increase active transportation could increase daily levels of physical

activity as a whole. Therefore, this study aims to discover the behaviors and intentions of principals of participating high schools and non-participating schools. The variables that were considered are the behavior, attitude towards behavior, task efficacy, barrier efficacy, subjective norm, perceived control, and the intentions of principals of both groups of schools.

Assumptions

- The participants answered the survey truthfully
- The registry from the National Center for Safe Routes to School has accurate documentation of participating schools
- The participants were principals of their schools

Delimitations

- High school principals
- Schools participating in the Walk/Bike to School Program and schools in the surrounding areas

Limitations

- Low response rate
- Principals completing the wrong survey
- Partial completion of the survey

Methods

Participants

Nineteen principals of high schools participated in this study. The mean age of the participants was 50.13 years old. The average duration the participants had been a

principal was 13.00 years and were at their current school for an average of 9.89 years. The participants were principals of schools that participated in the Walk to School Program and principals of neighboring schools. Table 1 includes demographic characteristics of the participants. The investigator’s institutional review board approved all study procedures and materials; accordingly, all participants provided informed consent by completing and submitting their survey.

Table 1. Participant Demographic Information

Number of Participants	N=19
Male	14
Female	4
Did not disclose	1
Ethnicity	
White	17
Other	1
Level of Education	
Masters Degree	14
Doctorate Degree	1
Other	1
Did not disclose	1
Average Duration as Principal	13.00 years
Range	1 – 25 years
Average Duration at Current School	9.89 years
Title 1 School	7
Participate in Active Transportation	5
Principal’s Frequency of MVPA	
Never	1
Once a week	1
Twice a week	6
Three times a week	3
Four times a week	1
Five times a week	5
Principal’s Frequency in Strength Training	
Never	7
Once a week	3
Twice a week	5
Three times a week	2
Four times a week	0
Five times a week	1

Instrument

The survey contained a total 53 items measuring personal value of physical activity, the demographics of the principals, promotion of active transportation, and other questions to find a trend on the intentions and beliefs of the principal. The survey contained promotion of the program, behaviors of the principal, and the principals' demographic information. The demographic section contained gender, ethnicity, level of education, duration as principal in total and at the current school, and the frequency of physical activity and strength training. The constructs related to beliefs were, attitude towards behavior (n=7), subjective norms (n=8), task efficacy (n=5), barrier efficacy (n=6), perceived control (n=3), and intentions (n=9) of the principals participating in the program and the neighboring principals. The behavior construct was measure on a Likert scale of 1-6 and was used to describe the principals' behaviors of promoting active transportation. The attitude towards behavior construct was measured using a Likert scale of 1-10 and described their attitude towards active transportation promotion in their schools. The task efficacy, barrier efficacy, subjective norm, perceived control, and intentions constructs were measured on a 1-7 Likert scale. The task efficacy construct portrayed how well the principals' felt they could promote active transportation. The barrier efficacy construct depicted the principals' opinion on how difficult it was to overcome barriers influencing promotion of active transportation at their school. Subjective norm documented the principals' views on the social expectations of their respective communities. The construct of perceived control described the amount of control the principals' felt they had over promoting active transportation at their school. The

intentions portrayed the overall intentions the principals' had towards promoting active transportation at their school. Finally, demographics of the principals was measured and included age, gender, race, level of education, length of time as an administrator, duration at current school, personal participation in active transportation, participation in MVPA outside of work, and participation in strength training outside of work.

Procedure

The schools participating in the program were identified through the National Center for Safe Routes to School at the University of North Carolina Highway Safety Research Center (<http://www.walkbiketoschool.org/go/who-walked>). After participating schools were identified neighboring schools were randomly selected from all of the schools in the surrounding areas. The participants were asked to complete an online survey. Survey administration occurred in five waves. The first contact was sent to 184 principals that participate in the Walk to School Program and 184 principals from neighboring school. The first email was an introductory email with a description of the study and directed participants to look out for a second email that contained a link to the survey. The next email was sent a week later and contained the link to the survey. The third and fourth emails, spaced a week apart, contained a follow-up and thank you as well as a link to the survey if they had not yet completed the survey. Due to low participation a fifth email, sent a week after the fourth, was distributed which contained the same contents as the third and fourth email.

Table 2. Distribution of Survey Emails

Email Sent	Week of Data Collection
Introductory Email (Participating Schools)	1
Introductory Email (Neighboring Schools)	2
Email with a Link to the Survey (Participating Schools)	2
Email with a Link to the Survey (Neighboring Schools)	3
2 nd Email with Link to the Survey (Participating Schools)	3
2 nd Email with Link to the Survey (Neighboring Schools)	4
Follow-Up Email (Participating Schools)	4
Follow-Up Email (Neighboring Schools)	5
Follow-up Email #2 (Participating Schools)	5
Follow-Up Email #2 (Neighboring Schools)	6

Thirty surveys were submitted for data collection. Twenty-one of those were disregarded due to incomplete responses. In the final sample, there were thirteen principals from schools that participated in the program and six principals from neighboring schools.

Analysis

Descriptive statistics were calculated for behavior, attitude towards behavior, task efficacy, barrier efficacy, subjective norm, perceived control, and intention. Looking at the descriptive statistics using the signified participation in the program, there were several larger differences between the average scores of each construct. After descriptive data analysis was completed, seven one-way ANOVAs were conducted. Alpha levels were set at .05.

Results

Intention averages for the participating schools was 5.02 out of 7 and the average for neighboring schools was 3.78 out of 7, the difference between the two was 1.24. Behavior averages for the participating schools was 2.07 out of 6 and the

average for neighboring schools was 1.72 out of 6, the difference between the two was .35. Attitude towards behavior averages for the participating schools was 8.77 out of 10 and the average for neighboring schools was 6.37 out of 10, the difference between the two was 2.40. Task efficacy averages for the participating schools was 4.81 out of 7 and the average for neighboring schools was 5.04, the difference between the two was .23. Barrier efficacy averages for the participating schools was 3.86 out of 7 and the average for neighboring schools was 3.53 out of 7, the difference between the two was .33. Subjective norm averages for the participating schools was 4.44 out of 7 and the average for neighboring schools was 5.00 out of 7, the difference between the two was .56. Perceived control averages for the participating schools was 5.78 out of 7 and the average for neighboring schools was 6.27 out of 7, the difference between the two was .49. Due to missing data, the number of participants for each construct was slightly different. Attitude towards behavior, task efficacy, barrier efficacy, subjective norm, and perceived control had 12 participating principals and 5 non-participating principals. Behavior had 14 participating principals and 6 non-participating principals, and intention had 13 participating principals and 4 non-participating principals. Table two summarizes the results of the analysis between the database provided participating principals and the non-participating principals.

Table 3. Participating Principals and Non-Participating Principals from the Database

Construct	Participating Principals		Non-Participating Principals		Difference	
	M	SD	M	SD	M	SD
Behavior	2.07	.99	1.72	.68	.35	.31
Attitude	8.77	1.32	6.37	1.21	2.40*	.11
Task Efficacy	4.81	1.08	5.04	.97	.23	.11
Barrier Efficacy	3.86	.88	3.53	.68	.33	.2
Subjective Norm	4.44	1.12	5.00	1.45	.56	.33
Perceived Control	5.78	.74	6.27	.43	.49	.31
Intention	5.02	1.09	3.78	.89	1.24	.20

Note: * >.05

Attitude towards behavior was the only variable that had significant differences between the two groups, $F(1,17)=12.17$, $p<.05$, $\eta^2=.45$.

When looking at the differences between whether or not the principal denoted if their school participated in the program or not, 6 of the 13 principals that were registered as participating in the Walk to School program answered that they did not participate in the program. Intention averages for the participating schools was 5.40 out of 7 and the average for non-participating schools was 4.26 out of 7, the difference between the two was 1.14. Behavior averages for the participating schools was 2.48 out of 7 and the average for non-participating schools was 1.64 out of 7, the difference between the two was .84. Attitude towards behavior averages for the participating schools was 8.55 out of 10 and the average for non-participating schools was 7.73 out of 10, the difference between the two was .82. Task efficacy averages for the participating schools was 4.71 out of 7 and the average for non-participating

schools was 4.99 out of 7, the difference between the two was .28. Barrier efficacy averages for the participating schools was 3.69 out of 7 and the average for non-participating schools was 3.82 out of 7, the difference between the two was .13. Subjective norm averages for the participating schools was 4.98 out of 7 and the average for non-participating schools was 4.34 out of 7, the difference between the two was .64. Perceived control averages for the participating schools was 5.95 out of 7 and the average for non-participating schools was 5.90 out of 7, the difference between the two was .05. Attitude towards behavior, task efficacy, barrier efficacy, subjective norm, perceived control, and intention had 7 participating principals and 10 non-participating principals. Behavior had 7 participating principals and 12 non-participating principals. Table four summarizes the results of the analysis between the self-identified participating principals and the neighboring principals.

Table 4. Self-Identified Participating Principals and Non-Participating Principals

Construct	Participating Principals		Non-Participating Principals		Difference	
	M	SD	M	SD	M	SD
Behavior	2.48	1.09	1.64	.69	.84	.40
Attitude	8.55	1.22	7.73	1.94	.82	.72
Task Efficacy	4.71	1.14	4.88	.98	.28	.16
Barrier Efficacy	3.69	.92	3.82	.79	.13	.13
Subjective Norm	4.98	.90	4.34	1.36	.64	.26
Perceived Control	5.95	.76	5.90	.69	.05	.07
Intention	5.40	1.24	4.26	.86	1.14*	.1

Note: * >.05

The results of the one-way ANOVAs indicated that there were significant results for intention in this second analysis of self-identified participating schools and

the principals from non-participating schools, $F(1,17)=5.05$, $p<.05$, $\eta^2=.25$. The internal reliability for behavior was .71, for attitude towards behavior it was .86, for task efficacy .78. Barrier efficacy has an internal reliability of .51, subjective norm had an internal reliability of .95, perceived control was .78, and intention had an internal reliability of .95.

Discussion

This study examined the behaviors and intentions of high school principals regarding promotion and implementation of active transportation to and from school. Limited research has been conducted on the implementation of active transportation in high schools. To our knowledge this is one of the first studies to assess the behaviors and intentions of high school principals and the Walk/Bike to School Program. The survey asked behavior, attitude towards behavior, task efficacy, behavior efficacy, subjective norm, perceived control, and intentions but did not ask how the program took effect in their school.

In the analysis of the reported participating principals and non-participating principals, attitude towards behavior was the only construct to have significant results. Showing that principals from participating schools have a stronger attitude towards encouraging students to use active modes of transportation to school but that there were barriers in the way. The significant results could also potentially be a result of the principals feeling the requirement to have positive attitudes of promoting active transportation because they are participating in the program. In a study conducted on school-initiated physical activity programs in high schools by Gråstén

et al. (2015) similar results were discovered. They found that improved promotion and orientation of physical activity in general increased participation and that there was the potential long-term effect but short-term improvements were not seen. This could potentially explain the results of this study because although the positive attitudes are present, immediate implementation is difficult to enact. This behavior could be altered by incorporating more of the community, improving the beliefs of principals, and shifting the perception high school students have of active transportation.

In the predetermined participating group, participating principals' non-significant scores were higher than the non-participating principals in the categories behavior, attitude towards behavior, barrier efficacy, and intention. This result is interesting because the program is meant to help promote and encourage students to participate in active transportation to and from school. The participating school principals' answers conclude that they feel less confident to encourage students to participate in active transportation than the principals of non-participating schools. They also feel like they do not have the control or support needed. This could be because the schools are participating in the program because majority of their students might not use active modes of transportation and the school could be trying to change the social norm. This result brings light to the issue of the lack of prioritization of physical activity in high schools. The curriculum for physical education in high schools to focus on personal choice, lifetime physical activity, and self-management behaviors (MacDonald, 2015). The lack of task efficacy and

follow through of the curriculum may contribute to the decline in high school students meeting the recommended time in MVPA.

Another startling observation was that the participating principals and the non-participating principals did not have significant differences in behavior or intentions even though attitude towards behavior scores were significant. The Walk/Bike to School program is designed to increase awareness of the benefits of active transportation and ways to overcome barriers. The Theory of Planned Behavior suggests that behavior is influenced by intention, subjective norm, and perceived control (Tessier et al., 2015). There were significant differences with attitude towards behavior but intentions and behavior did not have similar results. This is interesting because there should be a relationship between the two variables. According to the Theory of Planned Behavior because there was a higher score of attitude towards behavior from the participating principals there should be a higher score of intentions and in turn behavior as well. Without behavior changes focusing on subjective norm and perceived control does not change anything. Between the two groups subjective norm and perceived control had similar results which means that attitude towards behavior should have had an impact on intentions. There may not have been a relationship between attitude, intentions and behavior because of inaccurate responses or that even though the principal had a positive attitude towards promotion of active transportation they did not have the support from the community needed to create a change. Further research could be conducted to examine the relationships between the constructs in closer detail. Without behavior changes, focusing on subjective norm and perceived control does not change anything.

Although perceived control scores were lower for participating principals than non-participating principals, the results were not significant. This along with the lower but not significant results of barrier efficacy and subjective norm seems justifiable because the participating and non-participating principals do reside in the same or similar communities. Coming from similar communities the physical environment of the roads, sidewalks, and volume of cars can be assumed to be comparable causing the barrier efficacy scores to be relatively the same due to the students walking similar routes. Subjective norm is also reasonable to have similar scores because the perceptions and attitudes of the school board, parents, and students can be similar in both the participating and non-participating schools. These results could explain the findings of Molina-Garcia et al. (2015) that there is a significant decrease in overall physical activity when students graduate from high school. In this study walking specifically decline significantly which could be explained by the lack of barrier efficacy and the subjective norm in the community.

One of the clearest observations of the survey analysis was that six of the thirteen principals that were registered with the Walk/Bike to School Program answered that their school did not participate in the program. This is a startling observation because it shows the lack of awareness and participation in the program or the database of participating schools is inaccurate. If the principal does not know, the school will not provide a positive environment for active transportation which impedes development and perception of active transportation (Gråstén et al., 2015). The database containing inaccurate documentation could alter the perception of overall effectiveness and the results of future studies.

When looking at the self-identified participating principals and non-participating principals, the only construct to have significant results was intentions. The significance in this analysis and not the first analysis seems likely because the schools who were registered as participating in the program but did not know they were could have lowered the overall level of intention score not providing a clear picture on the true intentions of principals whose schools participate in the program. The self-identified participating principals could potentially provide a clearer picture into what level of intentions the program helps create and or improve. In addition to the task efficacy scores being similar between both groups, barrier efficacy was also similar between the two submissions. The barrier efficacy seems likely to have similar scores due to similar barriers at each school. This could be due to those principals who knew their school participate in the program were more involved and were a part of the process of trying to increase active transportation to school.

Although the results of the attitude towards behavior were significantly different between the reported participating and non-participating principals and intentions were significantly different between the self-identified participating and non-participating principals, other variables were not significantly different from each other due to the small sample size. While the results describe the participants and the results for the participants are significant, conclusions about all principals of high schools that participate in the program and non-participating high school principals cannot be made.

Some limitations of this study could have been that the responses were self-reported and there could have been a bias or feeling of pressure to answer differently.

Another limitation could be that the neighboring schools were not in the same communities as the participating schools due to anonymity in survey responses. A third limitation could be the inaccuracy of the Walk to School registry. The small sample size and high dropout rate could cause the results to be skewed and not allowed for the results to be generalizable.

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Appendix A: Literature Review

Physical Activity

Lack of daily physical activity in today's youth is a major health concern and a factor in the increasing rates of childhood obesity. According to Olshansky et al. (2005), 42.3% of children are overweight and obese. Rodriguez and Vogt (2009) supported this statement and reported that approximately 1 in 5 children is currently overweight. Su et al. (2013) made a similar report. In 2009 and 2010 12.5 million children between the ages of 2 and 19 were obese, which comes to a total of roughly 17% of all children in the United States. These statistics are concerning because the prevalence of childhood obesity has tripled since 1980 (Brener et al., 2013). In addition, children who are overweight or obese have a higher chance of developing a chronic illness such as type 2 diabetes, sleep apnea, hypertension, and hyperlipidemia. These conditions are related to 1 in 6 deaths in the United States (Rodriguez & Vogt, 2009). High school students, especially those in the upper grades are a subpopulation of today's youth that is at a higher risk for low levels of physical activity. In a report by the Morbidity and Mortality Weekly Report (2011), one in ten high schools students was reported to meet the daily recommendations for both aerobic and muscle-strengthening activities. When considering only muscle-strengthening activities 51% of high schools students meet the daily recommendations. According to the article "Physical Activity Levels of High School Students –United States, 2010" (2011), the larger percentage of students meeting the muscle-strengthening guidelines establishes that aerobic activity is the subcategory

that needs to increase in high school students. Physical inactivity in children alone is the leading cause of disability (Su et al., 2013). Establishing regular physical activity at an early age helps prevent obesity and related diseases down the road.

The decreasing amount of time spent in moderate to vigorous physical activity (MVPA) can be reversed. A child could attain a minimum of 30 minutes a day of MVPA by a slight increase in activities during times that may not be considered as opportunities for activity. For example, school breaks or travel to school, (Jago & Baranowski, 2004). Jago and Baranowski (2004) also suggest that children do not obtain enough time in MVPA because they are not exposed to interventions encouraging physical activity frequently enough to make an impact and change their sedentary behaviors. They further suggested two solutions to this lack of intervention. These solutions are promoting physical activity during recess and active transportation to and from school. The challenge of increasing activity during school breaks is that the current focus of education is on strictly academic learning and recess is secondary to such. The other solution proposed by Jago and Baranowski (2004) was active travel to and from school which that requires more attention from the entire community but is still a viable option. With communication and teamwork at a community level providing opportunities for active transportation could increase the amount of time spent in MVPA.

Active Transportation to School

Along with the increase in percentages of the prevalence of overweight and obese children, the number of students walking or biking to school has decreased from 41% to 10% (Chillón et al., 2014). A prospective method to reverse this trend is

to incorporate physical activity into their daily lives. Majority of a child's day is spent at school. Schools have several resources such as; recess, physical education, afterschool programs, and transportation to and from school that can be used to promote and increase physical activity. Active modes of transportation, walking or biking specifically, have been associated with the improvement of the amount of daily physical activity (Chillón et al., 2014). Children who utilize active transportation tend to be more physically active than children who do not use active transportation (Chillón et al., 2014; Rodriguez & Vogt, 2009). As the encouragement of active transportation continues to expand, schools are gaining many more tools to promote daily physical activity changes. Encouragement of active transportation is associated with children becoming less dependent on vehicles for transportation (Rodriguez & Vogt, 2009). In a European youth heart study, students who cycled to school were 5 times as likely to be in the top percentages for fitness recommendations than the students who used motorized forms of transportation, (Cooper et al., 2006).

It was documented that common activities used to increase active transportation were walkability assessments, pedestrian and bicycle safety trainings, and designated safe walking routes (Davison, Werder, & Lawson, 2008). Two national programs that focus on improving active lifestyles in children by promoting active transportation to and from school are the Walk/Bike to School Program and the Safe Routes to School Program. While these programs have parallel objectives, Safe Routes to School focuses more intently on policy changes (Ward et al., 2007).

The Safe Routes to School Program has become an umbrella organization encompassing many programs and initiatives to increase daily physical activity in

students. It has advocated for policy change by focusing on pedestrian safety, using the “four E’s”; education, encouragement, enforcement, and engineering strategies to improve the walkability to and from school for students (Davison et al., 2008; Vaughn et al., 2009). This program incorporates social marketing components with infrastructure changes, safety, and governmental policy to alter the sprawling growth patterns of schools and neighborhoods to cause more physically efficient transportation to and from school. State specific safe routes to school programs may allow for a better implementation or facilitation of the national program which in turn would increase promotion of active transportation to school (Rodriguez & Vogt, 2009).

Similar to the Safe Routes to School Program, the original Walk/Bike to School Program aimed to have a promotional week that brought groups together throughout the community to showcase the benefits of active transportation. The program also demonstrated how easy it was to modify transportation behaviors (Vaughn et al., 2009). Currently, the program’s central objective is directly promoting active transportation to school by education and promotional events and by forming community climates that are safe and supportive of active transportation (Ward et al., 2007).

The Walk/Bike to School Program first appeared in the United States in 1997, by 2002 the program had spread to all 50 states (Vaughn et al., 2009). Ward (2007) discovered that there are different levels of implementation of the program by various schools. Over 50% of schools had low implementation and hosted a Walk/Bike to School Day, 23% participated in medium implementation and supplemented a

Walk/Bike to School Day with other activities, and 21% had a high level of implementation and formulated policy-environmental changes to permanently create a positive change for active transportation to school. Vaughn et al. (2009) supported these findings by reporting that the most common activity was hosting a Walk/Bike to School Day event followed closely by poster campaigns and announcements. The Walk/Bike to School Program has documented increased rates of active transportation to school and for every extra community group involved in the local Walk/Bike to School Program the likelihood of a more extensive program increased by 56-78% (Ward et al., 2007). Although, the likelihood increases by a significant amount and the benefit of involvement is undeniable, only a few schools reported that community officials or school board members were actively involved in the program (Vaughn et al., 2009).

Determinants of Active Transportation

Understanding the reasons behind why students do not participate in active transportation has the potential to increase overall physical activity in students. Interventions could be much more beneficial and actions may be adhered to with the knowledge of common barriers (Su et al., 2013). One of the most frequently documented determinants of active transportation to school is the distance students have to travel to get to school. Distance from school has been documented as a primary obstacle for active transportation to school. In 1969, 87% of students who lived within 1 mile of school used active modes of transportation, while in 2001, only 36% of students walked or biked to school (Vaughn et al., 2009).

According to McDonald (2007) between 1970 and 1983 the number of public schools decreased from 89,372 to 81,418 and distance students had to travel increased dramatically due to school consolidation. In addition, due to the rising enrollment numbers half of the schools built after 1960 were larger schools built on the outskirts of town allowing for a larger school “zone” (Vaughn et al., 2009). Instead of repairing and updating the closed schools, new schools were built on the borders of town to allow a larger population to attend that school (McDonald, 2007). This increase of distance to school occurred during the same time period as an astounding decrease in the number of students who utilized active modes of transportation to school. Rodriguez and Vogt (2009) found that distance from home to school had been identified as the primary factor that prevented children from ages 5 to 11 from walking to school. Stewart supported this finding with the survey conclusions that distance from a student’s home to school was the clearest connection to active modes of transportation. Stewart (2011) also noted that a 1 minute increase in the duration of travel time to school created a .2% decrease in the chances of a student using active modes of transportation to commute to school.

Rodriguez and Vogt (2009) expanded the discussion of determinants of transportation to include the access to motorized transportation and parental safety concerns as main factors of the declining active transportation rates. Which was supported by Stewart’s finding that only 47% of the declining of active transportation to school was due to an increase of distance between school and home (Stewart, 2011). Su et al. (2013) discussed the concept that while connected streets and closer proximity increase direct routes to school they were only effective if they were small

streets or biking routes. This article suggested that if the connections were with highways or major roadways it would impede active transportation to school. Stewart (2011) suggested that schools in non-urban locations generally do not have access to supportive environmental features of walking or biking as a method of transportation and that these areas could benefit highly from Safe Routes to School infrastructure improvements. It was also discovered that the greater the urbanization the more walking-supportive characteristics were present and typically a higher rate of active transportation to school (Stewart, 2011; Su et al., 2013). Additional research correlated the navigation of steep roads and “un-walkable” neighborhoods as reasons students did not walk to school (Davison et al., 2008).

The physical environment of the routes and the people encountered on the way to school have been identified as additional significant barriers to active transportation to school. It was found that major road crossing, steep routes, and high volume routes were likely to have a negative relationship with active transportation to school (Stewart, 2011). With an objective measure of traffic density, it was confirmed that concerns about traffic volume, air pollution, harassment, street crossing, and lack of traffic lights were associated with a decrease in probability of using modes of active transportation (Su et al., 2013). McDonald (2007) discovered along with parents ranking “stranger danger” as a main barrier to using active transportation, overall safety was also a primary concern impeding the implementation of walking or biking to school. While physical environment is more difficult to fix, the concern of road safety is easily addressed with sidewalk and intersection improvements and there has been a dramatic decrease in kidnapping rate from 1973 to 2005. On top of that,

kidnappings make up only 2% of violent crimes against children and only 4% of those occur around schools (Stewart, 2011).

The attitude towards using active modes of transportation is also a major factor as to why student do not participate in walking or biking to school. Ward states that students are more likely to use active modes of transportation if their parents used active modes of transportation to school, currently actively commute to work, and value physical activity and social interactions (Ward et al., 2007). Rodriguez and Vogt (2009) suggest that the more a student thinks walking to school saves time and is safe, the more likely they are to walk or bike to school. This study also stated that the convenience of taking a child to school on the way to work is one of the more common reasons that students did not participate in active modes of transportation (Rodriguez & Vogt, 2009). It was found that there is a relationship between positive attitudes towards physical activity and active modes of transportation to and from school (Stewart, 2011). McDonald et al. (2013) also found that a study conducted in Oregon supports these findings.

Parents play an influential role in their child's transportation. It was documented that parents who intended for their children to walk or bike to school when purchasing a home were more likely to have students who consistently use active modes of transportation to and from school (Ward et al., 2007). There was also an increase in use of active transportation when parents and students perceived other students in the neighborhood walking or biking to school (Stewart, 2011). Rodriguez and Vogt (2009) found if walking or biking was presented in a fun and positive way there was a slight increase in participation. Active Transportation is believed to be a

convenient way for students to accumulate the recommended amount of time for physical activity and explore their environment (Stewart, 2011). Stewart (2011) also discovered that majority of parents who actively commuted to school would most likely have children who walked or biked to school, insinuating that efforts to promote active transportation at young ages could have a lifelong and multigenerational impact.

Parental influence extends beyond the perceived attitude of active transportation. Stewart (2011) found that income, employment, education, and socioeconomic status all had a negatively associated relationship with active transportation to school. Although, there is not a significant relationship between ownership of a car and the student's standard mode of transportation to school, it was found that schools with more students participating in the Free and Reduced Price Meals Program had a highly likelihood of students who regularly used active modes of transportation to and from school (Davison et al., 2008; Su et al., 2013). In one study, schools having less than 20% of students receiving free or reduced lunches have a walking rate of 13% whereas schools that have an 80% participation rate in free or reduced lunches have over 50% of students regularly participating in active modes of transportation (Su et al., 2013).

Families with higher parental education were found to live in areas with lower land use mix which inhibits active transportation. An increase in land use mix in urban planning could increase overall physical activity among students (Su et al., 2013). It was also noted that the increase in private schools, desegregation and mixing of schools in the 1960's, and the No Child Left Behind legislation increased the

number of students travelling outside of their designated “school zone” (McDonald, 2007). In addition, school policy is a major barrier to active transportation to and from school, schedule constraints and the expectation to arrive at school on time influence whether or not a student is driven to school (Stewart, 2011). Expectations of schools also influence the amount of physical activity a student engages in. There is a significant amount of pressure to exceed state standardized testing requirements that most schools only have time to hang promotional posters and physical education has become a lower priority (McDonald, 2007). Parent’s perceptions and environmental variables are primarily related to active transportation to and from school. Overall, public schools are more likely to have students use active modes of transportation due to lower income, location, and socioeconomic status (Davison et al., 2008).

Promotion of Physical Activity

Involving community members in the promotion of active transportation increases the participation of physical activity in a community. McCreedy and Leslie (2009) conducted a study on community involvement and the overall participation in decreasing sedentary behaviors. They found that inviting community members to take leadership roles had positive outcomes. They suggested that focusing on policy, programs, promotions, and physical projects aid in increasing participation in overall daily physical activity. They believed that making the area more accessible and inviting would make physical activity more convenient, affordable and practical to the average community member (McCreedy & Leslie, 2009). A similar project in Michigan focused primarily on active transportation and focused on gaining support from schools, businesses, healthcare employers, and government officials (TenBrink,

McMunn, & Panken, 2009). A third study found similar results discovering that health professionals working in the community had the ability to aid in development and highlighting variables to increase promotion of the use of active transportation (Chaney, Bernard, & Wilson, 2014). One of the most influential groups that aided in community promotion of active transportation was the school board. Between the school board and perceived parental interest in physical activity higher implementation scores were documented in elementary and secondary schools. Although the school board has the ability to dramatically impact active transportation promotion, only 38% of secondary schools cooperated with the board. This is worrisome because involving the community can have an influential impact on physical activity of students as a whole (McCreedy & Leslie, 2009).

School employees spend many hours a day with students and play an instrumental role in the development of a child. Because of this, schools are one of the most common and preferred intervention environments for increasing daily physical activity in today's youth (Cardon et al., 2012). They play a crucial role in aiding the prevention of childhood obesity because they have the ability to establish a safe and supportive environment with practices that encourage a healthy lifestyle. The environment allows for opportunities to learn about and practice daily physical activity behaviors. According to the Toronto Charter for Physical Activity, a 'whole-school' approach is suggested, this means that physical activity promotion should be prioritizing regular, highly active physical education classes, providing adequate environments and resources to support any type of physical activity, and supporting active transportation to and from school by supportive policy, and engaging the

community (Cardon et al., 2012). The Center for Disease Control and Prevention has developed a set of guidelines to promote healthy eating and physical activity in schools to assist in creating an ideal environment that align with the Toronto Charter for Physical Activity (Brener et al., 2013). Stewart (2011) suggested that schools should modify the school environment to support walking and biking and discourage arriving in a motorized vehicle to encourage active modes of transportation for families that do have multiple options for transportation.

A suggestion Chillón et al. (2014) offers is a Walking School Bus, a program that encourages children walk to school in groups along a set route with adults for supervision. They suggest that this strategy may encourage students to walk together, involve parents in active transportation to school, and compensate for a few of the more frequent concerns of active transportation to school. Incorporating elements of classroom education, school-wide walk to school days, maps of safe routes, and parent/community involvement resulted in a significant increase in the amount of students walking to school (Davison et al., 2008). In a two-year-time span Stewart found an increase in the number of students walking, biking, and carpooling and a significant decrease in single students arriving by car (Stewart, 2011). Programs such as the Walking School Bus, Safe Routes to School, and Walk/Bike to School demonstrate the impact that promotion, policy, and projects have on the prevalence of active transportation to school when all used simultaneously (TenBrink et al., 2009).

Theory of Planned Behavior

The Theory of Planned Behavior is a common theory used in physical activity promotion. This theory was developed in the 1980s by adding perceived behavioral

control to the Theory of Reasoned Action (Chaney et al., 2014). This theory proposes that attitudes arise from a summation of beliefs that behavior will hold certain repercussions and the value of such repercussions. It encompasses intention which is determined by three variables; attitude toward behavior, subjective norm, and perceived control (Tessier, Sarrazin, Dupont, & Nicaise, 2015). Perceived control explores the difficulty a person faces during the implementation of a behavior, subjective norm is the personal belief of expectations and social pressures from the surrounding community, and attitude reflects the personal evaluation of a behavior in terms of bad-good, harmful-helpful, and unpleasant-pleasant. The theory also supports the idea that the lower the beginning baseline, there is more available room for improvement (Tessier et al., 2015).

This theory's constructs allow for analysis of common barriers in physical activity promotion. Tessier et al.'s (2015) study used Theory of Planned Behavior because the intervention includes an increase in intention and behavior towards physical activity among low-active adolescents. It is reinforced by a planning approach to target key determinants of behavior changes in the sampled population. Chaney et al. (2014) also chose the TPB for his study because it addressed the social norms and perceived control for prediction of physical activity. There was found to be a positive effect of a perceived control intervention because it favored the integration of a planning strategy (Tessier et al., 2015). Chaney et al. (2014) found that those who participated in active transportation had a higher subjective norm, perceived control, and positive attitude. These findings align with the theory and how to improve intentions and behaviors.

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Appendix B: Survey

Walk to School Program Survey

Walk to School Program Survey

You are being invited to participate in a research study. If you agree to participate in this study, you will be asked to complete this web-based survey and submit it to the researcher.

The purpose of this study is to examine the attitudes, beliefs, and intentions of school administrators on the adaptation and promotion of the Walk/Bike to School Program.

The survey will take approximately 15 minutes to complete. Your participation in the study is completely voluntary and you have the right to withdraw from the study at any time. You can skip any questions you would prefer not to answer. If you want to withdraw from the study, do not complete and/or submit the survey. The information that you give in the study will be handled confidentially. Your name and identifiable information will not be used in any report. The security and confidentiality of the information collected from you on-line cannot be guaranteed. Information collected on-line can be intercepted, corrupted, lost, destroyed, arrive late or incomplete, or contain viruses.

This study may help provide guidance for future implementation of Walk to School Programs. While there are no direct benefits for participating in this study, the results may help researchers and educators understand factors influencing administrators and program directors beliefs and practices for promoting the Walk to School Program.

This study is being conducted as part of the requirements of a honors thesis, requiring the study write-up to be submitted to the University's online scholars archive. The result will be presented in professional meetings and submitted for potential publication.

If you have any questions about the study, contact:

Researchers: Zoanne McAllister (mcallisz@oregonstate.edu), Jill Pawlowski (jill.pawlowski@oregonstate.edu), and Joonkoo Yun (jk.yun@oregonstate.edu)

If you have questions about your rights or welfare as a participant contact:

The Oregon State University Institutional Review Board (IRB) Office, (541) 737-8008 or IRB@oregonstate.edu.

Agreement: Completion and submission of the survey constitutes consent to participate in the research study described above.

You may print a copy of this form for your records.

Do you agree to participate in this survey?

Yes



No



If yes, please click the "next" button to proceed to the survey.

Principal Investigator:

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Are you currently the principal at your school?

- Yes
- No

Has your school participated in the Walk/Bike to School Program?

- Yes
- No

Block 1

SECTION ONE: Physical Activity promotion intentions and behaviors

Please read each question in this section and select the answer that best describes how you feel about the question.

Over the last year, how often have you encouraged students to use active transportation (e.g walk, bike, etc.) to school?

- | | | | | | |
|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|
| Never | Once a Year | Once a Term | Once a Month | Once a Week | Daily |
| <input type="radio"/> |

Over the last year, how often have you facilitated Active Transportation Events for your students?

- | | | | | | |
|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|
| Never | Once a Year | Once a Term | Once a Month | Once a Week | Daily |
| <input type="radio"/> |

Over the last year, how often has your school rewarded students for participating in Active Transportation?

- | | | | | |
|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|
| Never | Once a Year | Once a Term | Once a Month | Daily |
| <input type="radio"/> |

Promotion the Active Transportation (e.g walk, bike, etc.) to school for your students is: (please select an answer for each pair of words)

- | | | | | | | | | | | | | |
|---------------|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|------------|
| Bad | <input type="radio"/> | Good |
| Pleasant | <input type="radio"/> | Unpleasant |
| Harmful | <input type="radio"/> | Beneficial |
| Useful | <input type="radio"/> | Useless |
| Un-enjoyable | <input type="radio"/> | Enjoyable |
| Healthy | <input type="radio"/> | Unhealthy |
| Not Important | <input type="radio"/> | Important |

For each of the following frequencies, indicate the number that represents how confident you are that you can promote active transportation (e.g walk, bike, etc.) for your students (please select an answer for each term in the left-hand column):

	Strongly agree	Agree	Somewhat agree	Neither agree nor disagree	Somewhat disagree	Disagree	Completely confident
Once a Year	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Once a Term	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Once a Month	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Once a Week	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Daily	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

Below are a list of barriers that may influence the promotion of the Walk/Bike to School Program. For each barrier, please rate how confident you are that you could still promote the Walk to School Program when that barrier exists.

	Not at all confident	Not Confident	Somewhat not confident	Neutral	Somewhat confident	Confident	Completely confident
The school day is shortened or interrupted due to an event (e.g. early release, assembly).	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
The weather is bad.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
The student is disinterested in active transportation.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
The school is participating in standardized testing.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
There is a lack of safe routes to school.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
The students live too far away to use active transportation.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

Please read each question in this section and select the answer that best describes how you feel about the question.

	Strongly agree	Agree	Somewhat agree	Neither agree nor disagree	Somewhat disagree	Disagree	Strongly disagree
The School district administration believes that it is important that I promote Active Transportation to school.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
I am motivated to comply with the belief of my school district's administration that I should promote Active Transportation to school.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
The parents of students at my school believe that it is important that I promote Active Transportation to school.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
I am motivated to comply with the belief of my students' parents that I promote Active Transportation to school.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
The teachers/staff at my school believe that it is important that I promote Active Transportation to school.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
I am motivated to comply with the belief of the teachers/staff that I should promote Active Transportation to school.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
The students in my school believe that it is important that I promote Active Transportation to school.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
I am motivated to comply with the belief of my students that I should promote Active Transportation to school.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

Please read each question in this section and select the answer that best describes how you feel about the question.

	Strongly agree	Agree	Somewhat agree	Neither agree nor disagree	Somewhat disagree	Disagree	Strongly disagree
I have control over whether I promote Active Transportation to school.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
It is mostly up to me if I promote Active Transportation to school.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
If I want to, I can promote Active Transportation to school.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

Please read each question in this section and select the answer that best describes how you feel about the question

	Strongly agree	Agree	Somewhat agree	Neither agree nor disagree	Somewhat disagree	Disagree	Strongly disagree
I have made a detailed plan regarding when to promote Active Transportation to school.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
I have made a detailed plan regarding where to promote Active Transportation to school.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
I have made a detailed plan regarding how to promote Active Transportation to school.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
I have made a detailed plan regarding how often to promote Active Transportation to school.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
I intend to promote Active Transportation to school.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
I will try to promote Active Transportation to school.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
I am determined to promote Active Transportation to school.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
I plan to promote Active Transportation to school.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
I have decided to promote Active Transportation to school.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

Block 2

SECTION Two: Demographics

Please answer the following questions to the best of your ability.

What is your current age?

What best describes your gender?

Male	Female	Neither	Prefer not to disclose
<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

What best describes your ethnicity?

Hispanic or Latino	Not Hispanic or Latino
<input type="radio"/>	<input type="radio"/>

How would you best describe your race? (check all that apply)

- | | |
|--|--|
| <input type="checkbox"/> White | <input type="checkbox"/> Asian |
| <input type="checkbox"/> Black, African American | <input type="checkbox"/> Native Hawaiian or Pacific Islander |
| <input type="checkbox"/> American Indian or Alaskan Native | <input type="checkbox"/> Multiracial |
| <input type="checkbox"/> Other | |

Which best describes your level of education?

- | | | | |
|-----------------------|-----------------------|-----------------------|-----------------------|
| Bachelors Degree | Masters Degree | Doctoral Degree | Other |
| <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |

How many years have you been an administrator?

How many years have you been at your current school?

Is your School designated as a title 1 school?

- | | | |
|-----------------------|-----------------------|-----------------------|
| Yes | No | Not Sure |
| <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |

Do you regularly participate in active transportation?

- | | |
|-----------------------|-----------------------|
| Yes | No |
| <input type="radio"/> | <input type="radio"/> |

How often do you participate in moderate to vigorous physical activity outside of your job (e.g. running, biking, swimming)?

- | | | | | | |
|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|---------------------------|
| Never | Unpleasant:Pleasant | Twice a week | Three times a week | Four times a week | Five or more times a week |
| <input type="radio"/> |

How often you participate in regular strength training physical activity outside of your job?

- | | | | | | |
|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|---------------------------|
| Never | Once a week | Twice a week | Three times a week | Four times a week | Five or more times a week |
| <input type="radio"/> |

Thank you for completing this survey; your participation is greatly appreciated!

Appendix C: IRB Approval

OSU Institutional Review Board
 Office of Research Integrity | Oregon State University
 8308 Kerr Administration Building, Corvallis, OR 97331-2140
 Telephone (541) 737-8008
 irb@oregonstate.edu | http://research.oregonstate.edu/irb

EXEMPT
DETERMINATION

Date of Notification	02/25/2016		
Study ID	7322		
Study Title	The Beliefs and Intentions of Walk/Bike to School Program		
Principal Investigator	Joonkoo Yun		
Study Team Members	Jill Pawloski, Zoanne McAllister		
Submission Type	Initial Application	Date Acknowledged	02/25/2016
Level	Exempt	Category(ies)	2
Funding Source	None	Proposal #	N/A
PI on Grant or Contract	N/A	Cayuse #	N/A

The above referenced study was reviewed by the OSU Institutional Review Board (IRB) and determined to be exempt from full board review.

EXPIRATION DATE: 02/24/2021
The exemption is valid for 5 years from the date of approval.

Annual renewals are not required. If the research extends beyond the expiration date, the Investigator must request a new exemption. Investigators should submit a final report to the IRB if the project is completed prior to the 5 year term.

Documents included in this review:

- | | | |
|---|--|--|
| <input checked="" type="checkbox"/> Protocol | <input checked="" type="checkbox"/> Recruiting tools | <input type="checkbox"/> External IRB approvals |
| <input type="checkbox"/> Consent forms | <input checked="" type="checkbox"/> Test instruments | <input type="checkbox"/> Translated documents |
| <input type="checkbox"/> Assent forms | <input type="checkbox"/> Attachment A: Radiation | <input type="checkbox"/> Attachment B: Human materials |
| <input checked="" type="checkbox"/> Alternative consent | <input type="checkbox"/> Alternative assent | <input type="checkbox"/> Other: |
| <input type="checkbox"/> Letters of support | <input type="checkbox"/> Grant/contract | |

Comments:

Principal Investigator responsibilities:

- Certain amendments to this study must be submitted to the IRB for review prior to initiating the change. These amendments may include, but are not limited to, changes in funding, , study population, study instruments, consent documents, recruitment material, sites of research, etc. For more information about the types of changes that require submission of a project revision to the IRB, please see: http://oregonstate.edu/research/irb/sites/default/files/website_guidancedocuments.pdf
- All study team members should be kept informed of the status of the research. The Principal Investigator is responsible for ensuring that all study team members have completed the online ethics training requirement, even if they do not need to be added to the study team via project revision.
- Reports of unanticipated problems involving risks to participants or others must be submitted to the IRB within three calendar days.
- The Principal Investigator is required to securely store all study related documents on the OSU campus for a minimum of three years post study termination.

Appendix D: Emails

Email address:

Subject: Research study from Oregon State University.

Dear (Agency Name),

I am writing this letter to invite you to participate in a research project entitled, *The Beliefs and Intentions of Walk/Bike to School Program*. As you may be well aware, lack of physical activity is a serious problem among youth in the United States. Lack of youth physical activity participation is a major health concern that can be addressed cost effectively through active transportation to school promotion. The ultimate goals of this study is to discover ways that Walk/Bike to School coordinators and principals can increase the effectiveness of the Walk/Bike to School program.

Your assistance is needed with this study and we would like to invite you to participate in our survey. Within the next 3-7 days, you will received an email including (a) an explain of research and (b) a link to the survey. This survey should take approximately 15 minutes to complete. Your participation will be greatly appreciated. If you are not interest to participate in this study, please let us know, we will move you from our list.

Participation in this study is voluntary, and you may skip any questions that you do not want to answer. If you decide to participate, you are free to withdraw at any time. The completed surveys are confidential. This study report will include only aggregate data for the group, not individual data or identifying information. If you have any questions or concerns you can directly contact Zoanne McAllister at (541) 788-4462 or mcallisz@oregonstate.edu or Joonkoo Yun, Principal Investigator, at (541) 737-8584, jk.yun@oregonstate.edu. Once again, we appreciate your time and thank you for your assistance in advance.

Sincerely,

Zoanne McAllister

Email address:

Subject: Research study from Oregon State University.

Hello,

We would like to invite you to participate in a research project entitled, *The Beliefs and Intentions of Walk/Bike to School Program*. As you may be well aware a lack of physical activity is a serious problem among youth in the United States. Lack of youth physical activity participation is a major health concern that can be addressed cost effectively through active transportation to school promotion. The purpose of this study is to examine the attitudes, beliefs, and intentions of school administrators on the adaptation and promotion of the Walk/Bike to School Program. It hopefully discover ways that Walk/Bike to School principals can increase the effectiveness of the Walk to School program. Your assistance is needed with this study. The study will take 15 minutes to complete. If you are willing to participate in this survey, you can click the link: [Walk/Bike to School Survey](#) The link includes an explain of research and the survey.

*note: if this link fails, please copy and paste:

http://oregonstate.qualtrics.com/SE/?SID=SV_6D89lo6Ca5gfmnj into a web browser.

Participation in this study is **voluntary**, and you may skip any questions that you do not want to answer. If you decide to participate, you are free to withdraw at any time. The completed surveys are confidential. This study report will include only aggregate data for the group, not individual data or identifying information. If you have any questions or concerns you can directly contact Zoanne McAllister at (541) 788-4462 or mcallisz@oregonstate.edu or Joonkoo Yun, Principal Investigator, at (541) 737-8584, j.k.yun@oregonstate.edu. If you have questions about your rights or welfare as a participant, please contact the Oregon State University Institutional Review Board (IRB) Office at (541) 737-8008 or by email at IRB@oregonstate.edu.

Once again, we appreciate your time and thank you for your assistance in advance.

Sincerely,

Zoanne McAllister

Email address:

Subject: Research study from Oregon State University.

Hello,

We are writing this email to follow up the previous email we sent appropriately a week ago. **If you have already participated in our survey, we would like to thank you for your help and assistance and you can disregard this email. If you have not participated in our survey yet, we would like to encourage you to consider helping us.**

We would like to invite you to participate in a research project entitled, *The Beliefs and Intentions of Walk/Bike to School Program*. As you may be well aware a lack of physical activity is a serious problem among youth in the United States. Lack of youth physical activity participation is a major health concern that can be addressed cost effectively through active transportation to school promotion. The purpose of this study is to discover ways that Walk/Bike to School coordinators and principals can increase the effectiveness of the Walk/Bike to School program.

Your assistance is needed with this study. If you are willing to participate in this survey, you can click the link: [Walk/Bike to School Survey](#) The link includes an explain of research and the survey.

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Once again, we appreciate your time and thank you for your assistance in advance.

Sincerely,

Zoanne McAllister