Dr Tara L. Crowell and Dr Elizabeth G. Calamidas are Associate Professors of Public Health, Stockton University, New Jersey, US. Laura Engelmann is a Community Health & Wellness Manager, AtlantiCare Healthy Schools, New Jersey, US.

For communication, please email: Tara.crowell@stockton.edu and Elizabeth.calamidas@stockton.edu

Tara L. Crowell, Elizabeth G. Calamidas and Laura Engelmann

Assessing school wellness through AtlantiCare Healthy Schools-Healthy Children Grants

C chools systems can have a great influence on the health status of young people and health education programs have existed in schools for many years (Lynagh, Schofield & Sanson-Fisher, 1997). Given this relationship, it is important to continue to identify and refine specifics regarding school policies and procedures; especially given the ever-changing nature of student health-related issues. A comprehensive school health program has been broadly defined as an integrated set of planned, sequential, school-affiliated strategies, activities and services designed to promote the optimal physical, emotional, social, educational development of students (National Academic Press, 1995). Furthermore, American School Health Association (ASHA) has expanded this by listing that school health includes the following:

- a healthful environment;
- nursing and other health services that students need to stay in school;
- nutritious and appealing school meals;
- opportunities for physical activity that include physical education;
- health education that covers a range of developmentally appropriate topics taught by knowledgeable teachers;
- programs that promote the health of school faculty and staff; and
- counselling, psychological and social services that promote healthy social and emotional development and remove barriers to students' learning.

More recently, the Whole School, Whole Community, and Whole Child (WSCC) model,

introduced the Association Supervision Curriculum and Development (ASCD) and the Centers for Disease Control and Prevention. The WSCC outlines the educational and health needs of children within a school setting which, in turn, lies within a broader context of the community. In addition, the WCSS provides a framework for members of the schools and communities to create systematic, integrated, and collaborative approaches to health and learning.

However, the mere existence of these models may not speak to the content or the quality of school health programs. Thus, when seeking to identify not only quantity but quality of school health programs, The American Cancer Society identified the basic elements of a high-quality school health program in a brochure *Elements of Excellence*, (as stated by American Association of School Health) as the following:

- 1. active leadership from school administrators, a school and community health council, and a school employee with responsibility for coordination;
- a coordinated and collaborative approach overseen by a school health council that sets priorities based on community needs and values, and that links with community resources;
- 3. a safe and nurturing learning environment with supportive policies and practices, facilities that are hazard free, and consistent health-enhancing messages; and
- 4. a commitment of time, personnel, and resources.

Adequate funding is required to offer high quality school health programs. According to Leachman, Albares, Masterson, and Wallace, (2016), many states have cut school funding and most supply less per student support than they did prior to the Great Recession of 2007-2012. In addition, most local funding sources do not make up the needed difference. The literature reveals that the lack of funding is a common and longstanding barrier to comprehensive school health education (Butler, 1993; Holland, Green, Alexander, Phillips, 2016) and funding is often driven by the health topics that are addressed (Sorace, 2011). Consequently, many schools must seek alternative funding sources in order to support many of their health education programs.

AtlantiCare Grants

One way that school systems are able to reach the goal of developing and implementing quality comprehensive health programs is through the attainment of external grants. Similar to many other companies that offer healthy school grants, AtlantiCare Health System of New Jersey has been partnering with local schools for almost 15 years. AtlantiCare1 has been collaborating with area schools to improve the health and wellness of staff, students, and their families, with a vision of building a healthier community. Specifically, AtlantiCare offers several health school grants to schools that meet the eligibility criteria². During 2014-2017, AtlantiCare has offered four grants (see Appendix A for Descriptions of Grants). All schools that apply for these grants are required to fill out the AtlantiCare School Health Survey. This survey assesses schools on six dimensions of health. Many of the dimensions of health addressed in the survey envelop those identified in Healthy People 2020 as being integral to

educational and community-based programs. More specifically, goal ECBP-2 of Healthy People 2020 is to "increase the proportion of elementary, middle, and senior high schools that provide comprehensive school health education to prevent health problems in the following areas: unintentional injury; violence; suicide; tobacco use and addiction; alcohol or other drug use; unintended pregnancy, HIV/AIDS, and STD infection; unhealthy dietary patterns; inadequate physical activity" (ODPHP, 2017). Thus, this manuscript highlights the results of the survey and identifies the strengths and weakness of school health policies, procedures, and initiatives in light of the Healthy People 2020 goals.

Methodology

As stated above, one of the requirements of the grant application process is that all schools fill out an *AtlantiCare School Health Survey* (see Appendix B for the full survey). The four-page survey consists of 22 nominal questions ("Yes" or "No") regarding various aspects of the following 6 dimensions of school health: School Wellness Policies; Health Physical Education and Physical Activity; Nutrition Related Policies and Practices; Family and Community Involvement; Collaboration; and Professional Development. For each question, the respondents were to indicate whether or not the policy, practice, and/or activity occurred in the years prior to completing the survey.

Between 2014-2017, a total of 147 AtlantiCare School Health Surveys were completed; 39 from the 2014-2015 grant round, 50 from the 2015-2016 grant round, and 56 from the 2016-2017 grant round, by schools within the Atlantic, Cape May, and Ocean Counties in New Jersey. Data from the surveys were entered into SPSS and frequency distributions were run on all 107

¹AtlantiCare is South Jersey's largest healthcare organization and largest non-casino employer, with more than 5,170 employees and 600 physicians in nearly 70 locations. AtlantiCare and its business units are governed by boards comprised of more than 70 volunteer community leaders. AtlantiCare's focus is to serve the community as a provider of health and wellness services and is committed to building healthy communities through partnerships with organizations that share their interest in health. AtlantiCare's primary service offering of healthcare delivery, integrated with the complementary and strategic service offerings of health information and health engagement, focuses on delivering value at every stage of health: healthy, at-risk, or with acute or chronic illness. AltantiCare's philosophy is that together, these services offer the elements necessary to achieve, maintain, or return each member of the community to optimal health.

²Applicants must be a K-12, public or private school serving students who reside within Atlantic County, Cape May County and/or southern Ocean County, New Jersey. Applicant school agrees to become an active participating partner in AtlantiCare's Healthy Schools, Healthy Children Initiative. Applicant schools designate a representative from its school/district to serve on the AtlantiCare Healthy Schools, Healthy Children Steering Committee. This Committee meets two times per school year, and attendance is strongly encouraged.

variables that made up questions within the above six dimensions.

Results

The results from questions that operationalized

each of the 6 dimensions are listed below in table format. These questions assess school's practices over the past year, except for Professional Development, which is over the last 3 years.

Table 1: Dimension #1 - School Health Policies exist for the identified variable

VARIABLES	N	YES	%	NO	%
Wellness policy	145	113	77.9%	32	22.1%
Wellness team	144	108	75%	36	25%
Physical activity	144	120	83.3%	23	16%
Nutrition	142	118	83.1%	24	16.9%
Tobacco prevention	143	92	64.3%	51	35.7%
Asthma	144	100	69.4%	44	30.6%
Injury violence prevention	145	109	75.2%	36	24.8%
Safer sex	141	66	44.6%	75	53.2%
Bullying, harassment or intimidation prevention	142	124	87.3%	18	12.7%
Policy regarding food for classroom celebrations	145	112	77.2%	33	22.8%
Identified student health needs based on a review of data	144	112	77.8%	32	22.2%
Recommend new or revised policies	144	109	75.7%	35	24.3%
Sought funding	145	110	75.9%	35	24.1%
Communicated importance of policies to district, parents	145	129	89%	16	11%
and community					
Reviewed curriculum	146	129	88.4%	17	11.6%
Assessed availability of physical activity opportunities for	145	128	86.5%	16	10.8%
students					
Family helped develop or implement policies or procedures	147	80	54.4%	67	45.6%
Parent active member of wellness team	146	75	51.4%	71	48.6%

Table 2: Dimension # 2 - Healthy Physical Education and Activity

VARIABLES	N	YES	%	NO	%
Received Professional Development	147	136	92.5%	11	7.5%
Physical exercise within the classroom	141	128	90.8%	13	9.2%
Physical exercise before the school day	144	68	47.2%	76	52.8%
Joint agreement for physical activity	143	115	80.4%	28	19.6%
Teach risks of being inactive	145	139	95.9%	6	4.1%
PE program structured around fitness	142	141	99.3%	1	0.7%
Teach importance of Energy Balance (calories consumed	144	121	84%	23	16%
vs. expended)					
Teach injury prevention and workout phases	143	136	95.1%	7	4.9%
students encouraged to design and implement personal	143	120	83.9%	23	16.1%
fitness plans goals					
PE class builds confidence and competence	144	142	98.6%	1	0.7%

Table 3: Dimension #3 - Nutrition

VARIABLES	N	YES	%	NO	%
Teach benefits of healthy eating	145	142	98.6%	2	1.4%
Teach benefits of drinking water	145	142	97.9%	3	2.1%
Teach benefits of eating a healthy breakfast	145	142	97.9%	3	2.1%
Teach food guidelines	145	137	94.5%	8	5.5%
Teach about reading nutritional labels	145	130	89.7%	15	10.3%
Teach about benefits of nutritious foods	145	142	97.9%	3	2.1%
Teach about eating fruits and vegetables	144	143	99.3%	1	0.7%
Teach benefits about low sodium, sugar, and fats	145	141	97.2%	4	2.8%
Teach food safety	145	122	84.1%	23	15.9%
Teach preparation of healthy meals and snacks	145	135	93.1%	10	6.9%
Priced nutritious foods and beverages lower and increased the price of less nutritious ones	141	53	37.6%	58	62.4%
Gathered suggestions from staff, students, and families preference on nutrition and strategies to promote healthy eating	145	98	67.6%	47	32.4%
Provide information to students or families on nutrition and caloric content of foods available	143	94	65.7%	47	34.3%
Conduct taste test to determine food preference on nutritional items	145	83	57.2%	62	42.8%
Serve locally or regionally grown foods	146	115	78.8%	31	21.8%
Planted a school food or vegetable garden	143	104	72.7%	39	27.3%
Placed fruits and veggies near cafeteria cashier	145	134	92.4%	11	7.6%
Use attractive displays for fruit / vegetables in the cafeteria / lunchroom	144	111	77.1%	33	22.9%
Offer students a self-serve salad bar	145	30	20.7%	115	79.3%
Label healthful foods with appealing names	144	83	57.5%	61	42.4%
Encourage students to drink plenty of water	142	130	91%	11	7.7%
Prohibit school staff from giving food coupons for reward for good behaviour or academic performance	142	73	51.4%	69	48.6%
Prohibit less nutritious foods and beverages from being sold for	143	79	55.2%	64	44.8%
fundraisers		10-	00.00/		44.007
Cafeteria displays positive messages about eating healthy	144	127	88.2%	17	11.8%
Cafeteria is inviting and colourful	144	126	87.5%	18	12.5%
Provide daily breakfast to at least 25% of students	146	110	75.3%	36	24.7%
At least 40% of students qualify for free or reduced lunch program	146	107	73.3%	39	26.7%

VARIABLE	N	Certain	%	All	%	NO	%
		locations		locations			
Students are permitted to have water bottles	144	48	33.3%	91	61.5%	5	3.5%

Table 4: Dimension # 4 - Family and Community Involvement

VARIABLES	N	YES	%	NO	%
Provided parent/ family with information about how to	143	106	74.1%	37	25.9%
communicate with child about health-related topics					
Provided parent /family with information about how to monitor	142	100	70.4%	42	29.6%
their child (setting expectations and enforcing rules)					
Involved parents as school volunteers in the delivery of health	142	72	50.7%	70	49.3%
education activities and services					
Linked parents and family to health services and programs in the	145	126	86.9%	19	13.1%
community					
Hosted a family event promoting physical activity and / or mental	144	95	66%	49	34%
health topics					
Hosted a family event promoting healthy eating and food	105	56	53.3%	49	46.7%
preparation					

Table 5: Dimension #5 - Collaboration

VARIABLES	N	YES	%	NO	%
Health/ PE staff worked with Health Services Staff	145	132	91%	13	9.0%
Health/ PE staff worked with Mental Health/Social Services	143	113	79%	30	21%
Health/ PE staff worked with nutritionist or food services	144	106	73.6%	38	26.4%
Health/ PE staff worked with classroom teachers	145	132	91%	13	9.0%
School provided family with information to increase knowledge on Asthma	140	97	69.3%	43	30.7%
School provided family with information to increase knowledge on nutrition and healthy eating	140	114	81.4%	26	18.6%
School provided family with information to increase knowledge on Diabetes	140	78	55.7%	62	44.3%
School provided family with information to increase knowledge on benefits of physical activities	143	113	79%	30	21%
School provided family with information to increase knowledge on tobacco-use prevention	141	94	66.7%	47	33.3%
School provided family with information to increase knowledge on substance abuse	139	99	70.2%	42	29.8%
School provided family with information to increase knowledge on stress management	139	88	63.3%	51	36.7%
School provided family with information to increase knowledge on preventing student bullying, intimidation and harassment	145	137	94.5%	8	5.5%
Teachers give health homework assignments / activities to do at home with parents / families	141	112	79.4%	29	20.6%

Table 6: Dimension # 6 - Professional Development (school personnel participated in workshops and trainings)

VARIABLES	N	YES	%	NO	%
Alcohol and substance abuse prevention	138	111	80.4%	27	19.6%
Asthma	141	119	84.4%	22	15.6%
Diabetes	141	110	78.0%	31	22%
Emotional and Mental Health	142	128	90.1%	14	9.9%
Epilepsy or Seizure Disorders	139	102	73.4%	36	25.9%
Food Allergies	140	114	81.4%	26	18.6%
Food borne illness prevention	140	92	65.7%	48	34.3%
HIV prevention*	34	20	58.8%	14	41.2%
HIV & Pregnancy Prevention	102	53	52%	49	48%
Human Sexuality	135	78	57.8%	57	42.2%
Infectious Disease Prevention	138	114	82.6%	24	17.4%
Injury prevention and safety	142	120	84.5%	22	15.5%
Nutrition and dietary behaviour	140	106	75.7%	34	24.3%
Physical activity and fitness	141	125	88.7%	16	11.3%
STD prevention	136	65	47.8%	71	52.2%
Tobacco-use prevention	135	83	61.5%	52	38.5%
Violence prevention	144	132	91.7%	12	8.3%
Additional opportunities for physical activity	141	113	80.1%	28	19.9%
Stress Management	137	105	76.6%	32	23.4%

^{*}For one year, HIV Prevention was a separate question, for the other two years, it was combined with Pregnancy Prevention.

Discussion

These results provide valuable insight to current school health programs. Thus, although this survey was initially intended to establish baseline scores as to what each school is currently doing and not doing, for grant purposes, as a whole it paints a bigger picture as to what dimensions are represented in the area's school health programs. Specifically, these results provide frequency data on the following 6 dimensions of school health programs: School Wellness Policies; Health Physical Education and Physical Activity; Nutrition Related Policies and Practices; Family & Community Involvement; Collaboration; and Professional Development. Discussion of these results below highlights the importance of such knowledge.

School Health Policies

Concerning School Health Policies, while the results indicate a fairly high percentage of schools have wellness policies and teams in place, there are still 20-25% that do not. A reality that needs to be addressed in future school health education endeavours. The importance of establishing sound school health policies cannot be understated. According to the Centers for Disease Control and Prevention (CDC, 2017), policies set a foundation for school district practice and procedures. More specifically, well established policies "Inform, support, and direct individuals throughout the school system; reassure families, students, and school staff that safety and health protection measures are in place; provide legal protection for schools; and help contain or prevent controversy" (CDC, 2017, np). In addition, well-articulated school health policies aid in integrating the importance of health into the school culture (Grebow, Greene, Harvey, and Head, 2002). Similarly, parent and involvement is lacking implementation policies and procedure along with participation in wellness teams. Given the past research regarding the importance of parent / family involvement in health (CDC, 2012) this is one area that schools need to consider as they move forward with their health education curriculum and endeavours.

Turning to specific health-related topics, results reveal that while some schools have strong policies on areas such as physical fitness, nutrition, (including policies on food for school

celebrations), and bullying, programs on topics such as safer sex, tobacco prevention, asthma, and injury prevention are absent from 25-50% of surveyed schools. Thus, future efforts and funding may be geared towards programs with these lower representations. Finally, results indicate that schools also report high levels of communication with parents regarding policies and procedures, review of curriculum, seeking funding and identifying student health needs based on data. Also, 75% of schools reported they have recommended new and revised policies. These results posit that many schools are actively engaging in both verbal and written communication to develop, implement, and assess their school wellness policies. This commitment by most schools is in accordance with the essential elements of a quality school health program.

Healthy Physical Education and Activity

Concerning Healthy Physical Education and Activity, results indicate very high participation in this area. These results should not be surprising, given the state-mandated regulations for physical education within schools. However, three interesting findings within this dimension that are worth highlighting. First, while the majority of students are encouraged to design and implement personal fitness plans and goals, there are still 16% of schools that do not engage students in this practice. Students' motivation and ability to be active participants in their own personal fitness is extremely important (Nurmi, Araujo – Soares, Haukkala, Hankonen, 2016) and efforts need to be made to help ensure that this is present in every school. Second and similarly, about 16% of schools are not including teaching regarding Energy Balance or calories consumed vs. expended. Given the more recent research which posits that weight loss is more likely to be attained by combining both physical activity and healthy dietary practices than by either physical activity or healthy dietary practices alone (Johns, Hartmann-Aveyard, Bovce, Jebb, 2014), students' comprehension of this relationship is imperative. One recommendation is for schools to look at national programs, such as Step It Up! (US Department of Health and Human Services, 2015) to identify strategies to incorporate this information into the curriculum. Finally, the lowest statistic in this dimension reveals that a

little over half of the schools do not provide any physical education or activity prior to the start of the school day. This opens the door for brainstorming to identify different intervention opportunities that could be incorporated into the time frame. For example, if students are already eating breakfast at school, could there be a way to incorporate information about Energy Balance during this time? Or for schools that require students to line up and wait for school to begin, is there an opportunity to incorporate some type of morning physical activity? The US Department of Health and Human Services 2008 Physical Activity Guidelines (PAG) recommends that children and adolescents engage in at least 60 minutes of physical activity every day (2008). Yet in 2015, 14.3% of 9th through 12th grade students surveyed through the Youth Risk Behavior Survey (YRBS) did not participate in at least 60 minutes of activity on at least one day during the week (Centers for Disease Control & Prevention, 2015) and only 21.7% reported engaging in 60 minutes of physical activity 7 days of the week. Based on the YRBS data, it is evident that schools must increase their efforts to incorporate physical activity within the school day in order to increase the number of students who will reach the 60 minutes of activity recommended in the 2008 PAG.

Nutrition

By far, there are a greater number of questions (27 separate items) regarding nutrition than any other dimension on the survey. Thus, for clarity discussion of the results is categorized into the following three areas of concentration: teaching, nutritional services schools provide, behaviours schools engage in to promote nutrition and healthy eating. First, the data show that schools are including elements of nutrition within their curriculum. Schools indicate that they are teaching about the benefits of healthy eating; from drinking plenty of water, eating a healthy breakfast, eating a diet low in fats, sodium and sugar to eating enough fruits and vegetables. In addition, results posit a high percentage of schools teach them about understanding basic knowledge of eating healthy and how to prepare healthy meals and snacks and how to read nutritional labels. Similarly, almost all schools report both promoting drinking plenty of water and provide an environment where students are permitted to

carry a water bottle during school hours. Teaching nutrition on various levels of learning, both cognitive and behavioural, will hopefully increase students' likelihood of adopting these behaviours. Past research indicates that cognitive learning is only one step in the process and behavioural learning needs to link with the cognitive to hope for an ultimate outcome of affective learning (Martin & Reigeluth, 1999; Reigeluth & Moore, 1999; Zimbardo & Leippe, 1991).

Schools were asked several questions about their cafeteria and the services they provide. Results indicate that 75% of schools provide breakfast to at least a quarter of their students and that almost half the schools provide at least 40% of students with a free or reduced lunch program. These percentages provide a better understanding of what daily services school cafeterias provide and who they are servicing. In addition, most schools indicated that their cafeterias display positive messages about eating healthy and that their cafeterias are inviting and colourful. Also, a high percentage of schools reported using attractive displays for healthy foods and placing them in easily accessible places in the lunch line. However, less than a quarter of the schools provide a self-serve salad bar and only a little over half indicate labelling healthy foods with appealing names. Again, these results shed a better light on what some schools are not providing when it comes to daily food services. Further investigation on the logistics providing these services is definitely warranted.

On a similar note, schools are even going beyond daily services when it comes to promoting healthy eating. Although results report lower percentages in these areas, the results also indicate other ways that some schools may or may not be promoting healthy eating and nutrition. Specifically, while two-thirds schools report gathering suggestions from staff, parents and students on strategies to promote healthy eating and providing information on nutrition and caloric content of the foods available, a little over half of the schools reported conducting taste tests on food preference of nutritional items. Similarly, only a little over half the schools reported prohibiting the use of food coupons for rewards and / or selling less nutritional foods as school fundraisers. However, around three- quarters of the schools

did indicate that they serve locally, or regionallygrown food and have planted a school garden. While some of these issues may come down to funding, these results do reveal a gap between providing knowledge or cognitive learning on healthy eating and behavioural learning – actually creating an environment where students have the opportunity and ability to engage in healthy eating. Family and Community Involvement

With regards to Family and Community Involvement, results indicate several interesting findings. Schools ranged from as low at 50% to as high as 87% on the presence of family and community involvement in their education. Schools report fairly high rates of communication and information sharing with parent / families with the highest percentage of schools indicating they link parents and families to health services and programs in community. However, schools report far less involvement of parents in schools as volunteers in health education and services. Specifically, only 50-60% of schools have families host activities / events focusing on physical and / or mental health or events promoting healthy eating and food preparation. The results reveal a lack of parent and family involvement and identify an area that needs further exploration. efforts should focus on possible ideas and innovative ways to increase parent involvement in school health programs. These efforts could result in possible models that schools could adopt and implement in order to facilitate parent / family involvement.

Collaboration

With regards to Collaboration, results on specifics about Health / PE staff and their participation in collaborating with others revealed fairly high to very high rates of collaboration with other health service staff and mental and social services, along with food services and teachers. In addition, almost 80% of schools posit that teachers are giving students health-related homework and activities to work on with parents. Results such as these are positive in nature given the known benefits of collaboration in both education and in healthrelated behaviours (Lewallen, Hunt, Potts-Datema, Zaza, & Giles, 2015). Next, schools were instructed to indicate their collaboration on specific health topics; similar to results on School Health Policies, percentages differ by topic.

Collaboration was greatest on information regarding bullying, intimidation, and harassment followed by nutrition and healthy eating. Schools reported lower collaboration on more specific health topics such as Asthma, Diabetes, tobaccoprevention, and substance abuse. Moderating variables such as age can account for some of the reduction in these areas, such as schools with younger school age children may be less likely to address issues of tobacco and substance abuse. In addition, health topics such as Asthma and Diabetes do not impact students in the same numbers as do issues such as bullying and healthy eating. Even taking those moderating factors into account, these findings provide interesting and relevant knowledge.

Professional Development

Concerning Professional Development, the survey results identified which of the 19 categories of professional development schools participated in within the last three years. The highest participation was reported in areas of emotional and mental health and violence prevention, while lowest participation was in STD, HIV, and pregnancy prevention; human sexuality; and tobacco-use. Again, student age is a moderating factor especially for these variables. Results for this dimension are similar to both Policies and Collaboration results, indicating higher presence in health topics that influence the student body as a whole (injury prevention, violence, physical activity and fitness and nutrition) as opposed to those topics that may only affect specific cohorts of students (Diabetes, Asthma, and Epilepsy or seizure disorders). Results indicate two possible exceptions to this line of thinking with a lower percentage of professional development on food-borne illness and stress management. The importance of school personnel participating in professional development training in these two areas cannot be underestimated since they are both linked to overall health status. For example, according to and Drug Administration (US the Food Department of Health and Human Services, 2016) approximately 1 out of 6 people in the US fall ill due to a food-borne illness each year. equates to almost 48 million people getting sick and results in approximately 3,000 deaths. With respect to stress management, a recent study by Stavrou et al. (2016) revealed that children who participated in a stress management intervention

program experienced a decrease in body mass index (BMI), depression, and anxiety. One explanation may be that, while these two topics are definitely mainstream health concepts, they are mistakenly less associated with children's health and more aligned with an older cohort of individuals.

Conclusion

The focus of this manuscript is to highlight the results gleaned from the AtlantiCare School Health Survey and discuss the strengths and weakness of school health policies, procedures, and initiatives in an effort to paint a clearer picture of school health programs in Southern and Central New Despite limitations due to sampling procedures and instrument constraints, results from 147 school health surveys provide valuable frequency statistics that assess school wellness on 6 different dimensions of health: School Wellness Policies; Health Physical Education and Physical Activity; Nutrition Related Policies and Practices; Community Family Involvement; Collaboration; and Professional Development. Results reveal that while, schools on the whole levels of engagement report high communication and practices that encourage healthy behaviour, there are specific areas in which schools can improve to help facilitate schools cognitive, behavioural, and affective learning regarding mental and physical health. Specifically, schools can do more to include parents and communities into health programs, increase efforts to address health topics that may affect a smaller number of students, develop and implement practices that promote students to make healthier choices, and creatively brainstorm possible new ways to include physical activity and education throughout the course of a student's day. Understanding the current state of schools' health programs allows for a better assessment of the quality of these programs. This knowledge helps to identify which elements of excellence may exist and which elements need further development and implementation. Thus, regardless of where funding for such change may come from - state, grants or other sources of funding, continuous assessment and reassessment of school health programs is vital to promoting healthier lifestyles.

References

American School Health Association. (2014). What is School Health? Available at:

https://netforum.avectra.com/eweb/DynamicPage.aspx?Site=asha 1&WebCode=WhatisSchoolHealth (Accessed 19th February 2018).

American School Health Association. (2015). *Connecting Health and Learning*. Available at:

https://netforum.avectra.com/eweb/DynamicPage.aspx?Site=asha 1&WebCode=WhatisSchoolHealth (Accessed 19th February 2018).

ASCD and Centers for Disease Control and Prevention. (2014). Whole School, Whole Community, Whole Child: A collaborative approach to learning and health. Alexandria, VA: Author.

Butler, S. (1993). Chief state school officers rank barriers to implementing comprehensive school health education. *Journal of School Health*, 63 (3), p. 130.

Centers for Disease Control and Prevention. (2012). *Parent engagement: strategies for involving parents in school health*. Available at:

http://www.cdc.gov/healthyyouth/protective/pdf/parent engageme nt strategies.pdf (Accessed 19th February 2018).

Centers for Disease Control and Prevention. (2015). *Trends in the Prevalence of Physical Activity and Sedentary Behaviors National YRBS:* 1991—2015. Available at:

https://www.cdc.gov/healthyyouth/data/yrbs/pdf/trends/2015 us physical trend yrbs.pdf (Accessed 19th February 2018).

Centers for Disease Control and Prevention. (2017). School health policy. Available at:

https://www.cdc.gov/healthyyouth/about/policy.htm (Accessed 19th February 2018).

Clark, R. C. & Mayer, R. E. (2003). Learning together on the web. In *e-Learning and the science of instruction*. San Francisco, CA: John Wiley & Sons, Inc.

Grebow, P., Greene, B., Harvey, J. & Head, C. (2002). Shaping health policies. *Educational Leadership*, 57(6), 63-66.

Holland, J., Green, J., Alexander, L. & Phillips, M. (2016). School Health Policies: Evidenced-based Programs for Policy Implementation. *Journal of Policy Practice*, 15 (4), p 314-332.

Johns, D. J., Hartmann-Boyce, J., Jebb, S. A. & Aveyard, P. (2014). Diet or Exercise Interventions vs Combined Behavioral Weight Management Programs: A Systematic Review and Meta-Analysis of Direct Comparisons. *Journal of the Academy of Nutrition and Dietetics*, 114 (10), 1557-1568.

Leachman, M., Albares, N., Masterson, K. & Wallace, M. (2016). *Most States Have Cut School Funding, and Some Continue Cutting*. Available at:

http://www.cbpp.org/research/state-budget-and-tax/most-states-have-cut-school-funding-and-some-continue-cutting (Accessed 19th February 2018).

Lewallen, T., Hunt, H., Potts-Datema W., Zaza, S. & Giles, W. (2015). The Whole School, Whole Child, Whole Community Model: A new approach for improving educational attainment and healthy development of students. *Journal of School Health*, 85(11), 729-739.

Lynagh, M., Schofield, M. & Sanson-Fisher, R. (1997). School Health Promotion Programs Over the Past Decade: A Review of the Smoking, Alcohol and Solar Protection Literature. *Health Promotion International*, 12 (1),

Martin, B. L. & Reigeluth, C. M. (1999). Affective education and the affective domain: Implications for instructional-design theories and models. In C. M. Reigeluth (Ed.), *Instructional-design theories and models: a new paradigm of instructional theory (Vol.2)*. Mahwah, NJ: Lawrence Erlbaum Associates.

National Academic Press. (1995). *Defining a Comprehensive School Health Program: An Interim Statement*. Science, Engineering and Medicine. Available at: https://www.nap.edu/read/9084/chapter/6 (Accessed 19th February 2018).

Nurmi, J., Hagger, M. S., Haukkala, A., Araújo-Soares, V. & Hankonen, N. (2016). Relations Between Autonomous Motivation and Leisure-Time Physical Activity Participation: The Mediating Role of Self-Regulation Techniques. *Journal of Sport and Exercise Psychology*, 38(2), 128-137.

Office of Disease Prevention and Health Promotion. (2017). *Educational and Community-Based Programs*. Available at: https://www.healthypeople.gov/2020/topics-objectives/topic/educational-and-community-based-programs/objectives (Accessed 19th February 2018).

Reigeluth, C. M. & Moore, J. (1999). Cognitive education and the cognitive domain. In C. M. Reigeluth (Ed.), *Instructional-design theories and models: a new paradigm of instructional theory (Vol. 2)*. Mahwah, NJ: Lawrence Erlbaum Associates.

Romiszowski, A. (1999). The development of physical skills: Instruction in the psychomotor domain. In *Instructional-design theories and models: a new paradigm of instructional theory (Vol. 2)*. Mahwah, NJ: Lawrence Erlbaum Associates.

Sorace, D. (2011). School health education primer. Available at: http://www.futureofsexed.org/documents/school_health_education_primer.pdf (Accessed 19th February 2018).

Stavrou, S., Nicolaides, N., Papageorgiou, I., Papadopoulou, P., Terzioglou, E., Chrousos, G. & Charmandari, E. (2016). The effectiveness of a stress-management intervention program in the management of overweight and obesity in childhood and adolescence. *Journal of Molecular Biochemistry*, 5, 63-70.

US Department of Health and Human Services. (2008). 2008 Physical Activity Guidelines for Americans (Publication). Available at: https://health.gov/paguidelines/guidelines/ (Accessed 19th February 2018).

US Department of Health and Human Services. (2015). Step it up! The Surgeon General's Call to Action to Promote Walking and Walkable Communities. Available at:

https://www.surgeongeneral.gov/library/calls/walking-and-walkable-communities/call-to-action-walking-and-walkable-communities.pdf (Accessed 19th February 2018).

Zimbardo, P.G. & Leippe, M.R. (1991). *The psychology of attitude change and social influence*. New York: McGraw-Hill.

APPENDIX A

Description of Grants

- **1. HEALTHY SCHOOL WELLNESS AWARD -** This award will grant dollars for schools to initiate or sustain **ongoing wellness activities** within the school setting. Students must be the main focus audience served by this grant; however families and school staff can also be included. Grant dollars can be used to hire instructors to provide activities to their students. Grant-funded activities must impact *at least one* of the following:
 - PHYSICAL ACTIVITY/FITNESS (ex: 8-week Zumba classes provided to students after school or during PE classes; purchase of fitness equipment that will be used ongoing by students throughout the year)
 - NUTRITION (ex: Healthy Food Preparation Lessons; Nutrition Assembly with aligned activities over the course of several weeks; purchase of Salad Bar for student meals)
 - LIFE SKILLS/MINDFULNESS OFFERINGS (ex: 6-week Yoga Class offered to staff and students; Coping Skills lessons provided to students)
- 2. HEALTHY SCHOOL & HEALTHY GARDEN AWARD This award is available to schools with an already established edible school garden that plan to continue to enhance their existing garden and also provide wellness activities within the school community. Grant dollars can be allocated at the discretion of the school, providing funding supports activities and initiatives that address both wellness and garden programming (ex: \$550 allocated for Garden activities and \$250 allocated for Wellness activities). One-day health fairs or one-day events will not be permitted, as we will only be funding ongoing activities and/or programming that will result in long-lasting behavioral changes and/or policy or environmental changes. The wellness activities must address one of the following ongoing activities as outlined in the School Wellness Award description outlined above:
 - Physical Activity/Fitness
 - Nutrition
 - Life Skills/Mindfulness
- **3. NEW HEALTHY SCHOOL EDIBLE GARDEN START-UP AWARD -** This award will grant dollars to assist schools in establishing a new edible school garden and any alternative gardening initiatives, such as hydroponics, aquaponics, and purchase/installation of a greenhouse.

Substantial research indicates that when children participate in the cultivation of fruits and vegetables they are more likely to eat them. Gardens not only offer students hands-on opportunities to learn about nutrition and participate in physical activity, but also offer unique learning experiences for teachers to incorporate classroom lessons into garden programming.

21 Educat	ion and Health						Vol.36 No.1, 2018
contin	uing their	EALTHY SCHOOL EDIBLE GARDEN AWARD - This award will gredible gardening efforts. Only schools with established school gastricted to fund specific garden equipment, educational material	ırde	ns ca	an ap	ply fo	r this award.
		APPENDIX B					
		AtlanticCare School Health Survey					
		Please complete the entire survey, calculate and record the total poi Please select only one answer, unless otherwise indicated		arneo	d.		
SCHOO	L WELLNES	SS POLICIES					
		Υ	es	No			
1. 2. 3.	Does your Has your s) ı as th	nis surve No	ey, to assess your
	a.	Physical activity		1	, 	0]
	b.	Nutrition		1		0	1
	C.	Tobacco-use prevention		1		0	1
	d.	Asthma		1		0	-
	e.	Injury and violence prevention		1		0	-
	f.	HIV, STD, and teen pregnancy prevention		1		0	-
	g.	Bullying, Harassment and Intimidation prevention		1		0	
4 . 5 .	Does your	school have a policy regarding foods that can be provided for school/classroom	,	Yes □ 1	N	lo □ 0	a activities?
0.	•	or No for each activity.)		•		·	g = 50.11001
				Yes	1	No_	
	a.	Identified student health needs based on a review of relevant data		1		0	
	l h	Recommended new or revised health and safety policies and activities to	1	1		0 I	

school administrators or a school improvement team

priorities for students and staff

community members

e.

f.

Sought funding or leveraged resources to support health and safety

to district administrators, school administrators, parent groups, or

Assessed the availability of physical activity opportunities for students

6. During the past two years, have students' families helped develop or implement policies and programs related to school health?

TOTAL (out of possible 18 points): __

Reviewed health-related curricula or instructional materials

7. Is at least one student's parent an active member of your school's Wellness Team?

Communicated the importance of health and safety policies and activities

0

0

0

No

 \square 0

No

 \square 0

1

1

Yes

 \Box 1

Yes

 \Box 1

HEALTH & PHYSICAL EDUCATION AND PHYSICAL ACTIVITY

8.	•	•	ast year, did any teachers or specialists at your school receive professional dev continuing education, or any other kind of in-service) on physical education or	•	•	kshops,
				Yes	No	
				□ 1	□ 0	
9.	Outside	e of pl	nysical education, do students participate in physical activity breaks and/or is p	hysical ad	ctivity inte	grated into
		-	struction during the school day? (ex: structured recess; walking club; movemen	-	-	-
	brain b		· · ·	Yes	No	•
				□ 1	□ 0	
10.	•		chool offer opportunities for students to participate in physical activity before the vities or access to facilities or equipment for physical activity?	e school d	day throuç	gh organized
	priyotoc	ai aoti	raiso of access to facilities of equipment for physical activity:	Yes	No	
				ш	Цΰ	
11.	use eit	her so	Agreement is a formal agreement between a school or school district and anoth hool facilities or community facilities to share costs and responsibilities. Does strict, have a Joint Use Agreement for shared use of school or community physically.	your scho	ool, either	directly or through
			,	Yes	No	
				□ 1		
				ш		
12.	Durina	the so	chool year did staff in your school teach students on the following topics?			
	•		No for each topic/lesson)			
	(Wark	1 00 01	The for each topic/lesson)	Yes	No	
	Ī		Densitie of healthy entire	163		
		a.	Benefits of healthy eating	1	0	
		b.	Benefits of drinking plenty of water	1 1	0	
		C.	Benefits of eating a healthy breakfast daily	1 1		
		d.	Food Guidance using current Dietary Guidelines (ex: MyPlate)	1 1	0	
	ŀ	e. f.	Reading Food Labels	1 1	0	
		T.	Differentiating between nutritious and non-nutritious beverages		0	

			Yes	No
a.	Benefits of healthy eating		1	0
b.	Benefits of drinking plenty of water		1	0
C.	Benefits of eating a healthy breakfast daily		1	0
d.	Food Guidance using current Dietary Guidelines (ex: MyPlate)		1	0
e.	Reading Food Labels		1	0
f.	Differentiating between nutritious and non-nutritious beverages		1	0
g.	Consuming more fruits, vegetables and whole grain products		1	0
h.	Choosing foods and beverages low in sodium, sugars and solid fats		1	0
i.	Food safety		1	0
j.	Preparing healthy meals and snacks		1	0
k.	Health risks related to being inactive		1	0
I.	PE program is structured around the components of fitness		1	0
	(cardiovascular, muscular endurance, flexibility)	 	4	
m.	The importance of Energy Balance (calories consumed vs. expended)		1	0
n.	Injury prevention and workout phases (warm up, cool-down)		1	0
0.	Students are encouraged to design and implement personal fitness plans goals		1	0
p.	PE classes build the confidence and competence of all students		1	0

13. During the school year has your staff tried to increase student knowledge on each of the following topics? (please select only the grade levels appropriate for your school).

Elementary and Middle only: (Mark Yes or No for each topic)

Yes

a.	Asthma	1	0
b.	Food Allergies	1	0
C.	Emotional and Mental Health	1	0
d.	Tobacco- use prevention	1	0
e.	Violence Prevention	1	0

No

High School only: (Mark Yes or No for each topic)

No

a.	Asthma	1	0
b.	Violence Prevention	1	0
C.	Emotional and Mental Health	1	0
d.	Tobacco- use prevention	1	0
е	Suicide prevention	1	0

TOTAL	out of po	ssible 25 points	s)
TOTAL	(out of po	ssible 25 points	S)

NUTRITION-RELATED POLICIES AND PRACTICES

14. During this school year, has your school done any of the following? (Mark Yes or No for each activity.)

		Yes	No
a.	Priced nutritious foods and beverages at a lower cost while increasing	1	0
	the price of less nutritious foods and beverages		
b.	Collected suggestions from students, families, and school staff on	1	0
	nutritious food preferences and strategies to promote healthy eating		
C.	Provided information to students or families on the nutrition and caloric	1	0
	content of foods available		
d.	Conducted taste tests to determine food preferences for nutritious items	1	0
e.	Provided opportunities for students to visit the cafeteria to learn about	1	0
	food safety, food preparation, or other nutrition-related topics		
f.	Served locally or regionally grown foods in the cafeteria or classrooms	1	0
g.	Planted a school food or vegetable garden	1	0
h.	Placed fruits and vegetables near the cafeteria cashier, where they are	1	0
	easy to access		
i.	Used attractive displays for fruits and vegetables in the	1	0
	cafeteria/lunchroom		
j.	Offered a self-serve salad bar to students	1	0
k.	Labeled healthful foods with appealing names (ex: Crunchy Carrots)	1	0
I.	Encouraged students to drink plain water	1	0
m.	Prohibited school staff from giving students food or food coupons as a	1	0
	reward for good behavior or good academic performance		
n.	Prohibited less nutritious foods and beverages (ex: candy, baked goods)	1	0
	from being sold for fundraising purposes		
0.	The cafeteria display positive messages (ex: healthy eating)?	1	0
p.	The cafeteria is inviting and colorful	1	0

15. Are students permitted to have a drinking water bottle with them during the school day? (Mar Yes, at all locations/times . Yes, at certain locations/times.			es s/times .	. 2 🗆 1 🗆
	N	No		0 🗖
16.	Does your school provide Breakfast to at least 25% of your studer	nts daily?	Yes □1	No □ 0
17.	Do at least 40% of your students qualify for Free or Reduced Lunc	ch program?	Yes □1	No □ 0
	TOTAL (out	t of possible 20 points):	:	

FAMILY AND COMMUNITY INVOLVEMENT

18. During this school year has your school done any of the following activities? (Mark Yes or No for each activity.)

		Yes	No
a.	Provided parents and families with information about how to communicate with their child about health related topics	1	0
b.	Provided parents with information about how to monitor their child (ex: setting parental expectations, responding when child breaks the rules)	1	0
C.	Involved parents as school volunteers in the delivery of health education, activities and services	1	0
d.	Linked parents and families to health services and programs in the community	1	0
e.	Hosted a family event promoting physical activity and/or mental health topics	1	0
f.	Hosted a family event promoting healthy eating & food preparation	1	0

TOTAL (out of possible 6	points):	
---------	-------------------	--------	----	--

COLLABORATION

19. During the school year, has your Health/PE staff worked with any of the following groups on health/wellness activities? (Mark Yes or No for each topic) Yes No

a.	Health Services Staff (School Nurse)	1	0
b.	Mental Health/Social Services Staff (Psychologists, counselors, social	1	0
	workers)		
C.	Nutrition or food services staff	1	0
d.	Classroom Teachers	1	0

20. During the school year did your school provide parents/families with health information designed to increase parent/family knowledge of the following topics?

(Mark Yes or No for each topic)

Yes o	r No for each topic)	Ye	S	No
a.	Asthma	1		0
b.	Nutrition and Healthy eating	1		0
C.	Diabetes	1		0
d.	Benefits of Physical Activity	1		0
e.	Tobacco-use prevention	1		0
f.	Substance abuse prevention	1		0
g.	Stress Management	1		0
h.	Preventing student bullying, intimidation and harassment	1		0

21.	During the school year have teachers given students	homework assignments or health ed	ucation a	activities to do at home with
	their parents/families?		Yes	No
			□1	□ 0
		TOTAL (out of possible 13 points):		

PROFESSIONAL DEVELOPMENT:

22. Over the past 3 years has any of your staff participated in professional development workshops/trainings on the following topics?

(Mark Yes or No for each topic)

Yes

No

	- ,		
a.	Alcohol and substance abuse prevention	1	0
b.	Asthma	1	0
C.	Diabetes	1	0
d.	Emotional and Mental Health	1	0
e.	Epilepsy or Seizure Disorders	1	0
f.	Food Allergies	1	0
g.	Foodborne illness prevention	1	0
h.	HIV prevention and Pregnancy Prevention	1	0
i.	Human Sexuality	1	0
j.	Infectious Disease Prevention (ex: flu prevention)	1	0
k.	Injury prevention and safety	1	0
I.	Nutrition and Dietary Behaviors	1	0
m.	Physical Activity and Fitness	1	0
n.	STD Prevention	1	0
0.	Tobacco-use Prevention	1	0
p.	Violence Prevention (HIB, date violence prevention, abuse & neglect)	1	0
q.	Additional opportunities for Physical Activity	1	0
r.	Stress Management	1	0
	TOTAL / 1 C 31 40 11 1		

TOTAL (out of possible 18 points)

GRAND TOTAL	(out of	possible	100)	
-------------	---------	----------	------	--

Education and Health Archive

Each issue of the journal, published since 1983, is available via the archive. There are several simple indices that help to identify articles by keywords; year/issue number; author surname and article title. It can be seen that some contributors have had a number of articles published and there are a range of topics that have been covered over the years. Sometimes a contributor will update their article or develop points raised by another contributor. The pages on the website, that have been provided for the Education and Health journal, usually have the highest number of 'reads' across all pages on this Internet site.

SHEU

Schools and Students Health Education Unit

The specialist provider of reliable local survey data for schools and colleges and recognised nationally since 1977

"The (SHEU survey) helped us to prioritise where we needed to be in terms of PSHE education. We delivered assemblies based on the evidence as well as curriculum development, and dealt with whole school issues – particularly in regard to pastoral care. The answers received to the question on the survey Who are you most likely to approach if you needed help worried staff as teacher was not a popular answer. Subsequently the staff asked themselves why this had happened and what needed to be done to address the issue. There was more emphasis on wider aspects of PSHE education delivery, which needed more attention. To summarise, the (SHEU survey) allows the PSHE department to assess the impact of teaching and learning and modify future lessons accordingly. It allows our school to look at whole school issues such as the extent to which the pastoral care system is meeting the needs of our pupils. It helps us to do need analysis of our pupils. It helps to provide important evidence for SEF / the extent to which we are meeting wellbeing indicators / National Healthy School standards." Secondary School Head

For more details please visit http://sheu.org.uk