

# Preferences, Perceptions and Top Motivators to Physical Activity among Young and Middle-Aged Adults are not Influenced by Income or Education Level

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**Abstract** Despite knowing the benefits of physical activity (PA), the majority of Americans are not meeting our national PA guidelines of 150 minutes of moderate to vigorous physical activity (MVPA) plus 2 or more strengthening activities per week. Multiple studies have pointed to a positive correlation between education and PA participation while other studies did not show this relationship. The purpose of this study was to examine the relationship between participants' income and education level to their i) attitudes and preferences for being active, ii) perceptions related to PA and exercise, and iii) top motivators to be physically active. In a two-phase, mixed methodology focus group study in South Carolina, facilitated group discussions were conducted (Phase I) with 175 participants from 13 groups. Questions were asked regarding their preferences, associations, perceptions and top motivators to PA and exercise. Based on the feedback from Phase I, a research generated survey was designed and administrated (Phase II) to the same community groups (229 valid surveys). The survey asked questions on preferences to PA, descriptors and perceptions associated with PA and exercise, and the respondent's top motivators to PA. The results of this study indicated there was no significant influence of education level or total household income on peoples' preferences for PA, perceptions associated with PA and exercise and chief motivators to PA. Although socioeconomic status and education can impact one's participation level in PA, in this case, there was no indication participants differed in their responses, regardless of their education and income background. Therefore, health and medical professionals should not assume there are major differences across adults in how they promote, motivate, and educate communities to be more physically active to meet the American PA guidelines. It is vital people like and embrace their PA choices for long lasting health.

**Keywords:** *income, education, preferences, perceptions, motivators, physical activity, exercise*

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## 1. Introduction

Despite knowing the benefits of physical activity (PA), most Americans are still not physically active. Understanding the negative consequences of physical inactivity on one's health can help lead to a healthier lifestyle and healthier choices [1,2,3]. However, the majority of the American population still does not meet our national PA guidelines of 150 minutes of moderate to vigorous physical activity (MVPA) plus 2 or more strengthening activities per week [4,5,6,7]. Research efforts to determine some of the underlying factors as to why this is happening after so many years of attempting to educate the public as to the benefits and importance of exercise are ongoing. Multiple studies have pointed to a positive correlation between education and PA participation [8,9], while other studies did not show this

relationship [10,11,12]. Past studies have indicated a relationship between household income and education to physical activity (PA) levels. The higher the education and income level, the more likely the participation in PA [6,13,14,15,16]. Conversely, adults from a lower socioeconomic status experience a decrease in PA activities and tend not to engage in recreational PA [6,13,14,15,16]. Interestingly, Sternfeld et al. concluded that education level positively impacted participation in sports, exercise, and leisure time PA while negatively affecting household and caregiver activities [17]. There seems to be no consistent outcome with the relationship of income and education to PA and exercise.

However, because so many Americans do not meet the country's PA guidelines, it is essential to take a step back and make a more detailed investigation as to whether income and education are related to adults' preferences for PA, perceptions most closely related to PA versus exercise and top motivators to PA. Males and females, ages 18 to

64, from South Carolina were included in this study. The purpose of this study was to examine the relationship between participants' income and education level to their i) attitudes and preferences for being active, ii) perceptions related to PA and exercise, and iii) top motivators to be active.

## **2. Methods**

### **2.1. Participants**

This mixed methodology study in Gaffney and Cherokee County in South Carolina received Institutional Review Board (Limestone College) clearance. Phase I of the research study concentrated on the phenomenological, qualitative approach to gathering data through facilitated focus group discussions and took place in Cherokee County from December of 2016 to May of 2018. Adults ages 18 years and older representing 13 diverse groups from Cherokee County, South Carolina were invited to participate in this study. Informed consent was obtained from all participants. Some examples from the focus groups from Cherokee County in South Carolina included members from a United Methodist and Baptist church, the Board of Public Works, the City of Gaffney staff, Rotary Clubs, City of Gaffney firefighters and schoolteachers from a rural elementary school.

A designated contact person from each focus group received an e-mail with 3 sets of information attached to distribute to members of their respective groups. The first was a letter of information prior to the focus group discussion, which included both the inclusion and exclusion criteria. To participate in the study, the participant had to be: (1) 18 years of age or older, and (2) a member of one of the community groups in Gaffney or Cherokee County. The exclusion criteria were any health conditions that precluded a participant from exercising. The selection of participants was non-random as each contact person per focus group asked for volunteers who would be willing to express their opinions, beliefs and attitude, outlook, perceptions, and motivators regarding physical activity and exercise in order to achieve depth of understanding. The second information document highlighted sample discussion questions, and the third document was the informed consent.

### **2.2. Procedures**

#### **2.2.1. Phase I**

Focus group facilitated discussions were conducted with 175 people from South Carolina representing the various groups of participants previously identified. Focus groups included 6-15 participants and were held in the preferred meeting place for each group. Every effort was made to create a comfortable atmosphere to facilitate a relaxed discussion. Conversations were not recorded, and each participant was reassured that the discussions would be kept confidential. Participants were urged to share their experiences and articulate their feelings regarding their preferences for achieving the recommended physical activity guidelines in addition to their associations

and perceptions of exercise versus physical activity. Furthermore, their motivators to PA was discussed in a carefully guided setting with the group facilitator asking insightful questions to allow thoughts to flow freely and allow for in-depth conversation.

The focus group discussions lasted approximately 45 to 60 minutes. Participants were free to leave at any time. The same, trained investigator facilitated each focus group discussion following the same procedure. Guiding questions included: What do you think of when you hear the word exercise? What comes to your mind when you hear the words physical activity? How do you compare your perception of exercise to PA? Is PA more realistic, enjoyable, and doable to accomplish as a part of your day? What are your main motivators to be physically active? Do you think the recommended PA guidelines of 150 minutes of MVPA can be met in lifestyle PA? Further probing questions followed and were dependent upon the participants' initial responses. Overall, the conversations were navigated to explore underlying factors for the overall lack of PA or exercise found in the American adult population.

These focus group discussions were observed by a small group of university students who made notes of the conversation as well as an interpretation of what they heard. Upon completion of each focus group discussion, the students sent their typed notes to the group facilitator for thorough review. To understand the perspectives and interpret the experiences of the participants, the data were analyzed through a phenomenological approach. One by one, the group facilitator thoroughly examined all the focus group notes gathered from the student note takers as well as the facilitator notes. The aim was to identify recurring themes emphasized by the participants. These themes were then categorized under separate headings and color-coded to arrange the data. For example, an orange colored box had the title "Perceptions of Exercise," Underneath the title were listed the following comments that reflected this category: "Planned, structured, regimented," "Not rewarding, a chore," "Stress reliever," "Sweating, hard work," "I'm happy and feel like I've accomplished something afterwards," "Difficult to overcome inertia to achieve," "Rewarding and fun," "Painful, tiring, and boring," "Impractical, takes too long," "Sweating, hard work, requires maximal intensity," "Enjoyable, fun, rewarding," "150 minutes of moderate to vigorous per week." Other color-coded boxes were added including "Perceptions of Physical Activity," "Peoples' Preferences for Physical Activity," and "Motivators to PA" along with the corresponding comments.

From the feedback given in phase I of the study, it became clear that even though many participants were cognizant of the benefits of exercise, from a practical and realistic standpoint, lifestyle PA was preferred. Many associated exercise with being planned, structured and regimented, a stress reliever, and a feeling of contentment and accomplishment afterwards. Activities such as walking, taking the stairs, gardening, washing the car, housework, shoveling snow and yard work was associated with physical activity. In addition, numerous women related to playing with children and walking the dog to physical activity. Better health, feeling good and happier

afterwards and losing and maintaining weight were the main motivators expressed to partake in PA.

**2.2.2. Phase II**

Using the themes that emerged from the focus group interviews, a research-generated survey was created to validate and quantify what was heard in phase I. With this purpose in mind, common themes and trends that emerged regarding PA, exercise and motivators from the focus group interviews were identified by two experts with backgrounds in physical activity and exercise. These themes were then used to construct a series of descriptive statements related to peoples’ preferences for PA, and the participants’ views of exercise, PA and motivators to reflect the responses from the focus group interviews. The team of skilled exercise scientists collaborated throughout the process in framing the descriptive statements to accurately assess comments from phase I while working towards unanimous consensus. Phase II of this study was cleared by the Institutional Review Board at Limestone College prior to the distribution of surveys in Cherokee County (December 2016 to May 2018).

Following another letter of invitation, informed consents from these participants were obtained. Survey administration was scheduled at a convenient time and

location suitable for each group with the objective of obtaining as many participants as possible. Participation in the focus group discussions was not required for completion of the survey. Participants were asked to complete a short demographic questionnaire including their gender, age, highest level of schooling completed, and total household income. Based on the feedback given in Phase I, participants were asked to answer i) “yes” or “no” to their preferences for PA, ii) check the descriptions that they felt most closely aligned with exercise and PA, iii) rank from one to three, with one being the most motivational, their top three motivators to be physically active or exercise. The questions presented to the participants as part of the survey are indicated in Table 1, Table 2 and Table 3.

**Table 1. Descriptors of physical activity vs. exercise. Identify whether you associate each descriptor with physical activity (PA), exercise (E) or both (PA and EX)**

<input type="checkbox"/> Enjoyable, fun, rewarding
<input type="checkbox"/> Painful, tiring, boring
<input type="checkbox"/> Planned, structured, regimented, routine, repetitive
<input type="checkbox"/> Not rewarding, an obligation, a chore
<input type="checkbox"/> Stress reliever
<input type="checkbox"/> I'm happy and feel like I've accomplished something afterwards
<input type="checkbox"/> Difficult to overcome inertia to achieve (or hard to get motivated to do)
<input type="checkbox"/> Impractical, it takes too long (drive to the gym, exercise, shower, etc.)

**Table 2. Attitudes and preferences towards physical activity and exercise**

	Yes	No
Is there a difference between physical activity and exercise?		
Do you think the Canadian/USA’s guidelines of 150 minutes of moderate to vigorous physical activity each week can be achieved by physical activity alone, or is it necessary to “exercise?”		
Would you prefer to engage in more vigorous physical activity such as energetic yard work, brisk walking or forcefully raking leaves than exercise?		
Do you think exercise has greater health benefits than physical activity?		
Is physical activity or exercise easier for you to do when it’s goal-oriented (i.e. gardening) or when there’s a destination/purpose (i.e. walking to work)?		
When you are physically active or exercise, is it important to have one or more friends or colleagues to be physically active or exercise with?		
Would you be interested in learning HOW to be more vigorously active in your everyday activities such as when walking the dog, cleaning around the house, running errands or playing with your kids?		
Is engaging in physical activity a more natural, realistic and enjoyable part of your day than exercise?		
Is moderate to vigorous physical activity easier to incorporate into your day than exercise?		

For each of the following statements, please choose either yes or no for your response.

**Table 3. What motivates YOU to be physically active? Choose 3 and rank them from 1 to 3, with 1 being the most motivational**

- Feeling good and happier afterwards
- Longevity
- Appearance
- Better health
- Losing or maintaining my weight
- Exercising with a friend or group
- Enjoying the feel of being physically active
- Seeing the rewards physically
- It is part of my job (i.e. if one is physically active at work)
- Personally impacted by negative consequences of health
- Other

### 3. Results

Participant characteristics (age and gender, percentage smokers, ethnicity, highest education level) are indicated in Table 4. Overall, the majority of participants were non-smoking Caucasians. Most participants had received an education level higher than high school at the time of being surveyed, although 40-45% of the males had not.

To assess the impact of education level, participants were divided into those having up to one year of college or university completed, or those beyond one year of college or university. Responses were also further divided into male and female, as well as age (18-34 and 35-64 years). Responses to survey questions pertaining to descriptors of PA and exercise, based on highest current education level are shown in Table 5. Overall, there is very good agreement between the responses of these two groups of education in terms of how strongly participants considered a particular descriptive statement to be indicative of PA, exercise, or both. Table 6 shows attitudes and preferences towards PA and exercise. Again, the responses are very similar between the two education groups. The results indicate that there is no strong influence of education level on how participants associate

various descriptors with PA and exercise, or the attitudes and preferences of participants towards engaging in movement.

Table 4. Participant Characteristics

	Female 18-34	Female 35-64	Male 18-34	Male 35-64
n	42	51	64	80
mean age, yrs.	22.8 ± 4.8	51.1 ± 7.8	24.8 ± 4.6	44.9 ± 7.1
% non-smokers	95	94	94	82
<b>Ethnicity</b>				
% Caucasian	93	76	83	92
% Black	7	24	15	5
% Latino/Hispanic	0	0	1	0
% Native	0	0	1	1
% Other	0	0	0	1
<b>Highest Level of Education</b>				
% High School	11	20	45	40
% College or University, 1 yr	40	10	15	13
% College or University, 2 yrs	13	4	13	16
% College or University, 3 yrs	5	0	11	4
% College or University, 4 yrs	26	34	13	23
% MSc	5	30	3	3
% PhD	0	2	0	1

Table 5. Responses to survey questions based on education level (≤ College Y1, ≥ College Y2), related to perceptions of physical, exercise, or both. Numbers represent the percentage of total respondents associating a given descriptive statement with PA, exercise (EX) or both

Perceptions associated with PA	Ages 18-34				Ages 35-64			
	Male ≤CY1	≥CY2	Female ≤CY1	≥CY2	Male ≤CY1	≥CY2	Female ≤CY1	≥CY2
Enjoyable, fun, rewarding	53	48	68	71	55	48	85	58
PA	19	28	18	5	18	7	0	6
EX	28	24	14	24	26	44	15	36
Both								
<b>Perceptions associated with EX</b>								
Painful, tiring, boring	31	29	14	0	24	20	0	10
PA	69	63	73	82	59	68	92	80
EX	0	8	14	18	18	12	8	10
Both								
Planned, structured, regimented, routine, repetitive	16	8	5	10	15	14	15	12
PA	75	88	95	85	79	77	62	82
EX	9	4	0	5	5	9	23	6
Both								
Hard to get motivated to do	21	24	18	20	20	5	17	12
PA	79	76	77	75	69	62	83	82
EX	0	0	5	5	11	32	0	6
Both								
Impractical, it takes too long	24	21	9	16	29	13	17	10
PA	76	71	91	74	65	77	83	90
EX	0	8	0	10	6	10	0	0
Both								
<b>Perceptions associated with either PA or EX</b>								
Not rewarding, obligation, a chore	64	56	52	67	44	50	20	28
PA	32	44	43	28	47	37	70	69
EX	4	0	5	5	9	13	10	3
Both								
Stress reliever	29	32	36	30	42	35	36	35
PA	52	56	41	55	33	23	50	38
EX	19	12	23	15	25	42	14	26
Both								
I'm happy and feel like I've accomplished something afterwards	32	36	27	58	50	37	23	30
PA	35	44	59	11	21	16	54	48
EX	32	20	14		29	47	23	21
Both								

Male: ages 18-34, n = 28-48; ages 35-64, n = 31-44; Female: ages 18-34, n = 21-22; ages 35-64, n = 10-34.

**Table 6. Responses to survey questions based on education level ( $\leq$  College Y1,  $\geq$  CY2), related to attitudes and preferences towards physical activity and exercise. Numbers represent the percentage of total respondents answering “Yes” to the question**

	<b>Ages 18-34</b>	<b>Ages 35-64</b>
Is there a difference between physical activity and exercise?	Male $\leq$ CY1, 81% $\geq$ CY2, 85% Female $\leq$ CY1, 74% $\geq$ CY2, 65%	Male $\leq$ CY1, 84% $\geq$ CY2, 78% Female $\leq$ CY1, 79% $\geq$ CY2, 77%
Do you think the USA’s guidelines for physical activity can be achieved by physical activity alone?	Male $\leq$ CY1, 67% $\geq$ CY2, 69% Female $\leq$ CY1 77% $\geq$ CY2, 65%	Male $\leq$ CY1, 67% $\geq$ CY2, 70% Female $\leq$ CY1, 57% $\geq$ CY2, 63%
Would you prefer to engage in more vigorous physical activity such as energetic yard work, brisk walking or forcefully raking leaves than exercise?	Male $\leq$ CY1, 75% $\geq$ CY2, 58% Female $\leq$ CY1 52% $\geq$ CY2, 58%	Male $\leq$ CY1, 63% $\geq$ CY2, 67% Female $\leq$ CY1, 79% $\geq$ CY2, 66%
Do you think exercise is better for you than physical activity?	Male $\leq$ CY1, 64% $\geq$ CY2, 62% Female $\leq$ CY1 45% $\geq$ CY2, 55%	Male $\leq$ CY1, 63% $\geq$ CY2, 70% Female $\leq$ CY1, 56% $\geq$ CY2, 66%
Is physical activity or exercise easier for you to do when it’s goal-oriented (i.e. gardening) or when there’s a destination/purpose (i.e. walking to work)?	Male $\leq$ CY1, 78% $\geq$ CY2, 88% Female $\leq$ CY1, 100% $\geq$ CY2, 90%	Male $\leq$ CY1, 79% $\geq$ CY2, 89% Female $\leq$ CY1 73% $\geq$ CY2 90%
When you are physically active, is it important to have one or more friends or colleagues to be physically active with?	Male $\leq$ CY1, 66% $\geq$ CY2, 85% Female $\leq$ CY1, 70% $\geq$ CY2, 45%	Male $\leq$ CY1, 56% $\geq$ CY2, 52% Female $\leq$ CY1, 57% $\geq$ CY2, 71%
Would you be interested in learning HOW to be more vigorously active in your everyday activities such as when walking the dog, shoveling snow or playing with your kids?	Male $\leq$ CY1, 51% $\geq$ CY2, 50% Female $\leq$ CY1, 55% $\geq$ CY2, 55%	Male $\leq$ CY1, 40% $\geq$ CY2, 54% Female $\leq$ CY1, 60% $\geq$ CY2, 74%
Is engaging in physical activity a more natural, realistic and enjoyable part of your day than exercise?	Male $\leq$ CY1, 78% $\geq$ CY2, 77% Female $\leq$ CY1, 82% $\geq$ CY2, 85%	Male $\leq$ CY1, 84% $\geq$ CY2, 82% Female $\leq$ CY1 86% $\geq$ CY2 90%
Is moderate to vigorous physical activity easier to incorporate into your day than exercise?	Male $\leq$ CY1, 72% $\geq$ CY2, 77% Female $\leq$ CY1, 61% $\geq$ CY2, 68%	Male $\leq$ CY1, 86% $\geq$ CY2, 74% Female $\leq$ CY1, 73% $\geq$ CY2, 82%

Male: ages 18-34, n = 35-37; ages 35-64, n = 42-46; Female: ages 18-34, n =; ages 35-64, n = 14-35.

The results presented in [Table 7](#) and [Table 8](#) show the same responses (association of descriptors with PA, exercise or both, and attitudes and preferences towards movement), based on household income. In order to assess the impact of income, an annual household income of \$50K was set as an arbitrary division. Overall, the responses in the two tiers of income are strikingly similar. The only notable exception is the response of young

(18-34-year-old) females earning less than \$50K per year, to the statement “Would you be interested in learning HOW to be more vigorously active in your everyday activities such as when walking the dog, shoveling snow or playing with your kids?” Only 8% answered “yes”, which is in stark contrast to the other female groups (65 to 80%), as well as the males (44 to 53%), that answered in the affirmative.

**Table 7. Responses to survey questions based on household income level (< \$50K, > \$50K), related to perceptions of physical, exercise, or both**

	<b>Male</b> <b>18-34 yrs</b> <i>n=30-31</i> <i>n=23-30</i>	<b>35-64 yrs</b> <i>n=13</i> <i>n=48-57</i>	<b>Female</b> <b>18-34 yrs</b> <i>n=10-11</i> <i>n=10</i>	<b>35-64 yrs</b> <i>n=12-16</i> <i>n=26-30</i>
<b>Perceptions associated with PA</b>				
D1. Enjoyable, fun, rewarding				
PA	<i>48 42</i>	<i>76 51</i>	<i>82 60</i>	<i>80 55</i>
EX	<i>19 19</i>	<i>15 11</i>	<i>9 10</i>	<i>13 0</i>
Both	<i>32 14</i>	<i>8 38</i>	<i>9 30</i>	<i>7 45</i>
<b>Perceptions associated with EX</b>				
D4. Painful, tiring, boring				
PA	<i>36 30</i>	<i>31 20</i>	<i>0 10</i>	<i>8 11</i>
EX	<i>57 70</i>	<i>61 63</i>	<i>90 80</i>	<i>85 79</i>
Both	<i>7 0</i>	<i>8 18</i>	<i>10 10</i>	<i>8 11</i>
D8. Planned, structured, regimented, routine, repetitive				
PA	<i>13 17</i>	<i>23 14</i>	<i>0 0</i>	<i>26 7</i>
EX	<i>84 71</i>	<i>69 79</i>	<i>91 100</i>	<i>60 83</i>
Both	<i>3 12</i>	<i>8 7</i>	<i>9 0</i>	<i>15 10</i>
D16. Hard to get motivated to do				
PA	<i>25 17</i>	<i>15 10</i>	<i>18 20</i>	<i>36 7</i>
EX	<i>75 83</i>	<i>69 65</i>	<i>73 70</i>	<i>64 86</i>
Both	<i>0 0</i>	<i>15 25</i>	<i>9 10</i>	<i>0 7</i>
D18. Impractical, it takes too long				
PA	<i>30 12</i>	<i>31 17</i>	<i>18 10</i>	<i>29 4</i>
EX	<i>67 83</i>	<i>61 75</i>	<i>73 90</i>	<i>71 96</i>
Both	<i>4 4</i>	<i>8 8</i>	<i>9 0</i>	<i>0 0</i>
<b>Perceptions associated with Either PA or EX</b>				
D10. Not rewarding, obligation, a chore				
PA	<i>63 67</i>	<i>62 44</i>	<i>64 67</i>	<i>17 30</i>
EX	<i>33 33</i>	<i>38 42</i>	<i>36 33</i>	<i>83 62</i>
Both	<i>4 0</i>	<i>0 15</i>	<i>0 0</i>	<i>0 8</i>
D11. Stress reliever				
PA	<i>30 29</i>	<i>46 38</i>	<i>27 30</i>	<i>31 37</i>
EX	<i>53 54</i>	<i>46 23</i>	<i>55 40</i>	<i>62 30</i>
Both	<i>17 17</i>	<i>8 39</i>	<i>18 30</i>	<i>7 33</i>
D14. I'm happy and feel like I've accomplished something afterwards				
PA	<i>32 30</i>	<i>46 45</i>	<i>36 30</i>	<i>47 13</i>
EX	<i>45 35</i>	<i>31 15</i>	<i>45 50</i>	<i>47 57</i>
Both	<i>23 35</i>	<i>23 40</i>	<i>18 20</i>	<i>7 30</i>

Numbers represent the percentage of total respondents associating a given descriptive statement with PA, exercise (EX) or both. The first number in each column (italicized) represents <\$50K, and the second number represents >\$50K.

**Table 8. Responses to survey questions based on income level (< 50K, > 50K), related to physical activity and exercise**

	<b>Male</b>		<b>Female</b>	
	<b>&lt;50K</b>	<b>&gt;50K</b>	<b>&lt;50K</b>	<b>&gt;50K</b>
<i>n (18-34 years old)</i>	<i>31-32</i>	<i>27-28</i>	<i>12</i>	<i>9-10</i>
<i>n (35-64 years old)</i>	<i>17</i>	<i>57-58</i>	<i>15-18</i>	<i>31-32</i>
Is there a difference between physical activity and exercise?	<i>82%</i> <i>71%</i>	<i>75%</i> <i>81%</i>	<i>50%</i> <i>75%</i>	<i>80%</i> <i>72%</i>
Do you think the USA's guidelines for physical activity can be achieved by physical activity alone?	<i>69%</i> <i>88%</i>	<i>59%</i> <i>62%</i>	<i>58%</i> <i>53%</i>	<i>78%</i> <i>58%</i>
Would you prefer to engage in more vigorous physical activity such as energetic yard work, brisk walking or forcefully raking leaves than exercise?	<i>58%</i> <i>59%</i>	<i>71%</i> <i>65%</i>	<i>58%</i> <i>71%</i>	<i>67%</i> <i>71%</i>
Do you think exercise is better for you than physical activity?	<i>65%</i> <i>65%</i>	<i>67%</i> <i>67%</i>	<i>42%</i> <i>67%</i>	<i>67%</i> <i>59%</i>
Is physical activity or exercise easier for you to do when it's goal-oriented (i.e. gardening) or when there's a destination/purpose (i.e. walking to work)?	<i>78%</i> <i>76%</i>	<i>89%</i> <i>88%</i>	<i>100%</i> <i>82%</i>	<i>100%</i> <i>87%</i>
When you are physically active, is it important to have one or more friends or colleagues to be physically active with?	<i>68%</i> <i>53%</i>	<i>78%</i> <i>53%</i>	<i>67%</i> <i>67%</i>	<i>60%</i> <i>59%</i>
Would you be interested in learning HOW to be more vigorously active in your everyday activities such as when walking the dog, shoveling snow or playing with your kids?	<i>44%</i> <i>53%</i>	<i>54%</i> <i>48%</i>	<i>8%</i> <i>65%</i>	<i>80%</i> <i>72%</i>
Is engaging in physical activity a more natural, realistic and enjoyable part of your day than exercise?	<i>81%</i> <i>94%</i>	<i>75%</i> <i>81%</i>	<i>92%</i> <i>81%</i>	<i>90%</i> <i>90%</i>

Numbers represent the percentage of total respondents answering "Yes" to the question. The first row in each column (italicized) represents 18-34-year olds, and the second row represents 34-65 year olds.

**Table 9. Top 3 motivators based on education level. Numbers represent the percentage of total respondents indicating a given motivator as their first, second or third choice**

Motivator Rank	Male 18-3 yrs ≤CY1 n=35-36	Male 18-34 yrs ≥CY2 n=26	Female 18-34 yrs ≤CY1 n=21	Female 18-34 yrs ≥CY2 n=17
1	1 (22%)	3 (19%)	1 (24%)	4 (35%)
2	4 (22%)	8 (19%)	3 (33%)	3 (29%)
3	4, 5 (19%)	4 (23%)	1 (33%)	1 (41%)
Motivator Rank	Male 35-64 yrs ≤CY1 n=42-43	Male 35-64 yrs ≥CY2 n=44	Female 35-64 yrs ≤CY1 n=14	Female 35-64 yrs ≥CY2 n=32
1	4 (40%)	4 (39%)	1 (36%)	4 (56%)
2	4 (26%)	4 (25%)	3, 4 (21%)	5 (25%)
3	1 (17%)	3 (20%)	4 (29%)	3 (25%)

**Motivator Codes:**

1. Feeling good and happier afterwards
3. Appearance
4. Better health
5. Losing or maintaining my weight
8. Seeing the rewards physically.

**Table 10. Top 3 motivators based on income level. Numbers represent the percentage of total respondents indicating a given motivator as their first, second or third choice**

Motivator Rank	Male 18-34 yrs ≤50K n=30-31	Male 18-34 yrs ≥50K n=28	Female 18-34 yrs ≤50K n=12	Female 18-34 yrs ≥50K n=10
1	4 (19%)	1, 3 (21%)	1, 3, 4 (17%)	4 (40%)
2	4, 5 (20%)	8 (21%)	4 (25%)	3 (60%)
3	4 (23%)	1 (25%)	1 (33%)	1 (30%)
Motivator Rank	Male 35-64 yrs ≤50K n=15-16	Male 35-64 yrs ≥50K n=57	Female 35-64 yrs ≤50K n=15	Female 35-64 yrs ≥50K n=29
1	1, 4 (31%)	4 (40%)	1, 5 (33%)	4 (52%)
2	4 (25%)	4 (25%)	1 (27%)	5 (24%)
3	4 (20%)	3 (19%)	4 (33%)	5 (28%)

**Motivator Codes:**

1. Feeling good and happier afterwards
3. Appearance
4. Better health
5. Losing or maintaining my weight
8. Seeing the rewards physically.

The results in Table 9 and Table 10 indicate the top 3 ranked motivators for being physically active, based on education level and household income. Although some differences do exist between the education and income groups, the motivators “feeling good and happier afterwards”, “better health”, “losing or maintaining weight” and “appearance” are consistently ranked within the top 3. Interestingly, “seeing the rewards physically” was ranked within the top 3 motivators in the 18-34-year-old males in both the more highly educated and higher earning groups. This was not seen in the middle-aged males, or any of the female groups.

### 4. Discussion

The results of this study indicated there was no significant influence of education level or total household income on peoples’ preferences for PA, perceptions associated with PA and exercise and chief motivators to PA. Although socioeconomic status and education can impact one’s participation level in PA [6,13,14,15,16], in this case,

there was no indication participants differed in their responses regardless of the education and income background. It is empowering to find common ground in communities when it comes to peoples’ preferences to want to engage more enthusiastically in lifestyle PA such as energetic yard work, brisk walking, raking leaves and gardening [18,19,20,21,22]. Furthermore, the American PA guidelines can be met while engaging in day to day responsibilities and tasks, at work, and through active transportation [23,24,25,26,27,28,29,30,31].

It is our belief that strong consideration should be given to a more grounded, realistic, natural approach to a physically active lifestyle because of the shared inclinations of peoples’ association with PA and exercise. Exercise does require a planned, structured approach to be successful. Preparation in advance is necessary to carve out the time to participate in organized PA. It makes sense that most people choose to engage in PA without having to take time out of their busy day to move moderately to vigorously to satisfy the requirement of being physically active. Knowing this fact, why is the American society focused mostly on exercise as a way of moving instead of lifestyle PA? One can

exercise every major muscle group by using one's own body during the day. Muscular endurance strengthening activities can be achieved anywhere while carrying heavy bags or boxes of groceries, for example.

In addition, regardless of income and education, there was strong agreement among the South Carolinians revealing that partaking in PA is a more natural, realistic, and enjoyable part of one's day than exercise and that PA is easier to incorporate into the day than exercise, especially when it's goal-oriented such as walking to work, shoveling snow, cleaning windows, and carrying heavy bags of groceries into the house. Given the consistent perception associating exercise with being "painful, tiring, boring, planned, structured, regimented, routine, repetitive, hard to get motivated to do, and impractical, takes too long", promoting a "one size fits all" narrative is a mistake to motivate people to engage in PA. There is a need for more advertising images to reflect lifestyle daily PA, highlighting the health benefits of what is accomplished on a daily basis for all populations.

Despite the income and education barriers that can decrease PA levels in communities, there is generally a synchronized perception of PA and exercise, peoples' preferences for PA and motivators to be physically active. Previous studies have linked the less educated and a low working income with lower success rate at implementing and maintaining healthy lifestyle habits [32]. However, in our study, the majority of South Carolinian adults regardless of education and income level, have similar preferences and associations with physical activity as well as what motivates them to be physically active. Therefore, health and medical professionals should not assume there are major differences across various populations in how they promote, motivate, and educate communities to be more physically active to meet the American PA guidelines. Although more ethnic groups need to be investigated regarding their relationship with PA and exercise, the vast majority of the male and female responses from South Carolina were similar and consistent.

Lastly, income and formal education did not significantly impact the top 3 motivators to be physically active which included "better health, feeling good and happier afterwards, losing and maintaining weight, and appearance" among male and female adults in South Carolina. These results indicate the importance of the affective benefit of PA and that many adults value "feeling good" as a part of the PA experience. As specified by most South Carolina adults, PA should be enjoyable, fun and rewarding to encourage people to connect in a more meaningful, pleasurable way with human movement. As a result, more intervention strategies should aim to endorse adults to not just dabble in lifestyle PA but strive to go "all in" to be lifestyle physically active, no matter the population, household, or educational background of the individual. Regardless, it is vital people like and embrace their PA choices so that they will want to choose to participate in PA instead of feeling like their only option is to partake in an exercise regimen. In addition to feeling good and happier afterwards, this study found that losing and maintaining weight can also be an affective motivator for all adults, no matter one's socio-economic status and educational achievement. Feeling your best can directly make any person feel better

about themselves and even foster higher levels of self-esteem leading to a greater self-efficacy ultimately leading to greater PA adherence [33,34,35].

Most people, regardless of education and income level, prefer lifestyle PA [36,37,38,39] over more traditional exercises. If one of the US objectives is to increase PA adherence, then there must be more emphasis on the pure enjoyment of the PA process as specified by the top 3 motivators ranked by the survey respondents. Lifestyle PA can be fun and rewarding for all! Unfortunately, so many people find exercise to be difficult to enjoy and challenging to face every day. Furthermore, more education informing the public of the benefits of lifestyle PA [18,20,22,26,27,30,40], and consistently connecting pleasant, fun and healthy PA images, educates and motivates the public to live a more realistic, natural and enjoyable physically active lifestyle as a way of meeting our PA guidelines. Consequently, understanding the environment and how a setting influences PA habits [41] may be more of where the challenge lies to encourage more people to be physically active [42].

## 5. Conclusion

Regardless of one's background, it is imperative that health professionals, the medical community and professors recognize the importance of connecting to peoples' preferences to lifestyle PA. In the end, most people prefer lifestyle PA. As a result, more emphasis needs to be placed on encouraging all people to be active in and around their home, neighborhood and community for a healthier body and mind. In addition, although most people appreciate and acknowledge the health benefits of exercise, its' structured, deliberate, scheduled, intentional way of moving can be a mental roadblock for many and deter them from adhering to PA in the long run. Rather than preaching a narrow agenda of a "one size fits all" approach, the time, energy, effort and resources should be spent encouraging people to discover their meaningful, enjoyable, fun, rewarding PA that can bring a unique satisfaction to each and every person. No matter the personal history, social class or upbringing of a person, customizing PA to suit the needs of each and every individual will allow for a greater opportunity to be physically active for a lifetime.

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## Statement of Competing Interests

The authors have no competing interests.

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