# ADDRESSING THE CORONAVIRUS IN THE LONG-TERM: THE PERCEPTION OF FACTORS THAT PREVENT THE SPREAD AND PHYSICAL ACTIVITY IN OLDER AND YOUNGER CONSUMERS

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# ABSTRACT

This study examines the differences between older and younger consumers regarding the perception of prevention measures for the Coronavirus (COVID-19) and the increase in physical activity as a result of the Coronavirus Pandemic. A questionnaire was administered to over 600 respondents, which recorded basic demographics and then asked psychographic questions using various scales, several of which were developed for this study. Analysis of variance (ANOVA) was used to compare the two groups. Implications for policymakers and health and fitness marketers were discussed.

**Keywords**: Coronavirus, Risk Factors, Physical Activity, Older Consumers, Younger Consumers Funding for this research was provided by a Steele Foundation Summer Grant.

#### **INTRODUCTION**

In 2020, a new acute viral respiratory infection (ARI), known as Coronavirus Disease 2019, or COVID-19, became an international pandemic. About 80% of cases are asymptomatic or with mild symptoms, the remaining cases can be severe and may result in death (Silveira, Silva Fagundes, Bizuti, Starck, Rossi, & Silva, 2020). As consumers deal with variants of the Coronavirus, it appears that the virus is not going to be eradicated from the marketplace. And although anyone can be infected with the virus, typical characteristics or higher risk candidates for infection have been identified: older consumers, those with hypertension, diabetes, cardiovascular disease, respiratory disease (Jimenez-Pavon & Carbonell-Baeza, 2020) and/or a compromised immune system (Ranasinghe, Ozemek, & Arena, 2020).

Major tactics that are recommended to minimize the spread of the virus include the following: social/physical distancing, testing, monitoring, isolation or quarantining, contact tracing, hygiene, and strengthening the immune system (Ranasinghe, Ozemek, & Arena, 2020).

A quarantine for those with significant symptoms of the Coronavirus may result in a major change in lifestyle, including a reduction in the level of physical activity (PA).

Recommendations of social isolation have reduced physical exercise patterns, increasing a sedentary lifestyle. This resulting reduction in physical activity can also exacerbate the likelihood of a more severe case of the virus. Although exercise may be a deterrent to the Coronavirus, or at the very least a way to lessen its severity, many consumers may not be aware of its benefit.

#### **Purpose of the Study**

The purpose of the study is to assess the perception of the importance of risk-reducing precautions for COVID-19 as well as the value of physical activity between older consumers (Matures, Baby Boomers, and Generation X) and younger consumers (Generation Y and Generation Z) in the United States. Since older consumers are more vulnerable to the virus, it is especially important for them to engage in physical activity to address the Coronavirus over the long term. The results of the study may be significant for policymakers and health and fitness marketers as they implement their promotional strategies.

## LITERATURE REVIEW

#### **Factors Preventing Coronavirus**

Cvirik (2020) found that health consciousness increased greatly during the Pandemic. Notably, the media have facilitated this increase with an overwhelming amount of information concerning the prevention, health, and management of this virus. Medical professionals concur that prevention and health consciousness are very important. Ferdous, Islam, Sikder, Mosaddek, & Zegarra-Valdivia (2020) found that prevention demographic factors included the following: female gender, older age, higher education, greater family incomes, and urban area residences. Cvirik (2020) also concluded in two phases of her research that older consumers are more health-conscious than younger consumers and that this increased level of consumer health consciousness has minimized the impact of the Pandemic. Similarly, elevating attitudes and quality of life (QOL) are important for improving prevention practices during the Pandemic. A study found that older consumers had more positive attitudes than younger consumers. Furthermore, high QOL was associated with older age and higher education (Waewwab, Pan-ngum, Sukhontha, Bhopdhornangkul, & Mahikul, 2022). Based on this discussion, the following hypotheses are proposed:

H1: Older consumers are more knowledgeable about the factors that prevent the spread of Coronavirus than younger consumers.

H2: Older consumers are more knowledgeable about the physical activity risk factors for severe Coronavirus than younger consumers.

H3: Older consumers engage in more behaviors that reduce health threats compared to younger consumers.

#### **Increased Level of Physical Activity**

Just a few weeks of physical inactivity can have the following effects: increased risk of cardiovascular disease, reduced muscle mass, and changes in metabolism and the immune system, especially in older consumers (Chagas, Biteli, Candeloro, Rodrigues, & Rodrigues, 2020). The accompanying negative psychological effects may include the following: post-traumatic stress symptoms, confusion, and anger. Longer quarantine durations are associated with infection fears, frustration, boredom, inadequate supplies, inadequate information, financial loss, and stigma (Chagas et al., 2020; Jimenez-Pavon & Carbonell-Baeza, 2020). Broadly speaking, depression and anxiety are the two most common mental illnesses when life quality is threatened. Both animal studies and human clinical trials support exercise as an intervention for depression and anxiety (Fallon, 2020; Hu, Tucker, Wu, & Yang, 2020).

Generally, physical activity and exercise are effective in addressing chronic diseases, directly affecting both mental and physical health; they are recommended for a healthy lifestyle (Ranasinghe, Ozemek, & Arena, 2020). Systematic physical exercise has a positive effect on the immune system, reducing the risk of diseases (Chagas et al., 2020). Particularly, it can reduce the incidence, duration, and severity of upper respiratory tract infections (Fallon, 2020).

In the case of the Coronavirus, regular physical exercise can improve the immune response (Nyenhuis, Greiwe, Zeiger, Nanda, & Cooke, 2020; Silveira, Silva Fagundes, Bizuti, Starck, Rossi, & Silva, 2020) and prevent the virus from progressing to severe stages (Ranasinghe, Ozemek, & Arena, 2020). The reaction to the Coronavirus is dependent upon the host's immune system response, which is influenced by the following: genetics, age, gender, nutritional and physical status. Although challenging due to physical isolation and subsequent anxiety and stress, addressing general health via physical fitness, nutrition, sleep, and improving mental health, will boost the immune system (Ranasinghe, Ozemek, & Arena, 2020). Unfortunately, one-third of the population doesn't engage in any physical exercise. Older consumers in particular benefit in terms of many diseases, including those that impact aging (Jimenez-Pavon & Carbonell-Baeza, 2020).

There are many opportunities for engaging in exercising at home if a quarantine is in place (Jimenez-Pavon & Carbonell-Baeza, 2020). Home exercising is a good alternative to gyms and fitness centers, since many gyms are often crowded and may present opportunities for infection to be transmitted. Nyenhuis et al. (2020) discuss both major options of home gym equipment and fitness apps, which include those that require home fitness equipment (e.g., Peloton, Zwift, and Nordic Track) and those that do not require home fitness equipment. Moreover, strength, flexibility, and balance exercises can be practiced in the home and can be easily found on the internet, using body weight and commonly-found home objects (Chagas et al., 2020). Examples of home-based exercise include the following: strength workouts, stretching, yoga, dance, Pilates, and aerobics, which can be facilitated by equipment such as stairs and inclines, running machines, treadmills, exercise bikes, and running-in-place (Fallon, 2020). The

interactive platforms that are provided via the apps incorporate real-time personalized health data as well as provide a social connection with other platform users.

Since older consumers are more vulnerable to the Coronavirus, they would have the greatest benefit from increasing their level of physical activity. Ironically, older consumers are stereotypically less active as they continue to age. Therefore, the following hypothesis is proposed:

H4: Younger consumers have increased their level of physical activity as a result of the Pandemic more than older consumers.

#### **METHODOLOGY**

A primary data survey research design was used in this study. A hard-copy questionnaire was designed consisting of a cover page describing the study and compliance with Institutional Review Board (IRB) mandates. The next page contained all of the demographic questions. The remaining pages included the psychographic measures. The sample was a variation of the convenience sampling method, which has been successful in previous research studies (e.g., Jones & Reynolds, 2006). Undergraduate students at a medium-sized university were given the exercise as part of their semester course grade to administer the questionnaire to older and younger respondents. It was necessary to use this method so that an almost equal number of older and younger respondents would be in the final sample, facilitating comparisons between the two groups.

A questionnaire pretest was conducted on 61 respondents who were representative of the two age groups. As a result, no major changes were made to the questionnaire. The total number of questionnaires collected was 631. Several of these questionnaires were deleted from the dataset due to respondents who were considered to be speeders or straight-liners, i.e., providing the same response for an entire section(s) of questions. In this study, questionnaires were removed if most/all sections exhibited this characteristic. A total of 20 questionnaires were removed from the dataset. This resulted in a sample size of 611.

Next, a frequencies analysis was conducted on the dataset to check for any errors in recording values that were outside of the choices given to the respondents. One value was corrected for gender, one value was corrected for birth, one value was corrected for the first item of the socializing variable, SO1, one value was corrected for the first item of the diabetes variable, DIAB1, and one value was corrected for the first item of the increased physical activities variable, IPA1.

Based on the demographic data collected, summarized in Table 1, the typical older consumer (Matures, Baby Boomers, Generation X) in this study is female, earns over \$70,000 annually, is married, white (Caucasian), has completed a graduate degree, and works for a company or business. In contrast, the typical younger consumer (Generation Y, Generation Z) in this study is female, earns up to \$10,000 annually, is single, white (Caucasian), has completed high school, and is a student. Typical older and younger consumers engage in light physical activity daily and moderate physical activity multiple days a week. However, the typical older consumer never engages in vigorous physical activity and the typical younger consumer engages in vigorous physical activity multiple days a week.

Descriptive Information of the Sample*								
Items		Older	Consumers (n=286)	Young (n=32	ger Consumers 5)			
Gender	Male	39%	(111)	48%	(155)			
	Female	53%	(151)	49%	(159)			
Income	0-10k	1%	(3)	26%	(84)			
	10,001-30k	7%	(21)	23%	(74)			
	30,001-50k	20%	(56)	19%	(62)			
	50,001-70k	18%	(51)	7%	(23)			
	Above 70k	50%	(144)	22%	(72)			
Marital Status	Married	64%	(182)	21%	(70)			
	Single	13%	(37)	68%	(220)			
	Living with another	4%	(11)	8%	(27)			
	Widowed	3%	(10)	-0-	(0)			

TABLE 1:					
Descriptive 1	Information	of the	Sample		

	Separated	2%	(5)	<1%	(1)
	Divorced	11%	(32)	1%	(3)
	Rather not say	2%	(7)	1%	(2)
Race	White (Caucasian)	60%	(170)	53%	(171)
	African American	33%	(95)	36%	(118)
	Hispanic American	2%	(5)	5%	(17)
	Pacific Islander	1%	(4)	1%	(4)
	Asian American	2%	(5)	1%	(5)
	Native American	-0-	(0)	1%	(4)
	Other	1%	(3)	1%	(4)
Education	GED	3%	(8)	1%	(3)
Completed	High School	31%	(89)	50%	(164)
<b>F</b>	Undergraduate	17%	(50)	32%	(104)
	Graduate	25%	(70)	12%	(40)
	Professional Degree	18%	(51)	3%	(11)
	Other	5%	(13)	1%	(3)
Occupation	Student	2%	(6)	55%	(179)
	Homemaker/Not Employed	6%	(17)	1%	(2)
	Self-Employed	15%	(43)	4%	(12)
	Educator	11%	(31)	4%	(14)
	Professional	11%	(32)	6%	(21)
	Work for Company/Business	44%	(125)	28%	(90)
	Other	11%	(31)	2%	(7)
Level of Physical Activity					
Light	Never	6%	(17)	2%	(8)
8	Rarely	11%	(31)	7%	(22)
	Once a Week	13%	(36)	6%	(20)
	Multiple Days a Week	33%	(94)	38%	(125)
	Daily	36%	(103)	46%	(150)
Moderate	Never	15%	(43)	5%	(16)
	Rarely	26%	(75)	9%	(29)
	Once a Week	20%	(56)	19%	(63)
	Multiple Days a Week	28%	(79)	44%	(142)
	Daily	10%	(28)	23%	(75)
Vigorous	Never	35%	(99)	8%	(26)
1801045	Rarely	34%	(96)	23%	(74)
	Once a Week	13%	(38)	23 <i>%</i> 17%	(57)
	Multiple Days a Week	13%	(36)	37%	(37) (122)
	Daily	4%	(12)	14%	(46)
	Daily	+ /0	(12)	1 + 70	(40)

\*Percentages that do not total 100 are due to missing data (choices left blank by the respondent) and/or rounding percentages

#### Measures

# Factors that Prevent the Spread of Coronavirus

The first multiple-item measure was designed based on five factors that prevent the spread of Coronavirus: face masks, social distancing, avoiding large gatherings, socializing outdoors, and getting vaccinated ("Preventing the

spread of the Coronavirus," 2022). Each variable was represented by two items on a seven-point Likert-type strongly disagree/strongly agree scale, for a total of 10 items.

## **Risk Factors for Severe COVID-19**

The next multiple-item measure was designed based on six variables for severe COVID-19 and its variants: advanced age, gender (males), diabetes, obesity, cardiovascular disease, and lack of physical activity (Sallis, Young, Tartof, Sallis, Sall, Li, Smith, & Cohen, 2021). Each variable was represented by two items on a seven-point Likert-type strongly disagree/strongly agree scale, for a total of 12 items.

#### **Behaviors that Reduce Health Threats**

The next measure was an established scale and asked respondents to indicate their level of agreement with five issues related to reducing their health risks: reducing sodium levels, getting enough rest/sleep, regular exercise, taking health precautions now versus later, and regular physicals (Jayanti & Burns, 1998). Each of the five items was measured on a seven-point Likert-type strongly disagree/strongly agree scale.

# Increased Level of Physical Activity

The next two measures were designed for respondents to indicate their level of physical activity on three levels as defined in the questionnaire's instructions: light, moderate, and vigorous ("How physically active are you?" 2006). These three levels were described for the respondent as follows: 1) Light physical activities examples: walking leisurely, stretching, yoga, vacuuming, light yard work, 2) Moderate physical activities examples: fast walking, aerobics class, strength training, calisthenics, swimming, and 3) Vigorous physical activities examples: stair machine, jogging/running, tennis, racquetball, pickleball, badminton. Each level of this ordinal level scale was on an implied five-point scale from "never" to "daily." The results are reported in Table 1.

A second interval-level scale was designed to ask respondents if they have increased each of the three levels of physical activity. Thus, there were three items on a seven-point Likert-type strongly disagree/strongly agree scale.

## ANALYSIS AND RESULTS

Reliability coefficients were computed for each of the scales. Coefficient alphas were reported for the older and younger groups as well as the total sample. All alpha values are above the 0.70 value recommended by Nunnally (1978). Table 2 presents the reliability of the scales.

Scale/Statements	011	Coefficient Alpha	
	Older	Younger	Combined
Factors that Prevent the Spread of Coronavirus	0.95	0.94	0.94
Wearing a face mask in public indoor places reduces the			
spread of COVID.			
The number of COVID infections decreases when			
wearing a face mask in public indoor places.			
The spread of COVID is reduced by social distancing			
at least six feet.			
Social distancing at least six feet reduces the spread of			
COVID.			
Avoiding large gatherings reduces the spread of COVID.			
The number of people contracting COVID decreases by			
avoiding large gatherings.			
Socializing outdoors reduces the transmission of COVID.			
COVID infections are minimized when socializing outdoors.			
Getting vaccinated reduces the spread of COVID.			
COVID infections decrease due to vaccinations.			
Risk Factors for Severe COVID-19	0.87	0.89	0.88
Advanced age is a risk factor for severe COVID.	5401	~ • • • •	0100
Older individuals face a greater risk for severe COVID.			
Gender (male) is a risk factor for severe COVID.			

## **TABLE 2: Reliability Coefficients**

Males are at greater risk for severe COVID.

Diabetes is a risk factor for severe COVID. Diabetics have an increased risk for severe COVID. Obesity is a risk factor for severe COVID. Low body fat reduces the risk for severe COVID. Cardiovascular (heart) disease is a risk factor for severe COVID A healthy heart can reduce the risk for severe COVID. The lack of physical activity is a risk factor for severe COVID. Regular physical activity can reduce the risk for severe COVID.

Behaviors that Reduce Health Threats	0.85	0.83	0.84
I can avoid common health problems by reducing my sodium levels.			
I can stay healthy longer by getting enough rest and sleep.			
Regular exercise helps me to avoid common health problems.			
Taking care of my health now will result in fewer problems later.			
Having my physical done regularly has long-term advantages.			
Increased Level of Physical Activity	0.90	0.92	0.91
I have increased my level of light physical activities			
as a result of the Pandemic.			
I have increased my level of moderate physical activities			
as a result of the Pandemic.			
I have increased my level of vigorous physical activities			
as a result of the Pandemic.			

An exploratory factor analysis was run to identify whether the scale items build the expected constructs in support of construct validity. The suitability of the scale items for the factor analysis is determined by Kaiser-Meyer Olkin (KMO) Test and Bartlett's Test of Sphericity. The KMO Test checks the sample adequacy to conduct the factor analysis. A high value of KMO is expected, and a value below 0.5 is not acceptable. The KMO-value of the analysis is 0.849, as seen in Table 3. Barlett's Test checks scale items correlation. A high correlation among variables implies that the variables are suitable for structure detection. A significance level < 0.05 indicates that factor analysis is useful within the data. The significance value of the analysis is 0.000, as seen in Table 3. The rotated component matrix, shown in Table 3, is useful to form constructs based on the factor loadings of the variables. Loadings close to 1 indicate that the component (factor) strongly influences the variable and the highest loadings under a component constitute a construct.

TABLE 3. Factor Analysis

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KMO and Barlett's Test	
Kaiser-Meyer-Olkin Measure of Sampling Adequacy	0.853
Bartlett's Test of Sphericity	
Approx. Chi-Square	13133.640
df	325
Significance	0.000

Sig	nificance		0.00	00		
	1	2	3	4	5	6
FM1*	.799	.106	011	.330	.150	.146
FM2	.790	.119	.006	.341	.133	.127
SD1	.700	.124	006	.490	.162	.123
SD2	.694	.126	.030	.500	.164	.117
LG1	.595	.150	.040	.561	.261	.069
LG2	.592	.150	.066	.554	.229	.067
SO1	.277	.072	.220	.796	.135	.024
SO2	.292	.097	.223	.787	.106	.014
VAC1	.883	.093	.209	041	.071	.055
VAC2	.875	.106	.182	.014	.090	.033

.195

.208

.157

DIAB1

.864

.010

.142

DIAB2	.206	.164	.199	.167	.869	001
OBES1	.096	.135	.531	.053	.598	029
OBES2	.108	.019	.639	.006	.240	008
CARD1	.165	.136	.349	.158	.644	035
CARD2	.102	.084	.677	.195	.207	.001
PA1	.053	.150	.841	.096	.116	.119
PA2	.015	.167	.847	.102	.087	.100
HT1	.228	.642	.027	041	.156	.014
HT2	.045	.792	.075	.175	.133	.002
HT3	.042	.850	.112	.048	.081	.072
HT4	.021	.824	.130	.081	.019	050
HT5	.179	.730	.114	.061	.086	.055
IPA1	.174	.079	.097	.027	005	.876
IPA2	.111	.035	.045	.025	013	.946
IPA3	.056	037	.028	.061	011	.904

Extraction Method: Principal Component Analysis. Rotation Method: Varimax with Kaiser Normalization. a. Rotation converged in 12 iterations.

\*Key FM1, FM2 = face maskSD1, SD2 = social distancingLG1, LG2 = large gatheringsSO1, SO2 = socializing outdoorsVAC1, VAC2 = vaccinated DIAB1, DIAB2 = diabetes OBES1, OBES2 = obesity CARD1, CARD2 = cardiovascular disease PA1. PA2 = lack of physical activityHT1 = reducing sodium levels HT2 = rest and sleepHT3 = regular exerciseHT4 = preventive care HT5 = regular physicalsIPA1 = increased light physical activities IPA2 = increased moderate physical activities IPA3 = increased vigorous physical activities

The factor analysis provided some interesting results. First, the Factors that Prevent the Spread of Coronavirus Scale (FM, SD, LG, SO, VAC) yielded one component, with the exception of the Socializing Outdoors variable (SO), which was eliminated from further analysis. Second, factor analysis for the scale, Risk Factors for Severe COVID-19, yielded two components, each represented by the two items for the corresponding variables, Diabetes (DIAB) and Lack of Physical Activity (PA). Two other variables, Obesity (OBES) and Cardiovascular Disease (CARD), yielded cross-loadings, illustrating that each of these measures may be assessing multiple constructs. Therefore, since the Lack of Physical Activity (PA) variable was a unique component and since physical exercise was the focus of the study, it was retained for analysis as the sole variable in the Risk Factors for Severe COVID-19 Scale.

Third, the Increased Level of Physical Activity Scale (IPA1, IPA2, IPA3) yielded one component. Fourth, the Behaviors that Reduce Health Threats Scale (HT1, HT2, HT3, HT4, HT5) yielded one component. Thus, four constructs were identified.

Reliability coefficients were again calculated for the first two, revised, scales. The Factors that Prevent the Spread of Coronavirus Scale, with the elimination of the two-item Socializing Outdoors variables, yielded a coefficient alpha value of 0.94 with the remaining eight items. The Risk Factors for Severe COVID-19 Scale and its remaining sole variable, Lack of Physical Activity (PA), yielded a coefficient alpha value of 0.90. Both alpha values are above the 0.70 value recommended by Nunnally (1978).

Analysis of Variance (ANOVA) was conducted to determine whether there were significant mean differences between older and younger consumers in terms of the following: 1) Factors that Prevent the Spread of Coronavirus, 2) Risk Factors for Severe COVID-19, 3) Behaviors that Reduce Health Threats, and 4) Increased Level of Physical Activity. Table 4 presents the results.

As shown in Table 4, there are significant differences in Factors that Prevent the Spread of Coronavirus. There are significant differences in Increased Level of Physical Activity, providing support for Hypothesis 4. As a result of the Pandemic, younger consumers have increased their light, moderate, and vigorous physical activities significantly more than older consumers.

Constructs	Group	n	Mean	Std. Dev.	Sig.
H1: Factors that prevent the spread of	Older	282	5.04	1.75	0.11
Coronavirus	Younger	316	4.82	1.59	
H2: Risk factors for severe COVID-19	Older	283	4.58	1.70	0.49
	Younger	325	4.67	1.71	
H3: Behaviors that reduce health	Older	284	5.91	1.07	0.21
threats	Younger	325	5.80	1.08	
H4: Increased level of physical	Older	283	2.82	1.76	0.01*
activity	Younger	324	3.22	1.99	

#### TABLE 4: ANOVA

\*p = 0.01

NOTE: The two-item Socializing Outdoors (SO) variable was omitted from the Factors that Prevent the Spread of Coronavirus Scale. The two-item Lack of Physical Activity (PA) variable was the sole variable analyzed from the Risk Factors for Severe COVID-19 Scale.

# LIMITATIONS AND DIRECTIONS FOR FUTURE RESEARCH

There were several limitations and directions for future research that should be noted. First, although the subjects were selected randomly, the method was a variation of simple random sampling and convenience sampling. Future studies may consider other types of sampling. Second, the factor analysis for the Risk Factors for Severe COVID-19 Scale resulted in two components and cross-loadings, indicating that the selected component may or may not be indicative of Risk Factors for Severe COVID-19. Therefore, caution must be used when drawing any conclusions about the component used in the analysis, Lack of Physical Activity. Finally, future research can utilize the Factors that Prevent the Spread of Coronavirus scale and the Increased Level of Physical Activity scale to test their effectiveness in other contexts. A scale's validity and usefulness are demonstrated as it continues to be used over time.

# DISCUSSION

This study has theoretical and practical contributions. This study attempted to contribute to marketing theory via the development of scales that are relevant to the Coronavirus Pandemic. Item generation was based on the recent literature, then the items were assessed for content validity, and then exploratory factor analysis was conducted to assess construct validity and to determine which scale items were ultimately retained for analysis (Morgado, Meireles, Neves, Amaral, & Ferreira, 2017).

From a practical perspective, some irony accompanies the results of this study. Older consumers realize the importance of practices to prevent the spread of Coronavirus, yet they have not increased their level of physical activity as greatly as younger consumers. As discussed, increasing the level of physical activity is important for the prevention, or reduction of the severity, of most illnesses, including COVID-19. Furthermore, physical activity is more important for older consumers, since they are more vulnerable to the effects of the Coronavirus. Ideally, older consumers should be increasing their physical activity significantly more than younger consumers as a result of the Pandemic. The opposite finding occurred here.

This finding can be reconciled by understanding that many older consumers have mobility challenges, which may inhibit their ability to be physically active (Lim & Kim, 2011). As a result, older people are less inclined to do physical activities (Amatulli, Peluso, Guido, & Yoon, 2018). Therefore, this is the challenge for health and fitness marketing practitioners: The importance of physical activity must be stressed in promoting fitness equipment and exercise

programs that can accommodate the physical limitations of older consumers. Furthermore, marketers need to communicate to older consumers the critical importance of staying physically active, even increasing their physical activities, as they age.

In conclusion, Ranasinghe, Ozemek, and Arena (2020) state that "promoting physical activity has never been more critical" (p. 1196). Public health agencies, such as the CDC, in conjunction with health and fitness marketers, can promote the value of increased physical activity; this activity can include a basic home exercise routine requiring little or no equipment, a health club membership, or a major investment in a home gym.

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