

# DEVELOPING A “TAILOR-MADE” PRECISION LIFESTYLE MEDICINE INTERVENTION FOR WEIGHT CONTROL AMONG MIDDLE-AGED LATINO MEN

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**Objective:** To identify what is important to middle-aged Latino men and their personal goals and values as foundations for a future precision lifestyle medicine intervention that is rooted in Self-Determination Theory.

**Design:** We used a phenomenological, thematic approach to analyze data from 20 semi-structured, individual interviews with Latino men aged 35-60 years.

**Setting:** Community-based settings between November 2017 and May 2018 in South Florida.

**Participants:** Latino or Hispanic men who were aged 35-60 years. The mean age of the men was 49.8 years.

**Results:** Two key themes emerged: a) the characteristics that these men say define what it means to be a man; and b) the characteristics that these men say define what is important to them. “What defines a man” includes three primary subthemes: a) the attributes, characteristics and behaviors that participants understood to be ideals that a man should embody and the roles he should fulfill; b) lessons learned growing up about what it means to be a man; and c) how Latino men relate to the ideal of machismo. “What defines me” includes the subthemes: a) comparing themselves with the ideal of machismo; b) caring for family and others; and c) supporting and modeling positive behavior for their children.

**Conclusions:** We found key candidate mechanisms that may be novel yet critical foundations on which to build a precision lifestyle medicine intervention for Latino men. We identified actionable psychosocial factors that map onto motivational constructs that can shape behaviors that are essential for weight control and be a

## INTRODUCTION

While some have incorrectly equated and limited precision medicine to genes, drugs and disease,<sup>1</sup> precision medicine also includes population and lifestyle approaches to improving health.<sup>2,3</sup> Precision lifestyle medicine – the ability to tailor interventions to baseline participant characteristics – is fundamental to efforts to prevent and control chronic conditions, improve population health, and eliminate health disparities.<sup>3</sup> Precision lifestyle interventions build on principles of individual tailoring that have existed for decades,<sup>4,5</sup> but neither approach has been applied to Latino men. This article describes formative research that informs a future precision lifestyle medicine interven-

tion for middle-aged Latino men.

Latino men have higher rates of morbidity and mortality from chronic diseases, obesity and associated behaviors than White men, White women, and Latinas.<sup>6</sup> Latino men have experienced some of the largest increases in obesity rates over the past decade,<sup>7</sup> and Latino men have the highest rates of obesity among men.<sup>8</sup> Among Latino men, middle-aged men have the highest rates of obesity.<sup>9</sup> While there are a number of successful interventions to change eating practices and physical activity, few of them have considered the unique psychosocial contexts and life priorities of Latino men.<sup>10</sup> Research on Latino men’s health may be limited because it has ignored social and contextual factors that uniquely affect Latino men.<sup>6,11</sup>

useful foundation for improving the health of middle-aged Latino men. *Ethn Dis.* 2020;30(Suppl 1):203-210; doi:10.18865/ed.30.S1.203

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While structural models of masculinities<sup>12</sup> are essential to understanding how gender operates and how men “perform” gender in relation to health,<sup>13</sup> there is a need for micro-level detail to complement these macro-structural relations<sup>14,15</sup> if the goal is to develop interventions that are congruent with the individual identities, needs, beliefs and values of specific groups of men. Consistent with the recommendations of the NIH Science of Behavior Change Program, Self-Determination Theory<sup>16</sup> provides

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an important theoretical foundation for developing mechanism-focused experimental approaches to behavior change research.<sup>3</sup> Self-Determination Theory posits that autonomous regulation, which comprises identification (behaviors are performed because they are important to them) and integration (behaviors are performed because they are consistent with personal goals and values),<sup>17</sup> results in intrinsically motivated maintenance of health behavior change. These concepts reflect fundamental human needs that are useful potential

mechanistic foundations on which to build person-specific interventions.

In this article, we explore a) what characteristics middle-aged Latino men say define what it means to be a man, and b) what characteristics middle-aged Latino men say define what is important to them. Responses to the former research question (What defines a man?) help to identify foundations of identification and responses to the latter research question (What defines me?) help to identify determinants of integration from Self-Determination Theory. Answering these research questions will help us identify traits and characteristics that are most meaningful to Latino men in ways that can be the foundation of a precision lifestyle medicine intervention.

## METHODS

### Setting

We conducted this study in community locations around South Florida (Miami, South Miami, Hialeah) between November 2017 and May 2018. Latinos, approximately 68.6% of the population of Miami-Dade County,<sup>18</sup> have increased morbidity rates from diseases associated with poor health behaviors such as lack of physical activity and unhealthy eating practices related to type 2 diabetes, certain cancers (lung, prostate and colorectal) and heart disease.

### Recruitment and Participants

We used convenience sampling to recruit Latino men via word of mouth, flyers, and through staff and partner organization social networks. Men were eligible to participate if

they: 1) self-identified as Latino; 2) were between the ages of 35-64 at enrollment; and 3) did not identify any cognitive or physical health issues that limit their ability to engage in regular moderate or vigorous physical activity. Twenty men completed interviews.

Table 1 summarizes the demographic and health characteristics of participants. The average age of participants was 49.8 years. Approximately two-thirds (65%) of the men were married, and one-fourth of the men made <\$35,000/year. Almost half (45%) of participants reported being of Cuban heritage, and the other half of participants noted connections and roots in other Spanish, Hispanic or Latino countries or subcultures. All procedures were in accordance with the ethical standards of the responsible committee on human experimentation (institutional and national) and with the Helsinki Declaration of 1975, as revised in 2000. Informed consent was obtained from all participants included in the study.

### Data Collection

Prior to data collection, eligible and willing participants took part in a written informed consent process that was approved by the University of Miami institutional review board. Study staff who were trained in community-based and qualitative research carefully explained all study procedures and facilitated 20 individual interviews. All interviews were conducted by a woman in the participant's preferred language of English or Spanish; 70% were conducted in Spanish and the remaining 30% were conducted in English.

The semi-structured, in-depth

individual-interview protocol was designed using a phenomenological approach, which is appropriate when the goal is to explore the meanings and perspectives of individuals who have experienced the phenomenon of interest and asks them to describe the topic of interest in the context of their everyday lived experience. This process enables the researchers to develop a composite description of “what” and “how” people experience a particular phenomenon.<sup>19</sup> The interview process lasted approximately 1.5 hours and included completion of the informed consent process, a demographic survey (which captured the information reported in Table 1 such as age and ethnic heritage), the individual interview (which took about 60 minutes), and the paperwork to document and distribute the incentive of \$40 for interview participation.

### Data Analysis

We digitally recorded, transcribed verbatim, and, if necessary, translated interviews into English for analysis. We used a thematic approach,<sup>20</sup> similar to the methods previously used by the research team for analysis of qualitative interview data.<sup>15,21-23</sup> This approach allows for the researchers to identify, analyze and report themes and classifications that relate to the data and helps to discover, organize and describe interpretations of the data.<sup>24</sup> A researcher trained in qualitative data analysis reviewed the transcripts to check for accuracy, familiarized herself with the transcripts and developed the codebook by revising and expanding one that was used in a prior, similar study. After developing the

**Table 1. Selected characteristics of study participants**

Demographic Characteristics	%	N
Latino men	100%	20
Ethnic heritage		
Cuban	45%	9
Puerto Rican	5%	1
South/Central America (Venezuela, Colombia)	20%	4
Other Spanish, Hispanic, Latino (Peru, Chile, Honduras)	30%	6
Primary language spoken at home		
English	30%	6
Spanish	70%	14
Average age, mean yrs, range = 35-60 years	49.8	
Marital status		
Divorced or annulled	15%	3
Married	65%	13
In a relationship but not married	15%	3
Other	5%	1
Children, mean	1.8	
Income category		
Less than \$20,000	15%	3
\$20,000-\$34,999	10%	2
\$35,000-\$74,999	45%	9
over \$75,000	25%	5
Rather not say	5%	1
Education		
Some high school, no diploma	10%	2
High school graduate, diploma or equivalent (ex. GED)	20%	4
Trade/technical/vocational training	5%	1
Some college credit, no degree	20%	4
Associate's degree	10%	2
Bachelor's degree	15%	3
Master's degree	10%	2
Doctorate degree	10%	2
Employment status		
Employed, part time	5%	1
Employed, full time	75%	15
Unemployed, looking for work	10%	2
Unemployed due to illness or injury	5%	1
Retired	5%	1
Health characteristics		
Obese (body mass index $\geq$ 30)	95%	19
Average BMI (mean)	35	

codebook, we analyzed the interview data by taking these five steps: 1) organizing interview responses into a series of direct quotes that could be accurately understood outside of the context of the interview; 2) double-checking the quotes and notes; 3) coding quotes into categories; 4) combining coded restatements across

interviews and participants to form one consolidated document; and 5) reviewing the consolidated document to identify themes and sub-themes to be included in the results. We included representative quotes in this article to reflect the key themes that emerged from responses to four interview questions: 1) What de-

defines a man? 2) What did you learn growing up about being a man? 3) What characteristics are most important for you to portray to others? and 4) What characteristics are most important to how you see yourself?

## RESULTS

We found that two key themes emerged: a) the characteristics that these men say defines what it means to be a man; and b) the characteristics that these men say define what is important to them.

### What Defines a Man?

This theme – “What defines a man” – includes three primary sub-themes: a) the attributes, characteristics and behaviors that participants understood to be ideals that a man should embody and the roles he should fulfill; b) lessons learned growing up about what it means to be a man; and c) how Latino men relate to the ideal of machismo. In our study, participants spoke about innate characteristics that are reflected in behaviors or actions that demonstrate character such as being upfront, being clear and direct in communication, not being boastful, and being grounded. In addition to these intrapersonal attributes, participants talked about both *being* responsible (action that reflects deeper positive attributes) as well as having responsibility (a state or fact of *being* accountable or to blame for something). One man (age: 47, Colombian) explained, “He has to be responsible, very focused, with his feet on the ground. That is [being a] man.”

Men also indicated that accepting or fulfilling the role of protector and/or leader of the household was part of being a man. The subtheme of being a protector or leader included giving a home a firm moral foundation, being the man or center of the house, looking after the household, and directing and protecting his family. One man (age: 59, Venezuelan) stated:

“A man is the one who is determined to support a home, to give it the necessary strength, to learn to raise children and work to support them.”

The subtheme of being a provider was heavily focused on very traditional household gender roles and associated behaviors such as: working and knowing how to work; bringing home money to support the household; providing food for the family; and maintaining the household. One man (age: 40, Cuban) stated:

“Usually, a man is the center of the house; he is the one who goes out to work to make sure he can support his home financially. Being Latino, that is what my father taught me; mostly, that the dad is the one who works and mum is the one who takes care of the house and raises the children.”

A few men acknowledged that women, either in place of, or in addition to men, can serve as the provider, or center of the home. Although this was not identified by the majority of men. When talking of supporting the family, participants described ideas such as: focusing on the family; helping their wives, children and other family members;

taking care of the family; maintaining the health of the family; being an example for children and family; and showing love for the family. One man (age: 53, Nicaraguan) explained:

“Being the head of the household, being a good father, and taking care of his family not necessarily being the breadwinner or anything like that, but just taking care of his family needs and then doing the best he can to ensure that his kids and his family has everything they need.”

In talking about other ideals of what it means to be a man, participants spoke of behaviors and characteristics such as: being attracted to women; being the final decision-maker in the household; acting, walking, looking and dressing like a man; being strong; knowing how to defend oneself; and having a girlfriend. For example, one man (age: 60, Cuban) said:

“The masculine sex, a person who likes women and not anything else. A person that because of their physiognomy looks like a man, a man who dresses like a man, acts like a man, and has many jobs that are exclusively made for ... not all, but there are some [jobs] that are like that.”

These men also described traits and attributes that are congruent with more stereotypically toxic performances of masculinity and machismo that are rooted in negative characteristics such as sexism, chauvinism, aggressive behavior and strictly adhering to and enforcing traditional gender roles in households

and families. For example, a man (age: 47, Cuban) compared himself, and his perception of what it means to be a man to the way he perceives that older Hispanic men believe in and perform masculinities. He said,

“As far as being a man, I mean, I appreciate having learned what being a man is like, I guess from a woman’s eyes. It’s different than more of the macho chauvinist that your older Hispanic men are. You get into that mentality, and I love my dad, but there are things about him that I’d probably change.”

Men also stated that being respectful and respecting others was a key part of how they not only defined attributes of men, but also how they wanted to be perceived as men. For example, one man (age: 41, Cuban) stated:

“As far as being a man, I don’t think it was a distinction between a man and a woman; it was just respect others and go about your life. I just see it as respect, respect is all you can ask for.”

Another man (age: 45, Cuban) indicated:

“From my father I learned, above everything else, to respect people, men and women with no problems.”

These pro-social attributes were prominently noted in these men’s descriptions of what defines a man. As one man (age: 55, Cuban) explained:

“At least where I was born—it was a basic concept, but at the same time so broad. Includes being a gentleman with

women; word fidelity, loyal; some concepts in life such as, for example being honest.”

Another man (age: 47, Cuban) elaborated on this concept by saying:

“I was raised by my mom, so up until I was 16, I lived with my mom, and at 16, I moved in with my dad. So, I was kinda taught by her, everything that a man should be, not what they are. So, I have learned to respect women. I have learned – I always open the door.”

Another man (age: 58, Puerto Rican) stated:

“My father taught me to be a good worker, to be proud of the things that I did, to be respectful and pretty much to have the responsibility that everything that I do, I am the responsible one, don’t put the blame on anyone, because I am the one doing it.”

In sum, our study participants noted a variety of ideals, behaviors, attributes and characteristics to describe what they learned and understood a man is and should be, typically without any indication of how much they endorse or seek to adhere to such notions.

### What Defines Me?

By contrast, in the second theme, participants described how they characterize what is personally important to them. This includes the subthemes: a) comparing themselves with the ideal of machismo; b) caring for family and others; and c) supporting and modeling positive behavior for their children. These men drew compari-

sons to ideals and attributes that are often assumed to reflect ideals that are connected to machismo. While they recognize it is part of Latino culture, they personally did not endorse, adhere to or hope to embody ideals of machismo. Several, in fact, emphasized that they were not macho nor did they strive to be. For example, one man (age: 59, Venezuelan) explained:

“I’m not a supporter of machismo. In effect, I have been a critic of that because there are many people who relate machismo with not doing things at home or things like that... I happened to talk to a friend yesterday... He reminded me that, in my boyhood days, –( I am the only male in my house) -, my sisters had a different schedule than mine; and in my free time, I was the one who helped my mom and she liked it. That is, I did the chores of the home, I washed the dishes and - I even helped in the kitchen. Therefore, I do not like to relate that to machismo.”

In further contrast to traditional notions of machismo, many participants made more personal connections to the notion of caring for others. They cited ideas such as being there for others, being a friend and confidant, listening, caring, giving, being courteous, and doing well by others as you do for yourself. One participant (age: 47, Cuban) explained:

“So you gotta take care of yourself before you can take care of others, but kind of like care – being there for others, I think sets you apart. There’s too many people that – espe-

cially in – I’ve learned in Miami, there’s too many egos, too many elitists, or people that think they’re – you know. I think that you should be down to earth.”

Men also made a personal distinction to the concept of working hard and other positive attributes associated with men. In discussing this concept, men spoke of being focused, accomplished, doing good work, being independent, having goals, and working to accomplish goals. For example, one man (age: 55, Chilean) spoke of two concepts he felt were important to his perception of himself as a man stating: “I am a hard-working man and I have a strong character.”

The most personal concept men seemed to identify with was related to their familial role. When talking of being a good father, men identified being a father figure, being a guide, needing the tools to educate children, and learning to raise children as important concepts. For example, one man (age: 40, Cuban) stated: “The most important thing for me is the education ... I need all of the tools. To educate my son, my daughter. Yes, this is very important to me.”

Another man (age: 47, Colombian) explained:

“I have to be an example for my children, for my family, so that they can see who I am and how I move forward, thinking about what I can provide for my family in the future.”

The participants were motivated by the ability to materially provide for their families, model positive attributes for their children and demonstrate that they possessed and were driven by innate, pro-social characteristics. While they understood and acknowledged that machismo and other toxic aspects of masculinity exist, they did not aspire to embody them or engage in behaviors consistent with them. They aspired to embody positive characteristics, attributes and values and fulfill roles and responsibilities that were instrumental to their children and families.

## DISCUSSION

The goal of this article was to identify potential ideals and psychosocial mechanisms that could be the foundation of a precision lifestyle medicine intervention to promote weight control among middle-aged Latino men.<sup>3</sup> Rather than anchoring our intervention approach in ideals and values that are presumed to be reflected in terms like Latino or machismo, we began by exploring how men understand what it means to be a man, and what they feel or hope defines them.<sup>14,19</sup>

We found that middle-aged Latino men in south Florida defined a man in ways that built on what they were explicitly taught or vicariously learned about being a man as they were growing up. Some of the lessons they learned and retained related to characteristics that they felt they should embody and roles they should strive to fulfill, particularly in relation to their families. These men recognized what was encompassed in the

term and ideal of machismo, but they did not necessarily endorse this ideal.

In addition to characterizing the ways that our participants defined a man, we sought to understand what they believed, felt or hoped defined them. We found that participants differentiated and distanced themselves from the often-negative connotations associated with machismo. Rather, they sought to portray and

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embody values and characteristics that reflected that they cared for others, were dedicated to their families, were committed to providing for their families, and modeled positive attributes for their children.

Similar to prior research, we found that our participants conveyed that they understood the sociocultural characteristics that are presumed to be associated with being an adult, La-

tino male but they saw the notion of machismo too restrictive.<sup>13,15,25</sup> Rather, they sought to embody and portray characteristics and attributes that were more consistent with the notion of Caballerismo - an aspect of masculinity that focuses on social responsibility, emotional connectedness, and respectability<sup>25</sup> - and familism or a rooting of their life goals and aspirations not in their individual success but that of their family<sup>6,11,26</sup>. The efforts these men described to embody values and goals that are consistent with ideals of Caballerismo and familism, and the prioritizing of their family's needs and goals are laudable, but it also maps onto key barriers to healthy eating and physical activity that have been associated with provider role strain in middle-aged and older African American men.<sup>27,28</sup> These findings are important because they continue to refine links between Latino men's gendered ideals and how they relate to those ideals in ways that may affect their health behaviors and health outcomes. Anchoring precision lifestyle medicine intervention in ideals and aspirations that map onto factors that influence autonomous motivation (ie, identification and integration) from Self-Determination Theory<sup>17</sup> is key to understanding the interplay between men's intrapersonal beliefs and the stresses and psychological strains that not only result from these beliefs, but also represent factors that may or may not influence Latino men's motivation to consciously and intentionally engage in behaviors that may help to control their weight (eg, healthier eating practices and regular moderate or vigorous physical activity).

## Limitations

Despite the strengths of our approach, there are some limitations of our study. Primarily, a sample size of 20 men with varying ethnic heritages was not large enough to allow us to evaluate differences between ethnic sub-groups. We also recognize that the ethnic diversity of Latino men and the context of South Florida may have shaped our findings in ways that should not be considered generalizable to or representative of all Latino men.

## CONCLUSIONS AND IMPLICATIONS

Nevertheless, this article highlights key candidate mechanisms exist, nonetheless, that may be novel yet critical foundations on which to build a precision lifestyle medicine intervention for Latino men. We identified actionable psychosocial factors that map onto motivational constructs that can shape behaviors that are essential for weight control. Future work that couples these psychosocial factors with genetic and genomic phenotypes of obesity will provide a useful multi-level strategy for improving health and reducing health disparities.

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## CONFLICT OF INTEREST

No conflicts of interest to report.

## AUTHOR CONTRIBUTIONS

Research concept and design: Griffith, Jaeger, Garcia; Data analysis and interpretation: Griffith, Jaeger, Valdez, Schaefer Solle, Garcia, Alexander; Manuscript draft: Griffith, Jaeger, Valdez, Schaefer Solle, Garcia,

Alexander; Acquisition of funding: Griffith; Administrative: Jaeger, Valdez, Schaefer Solle, Alexander

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