Gender and alcohol consumption among young people: evaluation and validation of the conformity to Masculine Norms Inventory

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Abstract *Gender role social norms influence behaviors and affirm identities and belonging to particular groups. Dominant norms will continue to exist even if they change according to ethical, social and cultural norms. This study validated for the Brazilian reality the Conformity to Masculine Norms Inventory (CMNI-29) and searched for evidence of its applicability to specific factors of the consumption of alcoholic beverages of young university students. We collected data from 341 men in the age group 19-25 years living in the states of Minas Gerais and São Paulo. Participants completed the CMNI-29 and questions regarding their alcohol consumption. Even with adaptations to fit the context, the inventory was deemed valid. In general, reliability data were satisfactory and convergent and discriminant validity was achieved for all realms of masculinity. The CMNI-29 proved to be a useful measure to understand the multiple realms of masculinity in behavior. In addition, we found evidence of influence of norms on the frequency of alcohol consumption. The use of the scale broadens the scope of gender research in the country and enables search of its effect with other variables and health behaviors that affect this population.*
Key words *Masculinity, Social norms, Consumption of alcoholic beverages*

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Introduction

Social norms are the basis of fundamental elements for human life, such as culture, language, social interaction, economic control, male and female roles, among others. Common to all primates, imitation and social learning, which are normative principles, are especially developed in humans whose brain structures sustain the consciousness of the other[1,2].

Like other primates, humans pay attention to individuals around them and mimic what they see. However, knowledge of the actions of others and their imitation are not enough to imply social norms. What creates the basis for culture and society is not mimic, but rather the expectation of others as to when imitation is appropriate and when it is not. A social norm is an expectation about the appropriate behavior in a group context[2].

Thus, norms will not only specify appropriate behaviors, but the expectations concerning them, which in turn will define what a particular group is or does. Their study becomes important because group norms and the consequent conformity or not to them will be the source of construction of social identities. At first, deviating from social norms communicates the establishment of conformity and when social expectations are not met, and if the social norm is important, this deviation can lead to the loss of status or exclusion[2].

Several psychological theories attempt to explain the development of male and female normative roles and their influence on the behavior of individuals[3]. Therefore, various scales and inventories that aim to measure femininity and masculinity will emerge[4,5].

Among those scales that seek to measure masculinity is the Conformity to Masculine Norms Inventory (CMNI)[4], and its shorter versions, CMNI-46 and CMNI-29[6,7], which are considered in literature as prominent and current approaches with strong psychometric properties and evidence of construct validity[8-11].

It is known that social norms of gender roles guide and restrict behaviors; they have a descriptive and proscriptive nature and declare what is inappropriate to each individual in a given context[5,8,9,12]. The gender normative perspective has occurred more frequently in academic studies[14], and evidence has been found of its mediating role in behaviors related to health, personality styles and substance use, such as marijuana and alcohol[8,11,13,14].

Specifically in relation to alcohol, there is a link between the endorsement of some masculine norms, such as being aggressive, vigorous, having greater emotional control and the consumption of beverages by men[13-15]. In fact, experience with alcoholic beverage is a means of learning male culturally and socially accepted codes of conduct[10,16,17].

Thus, with the interest of introducing a gender normative approach in the experiences of young people's alcohol consumption, this paper aimed to validate, for the Brazilian reality, a model of multidimensional measurement of compliance with the masculine norms, namely, the Conformity to Masculine Norms Inventory (CMNI-29)[6]. In addition, we searched for evidence for its applicability to specific factors of alcohol consumption behavior of a male university population.

We share the understanding that masculinity is composed of fluidity and stability, and that the inventory can provide important, but not unique psychometric measures of a behavior[18]. This aspect may be a central point for directives regarding public health policies.

The conformity to masculine norms inventory (CMNI)

The CMNI was developed in 2003 to measure the extent to which men conform to thoughts, actions and feelings that represent the norms of the dominant culture in U.S. society[4]. It should be noted that, even if normative male and female characteristics may vary according to historical moments, social institutions or groups of individuals, idealized dominant models, that is, a more accepted way of being a man and being a woman[19] will always exist in all societies. Thus, the tool does not seek to measure how much individuals are or not masculine, but to what extent they endorse the dominant norms of society concerning masculinity.

For the construction of the inventory, Mahalik et al.[4] relied on literature reviews to establish the dominant norms of American culture. Subsequently, they conducted focus groups with masters and doctors in psychology to discuss the applicability of the norms identified, refine the categories and construct items to evaluate the compliance continuum.

This process identified 12 norm categories, measured in 93 items. Pilot tests were conducted and generated a factorial structure of 11 norms categorized as emotional control (i.e. suppression of emotions), winning (i.e. driving to win), playboy (i.e. having multiple sexual partners and

preference for sexual relationships without emotional attachment), power over women (i.e. belief that men should control women), dominance (i.e. desire to control situations), work primacy (i.e. work is seen as the majority of life), search for status (i.e. desire to be seen as important (i.e. aversion to being seen as homosexual), Risk Taking (i.e. a tendency to engage in risk behaviors), violence (i.e. a propensity to engage in violent behavior), and Self-Reliance (i.e. Self-Reliance in one's actions)[4,20].

In order to test the internal consistency of estimates obtained in the tool, the tool was applied separately to a sample of 245 women, in addition to the 752 men of the first study. The results evidenced men and women with different endorsement of masculine norms, with men scoring significantly more than women do in both their total compliance and some specific norms, for example, emotional control and violence. In addition, specific masculine norms were significantly associated with health-related behaviors, including drinking and violent behaviors[20].

In order to obtain the results regarding health and masculine norms, the authors performed a series of t-tests. Results indicated that men who responded positively to involvement in a violent situation scored significantly higher in the norms of winning, Risk Taking, violence, power over women, dominance, playboy, Heterosexual Self-Presentationand their total CMNI score. Men who responded positively to drinking in large quantities who forgot what they were doing scored significantly higher in Risk Taking, violence, playboy, and total CMNI score[20].

An short version of the tool was developed, namely CMNI-46[7] in order to advance studies related to masculine norms through the CMNI. This new version was the first factorial analysis after the creation of the CMNI and preserved the conceptual properties of the original tool, maintaining its multidimensional structure with less than half of the items. Nine of the eleven factors were supported and two removed, namely, dominance and search for status, due to low loadings and weak reliability coefficients[7].

However, CMNI and CMNI-46 were still inconsistent in relation to populations with different characteristics, since both were constructed based on white men, so CMNI-29 was developed. In this abridged version constructed with the addition of variables related to race and ethnicity, we obtained an eight-factor structure that showed a satisfactory model fit. The eight factors are Winning, Playboy, Self-Reliance, Violence,

Heterosexual Appearance, Risk Taking, Emotional Control and Power over Women[6]. Although used based on the U.S. population, recent studies have been applying scale in different cultural contexts, such as Spain, with satisfactory measures[14].

Due to the evidence of the intervention of normative gender roles in the behavior of individuals, academic studies have more frequently approached the subject by relating it to health behaviors[21]. Researchers have documented the effects of gender norms and inequalities, strictly based on dominant concepts on the health of men, women and children. Normative pressures are pointed out as important predictors of, say, behaviors that lead to vulnerabilities, negative consequences, physical and mental health, substance abusive behaviors and risky sexual behaviors[22]. In studies developed from this perspective, the conformity of individuals to dominant norms, both male and female have been measured through scales and inventories with multidimensional measures.

Methods

In order to meet the proposed objective and to make comparisons with the original scale, CMNI-29, and studies that validated the tool in different contexts but with a similar public, male students from public and private universities in Minas Gerais and São Paulo responded to the CMNI-29[6]. This should be answered by a 6-point Likert scale (1=totally disagree, 6=strongly agree). It is worth pointing out that the original measure consisted of 4-point Likert scale but, in this study, the scale was increased to 6 points, maintaining the lack of a neutral point[23]. The option of a larger scale in this research enables someone to record in more detail and more accurately the variations of the respondents' opinions[24,25].

The Inventory was adapted to the Portuguese language through a cross-cultural adaptation, a process that analyzes the language and cultural adaptation issues, as literature recommends[26]. The basic steps followed were: 1) Initial translation: made by bilingual translators, from the original language, English, to the target language, Portuguese. Versions were compared and a new version was produced; 3) Back Translation: based on the version obtained in the previous step, the tool was translated again into English to verify whether the translation reflected the same content of the original version and; 3) Expert Com-

mittee: from the version created in the previous step, professionals involved in the research sought to analyze the tool as to its semantic, idiomatic, experiential and conceptual equivalence. As a result, a final version of the translated tool was created.

The analysis of dimensionality, internal reliability and convergent and discriminant validity analyses were performed[27] to achieve statistical validity of the CMNI-29 for the context in question. It should be noted that authors of the CMNI-29 scale were consulted on the previous structure of the items, as well as on items with reverse scoring.

Dimensionality is associated with homogeneity[28]. We adopted the Exploratory Factor Analysis (EFA), using the principal components method. We also analyzed the explained variance, in which values close to 60% are satisfactory and 50% is the suggested minimum[27]. In relation to communalities, a 50% level would be adequate[29].

In addition, KMO and Bartlett's sphericity tests were used to verify sample suitability to factorial solution. It is noteworthy that in exploratory research and new applications of scales, values between 0.6 and 0.7 for the KMO test are acceptable. Bartlett's test should indicate significance of less than 0.05[27].

We used Cronbach's Alpha 35 for internal reliability. Limits between 0.6 and 0.7 are considered satisfactory[30].

Finally, we used average variance extracted (AVE) for convergent validity, where values above 0.5 were recommended, and composite reliability (CR), which has a minimum acceptance limit of 0.7[27]. For the discriminant validity, we used the criterion that compares the square root of the AVE of each factor with the value of the coefficients of correlation between the factors[28]. For discriminant validity, the estimates of the root of the variance extracted must be greater than the correlation estimates[28].

The Comparative Fit Index (CFI) and the Root Mean Square Error of Approximation (RMSEA) were used to measure the measurement and structural model fit. For CFI values close to or above 0.90 indicate good suitability of the model, and measure values between 0.3 and 0.8 are recommended for RMSEA[27].

In addition to the CMNI-29, respondents who consumed some type of alcoholic beverage also had access to some questions about their consumption. The questions were about the frequency of drinking. It should be noted that respondents were questioned about their consump-

tion or not of alcoholic beverages as filtering question of the questionnaire. If the answer was yes, in addition to the CMNI-29, respondents were asked questions related to their alcohol consumption. If the answer was negative, only the CMNI-29 questionnaire and questions related to the profile were answered.

The questionnaires with the two sections on norms and on alcohol consumption were made available to students through a link in Google Docs via social networks and through e-mail networks. In addition, in order to achieve sample size fit based on the number of variables in the questionnaire, approximately 10 times the number of variables (thirty-four), some questionnaires were also applied in person in university spaces such as classrooms and dining rooms. The study sample was thus obtained for convenience, based on the easy access to university students. Data were collected from November to December 2016, and a total of 353 responses were obtained.

Data were analyzed on a preliminary basis for the presence of multivariate outliers, by means of the Mahalanobis distance, in which values with significance lower than 0.1% are considered outliers[28]. Twelve cases were found, which were excluded from the analysis to fit data better into the model. We then analyzed 341 valid answers.

After such procedures to obtain the correlation between each male norm, validated to the Brazilian context and the alcohol consumption of the men studied, non-parametric tests were used, mainly due to the presence of categorical or ordinal variables. The Kendall Tau and Spearman[31] correlation tests were used.

Results

Sample characterization

The following variables were used for the characterization: alcoholic beverage consumption, age, region of residence and race / ethnicity, according to Table 1.

Thus, in relation to alcohol consumption, 83.58% of respondents stated that they consumed some type of alcoholic beverage, while 16.42% said they did not. Among those who did not consume, mostly from the state of Minas Gerais, 92.86%, were in the 19-25 years age group, 76.96%, and declared themselves as white (38.46%), brown (32.69%) or black (5.77%).

Among those who consumed alcohol, 98.60% lived in Minas Gerais, while 1.40% lived

in São Paulo. Of Minas Gerais residents, most were in the 19-25 years age group (84.36%) and declared themselves as white (50.89%) or brown (24.20%). Of São Paulo residents, 25% were aged under 18, followed by 75% aged 19-25. They declared themselves as white (75%) and black (25%).

Validation of questionnaire CMNI-29 for the Brazilian reality

This section shows the results regarding the validity procedures of the CMNI-29 tool for the Brazilian reality. The reliability, dimensionality and convergent and discriminant validity analyses are shown.

Reliability analysis

Tool internal reliability's results obtained by category of norms, comparison with results achieved in the original scale and their applica-tion in the Spanish context are summarized in Table 2.

We note that all the constructs showed values of reliability within the limits suggested in the literature[27]. Some of the reliability values found in this study are higher than those obtained in the original CMNI-29[6], as in the Heterosexual Appearance, Risk Taking, Self-Reliance, Emotio-nal Control, and Winning constructs. The other constructs, namely, Playboy, Power and Violence achieved values below the original scale, however, they are acceptable values. It is noteworthy that internal reliability values lower than the original American scale were also found in studies similar to this, with university populations, in which the tool was applied in other cultural contexts, such as in Spain[14].

Dimensionality analysis

All constructs were composed of only one dimension. In addition, most of them showed

Table 1. Description of the research sample, stratified into drinkers, state of residence, age and ethnicity.

Do you consume alcoholic beverages?	Region of residence	Age	Ethnicity	Percentage
No (16,42%)	MG (92,86%)	Under 18 years	White	9.62%
			Brown	11.54%
		19-25 years	White	38.46%
			Black	5.77%
			Brown	32.69%
		33-39 years	Black	1.92%
	SP (7,14%)	Under 18 years	White	25.00%
		19-25 years	Black	25.00%
			Brown	50.00%
Yes (83,58%)	MG (98,60%)	46 years and over	Brown	0.36%
		Under 18 years	White	4.63%
			Brown	2.49%
		19-25 years	Yellow	0.36%
			White	50.89%
			Mulatto	0.36%
			Black	8.19%
			None	0.36%
			Brown	24.20%
		26-32 years	White	4.27%
			Black	2.14%
			Brown	1.42%
		40-46 years	Brown	0.36%
	SP (1,40%)	Under 18 years	White	25.00%
		19-25 years	White	50.00%
			Black	25.00%

explained variance above 60%, except for the Violence construct, in which this value reached approximately 53%.

Regarding commonalities, issues were found in the constructs Heterosexual Appearance, Winning and Violence, with results below those suggested in the literature[29]. However, since these variables share the same common cause of the other indicators, in their respective constructs, the scale's unidimensionality is certified.

Regarding the KMO index, all constructs showed values higher than 0.6 (Heterosexual Appearance: 0.88; Risk Taking: 0.69; Self-Control: 0.682; Emotional Control: 0.749; Winning: 0.739; Playboy: 0.708; Power: 0.704; Violence: 0.693). In addition, Bartlett's test results indicated a significance of less than 0.05 in all constructs, reaffirming sample adequacy.

Convergent and discriminant validity

Table 3 shows the results obtained in the convergent validity analysis.

As can be seen, most of the constructs showed a convergent validity, with values within the limits recommended in the literature[26], with the exception of Violence, which showed an AVE of 0.42. Thus, in order to find convergent validity in this item, question Q.21.V3 was withdrawn, which in previous tests already evidenced results below the criteria established in the literature. The removal of the variable enabled the achievement of acceptable values for AVE and CR, of 0.53 and 0.85, respectively, indicating convergent validity for the Violence construct.

Data were also tested for discriminant validity. The values found are shown in Table 4.

It is verified that all the constructs showed discriminant validity, which evidences they measure different aspects of masculinity. The extracted variance, which is highlighted diagonally in bold, was perceived as greater than the shared variance between dimensions. In addition, all correlations showed values below 85%, indicating again discriminant validity.

Finally, the results of fit indices of the structural and measures model showed values within acceptable norms[27], RMSEA = 0.03; CFI = 0.89; GFI = 0.91, and followed in a general way the values found in the original scale[14], RMSEA = 0.04; CFI = 0.92.

It should be noted that there were no differences in the endorsement of masculine norms according to individuals who consumed alcoholic beverages and those who did not consume them. The t-test achieved a low difference of the means and no item showed a statistically different difference in relation to the constructs.

Correlation between masculine norms and alcohol consumption frequency

Seeking association between categories of validated masculine norms and consumption frequency of men who participated in the study, correlations were made between Spearman and Kendall Tau, as shown in Table 5.

It should be noted that among those who consume some type of alcoholic beverages, 51.58% do it once or twice a week, followed by 14.74% who consume seven to eleven times a week, 13.33% of three or four times a week and 8.77% one to three times a month.

Table 2. Internal reliability.

Construct	Alpha	Alpha original scale[6]	Alpha scale Spain[12]
Heterosexual appearance	0.86	0.87	0.81
Risk Taking	0.79	0.72	0.67
Self-Reliance	0.80	0.71	0.67
Emotional control	0.91	0.86	0.79
Winning	0.78	0.77	0.75
Playboy	0.80	0.82	0.75
Power	0.75	0.82	0.76
Violence	0.68	0.79	0.70

Table 3. Convergent validity.

Construct	AVE	Compound Reliability	Convergent Validity
Heterosexual appearance	0.63	0.92	Yes
Risk Taking	0.56	0.87	Yes
Self-Reliance	0.59	0.88	Yes
Emotional control	0.78	0.95	Yes
Winning	0.50	0.87	Yes
Playboy	0.58	0.88	Yes
Power	0.55	0.86	Yes
Violence	0.42	0.79	No

By using the same amount of data information, both coefficients have equal power to detect the existence of associations[31]. Thus, the *Playboy* constructs and Risk Taking show a significant degree of significance at the 0.05 level with the frequency of alcohol consumption, under the Kendall Tau and Spearman's tests.

Discussion of results

Some behaviors, gender roles and social stereotypes are subjected to constant social and cultural influence and can be considered different or even more desirable than others in certain cultures, when compared[21,32]. Thus, it is interesting to validate in different contexts normative models concerning masculinities and hegemonic femininities. This study validated the CMNI-29 for the Brazilian reality.

Masculinity can be understood as the characteristics and abilities that, when culturally signified, define a stereotype of man and influence the

relationships and experiences of individuals[1,5]. In Western societies, this concept is associated with heterosexual, white and middle class status. In several contexts, the so-called masculine practices are not represented mainly by men, but also by women and, thus, affect the cultural and social spheres. Social practice in all its forms is the means by which gender meanings organize social life[1].

Based on the previous steps, it was possible to identify that, in general, constructs had congruent levels of reliability and validity, and the CMNI-29 scale was valid for the Brazilian context with support to its psychometric properties. Values were also similar to the original study and those who used the scale in different contexts[6,12].

It urges to emphasize that, even with the adaptations made in the tool to fit the Brazilian context, the removal of a variable from the Violence construct and use of a scale with greater power of detail, it is still considered valid, due to the results of dimensionality, reliability and convergent and discriminant validity. Adaptations

Table 4. Discriminant validity.

	HP	Risk Taking	Self-Reliance	Emotional Control	Winning	Playboy	Power	Violence
HP	**0.79287**							
Risk Taking	0.04895	**0.74726**						
Self-Reliance	0.02962	-0.03563	**0.76978**					
Emotional Control	0.11718	-0.06617	0.32068	**0.88074**				
Winning	0.2924	0.0989	0.23342	0.11109	**0.70455**			
Playboy	0.04978	0.20294	0.03487	0.01494	0.21212	**0.76268**		
Power	0.49053	0.09525	0.08871	0.03391	0.06251	0.04323	**0.74155**	
Violence	0.07543	0.1534	-0.00716	0.15118	0.17352	0.10245	0.01919	**0.72943**

Table 5. Correlation analysis.

Constructs	Kendall's Test		Spearman's Test	
	Correlation Coefficient	Sig (2-tailed)	Correlation Coefficient	Sig (2-tailed)
Winning	0.067	0.105	0.087	0.111
Playboy	.225(**)	0.000	.293(**)	0.000
Self-Reliance	-0.027	0.520	-0.036	0.510
Violence	-0.006	0.882	-0.007	0.894
Heterosexual Self-Presentation	-0.076	0.066	-0.100	0.066
Risk Taking	.116(**)	0.005	.147(**)	0.007
Emotional Control	-0.053	0.198	-0.072	0.185
Power over Women	-0.007	0.872	-0.008	0.879

Note: *. Correlation is significant at a level of 0.05 (2-tailed). **. Correlation is significant at a level of 0.01 (2-tailed).

are common procedures for the validation of normative instruments, since the norms measured may not be of equal importance for individuals living in different societies[33].

Thus, by reaching values recommended by the literature and in this context of a Brazilian male university population, results evidenced the existence of masculine norms related to winning, playboy, self-reliance, violence, heterosexual appearance, risk taking, emotional control and power over women. Thus, the CMNI-29, validated for the Brazilian reality, is a useful measure for research aimed at understanding the role of the multiple realms of masculinity in the behavior of individuals. However, the more general use of the tool requires its application to diversified populations.

Regarding correlation between the masculine norms and the frequency of consumption of alcoholic beverages, we found evidence of influence of the norms on the frequency of consumption. We obtained the Playboy constructs, related to the desire and preference of men to have many sexual partners and sexual relations without emotional attachment, and Risk Taking, a propensity to engage in risk behavior, showing positive significance with the frequency of alcoholic beverages use. Similar results have been found in studies that indicate the association of endorsement of such realms and alcohol use and abuse, drinking at risk or Heavy Episodic Drinking[13,16,17,34]. Findings of this research indicated that the norms are associated to the consumption of masculine alcohol in the Brazilian context as well.

On this result, we found that university men who endorse norms about wanting many sexual partners at the same time, enjoying risky activities, regardless of the possible consequences are at high risk of drinking, doing so in larger quantities[34]. Such norms refer to a sense of self-appearance, and thus the ability to drink alcohol can be seen as a sign of masculinity[30].

The perceived existence of different social norms for men and women can influence the understanding of the behavior of individuals over their peers, which acts as a measure of compliance and as a guiding behavior that can promote sexual and risk and alcohol-related behaviors, for example[35,36].

Specifically in relation to the correlation between the Playboy norm and the consumption of alcoholic beverages, it has been observed that alcohol consumption situations can be sexually burdened. In university populations, situations of alcohol consumption are perceived as a sexual suggestion[35]. Perhaps for this reason such events can reinforce masculinity self-appearance. Future studies should explore such relationships.

In this regard, young university students realize that sex life and drinking a lot go hand-in-hand. Thus, men can engage in risk behaviors in relation to drinking in order to facilitate their relationships[10]. Authors clarify that alcohol consumption is higher in situations with new or casual sexual partners[37].

As these factors are important, they can be considered, for example, in the analysis of alcohol consumption, as well as in interventions to reduce its abuse, especially among young people. In Brazil, the male population that consumed some type of alcoholic beverage increased by 29.4% in the 2006-2012 period, and no additional recent data on this behavior were found. Moreover, the prevalence of heavy episodic drinking in male drinking population also increased by 13% over the same period[37].

Several practices, including health practices adopted by men and women are also covered by normative beliefs. Such practices are assumed to demonstrate femininities and masculinities. In North American culture, men assume unhealthy and risky behaviors to demonstrate their masculinity, failing to do so may mean overcoming social barriers that bring censorship and negative stereotypes[38]. In Brazil, this reality also seems to exist, since the highest mortality rate among 20-24 year-olds, 80.8%, is of the male population. The causes are mostly due to risky behaviors, such as external or violent motives, homicides and traffic accidents[39].

In fact, masculine norms are related to the pressure exerted on groups[15]. Specifically, men who endorse the Playboy norm may be more susceptible to perceptions of social pressure. This result showed the highest positive correlation in this study and can corroborate with the assumption that many men perceive the need to prove/reaffirm their masculinity, in this case, reflected in the ingestion of alcoholic beverages[13].

Final considerations

In the Brazilian context, this study totally validated the CMNI-29 tool, and it was verified that dominant norms concerning masculinity are also found in this cultural reality. The tool provided a useful model for the operationalization of masculine norms in Brazilian society.

It was possible to identify positive associations between the endorsement of such norms and the frequency of alcohol consumption of the university population under study. From the positive association found in this study, further studies may investigate relationships between perceived social pressure, level and frequency of alcohol consumption, places of consumption, types of drink and the endorsement of such masculine norms.

The limitation of this paper is the nature of the sample, namely, university students, and this was required to make comparisons with studies that used the scale in different contexts, but with similar audiences. This study is also limited since it did not stratify the sample according to the type of university, region of residence and race, for example, elements that can influence compliance with masculine norms as well as alcohol consumption.

Due to the use of a convenience, and not probabilistic sample, the results found are not subject to generalizations for any population, and the validation process must be continued. It is worth noting that the use of such samples is accepted in literature when performing exploratory studies, pre-test questionnaires or pilot studies[23].

Another limitation of the work is choosing a scale with a greater number of scheduling items - from four to six items - which makes the scale tested not exactly equal to the scale created by Hsu and Iwamoto[6].

Although the CMNI-29 provides an assessment of the variability of masculinity, since two men can vary considerably in which specific masculine norms they comply. The measurement of any part of the masculinity content realm, however broad, is necessarily limited in addressing multiple masculinities that individuals and societies construct. However, it is understood that gender complexity and its connection to a range of individual, family and community health issues require a methodological pluralism that creatively utilizes the strengths of all types of qualitative, quantitative and mixed methods research projects[18]. Thus, in the pursuit of enrichment of understanding about masculinity, future studies may explore these and other realms through qualitative methods.

It is interesting to expand the studies covering men in different age groups as well as different ethnicities, socioeconomic levels and different geographic regions, since consumption behavior may change and gender perspectives may be related to socio-identity factors.

As an academic contribution, this study can promote campaigns and research that relate the influence of social norms and consumption of alcoholic beverages by men, mainly looking for ways to encourage reduced excess consumption, which in many cases can be harmful to health. Among Brazilian men, alcohol abuse increased by 12% in the 2006-2012 period[38]. In addition, harmful use of alcohol is the eighth largest cause of sickness benefits in the social security system, in addition to depression, which is one of the main causes of chronic diseases in the country[40].

By reinforcing and adding the gender normative variable, in addition to a demographic, segmentation and gender difference, the use of the scale in the context of Brazilian research can clarify and point out the effect and relationship of compliance with other variables and health behaviors which affect the country's population, such as HIV, depression and drug use, and studies of this nature have grown in the international arena[40-42]. In addition, other areas where the dominant male normative stereotype may also influence men and women, such as product consumption behavior and interests and professional choices[43] may be explored.

Collaborations

TS Silva participated in the conception of the article, data collection, analysis and interpretation of data and writing of the article. JMM Chistino participated in the conception of the article, headed the data collection, critical review and approval of the final paper. LRC Moura participated in the data analysis and critical review. VHF Morais participated in the article design and data collection.

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