Values, spirituality and alcohol consumption in high school students
Valores, espiritualidad y consumo de alcohol en estudiantes de preparatoria

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ABSTRACT:
Introduction: Values and spirituality have been identified as protective factors that decrease the development of risky behaviors in adolescents such as alcohol consumption.
Aim: To identify values and spirituality in high school adolescents and determine the relationship between values and spirituality with alcohol consumption in high school adolescents.
Method: A descriptive correlational design was used. The population was of 4728 students from a high school in the central area of Monterrey, Nuevo León. It was used a a single-stage stratified probabilistic sampling, the sample consisted of 317 enrolled subjects. The variables were evaluated using the Schwartz Values Questionnaire (VAL), the Spirituality Questionnaire (CE) and the AUDIT.
Results: It was found that the general index of values showed an average of 70.4 (SD = 11.1, Mdn = 70.54), the spirituality index showed an average of 66.3 (SD = 13.4, Mdn = 67.82). A positive and significant correlation was found between spiritual beliefs and the index of alcohol dependent consumption (r = .181, p = .016), a significant negative correlation between spiritual beliefs and the number of alcoholic beverages consumed per occasion (r = .117, p = .038) and positive and significant correlation between spiritual needs and the index of harmful consumption (r = .180, p = .017).
Conclusions: Adolescents who have greater spiritual beliefs and spiritual needs are more dependent on harmful alcohol consumption.

Key words: Values; Spirituality; Alcohol Consumption; Adolescents.

RESUMEN:
Introducción: Los valores y la espiritualidad se han identificado como factores protectores que disminuyen el desarrollo de comportamientos riesgosos en los adolescentes como el consumo de alcohol.
Objetivo: Identificar los valores y la espiritualidad en adolescentes de preparatoria y determinar la relación que existe entre los valores y la espiritualidad con el consumo de alcohol en adolescentes de preparatoria.

Método: Se utilizó un diseño descriptivo correlacional. La población fue de 4728 estudiantes de una preparatoria del área metropolitana de Monterrey, Nuevo León. Se realizó un muestreo probabilístico estratificado unietápico, la muestra estuvo conformada por 317 sujetos inscritos. Las variables se evaluaron mediante el Cuestionario de Valores de Schwartz (VAL), el Cuestionario de Espiritualidad (CE) y el AUDIT.

Resultados: Se encontró que el índice general de valores mostró una media de 70.4 ($\overline{DE}$=11.1, $Mdn$=70.54), el índice de espiritualidad mostró una media de 66.3 ($\overline{DE}$=13.4, $Mdn$=67.82). Se encontró correlación positiva y significativa entre las creencias espirituales y el índice de consumo dependiente de alcohol ($r_s = .181$, $p = .016$), correlación negativa significativa entre las creencias espirituales y la cantidad de bebidas alcohólicas consumidas por ocasión ($r_s = -.117$, $p = .038$) y correlación positiva y significativa entre las necesidades espirituales y el índice de consumo dañino ($r_s = .180$, $p = .017$).

Conclusiones: Los adolescentes que tienen mayores creencias espirituales y necesidades espirituales presentan mayor consumo de alcohol dependiente y dañino.

Palabras clave: Valores; Espiritualidad; Consumo de Alcohol; Adolescentes

INTRODUCTION

Alcohol consumption is a public health problem. It contributes in a significant way to global morbidity being a casual factor of more than 200 illnesses(1) and representing a considerable proportion of dangerous situations attributable to the excessive alcohol intake such as: Traffic accidents, domestic violence, rapes, risky sexual behaviors, homicides and suicides. In the year 2014, there were 3.3 million deaths worldwide related to alcohol consumption, including 320,000 teens and young adults in between the ages of 15-20 years old, which represents the 5.9% if the worldwide morbidity(2).

According to the National Survey on Drug, Alcohol and Tobacco Consumption (ENCODAT, 2016), the excessive consumption of alcohol doubled in population between 12 to 17 years, from 4.3% in 2011 to 8.3% in 2016, with a significant increase in women from 2.2% to 7.7%. In addition, in 2016 only 1% of the population in this age group had customary consumption of alcohol while in 2016 4.1% was reported, of which 4.4% were men and 3.9% women, in daily consumption there was also a significant increase from 0.2% to 2.6% from the year 2011 to 2016 respectively(3).

Adolescents are still in a physical, psychological, sexual and social development process, the process allows them to culminate with the search of their identity, trough knowing themselves, their preferences, attitudes, limitations and motivations. In addition, going through this stage is where they search for freedom and autonomy. This is the reason why they are so vulnerable to alcohol consumption(4) and this is where we find the need for the set if values and spiritual beliefs that will guide their conduct and behavior, so they can respond in a positive way to the every day situations in life, taking into account the set of values and spiritual beliefs(5,6).

There is evidence that the set of values and spiritual beliefs in adolescents stand out as a protective factor against alcohol consumption and is of greater importance(6-9). Studies show that these concepts play a very important role in this transition stage and decrease the development of risky behaviors such as alcohol consumption(10-12).

It is considered that there is an empty knowledge when it comes to the values, Spirituality and the alcohol consumption, given that until now we have not found
studies were these variables were related. The nurse professionals has a very important role in the prevention of drug consumption such as alcohol.

This study will bring scientific knowledge that will allow the nurse professionals to develop strategies of prevention and reduction of alcohol consumption by strengthening the values and spirituality in adolescents.

**Specific Objectives**

1. To identify values and spirituality in High School students.
2. To determine the existent correlation between the values and spirituality with the alcohol consumption in High School students.

**METHODS AND MATERIALS**

**Study Design**

This study had a descriptive and relational design. The population was made up by High School students of the metropolitan area of Monterrey, Nuevo León, México. We performed a unietapic, stratified probability sampling where the population was 4,768 students.

**Participants**

The sample was made up by 317 subjects enrolled, from 9th and 10th grade, the average age of the participants was of 15.9 years ($SD = .801$), female was predominant with 53.9%, the 93% were single, the 62.1% is in the 9th grade of High School, the 85.5% are students and the 69.4% said they were Catholic.

**Measurements**

Socio-demographic data. Certificate of personal data and Alcohol Consumption History (CDPHCA) that consist on 12 questions that ask about the age, sex, marital status, level of education, occupation, religion, the types of prevalence of alcohol consumption starting age and the number of beverages in a typical day.

Values. The Schwartz Questionnaire of Values (VAL)\(^{(13)}\) measures the values of an adolescent, consists of 56 items that are divided in two subscales: Terminal and instrumental values. This instrument has been used in mexican adolescents where Alpha if Chronbach’s has reported that they range between .90 and .93.

Spirituality. The Parsian and Dunning Questionnaire (ESP)\(^{(14)}\) which focuses on the concept of internal identity, the meaning of life and the connection between adolescents and young adults. It is formed by 29 items, divided in four subscales: Self-awareness, spiritual beliefs in life, spiritual practices and spiritual needs. The instrument has reported an Alpha of Chronbach’s of 0.83. It was obtained the indexes of each subscale and the scale in general of the instruments, where the highest score is the value index and spirituality.
RESULTS

The general index showed a half of 70.4 ($SD = 11.1$, $Mdn = 70.54$), the terminal value index had a mean of 67.9 ($SD = 11.4$, $Mdn = 66.67$), while the instrumental value index presented a mean of 74.2 ($SD = 12.6$, $Mdn = 75$), the terminal value selected by the participants were: To give significance to my life and family security, while the instrumental values selected were: Choosing my own goals and to be successful. The Spirituality index showed a mean of 66.3 ($SD = 13.4$, $Mdn = 67.82$), the subscale index, self awareness, had a mean of 73.7 ($SD = 15.7$, $Mdn = 76.67$), the spiritual beliefs index showed a mean of 56.5 ($SD = 25.9$, $Mdn = 58.3$), the spiritual practices index had a half of 49.5 ($SD = 20.8$, $Mdn = 50.0$), the spiritual needs index presented a half of 75.5 ($SD = 14.4$, $Mdn = 77.7$).

The starting age of alcohol consumption was of 12.9 years of age ($SD = .057$, $Mdn = 13$) and the quantity of consumed beverages in a typical day was in average of 2.6 ($SD = 4.3$). In the prevalences of alcohol consumption, it was found that 71% of the participants had consumed alcohol sometime in their life, the 54.9% had consumed alcohol in the last year, the 3.8% had consumed alcohol in the past month and 16.7% of the participants has consumed alcohol in the last seven days.

It was found that there is a significative positive correlation between the frequency and quantity index of the alcohol consumption with the age ($r_s = .156$, $p = .039$); this indicates that the older the age, the more frequency and quantity of alcohol consumption. It is observed that there is a significative positive correlation between the quantity of alcoholic beverages consumed per occasion and the age ($rs=.276$, $p < .001$), this indicates that the older the age, the more alcoholic beverages consumed per occasion.

There are significant differences between the frequency of consumption ($U= 2988.5$, $p= .008$) per sex, higher frequency of consumption in males ($\bar{X} = 37.4$, $Mdn= 33.3$) than in females ($\bar{X} = 27.3$, $Mdn =16.66$). The starting age of alcohol consumption ($U= 4909.0$, $p= .001$) there is a significative difference between males ($\bar{X} = 12.8$, $Mdn= 13$) and females ($\bar{X} = 13.1$, $Mdn= 13$) observing less starting age in males. In terms of values it was found a significative relation between the terminal value index and instrumentals with the alcohol consumption ($p < .05$).

In the table 1 it shows the relation in the alcohol consumption with the Spirituality index, it showed a significative and positive correlation between spiritual beliefs and the dependent alcohol consumption index ($r_s = .181$, $p = .016$), this indicates that the more spiritual beliefs, there is more dependent alcohol consumption, it was found a significative negative correlation between the spiritual beliefs and the quantity of alcoholic beverages consumed per occasion ($r_s = -.117$, $p = .038$), this indicates that the more spiritual beliefs, less quantity of alcoholic beverages per occasion, finally, it was observed that there is a significative positive correlation between the spiritual needs and the harmful consumption ($r_s = .180$, $p = .017$), which means, that the more the spiritual needs, the more harmful consumption index.
<table>
<thead>
<tr>
<th></th>
<th>Spirituality</th>
<th>Self-awareness</th>
<th>Beliefs</th>
<th>Practices</th>
<th>Needs</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>AUDIT Index</strong></td>
<td>.079</td>
<td>.063</td>
<td>.035</td>
<td>-.005</td>
<td>.145</td>
</tr>
<tr>
<td></td>
<td>(.295)</td>
<td>(.403)</td>
<td>(.642)</td>
<td>(.945)</td>
<td>(.055)</td>
</tr>
<tr>
<td><strong>Quantity abd frequency</strong></td>
<td>.098</td>
<td>.143</td>
<td>.003</td>
<td>-.013</td>
<td>.124</td>
</tr>
<tr>
<td><strong>index</strong></td>
<td>(.196)</td>
<td>(.059)</td>
<td>(.966)</td>
<td>(.864)</td>
<td>(.100)</td>
</tr>
<tr>
<td><strong>Dependent consumption</strong></td>
<td>.092</td>
<td>-.005</td>
<td>.181</td>
<td>.071</td>
<td>.097</td>
</tr>
<tr>
<td><strong>index</strong></td>
<td>(.226)</td>
<td>(.946)</td>
<td>(.016*)</td>
<td>(.350)</td>
<td>(.202)</td>
</tr>
<tr>
<td><strong>Harmful consumption</strong></td>
<td>.021</td>
<td>-.030</td>
<td>-.030</td>
<td>-.028</td>
<td>.180</td>
</tr>
<tr>
<td><strong>index</strong></td>
<td>(.785)</td>
<td>(.679)</td>
<td>(.968)</td>
<td>(-.713)</td>
<td>(.017*)</td>
</tr>
<tr>
<td><strong>Quantity of alcoholic</strong></td>
<td>-.066</td>
<td>-.059</td>
<td>-.117</td>
<td>-.025</td>
<td>.018</td>
</tr>
<tr>
<td><strong>beverages consumed per</strong></td>
<td>(.238)</td>
<td>(.298)</td>
<td>(.038*)</td>
<td>(.662)</td>
<td>(.755)</td>
</tr>
<tr>
<td><strong>occasion</strong></td>
<td>(.226)</td>
<td>(.638)</td>
<td>(.205)</td>
<td>(.285)</td>
<td>(.350)</td>
</tr>
</tbody>
</table>

*Note: p = significance between parentheses*

**DISCUSSION**

In relation of the study's purpose that established to determine the relation that exists between terminal values, instrumental values, spirituality and the alcohol consumption in High School students, it was not found a significative correlation when it comes to the terminal and instrumental value index and the alcohol consumption, what differs from what was found by Rodriguez in 2015\(^{(15)}\) where the terminal value index was related in a significative negative way with the dependent alcohol consumption in students, what can be caused by the fact that the participants in this study belong to the suburbs, unlike the participants of the present study that belong to a metropolitan area.

When it comes to Spirituality and the alcohol consumption, it was found that exists a significative correlation between spiritual beliefs and the dependent index in alcohol consumption, which means that the more spiritual beliefs, there is more alcohol consumption index, this can be caused by restrictions by religious groups, when it comes to behavior in adolescents, adolescents do not wish to adjust to general rules and values of society and this can be considered as a part of the process of mature at this age\(^{(16)}\).

It was also found a significative negative correlation between the spiritual beliefs and the quantity of alcoholic beverages per occasion, which means that the more spiritual beliefs less is the quantity of alcoholic beverages per occasion, this can be caused by the fact that whom has more spiritual beliefs tend to healthy behaviors and if they do consumed they won't do it in a risky or harmful way\(^{(17)}\). Therefore, it was observed that
there is a significative correlation between the spiritual needs and the harmful consumption index, which means that the more spiritual needs, more is the harmful consumption, this can be caused by the subscale of spiritual needs centered in the me and only gives reference to a definition of preferences and the search for personal interests and not to spiritual premises such as seeking the good of the other before his own\textsuperscript{(18)}.

**CONCLUSIONS**

Due to the results previously presented, we conclude that certain components of spirituality could serve as the protective factor against alcohol consumption, on the other hand and differing with the literature certain components that were related with more consumption, for this reason it is proposed to continue using the Parsian and Dunning Questionnaire (2009) to identify if the results come out as the same behaviors, in the same way in population with different characteristics.

It is not known the way in which the values and spirituality modified the behavior in adolescents when it comes to consumption and no consumption of alcoholic beverages. It is therefore recommended to continue conducting studies that would investigate the variables but in a qualitative form in adolescents, since those concepts turn out to be abstract and profound and the interpretation of these can result in information that subsequently allow in a proper way, also it is recommended to realize comparative studies in population not schooled to identify if there is any difference to the report on this study.

**REFERENCES**