

## Consumo de álcool entre pescadores: uma revisão integrativa

Alcohol consumption among fishermen: an integrative review

Consumo de alcohol entre los pescadores: una revisión integradora

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### How to quote this article:

Ribeiro CRB; Saboia VM; Pereira CM. Alcohol consumption among fishermen: an integrative review. Rev Fund Care Online. 2017 abr/jun; 9(2):575-582. DOI: <http://dx.doi.org/10.9789/2175-5361.2017.v9i2.575-582>

## ABSTRACT

**Objective:** To summarize the scientific literature regarding the consumption of alcohol among fishermen.

**Method:** Integrative review performed by literature in CAPES databases, ScieLO and LILACS, with data collection on the period from March to April 2014. **Results:** Alcohol consumption was evidenced as an usual activity among fishermen, emphasizing its association with religion, long working hours, lack of knowledge about weekly maximum levels of satisfactory consumption of alcohol, occupational accidents, sexually transmitted and cardiovascular diseases, and hyperlipidemia. **Conclusion:** The consumption of alcohol is a common practice among fishermen and despite all the studies pointing to this practice, there is no evidence of real alternatives related to promotion, prevention and health care of fishermen in relation to alcohol consumption.

**Descriptors:** Alcohol consumption, Fisheries, Occupational health, Nursing.

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## RESUMO

**Objetivo:** Sintetizar a produção científica quanto ao consumo de álcool entre pescadores. **Método:** Revisão integrativa realizada por meio de levantamento bibliográfico nas bases de dados CAPES, SciELO e LILACS, com período de coleta de dados entre março e abril de 2014.

**Resultados:** Evidenciou-se o consumo de álcool como atividade habitual entre pescadores, salientando a associação com religião, longas jornadas de trabalho, desconhecimento dos níveis máximos de consumo de álcool semanais satisfatórios, acidentes ocupacionais, doenças sexualmente transmissíveis e cardiovasculares, e hiperlipidemia. **Conclusão:** O consumo de álcool é uma prática comum entre os pescadores e apesar de todos os estudos apontarem para essa prática, não há evidências de alternativas reais relacionadas a promoção, prevenção e cuidado da saúde de pescadores no que tange ao consumo de álcool.

**Descritores:** Consumo de bebidas alcoólicas, Pesqueiros, Saúde do trabalhador, Enfermagem.

## RESUMEN

**Objetivo:** Para resumir la literatura científica en relación con el consumo de alcohol entre los pescadores. **Método:** Revisión integrada realizada por la literatura en las bases de datos de la CAPES, SciELO y LILACS, con período de recolección de los datos de marzo a abril de 2014. **Resultados:** Se evidenció el consumo de alcohol como una actividad habitual entre los pescadores, haciendo hincapié en su asociación con la religión, largas horas de trabajo, la falta de niveles máximos de consumo de alcohol semanal satisfactorios, accidentes de trabajo, transmisibles y cardiovascular sexual, y la hiperlipidemia. **Conclusión:** El consumo de alcohol es una práctica común entre los pescadores ya pesar de todos los estudios que apuntan a esta práctica, no hay pruebas de alternativas reales relacionados con los pescadores de promoción, prevención y atención de la salud en relación con el consumo de alcohol.

**Descriptorios:** Consumo de bebidas alcohólicas, Pesqueras, Salud Ocupacional, Enfermería.

## INTRODUCTION

Alcohol or ethanol is a psychoactive abuse substance used across the world, being the active ingredient in any alcoholic beverage.

According to the World Health Organization (WHO), it is estimated that about two billion people on every continent consume alcohol and about 76.3 million live with a constant condition of disorders related to this drug. For this reason, it brings considerable social and economic burden from the perspective of public health. Epidemiological studies have shown that alcohol consumption is an important risk factor for numerous diseases.<sup>1,2</sup>

The Brazilian population is among the largest consumers of alcohol with an annual percentage of nearly nine liters of absolute alcohol among individuals over 15 years old.<sup>3</sup> In a nationwide study alcohol was appointed as one of the most frequently used substance, with regular use report in the lives of 18% of the 5,040 interviewed individuals of both sexes, aged 16 to 65 years.<sup>4</sup>

With regard to workers, substance abuse can cause health issues, deterioration of personal relationships, loss

of employment and family problems. The various problems related to alcohol use at work are part of a set of issues related to workers' health, welfare and safety, productivity in the workplace and civil liability.<sup>5</sup>

Alcohol abuse is often observed in fishing communities and is considered a habitual leisure practice.

A study by Ribeiro<sup>6</sup> with artisanal fishermen in Guanabara Bay found that 88.6% are active consumers of alcohol, and from these, 71% consume on weekends and 9.7% consume every day. Another study in Pará (PA), confirms the issue, when it points out alcohol abuse among this class of workers.<sup>7</sup>

In this perspective, the study is guided by the following question: what is the existing scientific literature on alcohol consumption among fishermen?

In order to expand the existing knowledge about alcohol consumption by fishermen, this study aimed to synthesize through an integrative literature review, scientific production and the consumption of alcohol among fishermen.

Given that the proposition of public policies for employee health is based on empirical data, it is intended, with the study findings, to excite reflections on the subject so that measures are taken for the benefit of working fishermen.

## METHOD

This study is characterized as an integrative literature review. It is a search method that allows research, critical evaluation and synthesis of available evidence on the subject researched, contributing to a deeper understanding and effective interventions in health care and contributing to the development of future research.<sup>8</sup>

This research method is developed in six distinct phases, namely: theme identification or elaboration of guiding question; sampling or literature search; data collection; critical analysis of the included studies; discussion of the results; and presentation of the integrative review.<sup>9</sup>

For the survey of articles in literature, there was a search in the following databases: Latin American and Caribbean Health Sciences (LILACS), Scientific Electronic Library Online (SciELO), National Library of Medicine (PubMed) and Periodicals Portal (CAPES) in the period from March to April 2014, published in the 1985-2013 period.

It was used, to search for articles, the following descriptors: alcohol (alcohol consumption) and fishing (fisheries), defined according to the Descriptors in Health Sciences (DECS) separated by the Boolean operator and. Temporal cut was not used in the query of the database, in order to meet the research question. The initial results of the research were 31 articles, 22 in PubMed, 2 in LILACS, SciELO 0 and 7 in CAPES.

After the exploratory reading of all the articles found, which is characterized by scanning with the aim to discover whether the text is linked to this research by all the scientific production found in the associations. Therefore, a selective reading took place, through electing and evaluating the

contribution of each text and its main topics. The articles according to the proposed objectives were selected by eliminating the repeated ones (1), items that did not have available abstracts (2), increasing the potential bibliography, i.e. 15 articles to analyze the data according to table 1, including the following items: year of publication, author(s), title of publication, type of study, periodic, objective, main results (approach to the proposed theme), conclusions.

It is noteworthy that for the construction of potential literature, article summaries were used because they were not found in full. Their use is justified because the summaries were perceived to be of great value for the constitution of potential literature and answered the question of this research.

After a critical analysis of the included studies, a discussion of the results was made through three categories according to the approach of the objectives and results of selected research.

## RESULTS

Fifteen articles that met the eligibility criteria were identified in the study period. All fifteen articles (100%) show the consumption of alcohol as a usual activity among fishermen. Of these, eight (53.3%) were published in the last ten years, only the first article summary available dated 1990, demonstrating the topicality of the subject.

The articles were published in the following journals: Substance use & Misuse(1), Journal Occupational Health(1), Occupational Medicine(1), Interative Maritime Health(1), Sex Transmition Diseases(1), Sex Transmition Infectologist(1), Interative Archives of Occupational Environmental Health(1), Health Education Research(1), Zhonghua Liu Xing Bing Xue Za Zhi(1), Drug Alcohol Ver(1), G Ital Med Lav Ergon (1), Salud Ocupacional (1), CM publ., Bull Inst Marit Trop Med Gdynia (2).

Regarding the type of publication, it was found that the fifteen items (100%) were research articles, of which twelve (80%) dealt with quantitative research and three (20%) quantitative and qualitative research.

The number of authors per article ranged between one and ten authors, totaling around 85 (eighty-five) writers, of which twelve were present in more than one publication.

As to the objectives proposed by the publications, it was found that the majority addressed the factors of health risks of fishermen associated with alcohol consumption. However, a marked diversity was noticed among the identified purposes proposed by the studies analyzed. The following Table 1 includes some of the study variables and objectives presented in order to better clarify them.

**Table 1** - Variables used for the analysis of localized publications - Rio de Janeiro, RJ - 2014

<b>Nº</b>	<b>Title</b>	<b>Periodic Journal</b>	<b>Year</b>	<b>Type</b>	<b>Author(s)</b>	<b>Objective</b>
<b>I</b>	Do religion and religiosity have anything to do with alcohol consumption patterns?	Substance use & Misuse	2013	Research	Tumwesigye NM et al	Examine the relationship of religion and religiosity with the consumption of alcohol in two fishing communities of the river Victoria in Uganda
<b>II</b>	Health disparities among occupations in Taiwan: a population study	J Occup Health	2012	Research	Chen F, Chen PY	Examine disparities in the health of the four major existing chronic physical conditions between professions
<b>III</b>	Occupational health of Turkish Aegean small-scale fishermen	Occupational Medicine	2012	Research	Percin F, et al	Examine the health, safety and working conditions of fishing fleets of small-scale in the Aegean coast of Turkey
<b>IV</b>	Risk factors for fishermen's health and safety in Greece	Int Marit Health	2012	Research	Frantzeskou E, et al	Determine the risks to health and safety in fishing Greece exploring health and health risk factors present in their professions
<b>V</b>	High HIV incidence and socio-behavioral risk patterns in fishing communities on the shores of Lake Victoria, Uganda.	Sex Transm Dis	2012	Research	Seeley J, et al	Examine the acquisition of HIV and associated risk factors in 5 fishing communities on Lake Victoria coast in Uganda
<b>VI</b>	HIV and syphilis prevalence and associated risk factors among fishing communities of Lake Victoria, Uganda	Sex Transm Infect.	2011	Research	Asiki G, et al	To determine the prevalence of STDs associated with risk factors in a fishing population in Lake Victoria in Uganda's Coast
<b>VII</b>	Psychoactive substances consumption in French fishermen and merchant seamen	Int Arch Occup Environ Health	2010	Research	Fort E, et al	Identify tobacco use, consumption and nicotine dependence and alcohol with the diagnostic test and Fagerstrom CAGES in fishermen and merchant seamen
<b>VIII</b>	The health and lifestyle of Scottish fishermen: a need for health promotion	Health Education Research	2004	Research	Lawrie T, et al	Understanding the issues of health and lifestyle affecting Scottish fishermen
<b>IX</b>	Study on the relationship between smoking, alcohol intake and hyperlipidemia in fishermen	Zhonghua Liu Xing Bing Xue Za Zhi	2003	Research	Wang JY, et al	Identifying the relationship between smoking, alcohol consumption and hyperlipidemia in fishermen
<b>X</b>	Perceived and self-reported licit and illicit drug use among fishing industry workers on the mid-north coast of Western Australia	Drug Alcohol Ver	2002	Research	Carruthers S, et al	Describe the perceptions of owners of vessels and health professionals in the area of alcohol and illicit drugs in a fishing industry in Western Australia.

(To be continued)

(Continuation)

Nº	Title	Periodic Journal	Year	Type	Author(s)	Objective
XI	Work and chronic health effects among fishermen in Chioggia, Italy	G Ital Med Lav Ergon	1998	Research	Casson FF, et al	Assess whether there is an association between high-sea fishing and common chronic diseases
XII	Estudio epidemiológico analítico de los patrones de uso de alcohol y tabaco en pescadores: correlación con variables demográficas y patologías	Salud ocup.	1995	Research	Schinder EOM, et al	Establish a demographic profile of Argentine fishermen, estimate the smoking distribution and alcoholism according to the selected variables
XIII	Estudio epidemiológico del perfil de salud de pescadores de Mar del Plata, Argentina: tabaquismo y alcoholismo	CM publ. m,d	1994	Research	Pili N, et al	Establish a demographic profile and toxic habits like alcohol and tobacco in Mar del Plata's fishermen in Argentina
XIV	Traumatism with fatal outcome in maritime workersalcoholismo	Bull Inst Marit Trop Med Gdynia.	1992	Research	Shapovalov KA	Analyze fatal accidents among populations of ships in Russia
XV	Selected medical and social factors and alcohol drinking in Polish seafarers.	Bull Inst Marit Trop Med Gdynia.	1990	Research	Nitka J	Examine a group of fishermen identifying the factors that led to excessive consumption of alcohol.

In the search results, the prevalent approaches of alcohol consumption inserted in the areas addressed by the different authors of the articles analyzed were also identified, as shown in Table 2.

**Table 2** - Prevalent focus of identified alcohol consumption in the articles analyzed - Rio de Janeiro (RJ) - 2014

Prevalent focus of identified alcohol consumption	Article identification
Association between alcohol consumption and fishing activity	III/IV/VII/VIII/X/XI/XV
Association between alcohol consumption and industrial accidents	XII/XIII/XIV
Association between alcohol consumption and sexually transmitted diseases	V/VI
Association between alcohol consumption and cardiovascular disease/hyperlipidemia	II/IX
Association between alcohol consumption and religion	I

Thus, seven (7) of the articles located focused on the association between alcohol consumption and fishing activity; three (3) items linked to alcohol consumption and industrial accidents; two (2) articles linked alcohol consumption to sexually transmitted diseases; two (2) articles associated alcohol consumption with cardiovascular disease/hyperlipidemia and one (1) article related alcohol consumption to religion.

To clarify the results and analysis, the emerging data of the selected articles were grouped and categorized, clarifying in this way, the understanding of the thematic discussion. After thorough reading of the texts, two categories were created: alcohol consumption as a risk factor associated with the health of fishermen; and alcohol consumption and occupational accidents: search for promotion initiatives.

## DISCUSSION

### Category 1) Drinking: a risk factor associated with fishing health

The reality of life for fishermen especially artisanal ones, who develop fishing activities informally, without a formal employment relationship, has been identified as extremely precarious.<sup>6,10,11</sup> It has been observed in studies of this review that the socio-economic challenge and the sociocultural context in which they are immersed can be facilitating aspects of the habit of alcohol consumption among these professionals. In a study by Ribeiro<sup>6</sup> alcohol consumption is reported by 31.4% of the 35 fishermen interviewed as the main leisure activity, followed by table games (11.4%) and soccer (8.6%). Since the consumption pattern sometimes exceeds what is considered adequate for the maintenance of bodily functions, resulting in adverse effects on systems such as cardiovascular, digestive, nervous, and others. So the question to receive emphasis in this first category is the consumption of alcohol among fishermen and the damage to health linked to it.

Although there is evidence of beneficial effects of moderate alcohol consumption<sup>12</sup>, there are studies indicating

an increased risk of coronary heart disease associated with the usage pattern of the type of excessive alcohol drinking.<sup>13,14</sup> Ingesting large amounts of alcohol on a single occasion has been associated with adverse effects on blood pressure and also on platelet aggregation.<sup>15</sup> The correlation of alcohol consumption with the development of hyperlipidemia was also noticed. As described by Wang<sup>16</sup>, LDL-C cholesterol levels in a group of fishermen who consumed alcohol abusively was higher than in the control group. Thus, smoking and alcohol abuse are major risk factors for hyperlipidemia, through the change in LDL-C levels.

Despite the high morbidity and mortality associated with fishing activity, few studies show the effects of working conditions on the health of fishermen. Risk factors for fishermen of occupational health include alcohol, poor diet and smoking.<sup>17</sup> These possibly explain the gastrointestinal, respiratory and cardiovascular symptoms commonly reported by them.<sup>18</sup>

A study conducted with people of various professions in Taiwan in order to identify the health disparity between them showed that there is a prevalence of two to four times more Cardiovascular Disease (CVD) in fishermen compared to other professions such as machine operators, models and sellers. The same study also found that fishermen are often engaged with smoking and alcohol consumption concurrently and that this association increases the risk of liver disease.<sup>19</sup>

Because it is a psychoactive substance, excessive consumption of alcohol predisposes the individual to sleepiness, slower reaction time, deterioration of motor skills and coordination, loss of concentration and memory, reduced intellectual performance, and greater chance to put themselves in risky situations, such as the acquisition of Sexually Transmitted Diseases (STD), since the drug impairs your judgment, causing reckless behavior, such as unsafe sex.<sup>20,21</sup>

Studies in five fishing communities in Uganda, with high rates of HIV infection in an attempt to explain this high rate, associated it with risk behaviors, including regular consumption of alcohol.<sup>22,23</sup>

Alcohol predisposes fishermen to a lot of damage to health. The study results point to progress in future studies that aim to investigate the development of diseases specifically in this class of workers and identify strategies to reduce risk factors and exposure to them.

## **Category 2) Alcohol consumption and occupational accidents: the search for promotion initiatives**

Freedom and autonomy inherent in the profession can contribute to alcohol abuse in the workplace. The artisanal fisherman is able to decide, according to their experience in the art of fishing, climatic factors or need for income, at what time of the day to fish and if they will fish in a group or alone. The profession itself confers risk of accidents to workers, risk

of injury, shipwreck, waterborne diseases, all which may be potentiated by alcohol.

In a study by Schinder et al<sup>24</sup>, fishermen who consumed more alcohol and smoked more daily had work accidents more often. In addition, the rise of alcohol consumption was associated with increased exposure to marine occupational physical environmental variables. Studies have pointed to the high daily alcohol consumption among fishermen, as well as intensive behavioral smoking, associating the behavior and working conditions.<sup>25,26</sup>

Another study pointed fishermen as major consumers of alcohol in the control group. In both groups, those who consumed alcohol were older, smoked more cigarettes per day, and experienced a greater frequency of accidents than those who did not consume alcohol. A significantly greater exposure to physical occupational factors was associated with a higher alcohol consumption.<sup>27</sup>

Offshore workers are more exposed to alcohol dependence. Several stressful work-related factors often make the "escape" through the consumption of alcohol. This is a particularly dangerous fact, since alcohol is usually present as a contributing factor in disasters, unexplained disappearances of ships and work accidents.<sup>28</sup>

Alcohol abuse was identified as the highest risk factor for accidents and fatal injuries to sailors and fishermen,<sup>29</sup> being the possible facilitating factor for falls resulting in fractures of intervertebral discs.<sup>18</sup>

As suggested by Jaremin e Kotulak,<sup>18,30</sup> alcohol can contribute to human errors in navigation and is associated with at least ¼ of accidents, further highlighting the importance of prevention policies to reduce alcohol consumption.<sup>18</sup>

Fishing communities have a high level of overall alcohol consumption, as identified in the studied texts. Furthermore, it is known for some time that fishing is one of the most dangerous professions among the various existing in society. However, it is noteworthy that despite the consumption of alcohol being common among them, few fishermen know the health risks associated with this consumption. A fact borne out by a study conducted by Lawrie et al<sup>31</sup>, which noted alcohol consumption above recommended per week in 12.2% of the fishermen. When asked about whether they knew of the recommended weekly alcohol consumption, 66% did not know it.

Long working hours mark a fisherman's life, and this work overload may explain the high consumption of alcohol and tobacco. The study pointed to correlations between occupational accidents, respiratory problems, electrocardiogram (ECG) changes and various aspects of the profession as worked years and time spent offshore.<sup>32</sup> On the other hand, one can not overlook the correlation of alcohol consumption with more personal aspects intrinsic to fishermen, according to a study conducted by Tumwesigye NM et al, in which it examined the relationship of religiosity with the consumption of alcohol in Ugandan fishing communities. It found that people who report low religiosity

consume five times more alcohol than those who reported low religious attachment. It is understood that religion is a powerful channel for controlling alcohol consumption.<sup>33</sup>

It is evident therefore that fishermen should receive special attention through health promotion initiatives regarding safe levels of alcohol consumption and the risks associated with excessive consumption.

## CONCLUSION

The completion of the study provided an overview of the scientific production and the consumption of alcohol among fishermen, identified the main approach adopted in the publications surveyed, and also described the main findings to be incorporated into health practices with this population group.

It was found that alcohol consumption is linked to health risks such as cardiovascular disease, sexually transmitted disease, hyperlipidemia and risk of occupational accidents. The long working hours, lack of religious attachment and ignorance about the maximum levels of satisfactory weekly alcohol consumption are factors that facilitate the consumption of alcohol among fishermen.

Alcohol consumption is a common practice among fishermen and despite all the studies pointing to this harmful practice, there is no evidence of real alternatives related to the promotion and prevention of fishermen healthcare in relation to alcohol consumption.

This evident gap and the results presented in the articles included in this integrative review turn out to be an urgent need to intensify efforts to develop further research on this subject, with this population group, in order to generate transformations by knowledge.

## REFERENCES

1. WHO. World Health Organization. Global Burden of Disease. Geneva; 2003.
2. Rehm J, Taylor B, Room R. Global burden of disease from alcohol, illicit drugs and tobacco. *Drug Alcohol Rev* [periódico online] 2006 [Acesso em 2014 Ago 02]; 25: 503-13.
3. Bortoluzzi MC, Traebert J, Loguercio A, Kehrig RT. Prevalência e perfil dos usuários de álcool de população adulta em cidade do Sul do Brasil. *Ciênc. saúde coletiva*. [periódico online] 2010 [Acesso em 2014 Jun 23]; 15(3):679-85. Disponível em: [http://www.scielo.br/scielo.php?pid=S1413-81232010000300010&script=sci\\_arttext](http://www.scielo.br/scielo.php?pid=S1413-81232010000300010&script=sci_arttext)
4. Bastos FI, Bertoni N, Hacker MA. Consumo de álcool e drogas: principais achados de pesquisa de âmbito nacional, Brasil 2005. *Rev Saúde Pública*. [periódico online] 2008 [Acesso em 2014 Jul 30]; 42(Supl 1):109-17. Disponível em: <http://www.scielo.br/pdf/rsp/v42s1/13.pdf>
5. OIT. Organização Internacional do Trabalho. Problemas ligados ao álcool e a drogas no local de trabalho. Uma evolução para a prevenção. 1 ed. Lisboa: Bureau Internacional do Trabalho; 2008.
6. Ribeiro CRB. Impacto ambiental, trabalho e saúde de pescadores da Baía de Guanabara-RJ, Brasil: a Educação pelos Pares como estratégia de prevenção. [Dissertação de Mestrado]. Niterói (RJ): Universidade Federal Fluminense; 2013.
7. Pereira RAC. Os isqueiros no pantanal de Mato Grosso do Sul, Brasil: uma abordagem sócio-econômica, ambiental e legal [Dissertação de Mestrado]. Brasília (DF): Universidade de Brasília; 2001.
8. Mendes KDS, Silveira RCCP, Galvão CM. Revisão Integrativa: método de pesquisa para a incorporação de evidências na saúde e na enfermagem. *Texto Contexto Enferm*. [periódico online] 2008 [Acesso em 2014 Jun 03]; 4 (17):758-64. Disponível em: [http://www.scielo.br/scielo.php?pid=S010407072008000400018&script=sci\\_arttext](http://www.scielo.br/scielo.php?pid=S010407072008000400018&script=sci_arttext)
9. Souza MT, Silva MD, Carvalho R. Revisão integrativa: o que é e como fazer. *Rev Einstein* [periódico online] 2010 [Acesso em 2014 Jun 05]; 8(1):102-6. Disponível em: [http://www.scielo.br/scielo.php?pid=S1413-81232010000300010&script=sci\\_arttext](http://www.scielo.br/scielo.php?pid=S1413-81232010000300010&script=sci_arttext)
10. Rosa MFM, Mattos UAO. A saúde e os riscos de pescadores e catadores de caranguejo da Baía de Guanabara. *Ciênc. saúde coletiva*. [periódico online] 2010 [Acesso em 2013 Jun 25]; 15 (Supl. 1):1543-52. Disponível em: [http://www.scielo.br/scielo.php?script=sci\\_arttext&pid=S141381232010000700066](http://www.scielo.br/scielo.php?script=sci_arttext&pid=S141381232010000700066)
11. Neto DG, Cordeiro RC, Haddad Jr V. Acidentes do trabalho em pescadores artesanais da região do Médio Rio Araguaia Tocantins, Brasil. *Cad. saúde pública* [periódico online] 2005 [Acesso em 2014 Jul 02]; 3 (21): 795-803. Disponível em: <http://www.scielo.br/pdf/csp/v21n3/13.pdf>
12. Corrao G, Rubbiati L, Bagnardi V, Zambon A, Poikolainen K. Alcohol and coronary heart disease: a meta-analysis. *Addiction*. [periódico online] 2000 [Acesso em 2014 Jul 05]; 95: 1505-23.
13. McKee M, Briton A. The positive relationship between alcohol and heart disease in Eastern Europe: potential physiological mechanisms. *J Royal Soc Med* [periódico online] 1998 [Acesso em 2014 Jul 02]; 91: 402-7. Disponível em: <http://www.ncbi.nlm.nih.gov/pmc/articles/PMC1296837/>
14. Rehm J, Sempos CT, Trevisan M. Average volume of alcohol consumption, patterns of drinking and risk of coronary heart disease – a review. *J Cardiovasc Risk* [periódico online] 2003 [Acesso em 2014 Out 10]; 10: 15-20.
15. Lima MCP, Kerr-Corrêa F, Rehm J. Consumo de álcool e risco para doença coronariana na região metropolitana de São Paulo: uma análise do projeto GENACIS. *Rev Bras Epidemiol* [periódico online] 2013 [Acesso em 2014 Set 15]; 16(1): 49-57. Disponível em: [http://www.scielo.br/scielo.php?pid=S1415-790X2013000100049&script=sci\\_arttext](http://www.scielo.br/scielo.php?pid=S1415-790X2013000100049&script=sci_arttext)
16. Wang JY, et al. Study on the relationship between smoking, alcohol intake and hyperlipidemia in fishermen. *Zhonghua Liu Xing Bing Xue Za Zhi*. [periódico online] 2003 [Acesso em 2014 Out 15];24(12):1115-7.
17. Frantzeskou E, Kastania AN, Riza E, Jensen OC, Linos A. Risk factors for fishermen's health and safety in Greece. *Int Marit Health*. [periódico online] 2012 [Acesso em 2014 Nov 07];63(3):155-61.
18. Percin F, Akyol O, Davas A, Saygi H. Occupational health of Turkish Aegean small-scale fishermen. *Occupational Medicine*. [periódico online] 2012 [Acesso em 2014 Out 07]; 62:148-151.
19. Chen F, Chen PY. Health disparities among occupations in Taiwan: a population study. *J Occup Health*. [periódico online] 2012 [Acesso em 2014 Nov 17]; 54: 147-53.
20. Duarte PCAV, Stempluk VA, Barroso LP, organizadores. Relatório brasileiro sobre drogas. Brasília: Secretaria Nacional de Políticas sobre Drogas; 2009.
21. Anjos KE, Santos VC, Almeida OS. Caracterização do consumo de álcool entre estudantes do Ensino Médio. *Rev baiana saúde pública*. [periódico online] 2012 [Acesso em 2014 Jul 27];36(2):419-31.
22. Asiki G, et al. HIV and syphilis prevalence and associated risk factors among fishing communities of Lake Victoria, Uganda. *Sex Transm Infect*. [periódico online] 2011 [Acesso em 2014 Mai 22];87(6):511-5.
23. Seeley J, et al. High HIV incidence and socio-behavioral risk patterns in fishing communities on the shores of Lake Victoria, Uganda. *Sex Transm Dis*. [periódico online] 2012 [Acesso em 2014 Out 25]; 39(6):433-9.
24. Schinder EOM, et al. Estudio epidemiológico analítico de los patrones de uso de alcohol y tabaco en pescadores: correlación con variables demográficas y patologías. *Salud ocup*. [periódico online] 1995 [Acesso em 2014 Jul 23]; 13(58): 6-17.
25. Fort E, Massardier-Pilonchéry A, Bergeret A. Psychoactive substances consumption in French fishermen and merchant seamen. *Int Arch Occup Environ Health*. [periódico online] 2010 [Acesso em 2014 Set 24];83(5):497-509.
26. Carruthers S, Boots K, Midford R. Perceived and self-reported licit and illicit drug use among fishing industry workers on the mid-north coast of Western Australia. *Drug Alcohol Rev*. [periódico online] 2002 [Acesso em 2014 Nov 30];21(4):357-61.
27. Pili N, et al. Estudio epidemiológico del perfil de salud de pescadores de Mar del Plata, Argentina: tabaquismo y alcoholismo. *CM publ. m,d* [periódico online] 1994 [Acesso em 2014 Nov 09]; 7(1): 2-10.
28. Nitka J. Selected medical and social factors and alcohol drinking in Polish seafarers. *Bull Inst Marit Trop Med Gdynia*. [periódico online] 1990 [Acesso em 2014 Dez 13];41(1-4):53-7.
29. Shapovalov KA. Traumatism with fatal outcome in maritime workers. *Bull Inst Marit Trop Med Gdynia*. [periódico online]1992 [Acesso em 2014 Mar 03];43(1-4):57-60.
30. Jaremin B, Kotulak E. Mortality in the Polish small-scale fishing industry. *Occup Med (Lond)* [periódico online] 2004 [Acesso em 2014 Mai 22];54:258-60.
31. Lawrie T, Matheson L, Ritchie E, Bond C. The health and lifestyle of Scottish fishermen: a need for health promotion. *Theory & Practice Pages* [periódico online] 2004 [Acesso em 2014 Out 31];19(4):373-379.
32. Casson FF, et al. Work and chronic health effects among fishermen in Chioggia, Italy. *G Ital Med Lav Ergon*. [periódico online]1998 [Acesso em 2014 Jul 12];20(2):68-74.
33. Tumwesigye NM, et al. Do Religion and Religiosity Have Anything to Do With Alcohol Consumption Patterns? Substance use & Misuse. [periódico online] 2013 [Acesso em 2014 Mai 23];48 (12):1130-37.

Received on: 15/01/2015

Reviews required: No

Approved on: 15/06/2016

Published on: 10/04/2017

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