

Hilda Maria Rodrigues Moleda Constant¹,

Universidade Federal de Ciências da Saúde de Porto Alegre

Helena Maria Tannhauser Barros²

Universidade Federal de Ciências da Saúde de Porto Alegre

Maristela Ferigolo³

Universidade Federal de Ciências da Saúde de Porto Alegre

Carmen Moret-Tatay⁴

Universidad Católica de Valencia

The role of positive thinking: a study of *telehealth supportive counseling* for alcohol abusers

Abstract

Alcohol abuse is one of the main causes of health problems in the world. In response to these alcohol-related health consequences, *telehealth supportive counseling* has emerged, offering new strategies of dealing with addition problems. Most of *telehealth supportive counseling* strategies are focused on coping more precisely with positive and negative thinking.

The aim of presented study was to examine the relationships between positive thinking, and other coping strategies inherent to human thinking, to refuse alcohol. For this purpose, a total of 232 people participated in the study, all of them were users of a *telehealth supportive counseling* in Brazil. A batch of questionnaires was employed. This included the sociodemographic information, IDHEA-AD scores and the Coping Behaviours Inventory (CBI-20).

After an analysis of mediation, the results indicated that the relationship between negative and positive thinking might be mediated by the assertiveness to refuse. These results suggest that this type of *supportive counseling* modality might be helpful for users and health professionals. More research is needed to examine the innumerable possibilities of the telehealth tools using as a strategy to deal with the coping variables related to quitting alcohol use.

Key words: alcoholism, positive thinking, telehealth

1 ORCID: 0000-0001-9349-42033. Adres do korespondencji: hildamoleda@gmail.com

2 ORCID: 0000-0002-0779-77322

3 ORCID: 0000-0002-1449-5791

4 ORCID: 0000-0002-2867-9399

Rola pozytywnego myślenia: efektywność teleporadnictwa dla osób nadużywających alkoholu

Nadużywanie alkoholu stanowi istotny problem współczesnego świata. Jednym z proponowanych od niedawna w tym obszarze rozwiązań stała się tzw. telemedycyna oferująca nową formułę wspierającego ludzkie zdrowie poradnictwa. Większość ze stosowanych w jej obrębie strategii skoncentrowana jest na oddziaływaniu na pozytywne i negatywne myśli.

Celem prezentowanego badania było ustalenie związków między myśleniem pozytywnym a innymi charakterystycznymi dla ludzkiego stylu myślenia strategiami pozwalającymi jednostce zredukować konsumpcję alkoholu. W badaniu wzięły udział 232 osoby korzystające z *telefonicznego wspierającego poradnictwa* w Brazylii. Zastosowano następujące kwestionariusze: ankietę socjodemograficzną, kwestionariusz do badania umiejętności odmawiania alkoholu i narkotyków (IDHEA-AD) oraz Katalog Zachowań związanych z radzeniem sobie z problemami (Coping Behaviours Inventory – CBI-20).

Analizy wykazały, że relacja pomiędzy myśleniem negatywnym i pozytywnym może być kształtowana przez asertywną odmowę. Wyniki te sugerują, że zastosowanie telefonicznego poradnictwa może być pomocne dla beneficjentów służby zdrowia. Konieczne są dalsze badania w celu przeanalizowania licznych możliwości wykorzystania z tego narzędzia w celu rozwijania strategii związanych z ograniczaniem spożycia alkoholu.

Słowa kluczowe: alkoholizm, pozytywne myślenie, telemedycyna

Introduction

Beyond the consequences for health, harmful consumption of alcohol causes significant social and economic loss, both for individuals and for society, as it also affects family members, friends, co-workers, and even strangers. An important part of the burden of morbidity and mortality attributable to abuse of alcohol corresponds to injuries, particularly those resulting from traffic accidents, violence, and suicide, which occur mostly in the relatively young population (WHO, 2014). In addition, in Global Status Report on alcohol and health (WHO 2018) additional evidence has been presented on the relationships between alcohol consumption and the occurrence of diseases and injuries, including the disease caused by alcoholic cardiomyopathy which was not previously estimable, i.e. the effect of alcohol on the risk of HIV/AIDS. Consumption of alcohol and the problems related to it have been a subject studied extensively for years, and in the current DSM-5 (APA, 2013), in the group of disorders related to addictive substances, where in turn four different types of disorders can be found; disorder due to alcohol consumption, alcohol intoxication, alcohol withdrawal, and not specified alcohol-related disorder.

There are different studies (Braitman & Henson, 2015; Cortés, Espejo, & Giménez, 2007, Muñoz, Andreu, & Gutiérrez, 2005; Pombo, da Costa, Figueira, Ismail, & Lesch, 2015), which agree on a multidimensional nature of alcohol consumption, evidencing both internal and external factors. In the context of healthcare, new technologies have been developed with some interesting findings regarding their efficacy (Yoo,

Shah, Chih, & Gustafson, 2018; Kazemi et al., 2017; Prosser, Gee, & Jones, 2018). In this way, telerehabilitation combined with counseling can contribute to a change in behaviors such as withdrawal or abstinence maintenance. In the last decade it might be observed that alcoholism has benefitted from *telemedicine* in terms of time and distance. Moreover, these might help to cut down the mortality gap in people with severe mental disorders, offering a tool with various benefits (Harley, & Kim, 2018): it helps to cope with geographical barriers, but it also might be of interest for people who are afraid of being stereotyped in respect of mental health or addiction.

Although many efforts have been undertaken in this field, some questions remain unclear in the study of coping strategies, mental health, and their relationship to telehealth (Dulin & Gonzalez, 2017; Rosenfield, Lennon, & White, 2005). Consequently, we can find variables that are typical of alcoholism, such as anxiety, emotional distress, and depression. It is here where developing strong coping skills is crucial. In this way, negative coping might have an effect on some dysfunctional variables such as dissociation and avoidance, ultimately leading to self-medication or alcohol addiction (Crane, Garnett, Brown, West, & Michie, 2017; Miller, DiBello, Lust, Meisel, & Carey, 2017). When anxiety, stress, depression, and negative self-thinking reach tipping points, subsequently exacerbated by low-self-esteem, inadequate personal power and distorted personal identity, positive coping mechanisms might fail (de Quervain, Schwabe, & Roozendaal, 2017; Yang, Tao, He, Wang, & Zhang, 2018).

According to traditional authors such as Aldwin and Revenson (1987), there is a relationship that may be mediated by the type of stressor and their perception of controllability. Furthermore, ultimately being able to refuse alcohol is the result of a learning process that, from the onset, requires assertiveness. Whether someone is self-endorsing or self-inducing anxiety, stress or depression, benefits from undertaking this type of personal development work might be found. More precisely, negative thinking leads to emotional escape that includes alcohol abuse (Bravo, Pearson, & Henson, 2017; Bravo et al., 2018). In other words, people being assertive usually implies that they are willing to stand up for themselves (Stevens, Littlefield, Blanchard, Talley, & Brown, 2016). Such individuals tend to exhibit confident statements and behavior. Sometimes assertiveness is associated with aggressiveness and pushiness, but this is only when it is taken to extremes. By learning to be assertive, an individual is capable of having their needs met in an honest and safe way. More precisely, in order to stay sober, one needs to invest in personal growth and development.

In conclusion, possessing positive coping skills is a plus, although it is action that counts most. As a result of taking positive steps, one will find that positive, coping skills are automatically enhanced. This general view was shared by Carver and Connor-Smith (2010), stipulating that the relationship between coping and adaptation may be tempered by the nature, duration, context and controllability of the stress. However, in the presented study it was hypothesized that assertiveness can play a mediational role for refusal in coping for alcohol abusers undergoing telehealth treatment. In this way, this study aimed to analyze the mediational role of assertiveness for refusal in coping strategies.

Method

Design and Setting

The study was conducted at a free telephone counseling call center that provides advice and support to drug users throughout Brazil, from February 2011 to July 2016. Participants included those who called Ligue 132-VIVAVOZ⁵ because they wanted to stop drinking and expressed a desire to participate in the study.

The study was approved by the Committee of Research Ethics of the Federal University of Healthcare Sciences of Porto Alegre – UFCSPA under protocol no. 38026014.0.0000.5345.

Participants

A total of 232 alcohol users who intended to stop consumption were recruited when they sought help in the telehealth service from a Brief Motivational Intervention (IBM) program (Signor et al., 2013). The inclusion criteria were as follows: i) participants over 18 years old, ii) participants wanted to quit drinking alcohol. Participants who did not agree to participate in the study or did not follow it until the end, were excluded.

75.3% of the tested group were men, of average age of 39.11 (SD = 10.9). In terms of marital status, 28.9% had no stable relationship. Only 6.5 % completed between 10 and 13 years of education and 78% were working.

Measures

Firstly, Questionnaire of sociodemographic information was used. It consisted of 12 questions about gender, age, marital status and education. Finally, the Coping Behaviours Inventory – CBI-20 a brief version for alcohol users in Brazil (Constant et al., 2014) was also administered. It was adapted to be applied to the Brazilian population. This instrument was chosen because it was the only one, at that time, adapted for the Brazilian population, and which evaluated coping strategies for alcohol users. The inventory has 20 items related to coping strategies to avoid situations of risk in the consumption of alcoholic beverages. This instrument was developed on the basis of reports of alcoholic patients who described in detail the methods they used to prevent relapses, and it classifies four factors of coping strategies: F1-positive thinking; F2-negative thinking; F3-distraction/ avoidance; and F4- social support.

5 Ligue 132-VIVAVOZ (Serviço Nacional de Orientações e Informações sobre a Prevenção do Uso Indevido de Drogas) is a phone service created by the National Secretary for Drug Policies (SENAD) and Universidade Federal de Ciências da Saúde de Porto Alegre (UFCSPA) to provide free, anonymous and confidential service. The service works 24 hours a day and provides guidance and information on drugs for people and their relatives by phone, serving all regions of Brazil.

Data Analysis

To perform the analysis, SPSS 23.0, AMOS 18 (IBM) and the SPSS macro PROCESS created by Preacher and Hayes (2008) were employed. As an initial step, a descriptive analysis was carried out, examining the normal distribution assumptions. Internal consistency of both scales through Cronbach Alpha we examined, as well as their item homogeneity, KMO index, and the Bartlett test of sphericity.

Results

The table 1 presents the descriptive analysis, homogeneity items, Cronbach’s alpha, kurtosis, skewness, and exploratory factor loadings between items.

Table 1. Descriptive analysis, homogeneity items, Cronbach’s alpha, kurtosis, skewness

Item	Mean	SD	H ²	Kurtosis	Skewness	Cronbach’s α
Factor 1	1.09	.64	.37–.57	.32	–.56	.80
Factor 2	0.96	.78	.54–.69	.32	–.18	.78
Factor 3	1.27	.80	.35–.55	.32	–.82	.66
Factor 4	1.85	.83	.28–.33	.32	–.87	.52

SD: Standard deviation; H²: Homogeneity range

A mediational model to test indirect effects (see figure 1). This analysis also allowed to determine whether assertiveness for refusal mediated the relationship between interpersonal negative and positive thinking. After standardizing all measures, the overall model was statistically significant: $F_{(1,220)} = 33.43$, $MSE = 0.88$; $p < .01$, $R^2 = .12$. In terms of path, the path of X and M (path a) was tested first, which resulted in a positive significant effect ($\beta = .34$, $t(221) = 5.78$, $SE = .06$, $p < .001$, $LLCI = .10$, $ULCI = .30$). The second path b, between M and Y, was tested, reaching the statistical level: ($\beta = .60$, $t(221) = 4.12$, $SE = .04$, $p < .0001$, $LLCI = .50$, $ULCI = .71$). The indirect effect was also in the confidence interval ($\beta = .07$, $t(221) = 3.28$, $SE = .02$, $p < .0001$, $LLCI = .03$, $ULCI = .12$).

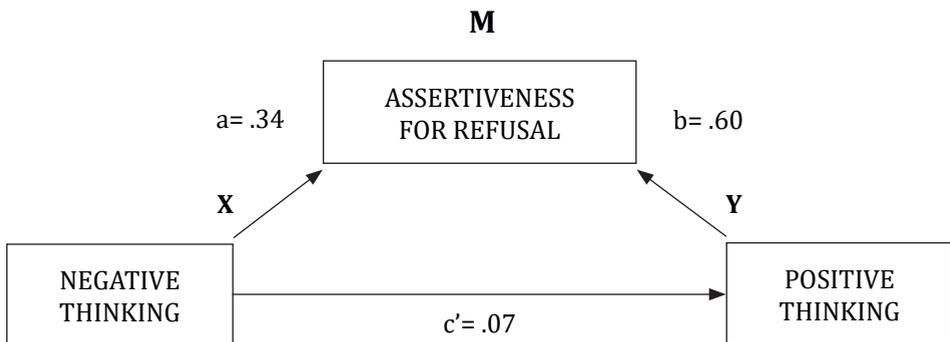


Figure 1. Mediational model proposed in terms of assertiveness for refusal and positive and negative coping. Of note, c was a borderline mediation

Discussion

As encouraging positive thinking might promote adherence to treatment, the aim of this study was to examine the mediational role of assertiveness in the refusal to cope for alcohol abusers undergoing telehealth treatment. For this reason, a mediational model was proposed. The model presented an optimal fit. According to the data showed in previous studies (Carver & Scheier, 2017) these results are of interest for therapists in this type of services, suggesting the importance of coping and negative thinking to reach an optimal thinking in the end. The main goal is to try to reduce alcohol abuse and mortality, promoting interest in telehealth interventions (Khadjesari, Murray, Hewitt, Hartley, & Godfrey, 2011). Telehealth interventions have been extensively used in vast territorial areas with large and populations with scarce access of health care. Expanding this view, health systems have used this technology as a tool to deliver diverse services (Lurie & Carr, 2018; Tuckson, Edmunds, & Hodgkins, 2017). The perspective is that this service can be used as health a policy, since abuse of alcohol has an impact on society globally.

This topic is also related to social skills. Authors such as Gaffney, Thorpe, Young, Collet, and Occhipinti (1998), related the deficit of social skills to alcohol consumption, highlighting antisocial behavior and a lack of assertiveness. Although this study is mainly focused on cognitive variables, future lines of research should take this point into account. Within these lines, we can also find self-esteem, self-control, and impulsiveness. Being able to refuse alcohol is the result of a learning process that requires assertiveness. According to several authors, young people with low self-esteem are more vulnerable to peer pressure and in turn, are more likely to engage in risky behaviors (Crockett & Petersen, 1993). Regarding self-control, the studies show that it is closely related to the concepts of self-esteem and self-concept, and that when self-control decreases, the duration and scale of substance use increases (López-Torrecillas, Peralta, Muñoz-Rivas, & Godoy, 2003).

Conclusions

The implication of the findings can be employed on both theoretical and applied levels. Understanding the mechanisms of coping strategies involved in relapse prevention can impact the level of assistance provided to alcohol users. The idea of working with specific and more effective confrontations can be considered a facilitator in the whole process of therapy, as well as in adherence to treatment. First, this might shed some light on the moderated mediational model, which shows that assertiveness of refusal might have an effect on coping strategies. Thus, a plan of relapse prevention can be implemented more effectively. Finally, this might emphasize the effects of variables of interest on the process of quitting alcohol use. This is useful for health practitioners in the field of telehealth counselling. However, more research is needed due to the high prevalence and incidences of alcohol use around the world.

Limitations

There are several shortcomings of the present study. Firstly, the participants were selected through non-probability sampling, which can result in distortions in the results considering that the final sample may be biased. Secondly, even though the evaluation was supervised by trained professionals, it was completed online. Thus, a self-reporting bias may occur. However, despite these inconveniences, this modality is of interest in the context of avoiding stereotypes with regards to mental health and addiction. Furthermore, they offer a new field of work in an ever more digitalized world, where gaps such as distance and time are crucial. Obviously, this is an area where more research is needed.

References

- Aldwin, C.M., & Revenson, T.A. (1987). Does coping help? A reexamination of the relation between coping and mental health. *Journal of personality and social psychology*, 53(2), 337.
- American Psychiatric Association. (2013). *Diagnostic and statistical manual of mental disorders* (5^a ed.). Washington, DC: Author.
- Braitman, A.L., & Henson, J.M. (2015). The impact of time perspective latent profiles on college drinking: a multidimensional approach. *Substance use & misuse*, 50(5), 664–673.
- Bravo, A.J., Pearson, M.R., & Henson, J.M. (2017). Drinking to cope with depressive symptoms and ruminative thinking: a multiple mediation model among college students. *Substance use & misuse*, 52(1), 52–62.
- Bravo, A.J., Pilatti, A., Pearson, M.R., Mezquita, L., Ibáñez, M.I., & Ortet, G. (2018). Depressive symptoms, ruminative thinking, drinking motives, and alcohol outcomes: A multiple mediation model among college students in three countries. *Addictive behaviors*, 76, 319–327.
- Cortés, M.T., Espejo, B., & Giménez, J.A. (2007). Características que definen el fenómeno del botellón en universitarios y adolescentes. *Adicciones*, 19(4), 357–372.
- Constant, H.M.R.M., Figueiró, L.R., Signor, L., Bisch, N.K., Barros, H.M.T., & Ferigolo, M. (2014). Tradução, adaptação transcultural e validação de conteúdo da versão em português do Coping Behaviours Inventory (CBI) para a população brasileira. *Cadernos de Saúde Pública*, 30, 2049–2056.
- Carver, C.S., & Connor-Smith, J. (2010). Personality and coping. *Annual review of psychology*, 61, 679–704.
- Carver, C.S., & Scheier, M.F. (2017). Self-regulatory functions supporting motivated action. *Advances in motivation science*, 4, 1–37. DOI: 10.1016/bs.idms.2017.02.002.
- Crane, D., Garnett, C., Brown, J., West, R., & Michie, S. (2017). Factors influencing usability of a smartphone app to reduce excessive alcohol consumption: think aloud and interview studies. *Frontiers in Public Health*, 5, 39.

- Crockett, L. J., & Petersen, A.C. (1993). Adolescent development: Health risks and opportunities for health promotion. In S.G. Millstein, A.C. Petersen, & E.O. Nightingale (Eds.), *Promoting the health of adolescents: New directions for the twenty-first century* (pp. 13–37). Oxford University Press.
- de Quervain, D., Schwabe, L., & Roozendaal, B. (2017). Stress, glucocorticoids and memory: implications for treating fear-related disorders. *Nature Reviews Neuroscience*, *18*(1), 7.
- Dulin, P.L., & Gonzalez, V.M. (2017). Smartphone-based, momentary intervention for alcohol cravings amongst individuals with an alcohol use disorder. *Psychology of Addictive Behaviors*, *31*(5), 601.
- Gaffney, L.R., Thorpe, K., Young, R., Collett, R., & Occhipinti, S. (1998). Social skills, expectancies, and drinking in adolescents. *Addictive Behaviors*, *23*(5), 587–599.
- Harley D.A., & Kim B.J. (2018). Substance-Related and Addictive Disorder Treatment in Rural, Frontier, and Territory Settings. In: Harley D., Ysasi N., Bishop M., Fleming A. (Eds.), *Disability and Vocational Rehabilitation in Rural Settings* (pp. 519–543). Springer, Cham. DOI: 443.webvpn.fjmu.edu.cn/10.1007/978-3-319-64786-9_28
- Kazemi, D.M., Borsari, B., Levine, M.J., Li, S., Lamberson, K.A., & Matta, L.A. (2017). A systematic review of the mHealth interventions to prevent alcohol and substance abuse. *Journal of Health Communication*, *22*(5), 413–432.
- Khadjesari, Z., Murray, E., Hewitt, C., Hartley, S., & Godfrey, C. (2011). Can stand-alone computer-based interventions reduce alcohol consumption? A systematic review. *Addiction*, *106*(2), 267–282.
- López-Torrecillas, F., Peralta, I., Muñoz-Rivas, M.J., & Godoy, J.F. (2003). Autocontrol y consumo de drogas. [*Self-Control and Drug Use*]. *Adicciones*, *15*(2). DOI: 10.20882/adicciones.436
- Lurie, N., & Carr, B.G. (2018). The role of telehealth in the medical response to disasters. *JAMA Internal Medicine*, *178*(6), 745–746.
- Miller, M.B., DiBello, A.M., Lust, S.A., Meisel, M.K., & Carey, K.B. (2017). Impulsive personality traits and alcohol use: Does sleeping help with thinking? *Psychology of Addictive Behaviors*, *31*(1), 46–53.
- Muñoz-Rivas, M., Andreu, J.M., & Gutiérrez, P. (2005). Genero y continuidad en el consumo de alcohol, tabaco y cannabis en jóvenes. *Salud y drogas*, *5*(2), 67–79.
- Preacher, K.J., & Hayes, A.F. (2008). Asymptotic and resampling strategies for assessing and comparing indirect effects in multiple mediator models. *Behavior Research Methods*, *40*(3), 879–891.
- Pombo, S., da Costa, N.F., Figueira, M.L., Ismail, F., & Lesch, O.M. (2015). Multidimensional alcoholism typologies: could they guide clinical practice? Results from a 3-month prospective study. *International Journal of Psychiatry in Clinical Practice*, *19*(2), 137–147.
- Prosser, T., Gee, K.A., & Jones, F. (2018). A meta-analysis of effectiveness of E-interventions to reduce alcohol consumption in college and university students. *Journal of American College Health*, *66*(4), 292–301.
- Rosenfield, S., Lennon, M.C., & White, H.R. (2005). The self and mental health: Self-salience and the emergence of internalizing and externalizing problems. *Journal of Health and Social Behavior*, *46*(4), 323–340.

- Signor, L., Pierozan, P.S., Ferigolo, M., Fernandes, S., Campos Moreira de, T., Mazoni, C.G., & Barros Tannhauser, H.M. (2013). Efficacy of the telephone-based Brief Motivational Intervention for alcohol problems in Brazil. *Brazilian Journal of Psychiatry*, 35(3), 254–261. DOI: 10.1590/1516-4446-2011-0724.
- Stevens, A.K., Littlefield, A.K., Blanchard, B.E., Talley, A.E., & Brown, J.L. (2016). Does drinking refusal self-efficacy mediate the impulsivity – problematic alcohol use relation? *Addictive Behaviors*, 53, 181–186.
- Tuckson, R.V., Edmunds, M., & Hodgkins, M.L. (2017). Telehealth. *New England Journal of Medicine*, 377(16), 1585–1592.
- World Health Organization. (2014). Global status report on noncommunicable diseases 2014 (No. WHO/NMH/NVI/15.1).
- World Health Organization. (2018). Global status report on noncommunicable diseases 2014 (<https://apps.who.int/iris/bitstream/handle/10665/274603/9789241565639-eng.pdf?ua=1>).
- Yang, P., Tao, R., He, C., Wang, Y., & Zhang, X. (2018). The Risk Factors of the Alcohol Use Disorders –Through Review of Its Comorbidities. *Frontiers in Neuroscience*, 12, 303. <https://www.readcube.com/articles/10.3389%2Ffnins.2018.00303>.
- Yoo, W., Shah, D.V., Chih, M.Y., & Gustafson, D.H. (2018). Predicting changes in giving and receiving emotional support within a smartphone-based alcoholism support group. *Computers in Human Behavior*, 78, 261–272.

