



ORIGINAL ARTICLE

Coping strategies in oral and oropharyngeal cancer patients with alcohol dependence

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KEYWORDS

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Abstract

Background and objectives: The role of coping mechanisms and alcoholism in people affected with malignant tumours of oral cavity and oropharynx is not clearly established in literature. The aim of this study was to compare the coping strategies of the alcohol dependent patients affected by the malignant tumours of oral cavity and oropharynx with the alcohol dependent patients who were not affected by the carcinoma and the healthy population.

Methods: The study included a total of 153 participants divided into three groups matched in age, gender, education, work and marital status. The first group consisted of 51 alcohol dependent patients diagnosed with malignant tumour of the oral cavity and oropharynx who had been hospitalised and undergone surgery. The second group included 51 patients diagnosed with alcohol dependence but with no cancer diagnosis and the third group consisted of 51 participants who had not previously had any health problems. All participants completed the self-assessment test aimed at registering their usual strategies of coping with stress.

Results: The three groups of patients differed most in avoidance coping, both on the total score ($F_{(2,150)} = 3,986$; $p = 0.021$) and the following subscales: accepting ($F_{(2,150)} = 5,509$; $p = 0.005$), mental disengagement ($F_{(2,150)} = 4,017$; $p = 0.020$), religion ($F_{(2,150)} = 4,527$; $p = 0.012$), alcohol/drug consumption ($F_{(2,150)} = 11,825$; $p < 0.001$) and isolation ($F_{(2,150)} = 3,448$; $p = 0.034$). Compared to healthy controls, patients diagnosed with malignant tumour and alcohol dependence used more avoidance in coping with stress ($p = 0.010$).

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Conclusion: Despite the limited generalisation and cross-sectional study design the results indicated that patients affected by alcohol dependency and malignant tumour of oral cavity and oropharynx perceived their illness as something out of their control, something that they can hardly deal with, and mostly relied on disengaging/distancing coping strategies.

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Introduction

Malignant tumour of oral cavity makes 5% of all malignant tumours in the Europe and the USA and is seventh most commonly diagnosed cancer worldwide.¹ The incidence of malignant tumours of oral cavity and oropharynx in the world ranges from 0.5 to 4 per 100 000 inhabitants, and in Croatia 4.5 per 10 000 inhabitants.^{1,2} The mean age of affected is 55 years and the proportion of men over women is 5:1.³ Some etiological factors are recognised, as the 90% of the patients who get affected by this illness are nicotine and/or alcohol dependent.^{4,5} As well as receiving a potentially life-threatening diagnosis, individuals with malignant tumours of oral cavity and oropharynx endure aggressive and often invasive treatment including radiotherapy, chemotherapy, surgery, or a combination of these.⁶ Oral cavity comprises a small surface, but that surface is significant and specific because it presents complex interrelations between the structure and function. For that reason, individuals with malignant tumours of oral cavity and oropharynx are vulnerable to unique challenges resulting from disfigurement and dysfunction that accompanies this type of cancer and its treatment. These include impairments in daily functioning (e.g. breathing, eating, swallowing, loss of taste, residual pain) and feelings of vulnerability, social isolation and sadness connected to changes in appearance.^{7,8} In numerous studies carcinoma of oral cavity and oropharynx has been described as one of the most traumatic kind of human carcinomas and individuals affected with it are vulnerable to greater levels psychological distress^{7,9} which can result in serious psychopathology like depression, anxiety, adjustment disorders, and higher risks of suicides.^{10–12} Heavy alcohol consumption, along with tobacco smoking, is one of the well-known risk factors for development of malignant tumours of oral cavity and oropharynx.^{13,14} At the same time alcohol drinking in cancer patients can also be viewed as one of the dysfunctional ways to cope with negative emotions and stress caused by the illness.

Lazarus and Folkman define coping as a dynamic process involving cognitive and behavioural efforts to enable people to live with internal or external demands brought about by disease.¹⁵ Coping with stress, as described by researchers such as Lazarus and Folkman, implies a more specific process of cognitive appraisal to determine whether an individual believes he or she has the resources to respond effectively to the challenges of a stressor or change.¹⁶ If the person has the resources to manage the challenge, he or she will usually develop a problem-focused coping response (actively planning, behavioural engagement, etc.). If the individual does

not believe he or she has the capacity to respond to the challenge or feels a lack of control, he or she is most likely to turn to an emotion-focused coping (managing or changing emotional distress) or avoidant coping (distancing oneself from the situation, denial).¹⁶ The research has shown that people use combined coping strategies especially in the complex situations caused by the disease and hospitalisation.¹⁷ There are many factors influencing coping such as nature of the stressful event, personality and available resources from the environment. These elements considerably influence the adjustment of the patients in the moments when a disease is discovered and when it is under treatment and control.^{18,19} Coping styles are also not inherently positive or negative, although specific coping strategies may be more functional in different contexts. For example, in more controllable situations, problem-focused coping strategies are more functional and in relatively uncontrollable situations, emotion-focused strategies are more functional.^{16,17}

Studies that systematically examined coping strategies in people with substance use disorder showed higher tendency to maladaptive coping such as disengagement, social withdrawal and lower in engagement ones such as problem solving, cognitive restructuring and social support.^{20,21} It is also shown that the severity of addiction, number of relapses and age of onset of substance use were related to maladaptive coping such as disengagement, lesser use of social support and higher problem avoidance and social withdrawal.²² When we specifically look at studies on alcohol abuser/addicts similar patterns of coping strategies emerges. It is shown that coping mechanisms such as restraint and suppression of competing activities moderates the influence of stress on alcohol use.²³ It is also shown that some personality traits are related to different coping strategy utilisation in persons with alcohol use disorder.²⁴ Maladaptive coping is shown to have moderation effect between stress and alcohol use in terms of higher consumption and heavy episodic drinking.²⁵

Research on interaction of psychological distress and coping mechanisms among people with malignant tumours of oral cavity and oropharynx and alcohol dependency did not yield completely conclusive result. Most of the research, however, suggests a relationship between disengagement/avoidant coping styles and increased psychological distress.^{20,26–28} Avoidant coping strategies were utilised significantly more in individuals having high levels of depression and anxiety^{26,29} and the coping through alcohol/drug use was also found to be in relation to elevated depression.³⁰ Denial, behavioural disengagement and self-blame at diagnosis is shown to be related with development

of post-traumatic stress symptoms and poor quality of life in patients with head and neck cancer.³¹ Inadequate coping mechanisms of alcohol dependent patients with malignant tumour of oral cavity could be an indication to commence with the earliest possible implementation of psychotherapeutic treatments in order to make corrections and to develop more functional coping strategies that could result in more adequate treatment and better disease control. The aim of this study was to compare the coping strategies of the alcohol dependent patients affected by the malignant tumours of oral cavity and oropharynx with the alcohol dependent patients who were not affected by the carcinoma and the healthy population, starting from the following hypotheses: (a) participants with the alcohol dependence, regardless of cancer, will use more avoidance and less problem focused coping compared to healthy controls, and (b) participants with the malignant tumours of oral cavity and oropharynx will use significantly more emotion suppression, disengagement and social isolation compared to both alcoholics without cancer and healthy controls.

Methods

Participants

The study sample consisted of the 153 participants divided in three groups. The first group consisted of 51 alcohol dependent patients diagnosed with malignant tumour of the oral cavity and oropharynx. They had previously been hospitalised and undergone surgery at the Clinic for Maxillofacial Surgery at the University Hospital Centre in Rijeka, Croatia. The inclusion criteria for the first group were: (1) the diagnosis of malignant tumour of the oral cavity and oropharynx based on clinical examination according to the TNM Classification of Malignant Tumours (TNM), computed tomography (CT), head and neck ultrasound and pathohistological biopsy verification of malignant disease; (2) the diagnosis of alcohol dependence according to the Diagnostic and Statistical Manual of Mental Disorders (DSM-IV-TR)³² by using the Mini International Neuropsychiatric Interview (MINI)³³; (3) age – 18 years or older and (4) provision of signed informed consent. The exclusion criteria were: (1) comorbid psychotic disorder, (2) mental disorder caused by organic factors, and (3) cognitive and/or sensory disabilities. Patients with other psychiatric comorbidities (other than those covered by the exclusion criteria – i.e. major depression, bipolar disorder, etc.) were included in the sample and analysed. Seventy-nine patients hospitalised at the Clinic for Maxillofacial Surgery at the University Hospital Centre were screened for the malignant tumour of the oral cavity and oropharynx in the observed period. Nine patients (11%) did not meet the criteria for the diagnosis and other 9 patients (11%) had comorbid organic mental disorder, while 10 (13%) refused to give their written informed consent and were therefore excluded from the research.

The second group of participants included patients who were treated at the Psychiatric Clinic of the University Hospital Centre Rijeka, Department for Alcohol Addiction. The inclusion criteria for the second group of participants were: (1) the diagnosis of alcohol dependence according to the DSM-IV-TR³² criteria, (2) age 18 or older and (3) provision

of signed informed consent. The exclusion criteria for the second group were: (1) comorbid psychotic disorder, (2) mental disorder caused by organic factors, and (3) cognitive and/or sensory disabilities. As in the first group of participants the patients with other psychiatric comorbidities (i.e. major depression, bipolar disorder, etc.) were also eligible and were included in the final sample. Sixty-seven participants were included in the screening, out of which 9 (13%) met the criteria for organic mental disorder, 4 (6%) had a diagnosis of psychotic disorder and 3 (4%) did not provide a written informed consent leaving a total of 51 participants.

The third, control group of participants was matched to two other groups in sex, age and education level and consisted of 51 participants who had not previously had any mental health problems and had been selected at general practitioner offices in the area of the city of Rijeka. Age 18 or older, no history of alcohol addiction, no history of malignant diseases, organic mental disorders and psychotic disorder were set as the inclusion criteria for the third group of participants. Out of 64 contacted participants, 13 (20%) refused to give a written informed consent. The flow of participants is shown in Fig. 1. Written informed consent to participate in research project, and study was approved by the local ethical committee.

Instruments

General socio-demographic data about age, gender, employment status, education and marital status were gathered using the short questionnaire custom-developed for this study. Malignant tumour of the oral cavity and oropharynx was diagnosed by a maxillofacial surgeon based on clinical examination according to the TNM classification, computed tomography – CT, head and neck ultrasound and pathohistological biopsy verification of malignant disease. The diagnosis of alcohol dependence according to the DSM-IV-TR³² was diagnosed by a psychiatrist using the structured psychiatric interview MINI.³³

All the participants completed the self-assessment test: Questionnaire on coping with stress (COPE). The COPE is a multidimensional coping inventory aimed to assess the different ways in which people respond to stress. The Croatian version of COPE used in this research was translated and adapted by Hudek-Knežević et al. and consists of 71 items describing different coping reactions to a stress.³⁴ Each participant responds on a five point Likert scale what he/she usually does or experiences in everyday situations (0 = “I never do this”, 1 = “Sometimes I do this”, 2 = “I usually do this”, 3 = “I often do this” and 4 = “I always do this”). Of these 71 items 17 subscales were empirically derived, 15 of which overlap with the original COPE questionnaire, while the two subscales are specific to our socio-cultural area (social isolation and emotion suppression). Six scales measure conceptually distinct aspects of *problem-focused coping* (active coping, planning, suppression of competing activities, restraint coping, positive reframing and acceptance); three scales measure aspects of what might be viewed as *emotion-focused coping* (using emotional support, using instrumental support, and venting of emotions) and eight scales measure *avoidance coping* (denial, behavioural and mental avoidance, humour, religion, alcohol, isolation

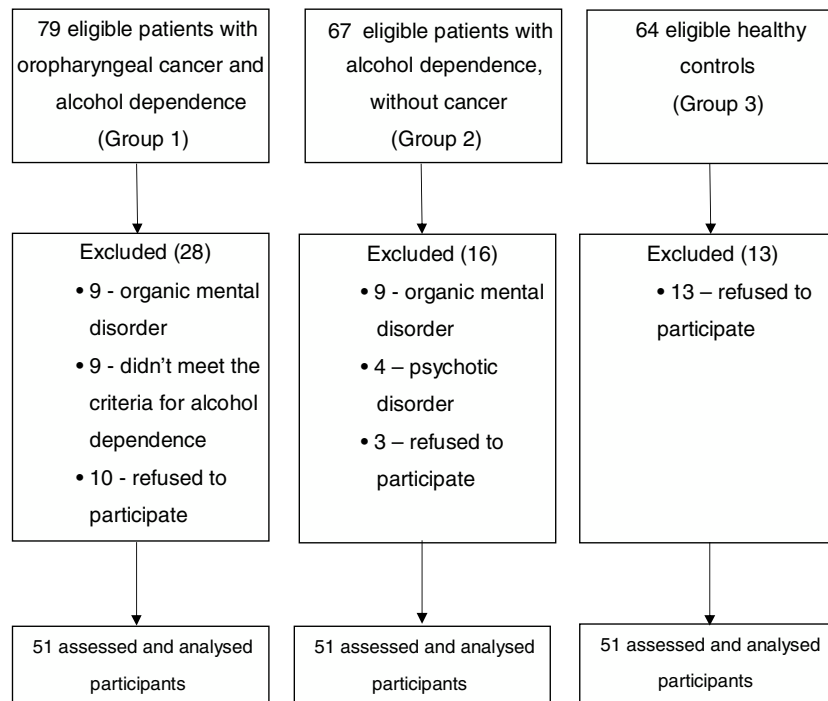


Figure 1 Flow-chart of the recruitment process.

and suppression of emotions).³⁴ Reliability of all three major scales was satisfying (Cronbach alpha for problem-focused coping = 0.844; Cronbach alpha for emotion-focused coping = 0.809; Cronbach alpha for coping by avoidance = 0.787).

Data analysis

Patient characteristics and coping strategies were summarised using frequencies (percentages) and means (standard deviations). Normality of distribution of continuous variables was tested by Kolmogorov–Smirnov test. In the cases of smaller sub-samples Shapiro–Wilk test were used instead. Differences between normally distributed measures were tested using One-Way ANOVA with planned comparison between each group of subjects. Chi-square test was used in testing differences between categorical socio-demographic variables. Two-tail tests of statistical significance were used in all cases. The effect sizes of main effects in ANOVA(s) are shown as partial eta squared (η_p^2). Level of significance was set to 95% ($p < 0.05$). All the analyses were carried out using SPSS 23.0 (SPSS Inc., 2008, Chicago, IL, USA) statistical software package.

Results

The three groups of participants did not differ on age, gender, current work status, education level and marital status. More than three quarters of the sample were male and the mean age of participants was 57 (SD = 8.8) years. Almost half of the participants were retired (45.8%), followed by employed (38.6%) and unemployed (15.7%). Most of them

had finished high-school education (75.8%) and were married (55.6%) (Table 1).

Compared on general coping styles, total scores on problem focused coping and emotion focused coping did not significantly differ between groups. However, statistically significant differences were registered on the problem focused coping subscale restraint coping (waiting) ($F_{(2,150)} = 3,739$; $p = 0.026$) and emotion focused coping subscale venting of emotions ($F_{(2,150)} = 3,687$; $p = 0.027$). Patients diagnosed with alcohol dependence and malignant tumour used restraint coping significantly more compared to alcoholics without malignant tumour ($p = 0.014$) and healthy controls ($p = 0.028$). Similarly, patients with malignant tumour used venting of emotions significantly more compared to alcoholics without malignant tumour ($p = 0.048$) and healthy controls ($p = 0.010$).

The three groups of participants differed most in avoidance coping, both on the total score ($F_{(2,150)} = 3,986$; $p = 0.021$) and the following subscales: accepting ($F_{(2,150)} = 5,509$; $p = 0.005$), mental disengagement ($F_{(2,150)} = 4,017$; $p = 0.020$), religion ($F_{(2,150)} = 4,527$; $p = 0.012$), alcohol/drug consumption ($F_{(2,150)} = 11,825$; $p < 0.001$) and social isolation ($F_{(2,150)} = 3,448$; $p = 0.034$) (Table 2). Compared to healthy controls, patients diagnosed with malignant tumour and alcohol dependence as well as alcoholics without cancer used more avoidance in coping with stress ($p = 0.010$ and $p = 0.048$ respectively), while avoidance levels did not differ significantly between patients with and without cancer.

On the level of particular avoidance subscales, patients diagnosed with alcohol dependence and malignant tumour used acceptance as a coping strategy significantly more com-

Table 1 Comparison of socio-demographic characteristic of the three groups of participants.

	Malignant tumour with alcohol dependence <i>n</i> = 51 Mean (SD)	Alcohol dependence without malignant tumour <i>n</i> = 51 Mean (SD)	Healthy control <i>n</i> = 51 Mean (SD)	<i>p</i>
Age	58.02 (8.17)	57.14 (7.87)	55.42 (8.58)	.897*
	<i>n</i> (%)	<i>n</i> (%)	<i>n</i> (%)	
<i>Gender</i>				
Male	40 (78.4)	40 (78.4)	40 (78.4)	–
Female	11 (21.6)	11 (21.6)	11 (21.6)	
<i>Work status</i>				
Employed	18 (35.3)	19 (37.3)	22 (43.1)	.696**
Unemployed	10 (19.6)	9 (17.6)	5 (9.8)	
Retired	23 (45.1)	23 (45.1)	24 (47.1)	
<i>Education</i>				
Elementary school	13 (25.5)	10 (19.6)	9 (17.6)	.906**
High school	36 (70.6)	39 (76.5)	41 (80.4)	
University	2 (3.9)	2 (3.9)	1 (3.9)	
<i>Marital status</i>				
Single	9 (17.6)	6 (11.8)	8 (15.7)	.149**
Married	34 (66.7)	24 (47.1)	27 (52.9)	
Divorced	2 (3.9)	11 (21.6)	8 (15.7)	
Widowed	6 (11.8)	8 (15.7)	8 (15.7)	

* *T*-test.

** Chi square test.

Table 2 Differences in coping strategies between the three groups of participants.

Coping strategies	Malignant tumour with alcohol dependence <i>n</i> = 51 Mean (SD)	Alcohol dependence without malignant tumour <i>n</i> = 51 Mean (SD)	Healthy control <i>n</i> = 51 Mean (SD)	$F_{(2,150)}$	Effect size η_p^2
Problem focused coping	49.84 (12.55)	45.88 (13.39)	44.92 (10.27)	2.354	0.030
Restraint coping (waiting)	8.71 (3.32)	7.33 (2.61)	7.49 (2.92)	3.739*	0.048
Emotion focused coping	17.18 (6.32)	19.12 (7.32)	17.73 (6.58)	1.119	0.010
Venting	4.71 (2.34)	5.61 (2.17)	5.88 (2.35)	3.687*	0.054
Avoidance	52.9 (14.06)	52.9 (12.37)	45.16 (16.75)	3.986*	0.060
Acceptance	9.29 (3.04)	7.24 (2.99)	8.2 (3.36)	5.509**	0.075
Cognitive disengagement	9.18 (4.06)	9.35 (4.07)	7.35 (3.7)	4.017*	0.051
Religion	7.84 (5.20)	6.57 (5.44)	4.73 (5.14)	4.527*	0.066
Substance use	4.9 (4.01)	7.61 (5.15)	3.35 (4.17)	11.83**	0.188
Social isolation	3.53 (2.1)	4.69 (3.11)	3.49 (2.53)	3.448*	0.044

* $p < 0.05$.** $p < 0.01$.

pared to alcoholics without malignant tumour ($p=0.001$), but not compared to healthy participants.

Compared to healthy participants, patients diagnosed with alcohol dependence and malignant tumour as well as alcoholics without malignant tumour used significantly more mental disengagement ($p=0.021$ and $p=0.011$ respec-

tively). Patients diagnosed with alcohol dependence and malignant tumour used significantly more coping through religion compared to healthy participants ($p=0.003$). Compared to patients without malignant tumour this difference did not reach statistical significance ($p=0.079$). Alcohol dependent patients without malignant tumour coped

through substance use significantly more compared both to patients with malignant tumour ($p=0.003$) and healthy controls ($p=0.001$). Alcohol dependent patients without malignant tumour also coped significantly more through social isolation compared both to patients with malignant tumour ($p=0.027$) and healthy controls ($p=0.022$).

Discussion

This study focused on strategies of coping with stress used by patients addicted to alcohol with or without oropharyngeal cancer. Alcohol dependent patients affected by carcinoma of oral cavity and oropharynx and those without malignant tumour generally used more avoidance coping strategies compared to healthy individuals. Results for problem focused coping and emotion focused coping were somewhat inconclusive since participants only differed on the subscales of restraint coping and venting of emotions.

These results are generally in line with the literature pointing that disengaging/distancing are generally the most common coping mechanisms among the patients with malignant tumours of oral cavity and oropharynx^{26–30} as well as among the individuals with alcohol use disorder without cancer.^{20–24} However, when viewed in more detail and focusing on more specific coping mechanisms those differences showed interesting group-specific patterns. Although they did not differ in avoidance factor, alcoholics with carcinoma used significantly more coping through acceptance compared to alcoholics without malignant tumours. Even though it belongs to avoidant coping strategies, studies have shown that acceptance in the context of dealing with cancer can have a positive effect.³⁵ Cancer patients in this research have already been diagnosed, hospitalised and undergone surgery, they are well aware of the seriousness of their illness, and seem to have more realistic perspective on their condition. Alcoholics without cancer, on the other hand, refuse to accept the seriousness of their addiction which is also reflected in coping through use of substances. Although both groups are alcohol dependent, patients with malignant tumour used this strategy significantly less. It can be assumed that facing with all the demands of life-threatening illness and treatment probably resulted in the reduction or complete cessation of alcohol consumption. Although some patients, despite the illness and all the difficulties, do not stop drinking in our sample of cancer patients there appears to be a reduction in the use of this type of coping with stress.

Both groups of alcohol dependent patients, regardless of malignant tumour, used much more cognitive disengagement as a coping strategy than healthy individuals. This finding is in line with previous studies^{20,21,26,30} which showed that cognitive disengagement, characterised with the lack of concentration, daydreaming, inability to solve problems, giving up on any mental efforts, etc. is a common maladaptive coping strategy leading to helplessness, withdrawal and depression. Together with restraint coping, which is also a pronounced coping mechanisms in the cancer group, cognitive disengagement represents a coping pattern that leads to passivation and withdrawal from active participation in treatment. This result, as well as results of several other studies,^{20,21,26} suggest that utilisation

of disengagement strategies should be taken into account when developing treatment modalities for these groups of patients. The psychotherapeutic programmes and treatment process should be aimed to analyse negative aspects of avoidant coping and to facilitate the use of more active, engagement coping strategies. Our results also showed that, despite using more disengagement strategies, both groups of patients generally used problem focused and emotion focused coping (with the exception of restraint coping and venting of emotions) to the same extent as the healthy population. This can be viewed as a potential resource and the therapeutic process should focus on developing those strengths and mechanisms. Both groups of alcohol dependent patients used coping through religion/spirituality significantly more than healthy population. Using religion/spirituality as a way of coping with cancer have mixed results in literature in terms of its usefulness, and relation with the level of distress and quality of life.³⁶ Reliance on faith can, on the one hand, reflect the patient's belief that he/she has no control over his condition and that his/her life and the course of illness is a matter of divine will or destiny. On the other hand, religious/spiritual coping may also serve multiple functions in long-term adjustment to cancer such as maintaining self-esteem, providing a sense of meaning and purpose, giving emotional comfort and providing a sense of hope in life.³⁶ Using of social isolation as a coping mechanism showed interesting pattern which is not completely in line with our hypothesis. In this research patients with the alcohol dependence but no malignant tumour appeared to be socially isolated more than cancer patients and the healthy participants. Despite all the difficulties that cancer of oral cavity and oropharynx brings it seems that alcohol dependency is a factor that is strongly connected to the feeling of alienation and results in using social isolation as a way of dealing with stress. This result is in line with some studies indicating that social support/social withdrawal is common in people with alcohol dependency and can be related to poor clinical outcome and higher risk of relapses.^{20,21} Social isolation in alcohol dependent patients could also be associated with depression which, however, was not assessed in this study. Further studies should explore the role of depression and other psychiatric comorbidities to identify the precise effects and interactions of social isolation as a coping mechanism and clinical outcomes. Nevertheless, higher level of social isolation in patients with alcohol dependence indicates the need to focus on this aspect of coping in the treatment of this patient population. Cancer patients, on the other hand, used venting of emotion significantly less compared to both alcohol addicts and healthy population which is in line with our hypothesis. Suppression of emotion expression through venting may be seen as a protecting mechanism since excessive emotionality in cancer patients, could not lead to stress relief, but contrary, to increased tension and vulnerability. Other aspects of emotion-focused coping strategy in this research did not show any specific patterns of use in relation to malignant tumour of oral cavity and oropharynx and/or alcohol dependence. Taken altogether our result showed that alcohol dependent patients who do not have cancer used more maladaptive coping mechanisms compared both to alcoholics with oral carcinoma and healthy population.

Limitations of the study and future research

There are several limitations of this study. First, the cross-sectional design did not allow any conclusions on whether coping strategies used by patients were adaptation to their psychophysical condition or whether the reverse was true. Second, the sample was relatively small and it is possible that some group differences were not detected. Third, the study did not include a fourth group: patients with oral cavity/oropharynx tumours without alcohol dependency which limits the conclusions on different patterns of coping mechanism use. Also, despite of matching the groups of participants on relevant socio-demographic characteristic, it is possible that additional factors that have not been taken into account influenced the results i.e. potential influence of other psychiatric comorbidities that had not been controlled for, cancer treatment modality, adherence to therapy, smoking, etc. Another limitation was related to the generalisation of the results. Our convenient sample of alcohol dependent patients with or without malignant tumour of oral cavity and oropharynx and healthy individuals might not be representative of the entire studied population, and especially other culturally different populations and settings. Finally, although several significant results were obtained conclusions derived from those should be taken with caution due to the relatively low effect sizes. Further research should include longitudinal studies with larger samples and more control over potential covariates, especially comorbidities, treatment modalities and compliance. Also further research should focus on relations between coping mechanism, psychosocial treatment and clinical outcomes in patients with cancer and alcohol dependency.

Conclusions

Despite its limitations, this study indicated some differences in coping mechanisms used by patients affected by carcinoma of oral cavity and alcohol dependency and alcohol dependent patients without cancer. Patients with oral cancer used significantly more avoidance coping strategies compared to healthy individuals but less compared to alcohol addicts who have no cancer. Alcoholics with carcinoma compared to alcoholics without malignant tumours coped more through acceptance and significantly less using substances and social isolation. Results for problem focused coping and emotion focused coping strategies were less clear since the both groups of patients generally did not differ from the healthy population. Although further research is needed, this pattern of coping with stress indicates that therapeutic approach should be based on encouraging the use of adaptive coping styles and focusing on active engaging with the problem. This seems especially relevant for alcoholics who have no cancer since their excessive use of maladaptive disengagement coping can lead to deterioration of health and development of physical and mental illnesses.

Compliance with ethical standards

The study has been approved by the Ethics Committee of the Clinical Hospital Centre Rijeka. All procedures performed

were in accordance with the institutional, national and international ethical standards of research involving human subjects. Participants were fully informed about the purpose, procedures and other relevant aspects of the study and signed their informed consent.

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Conflict of interest

The authors of this article declare no conflict of interest.

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