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Age-related aspects of addiction

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Abstract

Research has shown that substance use, abuse and addiction are not limited to a specific age group. Problems related to substance addiction are an important cause of morbidity in the population aged 65 and above, especially the abuse of prescription drugs and legal substances. A lack of evidence-based studies and tailored treatment options for the aging population is evident. Appropriate and effective health-care is an important goal to improve health-related quality of life of elderly people. Research in the increasingly aging population needs to include an age- and gender-sensitive approach.

Keywords

Addiction; Substance use; Substance abuse; Substance dependence; Prescribed medication; Alcohol; Age; Gerontology

Background

Age-related aspects of addiction are an increasingly important public health challenge due to an incremental number of affected individuals. In most developed world countries people with a chronological age of 65 years or older are considered to be elderly or are in retirement [1]. Individuals from 15 to 64 years of age are defined as the “working-age-population”. During this century the number of European individuals aged 65 years and older has tripled and life expectancy has doubled [2]. One disregarded aspect of these definitions is that a lot of individuals aged 65 or more are still working and others retire early.

The definition for an older person published by the World Health Organization (WHO) is used in the current viewpoint, as described above [1]. In order to integrate all interesting publications, the respective exact age of the described population is referred to in the course of this article, having a clear focus on individuals of 50 years and above. Relevant terms such as “addiction”, “substance dependence”, “substance abuse” “substance use”, “alcohol”, “prescribed medication”, “illicit substances”, “licit substances”, “drugs” combined with “gerontology” or “age” were systematically searched via PubMed.

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In clinical research and practice substance misuse and dependence (fulfilling the criteria of standardized diagnostic international classification systems such as ICD 10 and DSM-IV [3, 4] are often misconceived as an issue affecting only the younger population. However, such problems have, indeed, no age limits [2]. It is estimated that the number of people aged 50 and above in need of substance-related addiction treatment will increase by 300% in the United States from 1.7 million in 2000/2001 to 4.4 million in 2020. [5].

Abuse of licit and illicit substances by the elderly is associated with a wide range of health risks, social exclusion and isolation. Aging is often characterized by social, psychological and health problems, which in turn are risk factors for substance misuse and dependence [2]. Substance use disorders are often ignored, unrecognized or misdiagnosed. Addiction can be mistaken for depression or dementia in elderly persons, which explains why the prevalence of addiction in the elderly is underestimated [6]. Especially polypharmacy is a common problem in this population. An effective method of conveying the benefits of reducing the number of medications is needed to improve quality of life [6].

Social isolation is a key risk factor for morbidity and mortality, becoming more common with increasing age due to lack of support and loneliness, the latter is also a problem in residential care and elderly homes [7]. Reasons for loneliness/isolation include widowhood, no children, living alone, deteriorating health, limited companionship and other negative live events [8, 9].

Individuals (mean age: 64 – 86 years) who suffer from addiction show an increased incidence of concomitant medical and psychiatric symptoms. Concerning physical health a higher risk of dental problems, accelerated aging processes of the brain and an increased probability to develop diabetes (type 2) are evident. Furthermore, an increase of co-occurring psychiatric disorders is observed, with the exception of posttraumatic stress disorder [6]. Specific instruments of assessment for the elderly (especially for individuals 65 years and older) need to be developed. These could serve as a basis for generating valid diagnoses in order to provide specialized and effective treatment.

Gender Issues

Addiction in women aged 50 years and older is an underestimated issue and has only recently become a larger public health topic. Women are less frequently diagnosed with addiction disorders and often show manifest problems at a later age than men (60 years or older) [10]. In the U.S. the prevalence of substance abuse in older women was estimated at 11% in research studies and has been increasing. Female gender, social isolation, depression and a history of substance abuse were identified as risk factors for developing substance related disorders at old age (≥ 50 years) [11, 12, 13].

There are remarkable gender differences found in the mental and physical health status of older adults in opioid maintenance treatment; men more frequently report physical symptoms while women report more psychiatric ones [14]. In a very recent study, individuals (mean age: 58.3 years) with a history of heroin dependence showed poorer health outcomes, compared to the general population. Women reported an earlier start than men with worse chronic and mental health problems [15]. Regarding the treatment of older drug dependent individuals, detoxification is more successful than it is in the young, but ambivalent sentiments in health care demand and supply are very common in the older population [6]. However, appropriate and effective health-care is important to improve health-related outcomes, quality of life and to ensure the accommodation of gender-specific treatment needs.

Licit substance use/abuse or dependence in the elderly

Alcohol abuse and polypharmacy are the main issues in this group of patients. Current problems in the elderly originate in the medical and non-medical use of prescription drugs frequently combined with self-medication in the form of alcohol abuse. A large number of the very elderly patients suffer from somatic co-morbidities, resulting in polypharmacy with 5 or more concurrent medications [6]. The issue of illicit substance abuse is a less serious problem compared to individuals of younger age.

Regarding gender differences, older women tend to abuse prescription or over-the-counter drugs while men are more frequently reported to abuse alcohol. Addicted older women present special challenges in identification and intervention, and have specific needs in treatment [16, 17]. Bereavements of close relatives or the husband and the alteration of life circumstances through retirement are an additional burden [10].

Prescription medication

About 25% of prescribed medications in the US are provided to older subjects [2]. Increasing prevalence is observed and estimated at one-third of all prescribed substances. Among them, benzodiazepines and opioid analgesics are frequently prescribed to individuals aged 65 years and older [10, 11, 12]. This can result in physical dependence, while tolerance and withdrawal symptoms are generally less common in this population [11].

There is evidence that many patients are diagnosed with insomnia, anxiety and/or depressive disorder and receive long-term-prescriptions for benzodiazepines, but an international prescription guideline has not been established [11, 12]. The use of benzodiazepines for 1 year or longer is common in 95.6% of older primary care attendees (65 to 84 years) in Italy, regardless if a psychiatric disorder is diagnosed or not [18]. Results regarding benzodiazepine abuse in these individuals showed that 785 individuals (of n=1,156 individuals who participated, by completing a questionnaire evaluating mental health problems; the so-called Primary Care Evaluation of Mental Disorders (PRIME-MD)) had at least one psychiatric diagnosis and were often using benzodiazepines. Most of the patients received their first prescribed benzodiazepines from general practitioners, in most cases for long-term therapy.

19.7% of subjects with anxiety disorders started benzodiazepine treatment as an inpatient compared to only 13.7% of patients with depressive disorders. Sleeping disorders were observed in 50% to 85% of the sample, independent of psychiatric diagnoses. Patients with anxiety and depressive disorders received their prescription for benzodiazepines mostly from psychiatrists (15.7%). About three quarters of the dispensed benzodiazepines were medium or long-term acting benzodiazepines. Anxiolytic benzodiazepines were consumed more frequently than hypnotic benzodiazepines and about 25.4% of all benzodiazepine users reported to have consumed antidepressants at least once in their life [18].

Alcohol

Epidemiological data of 6,717 subjects aged 50-64 years and 4,236 subjects aged 65 years of age and older (i.e. 10,953 subjects of 50 years of age and older) from 2005 to 2009 showed that nearly 60% used alcohol the year before by means of self-assessments (mean number of days of substance use was 103.53; 62% used alcohol on 30 days or more, 14% on 12-29 days, 18% on 3-11 days and 6% on 1-2 days) [19]. Alcohol use was far more frequent in subjects 50-64 and among men. An increased incidence of physical health problems is associated with drinking at an older age [2].

An estimated 1.8 million women in the US show alcohol-related problems and about 11,000 women are in treatment. The prevalence of consumption in excess of the recommended amount of alcohol (recommendation for older persons, especially if health-problems or medication that could interact is used: 1 drink a day or 2 drinks on occasion) in the population aged 60 and above is estimated at 30% for men and 15% for women [2, 20]. Women are less likely to be heavy drinkers ("once a month" or more, 5 or more alcoholic drinks on one occasion in the past 12 months) than men (11.1% compared to 29.0%), but most of the male adult drinkers, aged 18 years and older are not diagnosed with alcohol dependence [21]. Depression or anxiety disorders are very common in persons who are alcohol dependent and often contribute to social isolation.

Epidemiological studies suggest that about 2-20% of elderly abuse alcohol or are hazardous drinkers; alcohol dependence is estimated at 4% [22, 23, 24, 25].

Illicit substances

The prevalence of illicit drug abuse or dependence in people aged 50 years and older is very low (only 0.33% for any abuse or dependence, 0.12% for marijuana abuse or dependence and 0.18% for cocaine abuse or dependence) according to literature [5, 19]. About 2.6% used marijuana and 0.41% cocaine in the prior year. Nevertheless, the use of marijuana approached 4% in the 50–64 age group in comparison to 0.7% in the 65 years and older age group.

Drug use was far more frequent in subjects aged 50–64 and among men. The estimates on prevalence show, that drug use is very low in this population, but that the prevalence may rise substantially in the 65 years and older age group when individuals of middle age will become older [5, 19]. Drug use, in contrast to alcohol use, was not associated with education, and was more common among unmarried individuals and those with major depression [19].

Excursion: Important aspects in opioid maintenance treatment

Opioid maintenance treatment is a very effective form of treatment and the only treatment of substance related disorders with very good evidence [16, 17, 26]; about 10% of patients in opioid maintenance treatment are over 50 years old [2]. The percentage of adults aged 50 years and older in opioid maintenance therapy increased from 5.5% in 1994 to 15.6% in 2004 [14]. In 2007 nearly half of patients in opioid maintenance treatment in Austria were 35 years and older. It is important to mention that the physical aging process is faster in drug abusing subjects, depending on their life circumstances (e.g. access to drugs with good quality).

The prevalence of mental and physical health disorders among 140 patients over the age of 50 was examined in a study using face-to-face interviews in a free-standing methadone clinic in a Midwestern industrial city [14]. More than half of the patients had physical health problems and at least one mental health disorder in the last year. High rates of arthritis and hypertension, depression, anxiety disorders and (in contrast to other results) posttraumatic stress disorders were reported. Women showed higher levels of depression, agoraphobia and panic disorders than men and men showed higher rates of hypertension and diabetes than women. Patients in methadone programs show worse health in comparison to the norm population [14].

Benzodiazepine consumption needs to be assessed carefully in opioid maintenance patients. The dispersion of benzodiazepines has decreased significantly between 2002 and 2005 in Austrian patients in opioid maintenance treatment. In 2008 about 27% of adult patients had

accompanying benzodiazepine prescriptions during opioid maintenance therapy. Many adult patients are prescribed co-occurring benzodiazepines (27%) by a secondary physician [27].

Interesting results in older individuals who received opioid medications for chronic pain (n=163) were found in a cross-sectional research design at the Baltimore Veteran Medical Centre. The results illustrate that depression is an underdiagnosed, but treatable co-morbidity in patients with pain (40% of them showed depressive symptoms) that should be evaluated in older patients receiving opioid medications. Undertreatment of depression in chronic pain patients may explain the lack of improvement in pain and functional status despite adequate opioid dosage [28].

Prospect and Conclusions

Senior drug users were an unnoticed marginal group in the past. However, based on the sociodemographic development, older individuals with addiction problems are becoming a very important group, especially considering the expected increase in numbers over the next decade [2, 29]. The elderly are currently under-represented in clinical trials in this field and in evidence-based treatment recommendations. It is also important to note that patients aged 50-54 years show worse physical and mental outcomes compared to normal controls aged 55-67 years (by sample composition; inclusion criterion: persons of at least 50 years), which refers to increasing health problems and to gender sensitive approaches [14].

Indeed not only the elderly, also women, special minorities and individuals with disabilities are underrepresented in the literature and the treatment system [25, 30]. A very important aspect is to be aware of the overlap between menopausal symptoms and those of opiate withdrawal. Patients in this age group estimate in self-report measures to be of poorer health compared to the general population [14]. Further research is also needed to bridge gender gaps and the disparity of underlying causes of substance dependence.

The incorporation of gender mainstreaming into the public health policy is essential, because both gender and age are important considerations in the treatment of dependence. In the future trained clinicians in geriatrics and substance abuse will be needed for the growing and aging substance abusing population [14]. Training and education of general practitioners regarding benzodiazepine prescription is very important to ensure a safe and effective treatment. The reduction of benzodiazepine prescriptions is necessary in the adult population, but this is a general problem, not only affecting the elderly [27].

The literature focuses on rehabilitation and on problems with prescribed medications or the abuse of alcohol, but the problems with other substances are not well evaluated and not subject to investigation. Furthermore, several limitations by the selected studies have to be mentioned, such as quality of the data, representativeness of the study sample, study design and implementation. Self-reported data about substance use are often not objective and valid and should be combined with objective methods, for example urine toxicologies which are often not conducted.

Individuals with drug problems should have the same claims as other citizens, although especially the aging population has problems getting active counseling or help. They are often in need of care or support, but a hidden anxiety because of the legal situation or shame keep them from seeking help. Treatment should be provided to affected individuals, regardless whether they need therapy pertaining to general or specific, physical, psychological or psychiatric problems.

Polypharmacy in the elderly increases health service costs and creates difficulty for health professionals. Research shows that non-pharmacological interventions, like increased

psychological care or having a confidant improves psychological and health-related outcomes [8, 9]. Furthermore, the number of prescribed medications can be reduced and the problem of social isolation and immobility can be improved [8, 9]. One of the most important interventions in this field is to speak to older, isolated individuals, who are often in need of social contacts. This is also the first step to providing information or motivation for further treatment or support, if needed. The non-pharmacological, psychoeducational approach is therefore very central.

A lack of evidence-based research (efficacy and epidemiological studies) often prohibits exact evaluation and interpretation of signs and symptoms of addiction. Therefore, an orientation towards better scientific standards must be established in investigations studying age and gender differences in addiction [31]. As a consequence the consideration of age- and gender related aspects with appropriate assessment and treatment of the elderly should be implemented in clinical practice and research. Interdisciplinary work in a multi-professional team is most recommendable.

The selection of research studies chosen for this viewpoint represent an excerpt of studies about addiction in older individuals, and mark the beginning rather than the end of the scope of “addiction and aging”. Training for therapists in terms of age-related aspects of addiction in assessment and treatment should be provided, to avoid over-medication and misdiagnosing. Psychoeducation has to become more diversified and adapted to meet the needs of elderly patients.

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