

Pharmaceuticalisation and the social management of sleep in old age

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ABSTRACT

This paper discusses sleep as a social phenomenon, analysing it in the older population within the frame of a growing pharmaceuticalisation of conditions associated with old age. Two analytical dimensions are privileged: one pertains to patterns of sleep in old age, showing these patterns to be socially differentiated; while another has to do with the subjective experience of sleep, particularly in terms of the social meanings attributed to sleep as well as the strategies employed to manage it. These strategies may be therapeutic or non-therapeutic, as an expression of different rationales favouring or resisting the pharmaceuticalisation of sleep. This analysis is empirically based on data from a research project on the consumption of psychopharmaceuticals among the older population, in an urban context in Portugal. The research methodology followed a mixed-methods approach: a survey was deployed to a sample of individuals aged 65 years and over (N = 414); and life history interviews were conducted with a number of respondents (N = 30) from the previous survey. Both techniques included individuals with physical and cognitive autonomy, living at home or in institutional settings. The results reveal a considerable social adherence to the use of pharmaceuticals to manage sleep problems, although consumption practices are socially differentiated in terms of gender, age and living contexts. They also reveal the use of non-therapeutic strategies, stemming from a resistance to the pharmaceuticalisation of sleep.

KEY WORDS—older population, pharmaceuticalisation, sleep patterns, sleep management.

Introduction

Sleep, aside from being a biological/physiological phenomenon that conditions the very possibility of human life, also constitutes a social phenomenon to which several scientific fields have been devoting growing attention. While in the past sleep was of marginal interest to medical approaches, in

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the last decades of the 20th century it progressively acquired the status of a medical object, becoming a focus of great interest for a part of the medical sciences and leading to the constitution of sleep medicine (Wolf-Meyer 2008). Research related to sleep (in terms of quantity and quality) abounds, associating it with health and illness conditions, and particularly focusing on the health risks associated with poor sleep – from more immediate ones, such as traffic accidents, to long-term ones, such as cognitive problems or chronic insomnia, among others (Williams 2002; Williams, Coveney and Gabe 2013).

Within the social sciences, and sociology in particular, sleep is increasingly seen as a relevant object of analysis (Williams 2011). As Williams states (2002: 22) in one of the crucial contributions to the emergence of a sociology of sleep, it cannot be reduced to its biological basis: ‘Sleep provides a paradigmatic example of the intertwining of biological and social processes’. He further emphasises the significance of social factors for sleep: ‘*How, when and where we sleep, let alone what we make of it, are all, to a large degree, socio-cultural and historical matters*’ (Williams 2004: 453, original emphasis). Indeed, several theoretical reflections and empirical research studies in the field of social sciences have focused on the subject, particularly exploring the social, cultural and political dimensions linking sleep and health (Henry, Knutson and Orzech 2013).

Much like health and illness are understood as social facts – providing the foundations for the existence of a sociology of health and illness – sleep, existing at a frontier between health, illness, wellbeing and performance, also constitutes a social phenomenon in two senses. First of all, because sleep patterns (objectively understood and empirically observable) are socially differentiated according to a number of variables of social import, such as gender, age, socio-economic status or other socio-demographic attributes (Williams 2002). This supports Taylor’s (1993) assertion that there is a social distribution of sleep. Secondly, because social actors attribute different meanings to sleep – associated with different perceptions, representations and attitudes towards it (Coveney 2014) – and develop different rationales and strategies to manage it, all of them also mediated by social variables.

In this paper, we discuss sleep as a social object, through the analytical angle of the pharmaceuticalisation of sleep, focusing on the older population (aged 65 years and over). More specifically, two analytical dimensions are privileged: one involves the patterns of sleep in old age, which are shown to be socially differentiated; the other is the subjective experience of sleep, which involves the social meanings attributed to sleep – and its disturbances – and ways to manage it. We particularly intend to identify the different strategies (therapeutic and non-therapeutic) employed to

manage sleep, as well as to grasp how these strategies are inscribed in different rationales favouring or resisting the pharmaceuticalisation of sleep.

Theoretical framework

Medicalisation and pharmaceuticalisation of sleep in the older population

Much like what has occurred with other natural processes (such as birth or death), sleep has been the object of a process of medicalisation, ‘a process by which nonmedical problems become defined and treated as medical problems, usually in terms of illness and disorders’ (Conrad 1992: 209). The proliferation of clinics and laboratories devoted to research on sleep, diagnosing sleep disorders and developing treatments for them is an example of such medicalisation. Associated with it, the growing pharmaceuticalisation of poor sleep is an increasingly visible phenomenon, particularly among the older population. The concept of pharmaceuticalisation has been consensually defined as ‘the transformation of human conditions into pharmaceutical matters of treatment or enhancement’ (Williams *et al.* 2008: 851). In the case of sleep problems, this entails their being defined as problems that can be handled by recourse to pharmaceuticals.

The processes of medicalisation and pharmaceuticalisation are, however, not entirely hegemonic. In fact,

the medicalisation of sleep is far from complete ... it is a complex, contested, partial, process in which some aspects of sleep are becoming more medicalised than others ... Insomnia, for example, has proved a far more problematic condition to medicalise over the years than other sleep problems or disorders with a more tangible physiological or neurological basis, such as obstructive sleep apnoea (OSA), narcolepsy or restless legs syndrome. (Williams, Coveney and Gabe 2013: 41)

In the same way, different social groups show different degrees of permeability to the medicalisation–pharmaceuticalisation of sleep problems. Comparative analysis of health and illness perceptions in different age groups has shown how older people tend to naturalise certain health issues (including sleep problems), deeming them to be *non-diseases* (Elias and Lowton 2014). Such health issues are attributed to intrinsic causes according to the conception that bodies inevitably deteriorate with age; limitations are thus considered normal after a certain age. This view expresses a fatalistic relationship with the ageing process (Pegado 2010). According to this outlook, poor sleep is not granted the status of a disease, but is rather viewed as ‘a fact of “ageing” life, and one of the inevitable markers of old age, over which old people have ultimately little or no control’ (Venn and Arber 2012: 1219). This is opposed to diseases that hinder day-to-day

performance or present risks to physical integrity or life itself – issues with which a substantial part of the older population has to cope.

The naturalisation of sleep problems in this age group is consistent with broader social representations of old age. Despite the expanding ideology of active ageing (Venn and Arber 2011), such representations associate old age with inactivity, and view older people as socially exempt from the levels of performance increasingly demanded of young people in a society obsessed with performance (Williams *et al.* 2008). In this way, sleep problems, which may condition younger people's performance in various social contexts (school, family, work, leisure) in the current 24-hour world (Coveney 2014), might be viewed as a non-problem for older people given that they are not socially expected to perform the same social roles. Since the older population is not required to perform in the same way, or at the same rhythm, a 'good' or 'refreshing' sleep is not socially thought of as such a pressing need.

The context of sleep in old age: spatial and temporal dimensions

Research has shown that the nature of sleep patterns varies according to age and gender. The link between age and sleep is evident: the lifecycle is one of the factors with greater impact on sleep, whether in physiological terms or in terms of attitudes towards sleep (Meadows 2005; Taylor 1993). Sleep patterns clearly alter with age: 'time spent in deep, slow-wave, sleep diminishes with age, and the time spent in lighter sleep increases, leaving older people finding that it takes longer to get to sleep, have more fragmented sleep and wake up earlier' (Venn and Arber 2011: 199). Various quantitative studies have revealed sleep disorders (namely insomnia) to be fairly common in the older population. They also reveal different sleep patterns between men and women, with the latter reporting sleep problems more often, especially in more advanced ages (Arber *et al.* 2007; Flick, Garms-Homolová and Röhnsch 2012; Hislop and Arber 2003a).

Recognising the existence of regularities in objective sleep patterns linked to the lifecycle should not, however, lead us to view sleep in the older population as biologically determined. When analysing the relationship between old age and sleep, as a social object, it is important to stress that the older population does not constitute a homogenous social group. If belonging to a certain age group or generational cohort affects many aspects of one's social conditions of existence, age alone cannot explain different conditions, attitudes and practices (Mauritti 2004). With respect to sleep patterns, while it is clear that they are linked to age, we should not ignore other factors that intervene in that relationship. In the case of this paper, we also focus on gender, on the diversity of age groups within the

‘older’ category and on contexts of living in old age (whether institutional or not). We contend that it is important to explore the different meanings that older individuals attribute to sleep, their different ways of managing (specifically poor) sleep, and the social rationales that underlie these attitudes and practices; all of which are mediated by socio-demographic and contextual variables.

Research on sleep in old age, set in specific contexts, also highlights the spatial and temporal dimensions of sleep. Flick, Garms-Homolová and Röhnsch (2012), for instance, show how sleep disturbances in older people are particularly prevalent for individuals in nursing homes, whose sleep patterns are characterised by short, repeated periods of slumber during the day, waking up frequently at night and having difficulty getting to sleep. These authors argue that the typical routine of nursing homes explains these patterns, since the strict regulations (such as fixed times for meals and for going to sleep) leave little room for autonomy, and individual rhythms are subjected to the institutional rhythms organising daily life. This process thus imposes a normative structure on sleep, similar to what happens in childhood. Sleep can therefore be considered one of the ways in which old age is infantilised (Flick, Garms-Homolová and Röhnsch 2012).

Other studies on institutionalised older people have raised questions regarding the *negotiation* and *privacy* of sleep. Luff *et al.* (2011) looked into the sleep patterns of residents in care homes, namely their time spent in bed, calling attention to the fact that in these contexts the room is not an entirely private space, with individuals having no control over the time at which they go to bed or get up. As it is an institutional space, ‘in the communal environment, sleep “negotiation” occurs with not only other “sleepers” but also staff and is constrained or influenced by a care home’s policies and customary practices’ (Luff *et al.* 2011: 1231). In such an institutional context, there is also the question of sleep privacy (Meadows 2005; Taylor 1993). In effect, ‘sleep becomes more private as we grow older. We move from infancy, where sleep is observed through such means as the intercom, to adulthood where we attain the right to be left alone whilst asleep and to sleep at a time of our own choosing’ (Meadows 2005: 241). In this sense, the prevalence of ‘observed sleep’ in institutions for older people can be thought of as a reversal of the adult back to childhood.

Another aspect worth mentioning with regard to the temporal dimension of sleep is napping. This practice is not only an objective and recurrent element of sleep patterns among the older population, but is also symbolically invested with different meanings. In a qualitative research study on older people (65–95 years) living in their own homes and reporting poor

sleep, Venn and Arber (2011) show that there are different attitudes towards daytime napping. Such attitudes are polarised between acceptance – resignation associated with the recognition of diminished energy in old age as a natural fact of life – and resistance – with napping being associated with inactivity and constituting a negative marker of the ageing process.

Privacy, autonomy and the negotiation of sleep therefore constitute traits that clearly differentiate the various contexts of living of the older population. Those living outside institutions are obviously much more autonomous in terms of managing their own sleep. Furthermore, those who live alone are not faced with the problem of having to negotiate sleep.

Managing sleep problems

As mentioned, large-scale studies have pointed to the widespread existence of sleep problems in old age. Individuals' conceptions about these problems and their attitudes towards the consumption of pharmaceuticals to deal with them inform different ways of managing sleep: the use of pharmaceuticals; the use of non-therapeutic practices; or even the absence of any strategies.

The prescription of hypnotics has been the most common form of treatment of sleep disorders in the older population (Flick, Garms-Homolová and Röhnsch 2012); these medications have been widely prescribed since the 1960s (Venn and Arber 2012). However, the prescription of psychopharmaceuticals for older people – as in the case of sleeping pills – is met with some ambivalence. On the one hand, it is inscribed within a matrix of social attitudes and values advanced by psychopharmaceuticalisation that suggests the prescription of psychopharmaceuticals as natural, resulting from the idea that it is through medication that older people can manage their daily lives. Psychopharmaceuticals function, in such circumstances, as a sort of momentary psychological prosthesis – supported by medical discourse – that alleviates some of the effects of ageing (Collin 2003). On the other hand, sleeping pills in particular may be rejected, depending on older individuals' perceptions of health and illness (as discussed), as well as their perceptions of the risks associated with such medications.

In fact, avoiding the consumption of sleep medication appears to be associated with the increased social visibility of its risks, creating a social stigma around hypnotics and sedatives – classes of medicines that, like anxiolytics, tend to be attributed greater risk in lay evaluations (Raposo 2010). Even individuals who do use these medicines tend to develop strategies to lessen the risks they associate with their consumption. The avoidance of sleeping pills can also stem from moral judgements regarding their use, which claim that such use expresses a feebleness of character, an inability

to maintain self-control (Venn and Arber 2012). This moral dimension concerning sleep medicines was recently explored by Gabe, Coveney and Williams (2015), who conducted a qualitative research study into how people understand and negotiate their use or non-use of hypnotics in everyday life. Although their study does not focus particularly on older people, the results identify a range of ways in which people relate to hypnotics, and show how they are embedded in moral discourses about addiction and control, ambivalence and reflexivity.

The rejection of pharmaceuticals as an answer to sleep problems can prompt *non-therapeutic strategies* for managing them, namely active practices designed to manage sleep without recourse to medication (be it pharmaceuticals, natural medicines or supplements). Hislop and Arber (2003b), for example, analysed the various strategies used by middle-aged women to manage sleep (specifically difficulty falling asleep). Beyond the use of medication, interviewees mentioned other strategies such as drinking herbal teas or engaging in activities believed to promote sleep (like reading or watching television). In another research study (Venn, Meadows and Arber 2013), where older people were interviewed, some differences were found to be associated with gender, with women showing a greater use of non-therapeutic strategies to manage sleep disorders, like avoiding the consumption of products such as coffee that may hinder sleep.

In this paper, we aim to grasp the ways in which strategies to manage sleep in the older population relate to the expanding dynamics of medicalisation and pharmaceuticalisation. We explore the rationales that govern either a willingness to use pharmaceuticals as the main resource to address sleep problems, or a refusal to use medicines for such ends (Pound *et al.* 2005), which may express a wider resistance to the therapeuticalisation (Lopes *et al.* 2015) of sleep, leading to the use of non-therapeutic strategies to manage it.

Research methodology

The empirical data supporting this discussion result from a case study on the consumption of psychopharmaceuticals among the older population (aged 65 years or over), conducted in the city of Almada in Portugal. Our target population was individuals with physical and cognitive autonomy, living alone in their domiciles or in institutional settings (provided that they had previously been living alone for at least two years). In Portugal, the percentage of older people living alone has been growing steadily: in 2011, it amounted to 19.8 per cent of individuals aged 65 years or over, an increase of 28.7 per cent compared to the previous decade (Instituto Nacional de Estatística 2012).

The research was structured using a mixed-methods approach. The collection of empirical data was organised in two main stages, in a sequence that gradually increased the depth of our analytical scope. The first stage consisted of a survey administered to a sample of 414 older individuals. The questionnaire contained a section dedicated to sleep, which included questions about sleep patterns, perceptions of sleep problems, the importance attributed to sleep and ways of managing sleep problems. In the second stage, life history interviews were conducted with 30 individuals who had previously responded to the questionnaire. The script for the interviews was constructed with the purpose of deepening the information obtained through the survey and broadening its analytical and interpretive scope.

The articulation of quantitative and qualitative techniques, aside from providing a more complete and contextual picture of the phenomenon, uncovers some dimensions that might be overlooked by the use of a solely quantitative or qualitative methodology (Jick 1979). The merits of mixed-methods approaches have been proven specifically for research studies about the consumption of medicines, allowing us not only to quantify consumption patterns and find correlations with socio-demographic attributes, but also to explore the rationales that govern consumption practices (or their absence) (Rodrigues 2010).

The survey was conducted between January and July 2014, after being pre-tested with a sample of 31 individuals with the same socio-demographic characteristics as the target population. It was administered face-to-face by a trained interviewer. Life history interviews were conducted between January and May 2015.

Contact with respondents was achieved in two ways: for individuals living alone, we approached them through recreational associations and senior universities (institutions, mostly organised by municipalities, offering free courses specifically targeting the older population); and for individuals integrated in institutional settings, we made contact through senior residential homes (care homes providing personal care to residents) and adult day care centres (where individuals stay during the day, returning to their own homes at night). In each of these cases, contact with potential respondents was made by team researchers, who explained the purposes of the study and – for those who accepted the invitation to participate – set up a meeting to administer the questionnaire. For the life history interviews, previous respondents who had shown a willingness to participate in this second stage of research were contacted again. Both stages of the research were approved by the Ethics Commission of Egas Moniz – Higher Institute of Health Sciences, and an informed consent form was presented to and signed by all participants in the study.

The questionnaire sample is not to be taken to be statistically representative. It was rather defined with the theoretical and methodological aim of

trying to encompass the social and contextual diversity of older individuals living alone (thereby under- or over-representing some segments of this population), in order to be able to explore more directly possible correlations between socio-demographic characteristics and living contexts, on the one hand, and sleep patterns and ways of managing sleep, on the other.

The survey sample was composed of 27.3 per cent men and 72.7 per cent women. In terms of their age, 29.2 per cent were 65–74 years, 42.8 per cent were 75–84 years and 28 per cent were 85 years or older. Concerning their educational stages, most had a primary education of four years or less (65%); the remainder had a secondary education (27.5%) or a higher education (7.5%). With regard to their living contexts, 40.3 per cent lived alone in their domiciles; the remainder were integrated in institutional settings, with 25.1 per cent in residential homes and 34.5 per cent in adult day care centres.

The sample for the interviews presents the same number of men ($N = 15$) and women ($N = 15$). With regard to age, 30 per cent of the interviewees were 65–74 years, 57 per cent were 75–84 years and 13 per cent were 85 years or older. With regard to their educational stages, the majority had a primary education of four years or less (53%), 37 per cent had a secondary education and 10 per cent a higher education. As for their living contexts, they were evenly distributed, with ten interviewees from each type of context. The total duration of the 30 interviews was 75 hours and 46 minutes, with an average length of 2 hours and 31 minutes per interview.

The survey data were analysed statistically using SPSS (Statistical Package for Social Sciences). Given the non-representative nature of the sample, we privileged a descriptive statistical analysis (univariate and bivariate). The interviews were subjected to qualitative content analysis, leading to the construction of analytical categories informed both by the literature and the empirical data. The data were then coded using the software program MAXQDA.

The following presentation and discussion of results is organised in two parts. First, we analyse the quantitative data from a set of indicators from the questionnaire regarding sleep patterns, attitudes towards sleep and the management of sleep disorders (including the consumption of sleeping pills). Second, we discuss the rationales underlying the social management of sleep through a qualitative approach, based on the narratives resulting from the life history interviews.

Sleep patterns and sleep management: a quantitative depiction

The indicators from the questionnaire discussed in this section refer not only to the number of hours that respondents sleep, but also to the

quality of their sleep – an aspect that has been highlighted in sleep research (e.g. Hislop and Arber 2003a). In this sense, we favour an approach that combines a focus on the experiential as well as the representational dimensions of sleep (Williams and Bendelow 1998).

The starting point for this analysis is a classic indicator for assessing sleep patterns: the number of hours of sleep. As Table 1 shows, the number of hours that most respondents sleep is lower than the normative standard of eight hours. However, medical criteria tend to consider it ‘natural’ to sleep fewer hours in old age. As other studies have also verified, in our sample women tend to sleep less than men. These patterns do not vary significantly according to age.

When it comes to living contexts, there is an observable variation in the number of hours of sleep (Table 2). Individuals in residential homes show the highest percentage both of those who sleep the least (five or fewer hours) and of those who sleep the most (more than eight hours). Individuals living in their domiciles come closer to the normative sleep pattern.

Indicators pertaining to bedtime and wake-up time also demonstrate variations according to whether individuals are integrated in institutional

TABLE 1. *Hours of sleep per night: distribution by gender*

Hours of sleep per night ¹	Men	Women	Total
		<i>Percentages</i>	
≤5	28.6	30.5	30.0
6–8	51.8	61.0	58.4
>8	19.6	8.6	11.6
Total	100	100	100

Notes. N = 404. 1. Question: Regarding your normal pattern of sleep, how many hours do you usually sleep each night?

Significance level: $p < 0.01$.

TABLE 2. *Hours of sleep per night: distribution by living context*

Hours of sleep per night ¹	Residential home	Adult day care centre	Domicile
		<i>Percentages</i>	
≤5	35.4	26.6	29.5
6–8	46.5	57.6	66.3
>8	18.2	15.8	4.2
Total	100	100	100

Notes. N = 404. 1. Question: Regarding your normal pattern of sleep, how many hours do you usually sleep each night?

Significance level: $p < 0.01$.

settings or not. In consonance with research on older people's sleep in institutional contexts (Flick, Garms-Homolová and Röhnsch 2012; Luff *et al.* 2011), in our sample we found that individuals in residential homes go to bed and wake up earlier than those living in their domiciles. This speaks to the imposition of institutional patterns on older people's sleep rhythms – or at the very least, of staying in bed – leaving little room for the individual management of one's own sleep.

As other studies have shown, naps are another relevant feature of older individuals' sleep patterns: 27.8 per cent of respondents in our sample declared the habit of napping. People residing in their domiciles were predominant in this percentage. However, this might also be the result of different social meanings attributed to napping, which can be interpreted as actual sleep or just a light slumber, with the latter corresponding to the pattern of involuntarily falling asleep, typical in nursing homes (Flick, Garms-Homolová and Röhnsch 2012).

Regarding sleep problems, about 80 per cent of respondents declared that they usually wake up at night – most of them more than once (70%), 34 per cent about three or four times and 9 per cent five times or more. This indicator is quite relevant in terms of showing the poor quality of sleep in old age, corroborating results from other studies (Arber *et al.* 2007; Flick, Garms-Homolová and Röhnsch 2012; Hislop and Arber 2003a).

Respondents' perceptions of their sleep point to an apparent ambiguity. When asked how they assess the number of hours they sleep, almost 70 per cent consider that they do not get enough sleep. In spite of this, almost half (47.8%) assessed their sleep in the previous month as having been good or very good, and 28.5 per cent as fair; only 23.7 per cent considered it poor. Adding to this, 52.8 per cent reported not having experienced a bad night's sleep in the previous week (although 17.9 per cent reported five to seven bad nights). What these apparently contradictory attitudes seem to indicate is a naturalisation of sleep problems in old age. Disturbed sleep is conceived of as a non-disease, and this prompts an attitude of acceptance or resignation in the face of such problems (Elias and Lowton 2014; Venn and Arber 2012). In socio-demographic terms, women tend to assess their sleep more negatively, as well as individuals aged 85 years or over, which matches the greater reporting of sleep problems by these segments of the population.

As for the importance attributed to sleep, individuals' responses in our sample fit with the current normative discourses on sleep that associate it with health (Williams 2002): 40.7 per cent consider sleep to be very important and 55.9 per cent consider it important, with a marginal percentage of respondents considering it of little or no importance (3.4%).

Having depicted the sleep patterns of individuals in our sample, as well as their perceptions of sleep, we turn now to some indicators of how they

manage it. We found that when sleep problems occur – like difficulty falling asleep, or waking up during the night – they are faced and eventually managed in different ways. About half of the respondents declared doing nothing when they have difficulty falling asleep (49%), and almost two-thirds do nothing in the case of waking up during the night. This absence of any strategies to manage these circumstances is likely associated with a naturalisation and acceptance of such disturbed sleep patterns, or with disbelief that any strategy might alter it. Nevertheless, we did register some forms of non-therapeutic sleep management, which generally involve otherwise leisure-time activities (mostly watching television or listening to the radio).

The management of sleep difficulties is, however, set within a frame of a substantial consumption of sleeping pills. When questioned on the consumption of psychopharmaceuticals for different purposes (Table 3), among them sleeping pills, we can see that not only have a large percentage of respondents used them (46.2 per cent were using them, and 8.6 per cent had used them in the past), but also that they are the predominant category of consumption compared with medication for memory, calming down or mood enhancement. Compared with other available studies, this constitutes a high rate of consumption, although these comparisons are merely tentative due to different methodological procedures. In France, for instance, a study with non-institutionalised older individuals revealed that 32 per cent were taking an anxiolytic/hypnotic (Lassere *et al.* 2010).

TABLE 3. *Consumption of psychopharmaceuticals*

Purpose ¹	Never used	No longer use	Using currently	Total	N
	<i>Percentages</i>				
Medication for sleep	45.2	8.6	46.2	100	407
Medication for memory	79.5	4.5	16.1	100	404
Medication to calm down	64.5	8.4	27.1	100	406
Medication for mood enhancement	86.6	4.2	9.2	100	404

Note. 1. Question: Do you usually take medication for any of these purposes?

Our results are also consistent with a study conducted in Portugal by the National Authority of Medicines and Health Products on the consumption of psychopharmaceuticals (Infarmed 2014), which includes some international comparisons. While it does not differentiate consumers by age, the study shows that Portugal has a very high consumption rate of anxiolytics, sedatives and hypnotics (96 DHD – defined daily dose per 1,000 inhabitants), much higher than countries to which it can be directly compared,

using the same methodologies to measure consumption, such as Denmark (31 DHD), Italy (53 DHD) and Norway (62 DHD).

Considering the duration of consumption among the questionnaire respondents, it can be considered long-term and regular; among those who use medication for sleep, 80 per cent have been doing so for over two years, and 75.5 per cent use it daily. This shows a pattern of relatively long and continuous consumption trajectories for sleep-related pharmaceuticals – highlighted by the low percentage of those who have used them in the past but have since stopped.

The consumption of natural medicines or supplements for sleep is practically nil: only 2.2 per cent declared that they currently use them, and 1.9 per cent had done so in the past. These percentages are lower than what was found in another study on the consumption of pharmaceuticals and natural products in the Portuguese population for other health matters (Lopes 2010; Lopes *et al.* 2012). This hegemony of pharmaceuticals in the realm of sleep is coupled with the almost absolute monopoly of medical prescriptions in referrals for medication for sleep, which is indicative of a consolidated medicalisation of the domain.

Perceptions of the efficacy of these medicines are rather positive: most of those who use them rate the results they get as good or excellent (67%). This corroborates data from another study where the high risk attributed to this kind of medication is considered to be the price to pay for their efficacy (Raposo 2010).

A socio-demographic analysis of the consumption practices of these medicines shows them to be socially differentiated, though not all correlations are statistically significant. First of all, there are clear differences by gender, with the female population appearing to be more susceptible to the pharmaceuticalisation of sleep: 51.5 per cent of women use medication for sleep, while the percentage for men is 31.8 per cent ($p < 0.01$). Secondly, consumption tends to increase with age within the older population: those aged between 65 and 74 years exhibit lower consumption rates. Thirdly, there is an inverse correlation between consumption and education levels: those with lower education levels show higher rates of consumption, which tend to decrease as education levels rise. Finally, in what concerns individuals' living contexts, consumption is lower among those not integrated in institutional settings. The higher rates of consumption in institutional settings – residential homes and adult day care centres – should be interpreted according to two factors. One is that the oldest amongst the older population (and who consume medication for sleep the most) tend to reside in these contexts. The other is that these contexts are characterised by imperatives to normalise daily rhythms, and thus presuppose control over when to sleep and for how long (Luff *et al.* 2011; Meadows 2005).

Conceptions of sleep and rationales for its management

We have concluded the quantitative depiction (through our survey data) of the social patterns of sleep in old age, as well as of the differential recourse to pharmaceuticals to manage poor sleep. This is a good starting point to discuss the rationales that govern the acceptance of, or resistance to, the pharmaceuticalisation of sleep, and how such resistance may (or may not) manifest itself in non-therapeutic strategies to manage sleep problems. In this second stage of our analysis, we turn to our qualitative data stemming from the content analysis of the life history interviews to discuss these rationales.

Rationales favouring the use of medication

The willingness to consume medication for sleep is not, for the most part of interviewees, unconditional or deeply held. Nonetheless, some report a routine, unproblematic consumption of this kind of medication. These cases result from relatively long trajectories of consumption, where the regular experience of using medication and the ensuing familiarisation with it seem to induce a naturalisation of consumption.

I started when I was about 50. I started taking it to sleep, because I didn't sleep, and I'd ask the doctor – I was still in [name of city] and I had a doctor there who was also very good – and she would prescribe me a pill every day, and it was very good for me, those sleeping pills never did me any harm. (E19, male, 86 years, primary education, residential home)

And I take Alprazolam, which is a muscle relaxant that makes me sleep, so I take it like a soporific. I'm not sure if it's exactly a soporific, but I do know I can't sleep well without it. Although I thought, one time that I forgot it, 'I'll spend the night well', and it was as if I hadn't slept, although I know I did, but it was that light sleep, you are almost aware of everything around, and it gives you the feeling that you didn't sleep, but you did. That's when I understood my mother when she would say 'I didn't get any sleep today', and I would go check her at night to see if she was sleeping, and she would even blow in her sleep, with that breathing of someone who's asleep, and so I realised what it was to not sleep while sleeping. (E8, male, 71 years, secondary education, domicile)

Interviewees who use sleeping pills tend to express at least some reservations concerning its consumption, which reveal the ambivalence that surrounds discourses about hypnotics, even among those who have been using them for long periods of time (Gabe, Coveney and Williams 2015). This attitude is apparent in our interviewees' discourses as they define some criteria to legitimise consumption. This is also apparent in their practices, as (with varying degrees of autonomy) they manage their consumption with the sense of limiting it as much as possible without compromising its effects. The following excerpts illustrate a set of strategies geared towards managing

the risks that individuals implicitly associate with sleep medication. These strategies mainly have to do with lowering the prescribed dose of a medicine – either taking a smaller dose each time, or taking it fewer times a day – but might also involve alternating between different therapeutic options to which are attributed different degrees of efficacy (and risk).

I take it; there was a time I couldn't sleep at all, so I went to the doctor and he prescribed – I can't remember the brand – some 10 mg of something, and I took it two or three nights. But then during the day I was ... I said 'I won't take it anymore', I reduced it to 5. After the 5 mg I reduced it to half, I would split the 5 mg pill in half. Nowadays I split that 5 mg pill in four. It's just a little something, it's more suggestion than anything, it's such a tiny thing, it's more suggestion. (E30, male, 77 years, secondary education, domicile)

It's not really for sleep, it's a tranquilliser. It's not specific for sleep, it tranquillises. I would even take half in the morning, half at lunch and one at bedtime. Now I just take it at bedtime. (E10, female, 72 years, secondary education, domicile)

So I take those [pills prescribed in the residential home], but when I don't get enough sleep, the next day I take one of mine [pill prescribed by a doctor some years ago]. [Interviewer: So you always take what the doctor prescribes, and when you don't sleep well, the next day, to make sure you sleep better, you take the stronger one?] The next day I take the other, if not I get dizzy. I'm kind of used to that stronger pill... (E19, male, 86 years, primary education, residential home)

Some interviewees also mentioned consumption experiences in the past – especially during critical or highly emotionally times (such as when a spouse fell ill or passed away) – which they did not continue. This seems to indicate a conception of sleep problems as a symptom of other – namely emotional – conditions and these are considered to warrant management through pharmaceuticals.

When my wife died there was a time I was a little out of control, with insomnias and such, and then I asked a doctor, 'Doc, don't you have something light, something so I can be relaxed at night and see if I can get some sleep?' And he prescribed me a medication. But then I read the [patient information] leaflet and it said, 'When you get an epileptic seizure do this and do that' and I say 'Wow, fortunately I have nothing like that', so I kind of put it aside. No, eventually I took it one time or another, half a pill at night or so... (E4, male, 85 years, primary education, residential home)

As with the quantitative data we analysed, references to medication for sleep in interviews are almost exclusively limited to pharmaceuticals, with medical prescription prevailing. The consumption of natural products to manage sleep problems is rare and, when it is mentioned, is mostly an occasional experiment.

Rationales resisting the use of medication

Discourses resisting pharmaceuticalisation (Pound *et al.* 2005) are grounded in specific social representations either of sleep problems in

old age or of sleeping pills, with a clear connection between the two. The former have to do with a naturalisation of poor sleep, whereby it is considered a non-disease, an inevitable trait of being old (Elias and Lowton 2014). The latter are associated with the risks attributed to sleeping pills, particularly habituation.

The naturalisation of sleep problems is commonplace among interviewees. In fact, this naturalisation – and the trivialisation of the problems it carries – is manifest in some cases even in the language used to describe them, such as ‘light sleep’. Thus, it expresses a fatalistic relationship to sleep problems that engenders two kinds of perception. One is that it is illegitimate to consume medication to alter something that is ‘naturally’ part of old age. The other has to do with the belief that the body is able to adapt itself to sleep-related difficulties in a natural way.

Someone who has to take pills every day, it’s bad. Not having any illness, just to sleep, that’s addictive. (E11, male, 77 years, secondary education, adult day care centre)

I have had sleep problems for some years, yes. But that’s normal with age, we sleep about three, four hours, then there’s an interval when we can’t sleep, and then we’re sleepy again in the morning ... Because it’s natural. There’s those people who have a hard time falling asleep; that’s not me. My insomnia is in the middle of the night. After sleeping those hours, three, four, then there’s a period when you can’t sleep, but that’s really natural, with age ... All older people have that problem. (E9, female, 76 years, primary education, domicile)

No, after a certain age my sleep got light. I have no problems with that. If I don’t sleep the whole night, the next day I’m good to work. Then I get a bit tired, in the afternoon, but I get home, lie down, and then I sleep, I get the reward ... There are sleeping pills, I don’t take any of that, I don’t like it, I’m against it. Nature will take care of the problem. (E5, male, 79 years, secondary education, domicile)

If I don’t sleep, I don’t take sleeping pills either. When I get sleepy, then I’ll sleep ... I’m someone who doesn’t need to sleep a lot. For me, four hours’ sleep ... But sometimes, for instance, there’s nights I wake up every hour, some nights I sleep four or five and then wake up, but that’s the same ... I never even complained to the doctor, because I think it’s normal. They say it’s insomnia. So be it. But I handle it well, ok, it’s alright, it has to handle me well too. (E7, female, 72 years, secondary education, domicile)

The attribution of risk to medicines for sleep is based on the concern that they may cause a physical and/or psychological dependency, more than other possible side-effects. This is a rather common perception in interviewees’ discourses, where it comes up either as a justification to reject consumption – in the case of those who choose not to use medication – or as a trigger to deploy the risk management strategies we analysed – in the case of those who do use medication. This risk perception feeds on individuals’ own consumption experiences, or on their familiarity with the consumption practices of others in their sociability networks.

There are lots of people who struggle and you know why? Sometimes I would complain to the doctor 'I sleep badly, I always wake up at night', and he said to me, 'So what do you want? You want some pills?' I said 'No, I'll think about it later'. Because I know very well that pills, people take pills and they can't fall asleep without them. That's bad, it's addictive. (E11, male, 77 years, secondary education, adult day care centre)

I've never had sleep problems, no. No. And I don't want to take sleeping pills. I don't want to get used to ... Because then I get dependent on that. I think so, I do, and I know examples of that. There's a colleague there in our wing that can't sleep without that. She lies down, finishes dinner and lies down, but she can't sleep without that, she's dependent on that. (E20, female, 76 years, primary education, residential home)

In some cases, beyond the risk of habituation, there are also concerns about the possible effects of sleeping pills at a cognitive level and on everyday performance. Medication to sleep is thus symbolically perceived as a 'drug' that interferes with alertness, an artificial instrument that disrupts one's 'nature'.

Because I think that is a drug and we're dependent ... There's a habituation and we become dependent on that, and I think that doesn't do us any favours, and it's not good for the brain either ... I'm against it. There are people that get used to it and there you go, they walk around kind of, like they're drugged, and that's terrible... (E30, male, 77 years, secondary education, domicile)

She says she takes two pills to sleep, then she sleeps all night. She doesn't sleep, she's drugged. I think, my opinion is: if someone takes sleeping pills, it's not the organism that's resting; it's forcibly resting. Then she wakes up tired just the same. In my opinion she doesn't sleep because her body needs it, she sleeps because she took something. (E7, female, 72 years, secondary education, domicile)

The rationales for resisting the pharmaceuticalisation of sleep may or may not give way to forms of non-therapeutic management of sleep. These consist of strategies that involve deliberate practices to deal with conditions that, while not considered diseases and in need of treatment, are nevertheless thought to be undesirable – as they trouble, in some measure, individuals' daily lives – and improvable.

These practices include a wide range of activities: from recreational activities – such as watching television, listening to the radio or reading; to consumption practices – be it to avoid consuming certain things that are believed to interfere with one's quality of sleep (such as caffeine) or to consume things believed to have the effect of aiding sleep (such as warm milk). Among these consumption practices, herbal teas call for a special note, not only because they are quite well disseminated among the older population, but also due to their use as a therapeutic resource, as other studies have shown (Lopes 2010). The consumption of herbal teas in this

population is quite frequent and diversified, with mentions of chamomile, lemon balm or lime flower, to name but a few. It is mentioned as a ritualised consumption (mostly before going to bed), but also as having ‘therapeutic’ purposes such as to calm down and/or fall asleep.

What do I do when I have trouble sleeping? For instance, I make some tea at night, which people say is good. Sometimes they even told me to use some natural herbs. (E13, female, 82 years, primary education, adult day care centre)

I avoid green tea, black tea. And I only take decaf, I don’t take normal coffee. And those teas I don’t take either ... It’s caffeine, so I avoid it. (E9, female, 76 years, primary education, domicile)

When I don’t sleep I get up, I watch a little television, CNN, the foreign channels, so and so. After 15 minutes, when I get sleepy, then I go to bed. (E11, male, 77 years, secondary education, adult day care centre)

You know what I do for sleep? I buy some dark, bitter chocolate bars at the supermarket. I break it into little pieces, put them in a little box there. Sometimes I sneak one at night and you see ... I drink a little water with it and in a little while I fall asleep. The best sedative I can get is that. And it works well. (E14, female, 75 years, primary education, adult day care centre)

Now what I do, I have a little player like this, I got some oriental tunes from the internet, those very soft [ones], and so before going to bed I always play it and fall asleep to the sound of that music ... I find that music relaxing, mellow, it’s good for you. (E30, male, 77 years, secondary education, domicile)

Finally, it is important to mention that discourses favouring or resisting the pharmaceuticalisation of sleep in the older population are not necessarily mutually exclusive. Looking at the consumption trajectories (related to sleep medication) of our interviewees, we found that in some cases they have gone back and forth between consumption and non-consumption practices, depending on the circumstances marking their lifecourse.

Conclusion

One of the analytical keys that have made the social dimension of sleep intelligible looks at sleep as traversed by the dynamics of medicalisation and pharmaceuticalisation in modern societies. Our analysis was set within that frame, but with two particularities. Firstly, we focused on a specific age group – old age – assuming that sleep patterns change through an individual’s lifecycle depending on a number of factors that articulate the physical/biological with the social/cultural. Secondly, we looked at how individuals respond to these changes in sleep patterns (often experienced as sleep problems) through various strategies. These

were shown to be governed by rationales that either accept or resist the pharmaceuticalisation of sleep, based on different conceptions of sleep and of the consumption of sleep medication.

Results from this research reveal a considerable social adherence to the use of pharmaceuticals to manage sleep problems – namely insomnia – in the older population. Individuals' relationships to the pharmaceuticalisation of sleep are, however, socially differentiated. First of all, in terms of gender: women use significantly more medication for sleep than men, matching arguments that point to a greater medicalisation (and pharmaceuticalisation, one might add) of the 'natural processes' of women (menstruation, birth, menopause) and *in* women (such as sleep). Secondly, in terms of age: younger members of the older population show lower levels of consumption. Finally, in terms of older people's living contexts: those integrated in institutional settings show greater consumption than those living in their own domiciles.

We also found that consumption practices do not necessarily presuppose a strong conviction in terms of the use of pharmaceuticals as the way to handle sleep problems. Among those we interviewed who take sleep medication, it was common to hear of strategies used to diminish the risks associated with this kind of medication, derived from a perception of their consumption as something somehow problematic.

Recourse to pharmaceuticals is not, however, the only way to manage sleep problems in this population, which is attested to by the use of various non-therapeutic strategies. These practices stem from a resistance to the pharmaceuticalisation of sleep, fuelling a search for alternative ways to deal with a condition that, whether accorded the status of disease/health problem or not, is thought to be something undesirable that can be improved. In this respect, it is important to note that the naturalisation of sleep problems is commonplace among our interviewees – something that sustains discourses resisting pharmaceuticalisation.

The analysis we undertook, while limited to a specific socio-geographical context, raises some issues that may contribute to future analytical developments relevant for other contexts, and could inform new empirical studies, particularly international comparative ones, which on this subject are still scarce. Special attention should be placed on the relationship between sleep and performance, be it at a cognitive, physical or relational level (Lopes *et al.* 2015). This involves going beyond perspectives that have thought of sleep in old age as a problem, to looking at it as a functional requisite for everyday performance, manageable in different ways. It also entails breaking with a social representation of old age as intrinsically linked to inactivity and incapacity, and looking at the social and cultural diversity of ways of life in old age. In this sense, the divide between older

individuals integrated in institutional settings and those who are not appears to be particularly relevant when looking into how different contexts of living generate different performance expectations and needs. These, in turn, may condition older people's conceptions of sleep, and of the possibility and desirability of managing it through the use of medication. This contextual angle of analysis may contribute to further theoretical reflection on the uneven pharmaceuticalisation of sleep in old age.

Finally, the issues raised by this analysis acquire a special relevance when faced with the advance of population ageing and the greater longevity of people in their older years, something that characterises a good number of modern Western societies. This phenomenon, associated with processes of family reconfiguration that translate into, among other aspects, the increase in older people living alone (on which empirical qualitative studies are still lacking), calls for a deeper sociological reflection on new ways of managing old age in daily life. Focusing on one of the dimensions that make up everyday life – sleep – and on one particular way of living in old age – alone – the analysis we undertook represents a contribution, both methodological and substantive, to a broader discussion on these subjects.

Acknowledgements

We would like to thank all participants in this study, the heads of the institutions that facilitated contact with them and the institutions that funded the research. We would also like to thank the editor and the anonymous reviewers of this paper for their helpful comments. This research was supported by Egas Moniz – Higher Institute of Health Sciences and the Municipality of Almada, Portugal.

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Accepted 31 January 2017

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