

# Dream recall frequency and psychosomatics

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**Abstract.** The ability to remember dreams can depend on a wide range of factors such as personality, creativity, mental state, cognitive functions as well as somatic symptoms. In the course of their studies, medical researchers have demonstrated that about 80% patients, woken up at their Rapid Eye Movement (REM) sleep phase, can remember their own dreams, whereas, in clinical practice, young adults can remember their dreams on their awakenings only once or twice a week. Let us now come to the point: in this study we suggest some hypotheses that could explain the reason why patients suffering from psychosomatic disorders seem to remember dreams much less frequently than healthy individuals. ([www.actabiomedica.it](http://www.actabiomedica.it))

**Key words:** Dream's recall, Dreaming, Psychosomatics, Awakening

## Introduction

Studies about sleep estimated that a human being sleeps about 230.000 hours in the course of his life, i.e. 26 years. However, sleeping is not the same as dreaming although the two meanings appear connected in our minds. As a matter of facts, neurobiology has demonstrated that, although all of us dream every night, not everybody remembers what he/she has dreamt. This is the reason why researchers have started to measure the percentage of the individuals who can remember their dreams upon awakening. i.e. Dream Recall Frequency ("DRF").

## Dfr measurement

According to previous studies (1, 2), one of the main problems of the DRF study has always been to be able to standardize the measurement method, since literature provides different data depending on the study method used. Belicki (3) found in the laboratory that wakening people up in the REM sleep phase reveals that about 80% of them remember dreams, but in clinical practice young adults remember dreams upon

awakening once or twice a week. In an empirical, non-anatomical study, Koulack & Goodenough (4) suggested the importance of transcribing the dream as soon as one wakes up in order to remember it, based on the 2-stage memory model, which assumes that the processing of information in short-term memory facilitates the subsequent retrieval of that information from long-term memory. The results of this work suggested that the individual's lifestyle (creativity, openness to new experiences, introspection and propensity to fantasy) would be of relative importance.

## Factors affecting DRF

Schonbar (5) hypothesized that DRF could be influenced by the individual's lifestyle, distinguishing an "inner accepting" lifestyle with high DRF, less curiosity in non-interpersonal problems and a high feeling of control over one's own life, from an "inner refusing" lifestyle with low DRF and opposite characteristics. According to Cory et al. (1), dream recallers had better memory towards visual stimuli compared to non-recallers. Schredl & Montasser (6, 7) thought instead that DRF depended on personality, visual memory

capacity, creativity, the frequency of nocturnal awakenings and attitude towards dreams. Analyzing DRF through the compilation of a clinical diary, Armitage (8) noted that in males DRF decreased during stress periods, while for females it was the opposite. Analyzing the ability to sleep and dream in the fetal period, childhood, adulthood and old age, Mangiaruga et al. (9) hypothesized that the ability to dream and remember dreams is associated with the development of cognitive processes (perception, learning, language, thinking, attention, memory, motivation and emotion). The studies of Sapolsky (10) and the ones of Trotter (11) have shown that the adult limbic system is not static but can be reshaped by experience: glucocorticoids produced during prolonged stress can in fact cause dendritic regression by inhibiting the learning and memorization processes that take place through the activation of the hippocampus. Instead, Vallat et al. (12) have shown, through PET, a higher DRF (ability to remember dreams upon awakening more than 3 times per week) in people with an increased density of white matter in the medial prefrontal cortex (MPFC) compared to people with low DRF (capable of at least 2 recalls upon awakening per month). It still remains to be seen whether this increase in white matter density in the MPFC is congenital or acquired. Van Wyk, Solms & Lipinska (13) have observed that patients with a high ability to remember dreams upon awakening do not seem to have a different type of REM sleep compared to those with a low ability to remember them. On the contrary, it would seem it is NREM sleep, and more specifically, the amount of awakenings from NREM2 sleep, which influences the ability to remember: patients who remember dreams the most have in fact a significantly higher and longer number of awakenings from NREM2 sleep. Several researchers have also noted an association between DRF, menstrual cycle phase, contraceptive pill intake and pregnancy. However, recently, Ilias et al. (14), highlighted a higher frequency of dream recall, in particular of dreams with pleasant content, in women in the luteal phase, hypothesized that DRF increases following the greater production of cortisol that occurs in this phase of the cycle, and hypothesized that cortisol can cause amnesia of nightmares, selectively filtering unpleasant recalls of dreams and allowing only pleasant dreams to pass. The au-

thor of this study interviewed 108 patients suffering from psychosomatic dermatitis and 6 suffering from gastrointestinal disorders and hypertension on a psychosomatic basis, finding a much lower percentage of dream recall upon awakening than what is reported in literature. Among the dermatological patients, only 19 of the 108 patients interviewed, i.e. 17.5%, remembered dreams frequently. This is 2-3 times a week (a considerably lower percentage compared to the 80% observed in studies in which people without psychosomatic disorders were interviewed, waking them up as soon as they reached the REM sleep phase); 70 patients, i.e. 65%, never remembered dreams, and 19, i.e. 17.5%, remembered them quite often, i.e. two or three times a month. Of the 6 patients with gastrointestinal disorders and hypertension, 1 frequently remembered dreams, i.e. 17%, 4 never remembered dreams, i.e. 66%, 1 remembered them quite frequently, i.e. 17%. However, we should consider that the low frequency of people who remember dreams in this study might depend on the method of data collection by means of interviews. This method, like all retrospective ones, has the defect of reporting incorrect or incomplete recalls; as well as on the low number of patients interviewed with gastrointestinal pathologies and hypertension on a psychosomatic basis. Furthermore, many patients suffering from itching and / or anxiety, when needed, took antihistamines or anxiolytics, which are frequently responsible for sleep and DRF alterations. Lewin et al. (15) observed that in mice the traumas suffered in early developmental stages are associated with sleep alterations that persist throughout the whole life.

If this finding will apply also to human being, it could explain the association between sleep disorders and psychosomatic diseases, since the latter, in many cases, seem to develop in the human being as a defense against traumatic events occurred just in the very early stages of development. A decrease in DRF was also found in patients depressed by Schredl (16) and in patients with obsessive compulsive disorder by Kuelz et al. (17), two conditions frequently associated with psychosomatic disorders.

Literature appears then as confirming Alexander's theories (18): psychosomatic diseases develop following cortisol increase and the hormonal cascades due to the activation of the autonomic nervous system in re-

sponse to stress and emotional tension, through splitting. This theory links the increase of this hormone also to the variations of DRF and to depression, along with an increase of inflammation parameters.

As highlighted by Peters (19), stress initially causes an increased production of cortisol and a switch of the immune system towards the Th1 arm but subsequently, if the situation becomes chronic, it determines a switch towards the Th2 arm, predisposing to different types of diseases. From a psychodynamic point of view, Cartwright, Tipton & Wicklund (20) observed improvements in the psychotherapy of patients who had been encouraged to dream recall, and hypothesized that dreaming and remembering dreams, regardless of the meaning they may have, is fundamental for people's psychosomatic balance. The existence of different currents of thought on the meaning of dreams complicates the evaluation of psychodynamic factors.

Let us consider the Freudian discontinuist hypotheses: a dream is considered as the hallucinatory satisfaction of a desire where the primary process acts in the sleeping phase, while the second process acts once awake. Therefore, the low percentage of recall upon awakening could be considered as a defense against intolerable thoughts which could rise according to consciousness upon analyzing dreams.

On the other hand, the models of the continuist thesis highlights that there is a sort of continuity between wakefulness and sleep since we dream to consolidate the self and attribute meaning to sensory experiences lived even when awake and even during the non-REM phase. (We should also consider Schonbar's thesis (5) according to which when we dream we fantasize more). Attending to the latter, we might think that the low percentage of dream recall is associated to inability to dream, intended as a necessary process to attribute meaning to experience. Bion (21) stated that the accumulation of raw sensory beta-elements (the first form of pre-verbal thought), which cannot be given a meaning through the alpha function which transforms them into alpha elements that can be stored as conscious memories, determines psychosomatic disorders through their projection on the body by splitting. Ogden (22) states that the accumulation of beta-elements in the non-Rem phase is responsible

for both psychosomatic diseases and night terrors, i.e. undreamt dream.

The author attempts to explain the phenomenon with a clear example: an individual undergoes a nightmare where one of his beloved relatives dies. Upon his awakening, he remembers the dream: he feels sad, upset and even cries but, after that, he realizes that what he experienced was a dream. All those bodily emotions (mediated by the activation of the autonomic nervous system, the immune system switch and the production of various cytokines) are discharged on a psychic level with the recall of the experience and its processing.

However, if he does not remember his dream, he cannot process through the recall those bodily emotions felt during the dream hallucinatory experience. Therefore, he has no chance to think and communicate that experience. This accumulation of raw sensory beta-elements will subsequently be withdrawn and projected onto the body through splitting, with a mechanism similar to that of psychotic islands described by Rosenfeld (23), according to which somatization was generated when the individual, unable to project projective identifications outwards, withdrew them towards themselves in real psychotic islands.

According to Bion (21), the raw sensory beta-elements come largely from eyes and sight; the author hypothesizes that since eyes are closed during sleep, the skin is at that moment the organ that is most stimulated, irritated and which accumulates raw sensory beta-elements through contact.

According to Deutch (24) people somatize more towards organs that are already inflamed. This leads the author to conclude that splitting can project these beta-elements again onto the skin just because it is stimulated also during sleep, triggering a sort of vicious circle.

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