

“Everybody distracts me and prevents me from succeeding”: A psychodynamic-oriented approach of medical students’ dreams of evaluation

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Summary. This investigation was based on 216 dreams of medical students about situations of evaluation. The manuscript reports on (i) how these situations were dreamt and what this revealed about dreaming students’ subjectivities and (ii) the psychodynamic approach taken for the investigation of the dreams. Dreams were analyzed with a data-driven method based on three interrelated psychodynamic dimensions appearing in the dreams: the quality of the internal objects of the dreamer, the intensity of the dreamer’s defensive stance, and the narcissistic impact of the evaluation situation on the dreamer. The presence or absence of good enough internal objects determined the intensity of the defensive stances and narcissistic impact. For some dreamers, the dreamt evaluation situation appeared as a catastrophic event associated with very negative experiences (e.g., feelings of despair and a desire to die), despite the massively erected defenses (e.g., immature defenses such as projection); the inner objects appearing in the dreams of these students showed important deficits (e.g., abandonment or rejection of the dreamer). This investigation of dreams revealed that the issue of evaluation is very sensitive and represents a major narcissistic threat for some medical students. The psychodynamic approach chosen to examine the dream seems to be coherent, in line with psychodynamic dream research, and allows us to gain some insight into medical students’ subjectivities with regard to the omnipresent issue of evaluation.

Keywords: Medical students, dreams, psychodynamic, evaluation

1. Introduction

Dreaming is universal and shows anthropological constancy (Griffith, Miyagi & Togo, 1958). However, there is variation and evolution in regard to the questions of why we dream and how we investigate dreams (Blechner, 1998; Kennedy & Norman, 2005; Revonsuo, 2000).

Depending on the historical and sociocultural context, various epistemological statuses were attributed to dreams. Some authors conceive dreams as random productions of a sleeping brain or of cerebral activities to expel useless material (Hobson & McCarley, 1977) or memories (Crick & Mitchison, 1983). In contrast, dreams also are thought to solve problems (Revonsuo 2000), integrate experiences of waking life (Malinowski & Horton, 2014a) or regulate mood and consolidate memories (Cartwright, Luten, Young, Mercer & Bears, 1998). The idea that dreams carry meaning persists (Blechner, 1998).

Most recently, dreams also have become an object of sociological interest, which illustrates that methodological approaches to investigate dreams evolve and cross disci-

plines. From a sociological perspective, dreams are not a sole product of intrapsychic conflicts or interpersonal situations but also reflect social context (Lahire, 2018). This view was already that of Charlotte Beradt (1966), who collected dreams in the times of the Nazi regime, and of dream researchers such as Lippmann (1998) and Bilu (1989). Additionally, sociology does not view dreams as shaped by a censor, who transforms them to hide their latent contents (Whitman, Kramer & Baldrige, 1963), but on the contrary as a communication with oneself in the absence of witnesses and therefore in no need of censorship and reflecting the dreamers’ preoccupations (Lahire, 2018).

In regard to the issue of evaluation and examination dreams, which are the topic of this study, Schredl remarked in his article on the multiple examination dreams of a single person that their lifetime prevalence is quite high, but their frequency within a person is low, and that they may reflect punishment, consolation (after waking up), guilt (e.g., when being helped), potency, a feeling of being unprepared or anticipatory anxiety (Schredl, 2017). Early reports on examination dreams (Sadger, 1920; Schmideberg, 1933; Sterba, 1927) were focused on single dreams embedded in a psychoanalytic setting. With regard to empirical research and students’ examination dreams, investigators found them to predict academic performance (Arnulf, 2014), probably related to the nocturnal consciousness attributes of the dreamer rather than the presence of dream recall in a single night (Yu, 2016).

In a prior study, we explored dreams of medical students with (i) a quantitative analysis of their contents based on the Hall and Van de Castle dream content analysis method and (ii) a qualitative thematic analysis (Nikles, Stiefel & Bourquin,

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2017). We found in the thematic analysis that the issue of *evaluation* occupied a central place in medical students' dreams. "Evaluation" refers not only to medical exams but also to more general situations of evaluation. The initial aim of the present continuation study was to compare dreams of medical students from two Swiss universities with different entry selection processes and a very different rate regarding failures of exams. However, our assumption that dream contents would differ between students of the two schools was not confirmed by an investigation and comparison of dream contents with the Hall and van de Castle coding system, and with thematic analysis. We therefore decided to conduct an in-depth analysis focusing specifically on *evaluation* dreams as the pervasive and most prevalent content of medical students' dreams.

2. Method

Since the disciplinary and theoretical framework of researchers orients the way dreams are investigated, we briefly summarize our professional backgrounds. The first author is a resident in the Department of Psychiatry of Lausanne University Hospital, and this study is part of her MD thesis. The second author is a social scientist embedded in a psychiatric liaison service where she conducts qualitative research, and the last author is a psychodynamically oriented consultation-liaison psychiatrist and psychotherapist. We consider dreams as productions that treat dreamers' daily matters of interest and concern. In other words, we understand dreams as being meaningful and situated.

2.1. Data collection and data corpus

The recruitment procedure and information of participants were the same at Fribourg University Medical School as at Lausanne University Medical School (Nikles, Stiefel & Bourquin, 2017). Students were approached 10 min prior to the end of a lecture by the first author (MN), who presented the objectives of the study and handed out an information sheet, which consisted of:

- information about the investigators, the objectives of the study and a confidentiality statement;
- a short guideline on how dreams should be reported;
- three questions concerning age, sex, and year of medical study;
- two questions on an eventual relationship between dreams and medical studies: "Do you think that your dreams have changed since you have entered medical school?" and "How often do you dream about your studies?";
- two pages to report (a) the date and content of the most recent dream remembered and (b) the date and content of a dream related to their studies.

These instructions followed the guidelines for the collection of the most recent dreams (Domhoff & Hall, 1996), which were established to avoid participants reporting a recurrent dream/nightmare or an especially unusual dream, which might not be representative; the date of the dream allows us to exclude dreams that have been dreamed, for example, in childhood. The most recent dream approach has been shown to be valid for the investigation of samples of 100 (or more) dreams (Domhoff & Hall, 1996).

The data corpus consisted of dreams of students in curriculum years 1 to 6 (34% participation rate, N = 619 dreams) collected at Lausanne University Medical School in 2015-16

and dreams of students in the first three years of the curriculum of medical studies (100% participation rate, N = 233 dreams) collected at Fribourg University Medical School in October 2017 (at that time, Fribourg Medical School offered training only in the bachelor years of the curriculum).

2.2. Dataset

From the corpus cited above, dreams putting into play a situation of *evaluation* were selected (N = 142 from Lausanne students and N = 74 from Fribourg students). These dreams described relevant situations, such as a written or oral exam, an interrogation by a teacher, preparatory work for exams or the reception of results. Among those dreams, approximately one-third (N = 71) showed situations of failure, and a small minority showed situations of success (N = 13). There were no major differences with regard to this distribution between the universities, with six times more dreams of failure by students of Lausanne University and five times more by students of Fribourg University.

2.3. Data analysis

Iterative reading and first coding of the dreams led to the decision to adopt a psychodynamic perspective to examine the dreams with an evaluation content. Three interrelated psychodynamic dimensions were indeed identified from the data: the *internal objects of the dreamer*, the *defensive stance of the dreamer with regard to the evaluation situation*, and the *narcissistic impact of the situation on the dreamer*. The dimensions were considered themes of coding that were then identified using thematic qualitative analysis (Braun & Clarke, 2006). Differences in definition, which were very few in number, were discussed and adjusted until a consensus was reached within the research team. All the authors were involved in the coding process and development of the thematic analysis framework.

We describe below the analytic themes, how they were defined and delineated, and the frame of psychodynamic theory that has been used to approach the data.

Psychodynamic approaches, although primarily used in therapeutic dyadic and group settings, have been used to analyze collectives, as exemplified by systems psychodynamic approaches to organization studies (Fotaki, 2015; Petriglieri, 2020) and in health care organizations (Baker, 2019; Dashtipour, 2021), using psychoanalytic concepts such as defenses (Dashtipour, 2021), regression or conflicts (Petriglieri, 2020).

The first theme of the analysis relates to the quality of the internal objects of the dreamer. The "internal object" is conceived as an intrapsychic structure built up during development, based on the child's subjective perceptual and fantasy experiences of relationships he or she establishes with significant others. This internal "presence", with which the subject constantly and unconsciously interacts, influences perceptions, emotions, thoughts and fantasies, and shapes current and future relationships (Sandler, 1990). The quality of the internal object depends on the quality of the subject's developmental interactions with parental figures, which can be conceived and empirically studied by means of concepts such as attachment theory (Bretherton, 1992; Stern, 2001). With regard to the analysis of the dreams, we considered the attitudes of the persons who appear in the dreams toward the dreamer as an indicator of the quality of the internal object. The internal objects appeared in the

dreams with the following qualities: supportive and comprehensive, good enough, insufficient or rejecting. From a theoretical perspective, persons appearing in a dream might represent real persons, internal objects or self-objects that are parts of the self. This distinction might be difficult to make in the clinical work, even when knowing the person and his developmental background, and in fine impossible to prove. However, independent of the fact that the persons appearing in the dreams are real persons, internal objects or self-objects, their quality (e.g., supportive, rejecting) still reflects dreamers' subjectivity while dreaming. We therefore assumed that this somehow imprecise and arbitrary way of defining the persons appearing in the dreams should not have a negative impact regarding the study aim (to identify by means of dreams the students' subjectivity with regard to an important element, evaluation and exams, of medical school).

The second theme relates to the intensity of the defensive stances of the dreamer. Defenses are unconscious mechanisms in the service of anxiety reduction or, more generally, in the service of adaptation when facing threats (Favre, Despland, de Rothen, Drapeau & Stiefel, 2007). Depending on the intensity of the situational threat and the vulnerability of the person, more (e.g., intellectualization, displacement) or less (e.g., projection, denial) mature defenses are deployed, associated with a more or less severe distortion of reality (Bernhard, de Rothen, Despland & Stiefel, 2012). We assumed that an indicator for the defensive stance (or the need for protection from a reality perceived as harsh) appeared in the dreams in two forms, depending on how the dreamer assumed responsibility with regard to the evaluation situation, and, more rarely, on how he or she handled associated emotions. The responsibility appeared in the dreams on a spectrum reaching from own responsibility or neutral (e.g., destiny) to the responsibility of others (defensive distortion of reality by projection). Handling of emotions ranged from adequate to defensive (e.g., denial of emotions) or an inability to handle emotions (e.g., breakdown of defenses with despair). Again, one might argue that manifest dream contents might not be the result of a defensive stance (projection onto another one's own failure) but just puts into play a situation of a specific failure. However, the scenic quality of the dream is still reflected by its unlikely occurrence in the real world in which the dreamer is freed from any responsibility. The same holds true for the emotions, because not being at least a little bit sad when facing the (potential) loss of a highly invested professional career seems rather defensive and is explained, also in the clinical work, by a defensive stance (e.g., denial, splitting).

The third and last theme relates to the degree of narcissistic impact the evaluation has on the dreamer. Impact refers to the intensity of an experience of psychological injury when an individual faces a real or fantasied situation; it depends on the situation itself and on the preexisting vulnerability of the person (MacDonald, 2014). The psychodynamic model of narcissistic injury can be conceived in terms of object relations theory (Kernberg, 1988) or self-psychology (Baker and Baker, 1987). What counts in regard to our study is that persons, due to developmental reasons, are not equal with regard to their sensitivity to situations of reward and deception. In persons who are sensitive from a narcissistic perspective, deception, such as the failure of an exam, may thus provoke intense reactions or different degrees of narcissistic injury (Halewood, 2003).

The narcissistic impact, as reflected in the dreams of our dataset, ranged from adequate coping with the situation to narcissistic blows (e.g., experiences of loneliness or feeling cheated) and impacts largely surpassing the scholarly dimension (e.g., existential consequences). To illustrate the analytic approach, three dreams with different qualities of internal objects, different intensities of defensive stances and different degrees of narcissistic impacts are presented. The three different dimensions are interrelated: the narcissistic impact, accordingly modulated by the defenses, depends on the quality of the internal object. The choice of the examples and excerpts to illustrate the analytic approach and characterize the different dimensions identified was based on their illustrative power.

Dream 1: The dreamer is a man. I arrived at the University Hospital to see my results of the exams, which I tried to pass for the third time [usually, following two and in some exceptions three failures, one has to renounce the study of medicine in Switzerland]. After having searched a lot, I find the table with the results and see that I have 10 points and that my results are just below the mean [as a consequence, he will not be able to continue medical school]. I then start to criticize with other students the system of the medical school. Later, by turning back home, I encounter at the exit of the University Hospital my mother, who – after discovering my results – starts to cry and does not want to see me anymore. Soon after that, my girlfriend leaves me. I start to feel badly, with the sensation of my stomach going into knots, and then I wake up. Here, the dreamer does not have a sufficiently good internal object, with a mother rejecting him and a girlfriend leaving him after his failure of exams. He tries to defend himself by criticizing the system (projection). Despite the erection of immature defenses, a feeling of severe unease cannot be avoided (breakdown of defenses, stomach going into knots), and the narcissistic impact surpasses the mere exams: the dreamer is not only rejected by the mother but also left by the girlfriend (abandonment), illustrating the experience of a catastrophic impact of existential dimensions, which makes him wake up.

Dream 2: The dreamer is a man. I did not pass the first exam of the first year of medical school. I read the results [of the exams] on my PC, I am frustrated and sad, but I think, that this is not the end of the world. Life continues. I eat with my parents, and everything goes well. I am not unhappy. Here, the dreamer's internal objects are good, supportive ("everything goes well") and encounter him in a "nurturing" environment. He experiences adequate emotions (sadness and frustration), with no need to defend himself. His psychic equilibrium remains preserved, and he can handle the narcissistic impact, since he envisages going on with his life. At the end of the dream, there might be an indicator of a certain defensive stance, since he feels not unhappy, which contradicts the sadness also appearing in the dream.

Dream 3: The dreamer is a woman. I was in the kitchen with my parents. I just received the results of my first exam, I obtained a note of 3.25 [4 is the minimal score to pass]. I cried and felt deceived, but I told my parents that this was not so relevant, and that I just failed the exam by a narrow margin. I felt very sad, but at the same time quite content. Here, the dreamer also appears in a nurturing environment (kitchen) in the presence of parents. The child

seems to protect them from painful feelings by downplaying the importance of the missed exam, which indicates a certain inversion of roles (the parents should comfort the child). However, the relationship with the parents (internal objects) can be considered sufficiently good, since the dreamer is able to share the experience of failure. The dreamer downplays the failure and associates a positive emotion (quite content), which indicates a hypomanic defense (defenses), less adequate compared to the unhappy feelings of the dreamer in Dream 2. However, she handles the situation, since she also is able to experience adequate feelings of sadness and deception; the narcissistic impact is thus limited. In summary, this dream is situated between (i) the dream with insufficient internal objects, deployment of immature defenses and a massive narcissistic injury (Dream 1) and (ii) the dream with a supportive internal object, with no need to erect defenses and an adequate handling of the situation and the narcissistic challenge (Dream 2).

3. Results

We will first present the results with regard to the internal objects, since they determine defensive stances and narcissistic impacts. Examples and excerpts of dreams illustrating the results are provided.

3.1. Quality of the internal objects of the dreamer

The qualities of the internal objects identified in the dreams ranged from persons who appeared to be supportive or at least sufficiently supportive to persons who were present and persons who were insufficiently supportive (rejecting, competitive, persecuting and absent).

3.1.1 Supportive or sufficiently supportive others

(The dreamer is a man) *I did not pass the first exam of the first year of medical school. [...] Life continues. I eat with my parents, and everything goes well.* (Excerpt of Dream 2)

(The dreamer is a woman) *I was in the kitchen with my parents. I just received the results of my first exam, I obtained a note of 3.25, I cried and felt deceived, but I told my parents that this was not so relevant.* (Excerpt of Dream 3)

The dreams differ with regard to the degree of supportiveness of the internal objects. As mentioned, in the second dream, the dreamer seems to feel the need to reassure his parents, while this is not the case in the first dream.

3.1.2 Present others (the dreamer is part of a collective)

(The dreamer is a woman) *I do not remember with whom I was, but all the other seats were occupied (I guess by other medical students). There was also a professor (but I don't know who he was).*

(The dreamer is a woman) *I was in a room with other students and had to pass an exam. I was quite stressed and unquiet.*

The dreams differ with regard to emotions, but the relational quality experienced with others is neutral.

3.1.3 Insufficiently supportive others (rejection, abandonment)

(The dreamer is a man) *I encounter at the exit of the University Hospital my mother, who – after discovering my results*

– starts to cry and does not want to see me anymore. Soon after that, my girlfriend leaves me. (Excerpt of Dream 1).

The dream features first rejection (mother) and later remains vague regarding the origin of the broken relationship (with the girlfriend), which can be considered as abandonment, given that the girlfriend leaves him while he passes through a difficult time (failure of exams, rejection by the mother).

3.1.4 Competitive others (comparison with others)

(The dreamer is a man) *I am in the exams, and while I still have half of the questions to answer, the supervisor asks me to hand him the copies. Later, the day of the results of the exams has meanwhile arrived, I open my computer. I realize that I failed and I panic. When I realize my failure, I am surrounded by my friends, who all of them had passed the exams.*

(The dreamer is a woman) *During an exam, I fail to make a diagnosis; I panic in front of my sheet. Leaving the classroom, I complain that the exam was difficult, but all the others answered that they considered it easy and that the diagnosis was "Münchhausen syndrome". I search in my memories, but I can't remember if I ever read something about it [the Münchhausen syndrome].*

The dreams are very similar with regard to the quality of the competitiveness and differ slightly with regard to the intensity of the potentially associated shame.

3.1.5 Persecuting others (threat)

(The dreamer is a man) *I was passing exams and a friend purposely deconcentrates me, and I fail.*

(The dreamer is a woman) *I was passing the medical exams. My colleague, without asking me, sat beside me, and started to copy my results. I got angry, since the supervisors could see it. I told her, that she should leave, but she didn't. Then, she took my copy and left the classroom. The supervisors banned both of us for the next exams (The dreamer adds "Thank God I woke up").*

The dreams differ with regard to the deeds of others but not with regard to their persecutory qualities.

3.1.6 Absent others (solitude, abandonment)

(The dreamer is a woman) *I was asked to repass my exams, despite the fact that I have already received my results and that my year was validated. I was alone in the auditorium (solitude), with only Professor W, who supervised the exam and who repeatedly stated that I will not pass (persecuting others) (The dreamer adds that it took her several minutes after waking up to remember that she actually passed the exams).*

(The dreamer is a woman) *I dreamt that I entered the classroom, but nobody was there. I searched for the others, I panicked, I was alone (abandonment).*

In some dreams, others feature qualities that can be classified into more than one category.

3.2. Intensity of the defensive stance of the dreamer

The defensive stances ranged in intensity, depending on the attribution of responsibility for the situation. We were able to classify defensiveness into (i) assuming responsibility, (ii) attribution of responsibility to external forces (e.g., destiny)

or (iii) to other persons (projection), (iv) multiple attributions and (v) the issue of responsibility does not appear in the dream. Moreover, how the dreamer handled painful emotions associated with the exam was a second indicator for defensive stances.

3.2.1 Assuming responsibility

(The dreamer is a man) *I fail my exams, because I pass the exams being completely unprepared.*

(The dreamer is a woman) *I went to the exams but arrived at the University instead of the University Hospital [where the exams took place], and I definitively failed the exams, since I already failed two times.*

(The dreamer is a man) *I was nervously sitting in the classroom with my old school friends and suddenly realized that I have forgotten my pens. Nobody wanted to give me a pen, and I angrily run out of the classroom to a nearby park.*

(The dreamer is a woman) *Passing exams and knowing nothing. I couldn't answer any of the questions and was desperate.*

Responsibility for failure is assumed in various ways, differing with regard to how the dreamer's capacities are questioned. Dreamers who arrive unprepared to exams, go to the wrong place, forget their pen, cannot answer any questions, and are not helped by others, assume less responsibility than dreamers who fail because of "know nothing".

3.2.2 Attribution of responsibility to external forces (destiny)

(The dreamer is a woman) *I was passing the exam in the classroom, but the papers flapped away, I couldn't finish.*

(The dreamer is a woman) *I arrive too late to the exam, my car cannot move forward in the traffic jam.*

The dreams differ with regard to external forces and nature of attribution, but the attributions are directed toward impersonal forces.

3.2.3 Attribution of responsibility to persons

(The dreamer is a man) *The exam was about physics. The questions are mixed up and listed in a tourist guide, difficult to consult. The professor passes by and says: "But it's easy, all your colleagues pass very well".*

(The dreamer is a man) *Everybody kept me from succeeding by deconcentrating me. The questions were incredibly difficult and completely unrelated to the topics of the examined module. Finally, I failed the exam.*

The targeted others are colored by characteristics, which are classified under "quality of internal objects".

3.2.4 Multiple attributions

(The dreamer is a woman) *We had to pass exams at the university, but the questions were completely foolish (e.g., read the list of ingredients of a Coca-Cola can, written in Chinese...) (attribution to others), and I was not prepared at all, since I thought that I had one more week before the exams (assuming responsibility, invoking reasons not related to the dreamer's academic capabilities). There was also a professor, and he frightened me a lot, since I was in a rush and he despised me for this (attribution to others, since the dreamer had to work under stressful conditions). The others were colleagues, who seemed to know all, which stressed*

me even more (others as competitors, who again create a stressful environment, which is not helpful in the context of an exam).

3.2.5 Absence of the issue of responsibility

(The dreamer is a man) *I did not pass the first exam of the first year of medical school. I read the results (of the exams) on my PC, I am frustrated and sad, but I think that this is not the end of the world. Life continues. (Excerpt of Dream 2).*

3.2.6 Handling of emotions associated with evaluation

As illustrated by the Dreams 1, 2, and 3, emotions could be experienced adequately (sadness, frustration), but there also were dreams in which positive emotions were felt despite the failure (feeling quite content), which indicate a defensive stance (e.g., hypomanic defenses), or in which painful emotions could not be fully embraced (contradictory emotions with sadness/frustration and, at the same time, feeling not unhappy).

3.3. Degrees of narcissistic impact (consequences/emotions)

The evaluation situations had a range of impacts, identified by narcissistic impact and associated emotions.

3.3.1 Degrees of narcissistic impact depending on subsequent consequences

(The dreamer is a woman) *I passed exams, and Professor S was sitting in height, like a judge in the court. There were just the two of us. He took my exam and scribbled on it, telling me that I had zero points. I felt anxious with blasted self-esteem (narcissistic injury modifying the image of herself).*

The dreams varied, ranging from absorbable impacts (see Dream 2) to slight narcissistic blows (see Dream 3) and severe narcissistic injuries modifying the life of the dreamer (see Dream 1).

3.3.2 Associated emotions (adequate, intense and pathological)

(The dreamer is a woman) *I was with my family at home and received the results of the exams. The results were very bad and I was very sad (adequate emotions).*

(The dreamer is a woman) *I received the results, I failed all the exams. I was alone, I felt ashamed and desperate (intense emotions) because I already failed my exams once in the first year.*

(The dreamer is a woman) *I received the results of the exams and I failed them. I could not stop crying, I felt the desire to die and I felt depressed (pathological emotions).*

The associated emotions vary in intensity but also with regard to the origins related to loss (sadness) or comparison with successful students (shame).

4. Discussion

We will start the commentary on some aspects of this continuation study and the settings in which dreams were collected. We will then discuss the results in light of the literature. Finally, we will situate our approach in psychodynamic dream research and conclude with some thoughts on the subjectivities of medical students.

First, in a previous study, we found a high prevalence of dream content among medical students putting into play situations of evaluation (Nikles, Stiefel & Bourquin, 2017). This finding also is in line with the literature (Schredl, 2017) and can be interpreted in view of threat simulation theory (Revonsuo, 2000) or the continuity hypothesis, with students putting much work into preparation for exams being more likely to dream about them (Schredl, 2012) and to obtain better results (Arnulf, 2014; Yu, 2016). The specific population under study also might play a role, since the prevalence of examination dreams has been observed to be related to higher education and to decline with age (Schredl, 2010).

This continuation study initially aimed to explore whether the dream contents of students of two medical schools with very different failure rates differ. Since the results showed no differences, we decided to conduct an in-depth analysis of all dreams that featured situations of evaluation, with the aim of gaining through the dreams some insight into medical students' waking-state subjectivities related to the issue of evaluation.

The two medical schools not only differ with regard to their exam failure rates but also with regard to the number of students, with Fribourg Medical School showing a very low failure rate (since the selection of students is made before they enter the school) and consequently almost no competition among students, while in Lausanne Medical School, approximately half of the students cannot enter the second year. Fribourg Medical School not only has a much lower number of students each year, the atmosphere is more familiar, students and teachers have closer contacts, and the students come from different parts of Switzerland, which might favor the ties among them. These characteristics might explain the higher participation rate of Fribourg students.

The results of this accidental study might explain why our initial assumption was not confirmed. First, the issue of evaluation is very sensitive for all medical students, as illustrated by its high prevalence in the dreams of both samples. While the probabilities of failure differ between the two schools, the threat seems to affect students equally. In other words, students perceive this threat not in relation to probabilities but as a possibility that may render their career choice obsolete and block the way to their desired future profession. To succeed or to fail from an individual perspective is, as in regard to the probability of cancer recurrence, a binary 100% or 0% event.

Moreover, the dreamt impact of situations of evaluation is shaped by the quality of the internal objects appearing in the dreams. If the internal objects are not good enough to rely on, students dream the situations of evaluation or its consequences as being a major challenge, deploy immature defenses and experience its impact as a severe narcissistic blow. There is no reason to believe that students of the two samples differ with regard to the quality of their internal objects. Therefore, despite differences between the two medical schools, the situations of evaluation were dreamt in similar ways. The prevalence of dreams featuring failure heavily surpassed that of success, with a nonsignificant difference between the schools. Again, anxiety – as a potent driver of dream activity – associated with failure might explain these results. Sensitivity with regard to the issue of evaluation is probably most determined by individual factors, such as development and education, past experiences from school and individual resources and vulnerabilities. Indeed, Freud

already observed that the perception of school performance may be shaped by experiences of punishment during childhood (Freud, 1900, p. 280). In addition, the school situation with teachers and pupils resembles the family structure, with exams experienced as a judgment not only of the performance but also of the person, explaining the existential dimensions of school failure, which might even provoke suicide (Bernfeld, 1929).

Second, the issue of performance, closely related to evaluation, figures among the most frequent structural patterns of dreams (in any populations), with the most common topic being the examination (Roesler, 2018). Since evaluation is associated with eventual failure, the related anxiety may thus explain the high frequency of dreams related to this topic. Indeed, the notion that emotions, especially anxiety, drive dream content has been proposed by several authors (Cartwright, 1974; Malinowski & Horton, 2014b; Schredl, 2006). Given the omnipresent issue of performance, evaluation, success and failure in medical schools, and in view of the continuation theory of dreams (Cipolli et al., 1986; Malinowski & Horton, 2014b; Marquard et al., 1996; Schredl & Hofmann, 2003; Vallat et al., 2017), it is thus not surprising that evaluation situations are a frequent topic in medical students' dreams. Dream "preoccupations" related to settings also have been found in hospitalized patients, who predominantly dream about separation and death (Smith, 1986), or in volunteers, who dream about stimuli, such as movies or photographs, presented to them in the context of a research setting (Cartwright, Bernich, Borowitz & Kluge, 1969). What preoccupies medical students in their first years is to pass exams to reach their objective of becoming physicians. A career choice in medicine is motivated by different factors (Simões Morgado et al., 2020, accepted for publication), including very personal factors (Duffy & Dik, 2013), some of which are closely related to (traumatic) biographical events (Elliott & Guy, 1993). The issue at stake is therefore not only professional but also private, which explains the emotional coloration of the evaluation dreams of medical students. Finally, the results fit into theories of dream functions, such as threat simulation (Revonsuo, 2000; Valli & Revonsuo, 2009), emotional regulation (Cartwright, Luten, Young, Mercer & Bears, 1998; Stickgold, Hobse, Fosse & Fosse, 2001) or autotherapy (Scalzone & Zontini, 2001; Walker & van Der Helm, 2009).

Third, iterative reading of our material led us to adopt a psychodynamic perspective on the dream material. Research on dreams from a psychodynamic perspective was rare in the past and often limited to case studies (Epstein & Ervin, 1956; Kramer et al., 1976). This is not surprising, since an overwhelming majority of psychoanalysts do not conduct research and consider that dreams cannot be understood from manifest dream contents and interpreted without knowledge of the biography of the dreamer (Lippmann, 1998). We do agree that meanings of dreams emerge only in psychotherapy; however, psychodynamic-oriented empirical dream research can have aims other than searching for meaning, as demonstrated, for example, by a study that showed that dream patterns are closely related to the psychological problems of dreamers and their evolution in psychotherapy (Roesler, 2018; Roesler, 2020). The aim of our psychodynamic dream investigation was to identify patterns that allow us to gain insight into medical students' waking-state subjectivities with regard to this omnipresent issue of evaluation. Psychodynamic coding systems for the

assessment of dream contents do exist, but they work with basic assumptions, which limit their empirical value (Roesler, 2018). An inductive-deductive approach, as chosen for this study, might therefore be an interesting alternative to coding systems.

There have long been arguments and calls for working with manifest dream contents by psychoanalytically oriented scholars (Greenberg & Pearlman, 1975, 1999; Harris, 1948). In one ancient study, for example, blinded evaluators were able to correlate manifest dream contents with the psychic structure of the dreamers (attribution of dreams to schizophrenic patients or to students) (Kramer, Hlasky, Jacobs & Roth, 1976), which also demonstrates that the psychodynamic investigation of dreams may be conducted outside the psychotherapeutic setting.

A psychodynamic-oriented investigation of dreams of medical students (and residents) – to the best of our knowledge, up to now the only study of medical students' dreams – concluded that the dreams showed an unconscious developmental process in response to medical training (Marcus, 2003). However, this study is somehow limited, since the approach was mostly deductive; the data were utilized to illustrate a psychoanalytic view of the general psychological challenges of medical students.

The psychodynamic perspective taken in our study was data-driven and focused on three dimensions, “internal object”, “defenses” and “narcissistic impact”, which we consider from a theoretical point of view to be interrelated. Working with three different, although interwoven, dimensions has advantages: it fosters the methodological approach and contributes to completing the dataset, since dreams can be included in the study even if one or two of the dimensions are lacking. The observation that the three dimensions were coherently interrelated (e.g., not good enough internal objects, increase of defenses and severity of narcissistic impact) endorses the validity of our approach. In addition, the spectrum of intensity within which these dimensions appeared allowed a nuanced and fine-grained analysis of the dreams.

Finally, our results are in line with recent psychodynamic dream research, which identified “coping with a challenge” as the most general pattern of dreams (Roesler, 2018). Subpatterns, also identified in our dream corpus, were “the dream ego is threatened”, “the dream ego is confronted with a performance requirement”, “social interaction dream” and “mobility dream” (the dream ego moving or being hindered to move) (Roesler, 2018). The only subpattern not present was “no dream ego present”; this subpattern, however, also was extremely rare in the cited study (2 out of 202 dreams).

For some of these young people, motivated to enter medical school, the threat to miss exams and to renounce their career choice and their profound desire to become physicians, represents – in the dreams – an intense narcissistic challenge, sometimes of existential dimensions. The dream contents reflect the threat and the issue at stake, as well as the students' motivation, their resources and vulnerabilities, and aspects of their early development (behavior of parents and other persons appearing in the dreams). Of interest in this context is that thin boundaries also indicating deficient internal objects, measured by questionnaires, have been associated with the frequency of nightmares (Schredl, Kleinfurher & Gell, 1996). It is not within the scope of this article to discuss the rich literature on medical career motivation (Boudreau et al., 2018; Duffy & Dik, 2013; Elliott &

Guy, 1993) or issues associated with the hidden curriculum in medical schools (Lempp, 2004). However, what we would like to underline here is that the harsh reality with regard to selection in medical schools not only creates specific subjectivities, as illustrated by this investigation, but can provoke profound psychological injuries in students who fail. Those who succeed and enter the medical universe will continue to meet situations of evaluation, performance, competitiveness, success and failure (Stiefel, Stiefel, Terui, Machino, Ishitani & Bourquin, 2019).

The study results have the potential to be used with students to address the topic of evaluation and performance and the associated reactions in case of failure. Dreams, since they not only “speak” to the cognitive dimensions of man, can be a powerful means – when used to address the topic of facing evaluation in medical school – to provoke emotional resonance, reflexivity and insight, which all may help to somehow anticipate and prepare for an eventual failure and the loss of a highly invested career choice. The study also reminds teachers not to forget that the harsh climate of permanent evaluation in medical school (and later on) can provoke traumatic experiences and that it is their responsibility to conduct these evaluations as respectfully and empathetically as possible.

Strengths and limitations of the study

We consider the data-driven, inductive-deductive approach, the psychodynamic perspective utilized outside a therapeutic setting and applied to a collective, as well as the rich and self-speaking material, valuable for pedagogic purposes in medical schools, to be the strengths of the study. As a limitation, one might find that the dimension “internal objects” utilized in the study is somehow arbitrary (we have argued in the discussion that this arbitrariness might not have too serious consequences with regard to the study aim) and that defenses are difficult to operationalize and identify without having access to the individual.

5. Conclusions

Since medicine is about caring and healing in the large sense of the word (Boudreau, Cassell, Fuks, 2018), this issue of evaluation merits to be addressed in medical schools. While the evaluation of medical students cannot be evacuated from the curriculum, addressing this issue would allow students to reflect on their personal challenges associated with failure and success and to situate themselves (Ng, Wright & Kuper, 2019). In doing so, medical schools would provide an example of care, which is at the core of the medical profession. Medical schools could hereby contribute to what dreams are sometimes for: to foster self-preservation and adaptation, according to the threat simulation theory (Valli & Revonsuo, 2009) or autotherapeutic theory (Hartmann, 1995). By addressing this topic, medical schools would provide medical students more room to dream about issues other than evaluation.

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