

### Academic Procrastination and Its Characteristics: A Narrative Review

**Background:** Time management, especially at university is an important factor contributing to the academic achievement of students. However, the majority of students relentlessly delay their academic work. Drawing upon the literature, it was attempted to identify the characteristics of academic procrastination in the current study.

**Methods:** In the review, articles, books and theses in English and Persian were identified by a search of Scopus, Proquest, Pubmed, Magiran, and SID databases using the keywords such as procrastination, academic procrastination, academic consultation, academic shilly-shally, and academic dilatoriness. However, our search was not limited by a time frame.

**Results:** 603 articles and theses were identified by searching the databases. Sifting through the information, we consulted only 27 articles and 2 theses which were relevant to our study. After a perusal of literature on academic procrastination, procrastination issues (i.e. definition, prevalence, types of procrastination, academic procrastination, and characteristics) and its associated factors were identified.

**Conclusions:** Given that procrastination is considered as a disruptive factor in academic achievement, teachers and students can use the results of this study to identify the behavior of procrastination and related factors.

**Keywords:** procrastination, student procrastination, academic procrastination, student

### مرور علی الماطلات التي تخفي اهمال الطلاب وخصائصها

**المقدمة:** لا يخفى على احد الصبة تنظيم الوقت للطلاب و خاصة في الدراسات الجامعية. ان ان السباب يجب ان يوفى بين دراسته و اعماله ومستوياته الاخرى. ونرى ان كثيرا من الطلاب يهملون دراستهم او يؤخرونها لذلك بنيت هذه الدراسة على اساس مرور المقالات و المتنون الواردة في هذا المجال.

**الطرق المستخدمة:** في هذه الدراسة استخدمنا المقالات و الاطروحات والكتب و محركات البحث sid, magiran, pubmed, proquest, scopus بدون تحديد للوقت. بكلمات: الالمال الدراسي, التاخير الدراسي. الماطلة الدراسية و مايعادلها بالانجليزية, Acadmic Dilatoriness, Acadmic Cunctation و Student Procrastination و Acadmic Shillyshally.

و ادخلت المقالات باللغتين الفارسية و الانجليزية بالدراسة. **النتائج:** عند البحث كانت هناك ٦٠٦ مقالة و اطروحة في هذا المجال و بعد قراءتها وجدنا ان ٢٧ مقالة و اطروحتين تناسب مع الهدف من دراستنا و ادخلت هذه المقالات و الاطروحتين في البحث. وكانت الدراسة تتمحور حول تعريف التسوية. شيوعه. انواع التسوية و التسوية الاكاديمية.

**النتائج:** يعتبر التسوية احد معوقات النجاح و التفوق لذلك يجب على الاساتذة و الباحثين التعرف عليه للحد منه.

**الكلمات المفتاح:** الماطلة الدراسية. التسوية الاكاديمية و التاخير الاكاديمي و الطلاب

### اهمال كاري تحصيلي دانشجویان و ویژگی های آن: مطالعه مروری

**مقدمه:** مدیریت زمان بخصوص در محیط های دانشگاهی و برای دانشجویان عامل مهمی در موفقیت آنان محسوب می شود. با این وجود اکثر دانشجویان بطور مداوم در انجام فعالیتهای تحصیلی خود تعویق دارند. این مطالعه با هدف شناسایی ویژگیهای اهمال کاری تحصیلی بر اساس مرور متون می باشد.

**روشها:** در این مطالعه مروری، مقالات، کتب و پایان نامه های پایگاههای اطلاعاتی و موتورهای جستجوی Scopus, Proquest, pubmed, magiran, sid بدون محدودیت زمانی با کلید واژه های تعلل ورزی تحصیلی، تعویق تحصیلی، اهمال کاری تحصیلی، اهمال کاری دانشجویی، تعویق دانشجویی و تعلل ورزی دانشجویی و نیز معادل انگلیسی آنها Academic Procrastination, academic Cunctation, Academic Shillyshally, Academic Dilatoriness و student Procrastination مورد جستجو قرار گرفت و مقالات و پایان نامه های انگلیسی و فارسی وارد مطالعه شدند.

**نتایج:** در جستجوی انجام شده، تعداد ٦٠٣ مقاله و پایان نامه یافت شد و پس از مطالعه مقالات با توجه به هدف مطالعه ٢٧ مقاله و ٢ پایان نامه مورد استفاده قرار گرفت. پس از بررسی و مرور مقالات و متون در مورد اهمال کاری تحصیلی، به موضوعاتی مانند تعریف اهمال کاری، شیوع، انواع اهمال کاری، اهمال کاری تحصیلی و ویژگی های آن پرداخته شده است.

**نتیجه گیری:** از آنجایی که اهمال کاری به عنوان یک عامل مخر موفقیت تحصیلی شناخته شده است، اساتید و دانشجویان می توانند از نتایج این مطالعه در جهت شناسایی رفتار اهمال کاری و ویژگی های آن استفاده کنند تا با شناسایی علل ایجاد کننده آن، حتی الامکان شیوع آن را در بین دانشجویان کاهش دهیم.

**واژه های کلیدی:** تعلل ورزی تحصیلی، اهمال کاری تحصیلی، تعویق آکادمیک، دانشجویان

### طلباء کی تساہلی اور اس کی خصوصیات، ایک تحقیق

**بیگ گراؤنڈ:** وقت کے اندر نصاب مکمل کرنا اور وقت کی پابندی طلباء کی کامیابی کا سبب ہے، اکثر طلباء ہمہ وقت پڑھائی کرنے میں لگے رہتے ہیں لیکن اس کے باوجود وہ پیچھے رہ جاتے ہیں۔ یہ تحقیق طلباء کی تساہلی کا جائزہ لینے کے لئے انجام دی گئی ہے۔

**روش:** اس تحقیق کے لئے مختلف سرچ انجنوں میں طلباء کی تساہلی، پڑھائی میں کابلی اور طلباء کے پیچھے رہ جانے جیسے الفاظ کی سرچ کی گئی تھی۔ اس سرچ میں فارسی اور انگریزی تھیسسوں کا جائزہ لیا گیا۔

**نتیجے:** اس تحقیق میں چھ سو تین مقالوں کا جائزہ لیا گیا اور اس کے بعد تحقیق کے ہدف کے پیش نظر ستائیس مقالے اور دو تھیسسوں سے استفادہ کیا گیا۔ مقالات کا جائزہ لینے کے بعد طلباء کی تساہلی، کابلی سے کام لینا، پڑھائی میں کابلی کرنے جیسے الفاظ کی تعریف کی گئی اور ان کی خصوصیات کا بھی جائزہ لیا گیا۔

**سفارش:** چونکہ تساہلی کو پڑھائی میں خلل ڈالنے والا عامل قرار دیا گیا ہے لہذا طلباء کو اس سے روکنے کے لئے تساہلی کے عوامل کی شناخت کرنا ضروری ہے اور طلباء کو اس سے روکنا چاہیے۔

**کلیدی الفاظ:** پڑھائی میں کابلی، طلباء کی تساہلی، پیچھے رہ جانا۔

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**INTRODUCTION**

Procrastination or postponing is a habit which is observed in a lot of people as far as researchers believe that it is one of the inherent tendencies of the human [1]. Procrastination is with us in many cases and is expressed in a variety of conditions influenced by the culture [2]. Among the types of Procrastination, academic procrastination is the most common one. This type of Procrastination has been defined as tendency prevailed to postpone the academic activities and is almost always associated with anxiety. An obvious example is to delay studying the lessons until the night of the exam and resulting hurry affects the student [3]. Academic procrastination is a relatively common phenomenon among adults and students in the universities [4]. A study by Barratt was carried out to determine the experience of procrastination behavior in students and it was suggested that people commit this behavior in order to avoid criticism [5]. Although Procrastination is not always a problem, but in most cases it can be associated with undesirable and irrecoverable consequences through preventing from development and not the achievement of the goals [6]. Regarding the effects of procrastination various studies have reported different results. Some researchers pointed out its negative effects on learning and promotion [7], and also on academic performance [8]. And even some cited positive effects of procrastination on academic achievement [9]. Also Procrastination is associated with poor mental health [10]. Overall postponing the tasks and assignments has many negative consequences on both physical and mental health as well as the ability of people to achieve goals [11]. Psychologists' findings indicate that the academic procrastination is associated with many variables in personality and behavior. The existing literature is related to procrastination prevalence and associated factors, but it does not provide significant information about its dimensions. Kazemi in his study stated that despite of existence of definition and comments about the procrastination, the reasons for it is still unknown, and even sometimes conflicting results have been obtained in this

Also Steel believes that though the facts about procrastination have been identified, it is still an unknown subject [13].

Given the experiences of the researcher, one of the courses that students have experienced procrastination is medical sciences, particularly nursing. Any other major in higher education cannot be found that has equal credit to clinical nursing in terms of the academic courses [14]. Goals of clinical practice for nursing students include critical thinking skills, competence and expertise, communication, time management and increasing self-confidence to work as a nurse in the future [15]. It seems that one of the factors which have a negative impact on their learning is academic procrastination. On the other hand, although the type of work and studying the level of students varies at different grades, but all of them face with various problems due to the difficulties of dormitory life and living away from the family and also doing extra work to earn money or afford the cost of everyday life that involve much time. So, given that nursing students pass a challenging period and face with intensive theoretical and practical tasks, And considering the importance of their major, the possible effects of procrastination on their academic and professional success increases. To reduce the prevalence of procrastination its characteristics should be identified so that the necessary interventions are taken in order to prevent it.

**METHODS**

In this Narrative review, which was conducted in 2017, a comprehensive review of articles was done based on searches in databases and search engines including Scopus, Proquest, Pubmed, Magiran, Sid using keywords: student Procrastination, Academic Procrastination, Academic Cunctation, Academic Shilly-shally, Academic Dilatoriness as well as their Persian equivalents (Table 1,2) without time limitations.

Articles were selected based on the research objectives. The articles should emphasize academic procrastination and its characteristics. The inclusion criteria were as follows: 1-

**Table 1. Papers found based on English key term without time limitation**

Database	Academic cunctation	Academic dilatoriness	Academic shillyshally	Student procrastination	Academic procrastination
Scopus	-	-	-	103	146
Pubmed	-	-	-	48	15
Proquest	-	-	-	60	90

**Table 2. Papers found based on Persian key terms without time limitation**

Database data base	Student Postponement/ Negligence/ Procrastination	Academic postponement	Academic Negligence	Academic procrastination
Sid	-	-	4	4
Magiran	-	1	55	30

procrastination based on standard instrumentation, 3-Appropriate clarity of the methodology.

After completing the initial search from the articles found in each database and search engine, out of a total of 603 papers and thesis, firstly 44 articles and 2 theses were selected based on the title and abstract, which were related to the present study, and in the second step, final separation was carried out based on studying the full text of the articles and having inclusion criteria for the present study, and finally 27 articles and 2 theses were entered into the study.

**Results:** The results obtained from this review can be categorized into the following topics:

- Definition of procrastination
- Prevalence of procrastination
- Causes of procrastination
- Types of procrastination
- Active procrastination characteristics
- Academic procrastination
- Academic procrastination characteristics

Finally, 27 articles and two theses were reviewed.

#### **Definition of Procrastination**

The term "procrastination" is made of two parts "Pro" meaning forward, ahead and in support of and "Crastinus" meaning tomorrow and up to tomorrow [13]. This term derived from the Latin word "Procrastinare" meaning "swallowing", "delaying", "pulling", "pausing", "stop moving", or "postponing a task" [16]. This term has been mentioned as a bad habit [17] and behavioral problem which is experienced by many adults in their daily works [18]. Especially it is experienced in the tasks which should be usually does. Milgram et al. (1998) defined procrastination as a behavioral feature, or defect which is specified as delaying a task or decision [19]. Procrastination is considered as a behavioral tendency in delaying what is necessary for achieving the goal; in other words, it is postponing a work which we have decided to perform it [20]. Others clearly maintain that procrastination does not have a scientific dimension [23]. Definition by Steel is consistent with the second group, and he manifests the nature of "weakness of will" in procrastination, which, despite of expectation for worsening following procrastination, a practical period is consciously delayed [13]. Procrastination sometimes is positively used. Some authors mentioned it as a functional delay or rush avoidance [24]. Although Steel states that if worsening is expected following procrastination, thus purposeful, practical, and positive delay are not considered as procrastination [25].

#### **Prevalence of procrastination**

Some authors introduce procrastination as disagreement between intention and behavior [26]. What is intended by the individual is totally different from what he wants to do, and the higher is difference between intention and behavior, procrastination is higher [21]. However, it seems that procrastination is a human phenomenon which has drawn attention of researchers from about 120 years ago [27]. Procrastination was widely taken into account prior to initiation of industrial civilization. John Li (1579), English novelist, paid attention to procrastinate and stated that

"nothing is as dangerous as procrastination". The Greek poet, Hozyod, also noted the dangers of postponing things to tomorrow in 800 BC. An Athenian General and Cicero, a Roma consortium, have spoken widely against procrastination. All of the above cases support the persistence of procrastination in human behavior [13]. It's not just late getting out of the house for work or dates, but talking to friends instead of working on educational assignments, postponing eating food and exercise are all examples of the procrastination effect on the daily lives of people. All of these examples have economic, psychological or biological consequences. Procrastination in most cases has an inverse relationship with variables such as self-esteem, self-efficacy and motivation [27]. Generally it seems that procrastination leads to negative consequences and in some rare cases it has been considered as a positive behavior. Procrastination exists in the working place, so that employees tend to delay the activities and projects. According to the ideas of human resource management consultants, procrastination is regarded as the first killer of the business [28]. People with procrastination may delay delivering new services or products to the consumer needlessly and put the companies in adverse competitive or financial conditions. Scattered studies on procrastination are surprising [12]. These studies show that about one fourth of adults are influenced by procrastination and its general progress in the community has been experiencing [29]. In combination of increasing trend of procrastination with structured or structure free jobs in America it seems that procrastination is able to turn into uncontrolled dizziness and distraction in the workplace [13].

#### **Causes of procrastination**

An important point is that despite of different definitions and ideas regarding procrastination, reasons of procrastination among employees of the organizations are still unknown, and even sometimes contradictory findings have been achieved in this relation. Thus, the experts have enumerated various reasons for it including fear of success, fear of failure, self-destructive behaviors (conscious or unconscious behaviors that lead to individual's failure/self-harm), avoidance of works that the person has no desire to do, lack of incentive to do work (Bonus) hardness of the work, unpredictable events, negative attitudes toward regulatory system and organizational structure, lack of knowledge and skills needed to do the work, the impracticability and lack of mobility, bad physical condition, as well as cases such as perfectionism, low level of tolerance and ability to deal with problems and low self-consciousness. These cases can be classified into individual, environmental, and organizational factors, and given the studies, factors affecting procrastination (individual, environmental, and organizational factors) can be presented as Figure 1.

Klingsieck classified research works related to procrastination into 4 categories:

1. Different psychological view which perceive procrastination as a personality characteristic related to other similar characteristics and variables
2. Motivational and psychological view that perceives

procrastination as a failure in motivation or will to carry out the work.

3. Clinical psychology view which focuses on clinical issues related to procrastination.

4. Situational view has recently become the most public view. This view examines the situational and contextual aspects of procrastination, such as characteristics of procrastination and teacher characteristics [30].

**Types of Procrastination**

When studies on procrastination are investigated it is found that various classifications have been proposed for it.

Procrastination includes behavioral, emotional, and cognitive components, and these components cause formation of types of procrastination [31, 32]. Discussion on types of procrastination is relatively complicated. Milgram (1987) separating and classifying types of procrastination are a subjective issue and practically these cases are highly overlapped. According to him, classification of procrastination types has been just for ease of its perception, and it is simply subjective and it is possible that all of procrastination types are present in the individuals [19]. It is the difference in cognitive, emotional, and behavioral components that causes creation of such concept as procrastination types. Golestani stated that procrastination has different manifestations considering its complexity, cognitive, emotional and behavioral components, including general procrastination, decision-making procrastination, neurotic procrastination, obsessive procrastination, academic procrastination [33]. Cho and Choi introduced the term Active procrastination, and classified it into active and inactive procrastination. People

purposefully decide to delay, and finally they can complete their tasks with strong motivation under pressure, and they can also achieve satisfactory results, while inactive procrastination people postpone their tasks until the last minutes which is accompanied by guilt and depression feeling, and it probably leads to failure in doing the tasks [34].

One of the classifications divides procrastination into chronic and situational types. Chronic procrastination is defined as one's tendency to the constant delay in many aspects of the life, while situational procrastination is applied on one's tendency to have constant procrastination in a specific aspect of life. Academic procrastination is a subgroup of situational procrastination and it is defined as delay in initiation or completion of academic assignments in irrational fields [35].

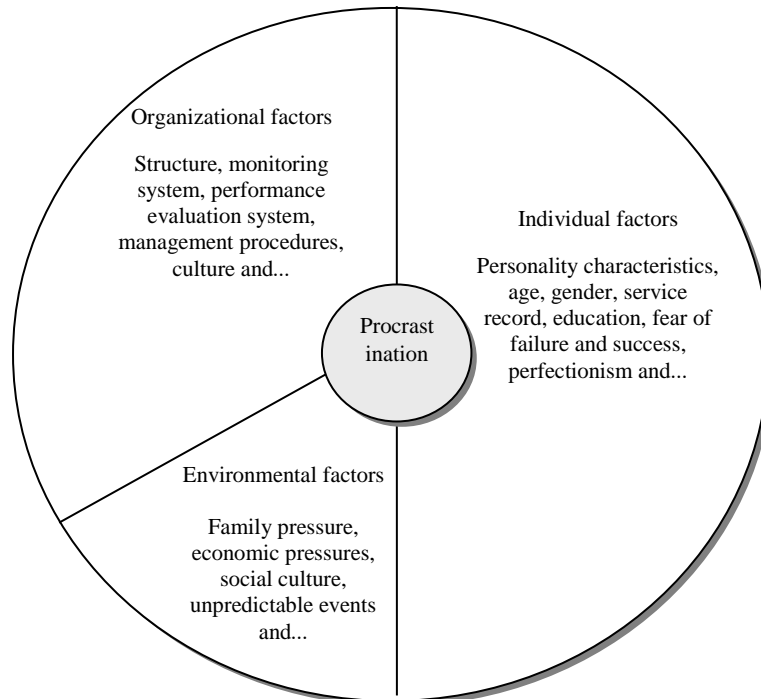
**Characteristics of Procrastination**

Choi and Moran discussed on active procrastination and stated four distinct characteristics for it:

1. They prefer time pressure.
2. They intentionally procrastinate.
3. They are able to work at last moments.
4. They are satisfied with the result [36].

**Academic Procrastination**

Perhaps the most common type of procrastination is academic procrastination. It is a delay in tasks or activities related or dependent on learning and studying [25]. Academic procrastination is a tendency to put off or delays in learning activities and behaviors [21]. The terms of student procrastination and academic procrastination are used interchangeably. Steele defined student/academic



**Figure 1. Factors affecting procrastination**

procrastination as follows: a deliberate delay in a practical course of study or learning in spite of the expected deterioration [13]. Academic procrastination occurs at all levels of education. Research has shown that procrastination among university undergraduate students is more common, and some studies have shown that more than 70 percent of college students regularly procrastinate [21]. Prevalence of academic procrastination in China has been reported to be between 4 -19 percent [37], while in the United States it is 7 -46 percent [32]. Lowinger et al. stated that Asian studies reported less procrastination which may be due to embarrassment accompanied by this behavior. Although different results have been reported in other studies. Savari reported prevalence of procrastination in students as 17.2 percent [38], Golestani reported it as 72 – 77 percent [33], and Rafiee reported it as 68 percent [39]. Academic procrastination occurs when students postpone completion of activities, projects, and assignments unnecessarily. Such procrastination may create unnecessary stress and anxiety for people when they attempt to complete their assignments with rush until the last deadline. Leaving aside or postponing the tasks not only can influence well-being sense of the person, but also it may influence his communication with others. Schraw maintained that procrastination may have positive outcomes which allow students to have better use of available studying time [21]. But other studies have shown that procrastination is associated with less success in the life and the emphasis of this study, similar to many other works, is in the negative form of procrastination.

#### **Characteristics of Academic Procrastination**

The studies have mentioned 6 characteristics for academic procrastination including:

1. Psychological beliefs about abilities
2. Distraction
3. Social factors of procrastination
4. Time management skills
5. Personal passion
6. laziness

##### **1. Psychological beliefs about abilities**

Although other studies failed during validation of 4-factor approach to active academic procrastination, they showed that people with procrastination justify their tendency for, leaving aside the tasks and their ability for working under pressure [40]. Hence, one aspect of procrastination includes psychological beliefs about ability to work under pressure and it has been defined as “sensation-seeking” in similar studies [41]. In other words, people with academic procrastination seek for working under pressure whether actively or inactively. That is, these people have undeniable belief in their ability to work under pressure. In fact, this belief was stated also in another study. Sokolowska stated that there is something known as academic self-image. It is a reflective view that people have about themselves and specifies students’ belief about their effectiveness or ineffectiveness. The higher is the students’ belief about their effectiveness, procrastination is more probable in them, and it is related to “exam night rush” resulting from their self-confidence in their ability and positive view about themselves [42]. Schraw showed that people with

procrastination and people who study at exam night experience higher level of challenge when they postpone studying until the last moments [21]. However, results of another study show that students which delay studying until the exam night are poor in class activities [13].

##### **2. Distraction**

Studies regarding procrastination indicate that people with procrastination are easily distracted by more interesting or fun activities. Thus, they mostly give priority to the more pleasant activities. Instead of working on the most important cases, they prefer to sleep, watch TV, or play, so that they distract or being taken away from the responsibilities. One of the reasons that students distract and replace other activities is that doing assignments and projects is annoying for them. It has been found that the more people do not like a work, they procrastinate more and replace more interesting activities [13]. Low levels of perseverance and high levels of distraction when working on assignments and poor planning skills have been identified as factors affecting procrastination [25]. Evading working on the major responsibilities is one of the main characteristics of people with procrastination. They constantly replace focusing on specific activities and tasks by other activities and behaviors [27].

##### **3. Social factors of procrastination**

Studies on procrastination indicate that people with procrastination fail in self-regulating behaviors which they have high stress [27]. Self-regulation includes the ability for matching at regulating individual’s performance in different environments. Thus, people with procrastination ignore deadlines of the projects when they are in stressful conditions. Steel states that all studies consider a failure in self-regulation as the core of academic procrastination [25]. Social factors can increase work avoidance or evading the tasks. These are two aspects of procrastination in the view of Schraw. Students are usually those who are at the beginning of adulthood or in adolescence period at the ages of 18 – 23 years old. This age is specified by social compatibility and independence. Students attempt to plan their time with the friends and family. New senses of independence and authority add to this fighting, and university students may leave aside the deadlines related to the academic assignments and instead choose to work or socialize with the friends. Thus, social factors denote and exacerbate procrastination [43].

##### **4. Lack of time management skills**

Time management can be defined as the ability to control activities and behaviors purposefully so that available time is maximized [44]. People with procrastination are unable in managing their time and there is high difference between their actual perception and their perceived behaviors. The time management problem has been stated as a reason for academic procrastination in the study by Solomon [32]. Time management skills are not an inherent attribute, but it is a characteristic learnt by people. Time management is an important factor for procrastination in the academic complex [42]. For success in an academic environment, students should perform their assignments timely and observe deadlines. They should complete their tasks in the deadlines. Poor time management



may lead in forgetting tasks, leaving aside studying without any specific purpose until the last moments or working on less important activities instead of academic working. Thus, defected time management may be defined as characteristics for people with academic procrastination.

#### 5. Lack of personal passion

Some researchers introduce procrastination as an inefficient delay [41]. Such delay not only can be due to situational or social variables, but also can be due to personality or attitude characteristics entitled as passion. Passion is general readiness or ability to start or perform the tasks with energy. If there is low passion in the student, there would be no strong stimulation for completing the tasks in due time. Lack of personal motivation or passion was recognized as a reason for procrastination by Caruth. Overall, when students are motivated they will be more efficient academically. The motivation is a stimulation for success and it can be internal or external [28].

#### 6. Laziness

Different studies related to academic procrastination have indicated the impact of three factors. These factors include fear of failure, evading working, and laziness [21]. Laziness is the tendency to evade of working, when there is needed physical power [44]. Evasion of working and laziness are the cause of 18% of the reasons for procrastination based on the reports of Solomon and Rothblum. In the Schraw's study, about 40 percent of students said that they would not pass the course if the instructor had a great deal of expectation or was not flexible in the deadline for delivery of assignments [21]. Therefore, procrastination may be accompanied by a great desire to avoid schooling or laziness.

In addition to the mentioned factors, situational factors of procrastination include inherent qualities of the assignments, such as attractiveness, importance or difficulty, and the teachers' characteristics are also mentioned as the factors affecting academic procrastination [25].

### DISCUSSION

A current narrative review was carried out aiming at determining procrastination, academic procrastination, and its characteristics.

Since one of the main missions of medical education is nurturing, committed and expert individuals with necessary capabilities so that they can provide better and higher quality health services to the community [45], research findings suggest the importance of attention to regular planning and organization of activities, identification of factors related to procrastination for the prevention of it, and educating necessary strategies for avoiding procrastination behaviors. Lowinger et al. stated that collection of variables involve in academic procrastination as predictors, but collective coping, avoidance coping, English proficiency and academic self-efficacy are among the most important predictors of academic v in Asian students [45]. Tripathi et al. also reported significant relationship between academic procrastination and self-efficacy and hope, so that procrastination level is reduced

pointed out that there is no causal relationship for the mentioned variables [48]. Various studies have reported academic procrastination in both sexes [49, 50], while some studies showed no difference between both sexes in terms of academic procrastination [51-53, 46]. Özer et al. Reported that academic procrastination in doing academic assignments is higher in male students than female students, while self-reporting of academic procrastination in female students is higher than male students, and its reason was mentioned as fear of failure and laziness [54]. Increasing use of the internet is another factor which causes losing control of time by students, thus it can be effective in creating academic procrastination. It is stated that students who are absent may become indifferent to their academic responsibilities [48]. Students who are unsuccessful in terms of schooling may also lose the motivation to learn in a timely manner, and procrastination may increase in these students [48]. This relationship between academic procrastination and academic performance is mutual, that is, someone who is delayed in doing his assignments, has low academic performance, and a person with low academic performance will be more likely to procrastinate [55].

The other factor related to procrastination is motivation. Grunschel et al. examined why students are (not) motivated to change academic procrastination, and concluded that students who are not contemplating about changing their procrastination behavior are those that are not affected by the negative impacts of procrastination [56].

Studies on procrastination emphasize on this common concept that academic procrastination has negative outcomes for students in relation with their academic achievement and well-being sense. Health related outcomes include mental stress, physical stress reactions, sleeping related problems, fatigue, and malady. Emotional outcomes include anxiety, anger, shame, dissatisfaction, and feeling of pressure, feelings of guilt and feelings of insecurity [25]. One of the negative consequences of procrastination is the test anxiety. According to Kaster, a statistically significant relationship was found between exam anxiety and academic procrastination among nursing students, and stated that most nursing students reported procrastination mostly concerned with doing weekly assignments, writing lectures and studying. Also students who have more self-reporting of academic procrastination have higher tendency to reduce it in their academic engagement [57].

Current research denote the importance of academic procrastination and need for considering necessary actions for its prevention and coping for providing health of individuals, promoting their academic performance and helping the society's progress. To this end, training effective strategies to students for setting partial goals and effective planning for doing academic assignments is recommended for reducing academic procrastination by consulting and using self-learning books [58].

### CONCLUSION

Considering the fact that procrastination and especially academic procrastination is a relatively common phenomenon, and it is increasing by technological progress,

and given its impacts on physical and mental health of human as well as its consequences on academic progress and social activities, identification of procrastination especially academic procrastination, its characteristics,

strategies for coping should be taught to the teachers and students, and motivation should be created for its prevention and coping so that its prevalence is reduced as much as possible.

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