Eur J Psychol Educ (2013) 28:841–861
DOI 10.1007/s10212-012-0143-4

Exploring reasons and consequences of academic procrastination: an interview study

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Received: 1 July 2011 / Revised: 28 April 2012 / Accepted: 2 July 2012 /
Published online: 20 July 2012

Abstract In the present study, we broadly investigated reasons and consequences of academic procrastination. Additionally, we explored whether students seeking help from student counselling services to overcome academic procrastination (counselling group) report more serious reasons and consequences of academic procrastination than students who procrastinate but seek no counselling support (non-counselling group). We conducted standardized interviews with university students (N=36, of which 16 belonged to the counselling group) and analysed these using qualitative content analysis and frequency analysis. The reasons and consequences of academic procrastination, each summarized in a separate category system, were manifold. The category systems consisted of 20 main categories in total, subsuming 81 subcategories, of which 32 were inductively developed. The counselling group reported more serious reasons and consequences of academic procrastination than the non-counselling group. Our results suggest considering academic procrastination as a self-regulation failure and contribute to constructing interventions tailored to students' specific needs.

Keywords Academic procrastination · Student counselling services · Interviews · Qualitative content analysis

Introduction

Academic procrastination is a well-known phenomenon among students. Approximately 70 % of students reported procrastinating academic tasks (Schouwenburg 1995), such as writing term papers, studying for exams or reading texts (Solomon and Rothblum 1984). Instead, they engaged in a wide range of alternative and often more pleasant activities, such as watching TV, sleeping or talking with family members or friends (Pychyl et al. 2000). Steel's (2007) definition of (academic) procrastination is "to voluntarily delay an intended course of action despite expecting to be worse off for the delay" (p. 66). Indeed, academic

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procrastination has been proven to result in harmful consequences, such as stress or lower grades (e.g. Tice and Baumeister 1997). Therefore, it is not surprising that up to 60 % of students reported a desire to reduce their academic procrastination (Solomon and Rothblum 1984).

In light of these findings, two questions arise: Why do students procrastinate at all? Which individual consequences do students experience? In the past, researchers have certainly addressed these questions. In line with their theoretical perspective [e.g. self-regulated learning perspective (Wolters 2003); temporal motivation theory (Steel 2007)], researchers especially focused on investigating internal (i.e. person-related) antecedents (Steel 2007; van Eerde 2003). However, they neglected the role of external antecedents (e.g. within the students' learning situation) that might also determine academic procrastination (cf. Funder 2008). Regarding the consequences of academic procrastination, researchers engaged in investigating students' grades and well-being (e.g. Tice and Baumeister 1997). However, they did not carefully examine additional effects, for example, on students' course of studies or on their private lives. Hence, further antecedents and consequences of academic procrastination are conceivable that have not been investigated as of yet.

One way to explore antecedents and consequences of academic procrastination in-depth and to gain new insights is to investigate students' subjective experiences and perspectives of antecedents and consequences in qualitative studies without taking a specific theoretical perspective of the variables that are in focus (cf. Stake 2010). Schraw et al. (2007) and Klingsieck et al. (in press) provided the first qualitative studies on academic procrastination. Among other variables, Schraw et al. (2007) investigated antecedents and consequences of academic procrastination on the basis of reports of "successful procrastinators" (p. 24). However, following the argumentation of Corkin et al. (2011), these findings apply to purposeful and functional forms of *delay*, rather than *academic procrastination*, because academic procrastination cannot, by definition, be associated with success. Therefore, these results may not apply to academic procrastination. By conducting an interview study, Klingsieck et al. (in press) presented initial insights into antecedents of academic procrastination. However, consequences of academic procrastination were not addressed in this study.

Further, none of these researchers have considered that antecedents and consequences of academic procrastination have been shown to vary depending on the sample and to be specific for certain subgroups of procrastinating students in past research. Klassen et al. (2008) found that students who experienced a negative influence of procrastination on academic functioning reported, for example, lower self-efficacy for self-regulation and class grades compared to students who experienced less intense or no negative impact of procrastination. In an exploratory study, Day et al. (2000) showed that evaluation anxiety and depression were higher for students who sought help from student counsellors to overcome academic procrastination than for students who procrastinated severely but sought no counselling support.

Based on these limitations of previous research, we wanted to carefully examine antecedents and consequences of academic procrastination, in general, and to deliberately explore antecedents and consequences of academic procrastination in different subgroups of procrastinating students. By conducting a microanalysis on antecedents and consequences of academic procrastination from students' subjective perspective, the results of our study should not only enhance the current understanding of antecedents and consequences of academic procrastination, in general, but should also reveal differences in antecedents and consequences among different subgroups of procrastinating students.

Given that researchers have already detected several antecedents and consequences of academic procrastination, we outline the main findings on these variables in the following sections. These findings comprise the foundation of our study.

Antecedents of academic procrastination

Previous studies have investigated internal and—to a lesser extent—external antecedents of academic procrastination. Depending on the research perspective taken on academic procrastination (e.g. Ferrari et al. 1995), studies have examined different types of internal antecedents: affective, cognitive, personality-related, volitional and competence-related aspects, as well as students' subjective perceptions of task characteristics.

Affective antecedents of academic procrastination include anxiety, depression, feeling overwhelmed, shame and frustration due to work on aversive tasks (e.g. Beswick et al. 1988; Fee and Tangney 2000; Flett et al. 1995a; Harrington 2005; Klingsieck et al. in press; Solomon and Rothblum 1984). Paradoxically, students procrastinated either because of high or low fear of failure (Milgram et al. 1992; Schouwenburg 1992). Researchers taking a cognitive perspective associated rumination with academic procrastination (e.g. Stainton et al. 2000).

Regarding the Big Five personality traits (Costa and McCrae 1992), van Eerde (2004) showed that low conscientiousness correlated strongly with academic procrastination while high neuroticism and low extraversion correlated only weakly with the phenomenon. Further, personality-related antecedents of academic procrastination included perfectionism (Flett et al. 1995b), low self-esteem (Harrington 2005), low self-efficacy (Wolters 2003) and, on a more specific level, low self-efficacy for self-regulation (Klassen et al. 2008).

In relation to volitional antecedents, Dewitte and Schouwenburg (2002) detected that students who showed a strong tendency to procrastinate also experienced more difficulties in shielding their goals against distractions compared to students with low procrastination tendencies. When considering competence-related antecedents, poor time management and goal setting skills were related to academic procrastination (Lay and Schouwenburg 1993).

Regarding subjectively perceived task characteristics, researchers mostly focused on investigating the impact of task aversiveness (i.e. pleasantness) on academic procrastination (e.g. Ackerman and Gross 2005; Blunt and Pychyl 2000; Ferrari and Scher 2000; Milgram et al. 1995; Senecal et al. 1997; Solomon and Rothblum 1984). Besides, students also tended to procrastinate when they perceived their tasks as important, stressful, difficult and confusing (Pychyl et al. 2000), as effortful, anxiety provoking and when not allowing them to show their skills and create self-confidence (Ferrari and Scher 2000) and when students experienced their tasks as uninteresting, requiring a small variety of skills, unclearly instructed, unrewarded, not interdependent with their other work and not associated with norms expecting the prompt completion of tasks (Ackerman and Gross 2005).

Compared to the internal antecedents, little is known about external antecedents of academic procrastination. Solomon and Rothblum (1984) included peers' influence (e.g. classmates who also have not started to work on a paper) as one possible reason for academic procrastination within their Procrastination Assessment Scale—Students. Klingsieck et al. (in press) also detected certain social antecedents (e.g. role models for procrastination) and revealed the amount of other tasks or diversion, for example, by good weather or social events, as external antecedents of academic procrastination.

Consequences of academic procrastination

Previous studies have revealed several negative consequences of academic procrastination on students' well-being and grades. Procrastination predicted poor physical and mental health, taking into account that increased stress mediated this relation (Sirois et al. 2003; Stead et al. 2010). Additionally, Tice and Baumeister (1997) found in a longitudinal study that procrastinators reported more illness symptoms and stress at the end of the semester compared to the beginning. Regarding students' grades, Steel (2007) found in his meta-analysis on procrastination that academic procrastination correlated negatively with grades, although the strength of the relation varied slightly between the included studies.

The present study

With regard to academic procrastination, researchers have mainly investigated internal antecedents and consequences on students' well-being and grades. However, further antecedents (e.g. external) and consequences (e.g. on students' course of studies) are conceivable that have rarely been addressed up till now. Moreover, there is little known about antecedents and consequences in different subgroups of procrastinating students. Based on these limitations, we pursued three aims in our study.

First, we aimed to obtain a multifaceted and comprehensive description of antecedents of academic procrastination from different students' perspectives. The same applies to our second aim, which addressed the consequences of academic procrastination. To gain profound and new insights, we conducted a qualitative study and interviewed students about their individual antecedents and consequences of academic procrastination. We believed that interviewing students would allow a broad and in-depth exploration of antecedents and consequences. We wondered whether we would be able to replicate or refine the antecedents and consequences that researchers have identified thus far and which antecedents and consequences would appear to be new.

Our third aim was to explore the specific antecedents and consequences in different subgroups of procrastinating students. We involved students seeking help from student counselling services to overcome academic procrastination (counselling group) and students procrastinating, but not seeking help from counsellors (non-counselling group). Based on the findings of Klassen et al. (2008) and Day et al. (2000), we assumed the counselling group would report more serious antecedents and consequences of academic procrastination than the non-counselling group.

Hence, the results of our study were to expand the current understanding of antecedents and consequences of academic procrastination, in general, and in subgroups of procrastinating students and thus would inspire future research and theory construction. Additionally, a comprehensive description of antecedents and consequences might lay the foundations for designing interventions to overcome academic procrastination tailored to students' specific needs.

In the course of the interviews, we used the term *reason* instead of *antecedent* because we asked students to remember past episodes of academic procrastination and to reconstruct variables that caused academic procrastination, rather than merely asking about preconditions of academic procrastination. Because of this, we use the term *reasons* instead of *antecedents* in the sections below.

Method

Participants

The first two authors of this study distributed flyers providing information about the aims and contents of our interview study on the campuses of two German universities. Counsellors from the two universities recruited students seeking help from student counselling services to overcome academic procrastination.

Students contacted the first two authors of the study voluntarily to arrange their interview. Because we aimed to interview information-rich cases about academic procrastination (Patton 1990), we defined and checked purposive criteria for participation (e.g. students ought to be enrolled in various fields of study, balanced gender in the counselling and non-counselling group). After the interviews, each student received 12 euros for their participation.

Our sample consisted of 20 female and 16 male students. On average, they were 27.47 years old (SD=5.63), had been studying for 11.59 semesters (SD=6.51) and were enrolled in various study subjects (e.g. educational science, engineering). After concluding the interviews, we used the German translation of the 16-item Tuckman Procrastination Scale (Stöber and Joormann 2001; Tuckman 1991; α=.81), adapted to the academic context, to control participants' tendency to procrastinate. The scale ranged from 1 (*strongly disagree*) to 5 (*strongly agree*). All students reported procrastinating study-related tasks (M=3.83; SD=0.53). There were no differences between students from the two universities and in terms of gender concerning the variables of age, semester and academic procrastination. The counselling group (eight women, eight men) was significantly older and had been studying significantly longer than the non-counselling group (12 women, eight men). There was no significant difference between the groups regarding students' tendency to procrastinate on academic tasks (see Table 1).

Interviews

We developed an interview schedule[1] to standardize the interview setting and questions (Kvale and Brinkmann 2009) and optimized it after conducting pilot interviews with two students. The authors of this study did not conduct the interviews themselves; instead, the first two authors trained seven research assistants (of which six were female) to carry out the interviews.

Two of these interviewers interviewed each student individually in an experimental room at one of the two universities. After introducing the interview procedure, the interviewers asked each student to define academic procrastination. Then one of the interviewers introduced a broad definition of academic procrastination, which was specified in the interview schedule. After discussing the definitions, the participants and interviewers agreed on a common definition, thus building a basis for the course of the interview. Subsequently, the interviewers asked the students to describe up to three episodes of academic procrastination they had experienced in the last semester and to specify which activity they had carried out instead. For each episode, the interviewers requested the students to describe reasons for and consequences of their procrastination (e.g. Why did you procrastinate doing the task that you had actually intended to carry out?). Using further standardized questions helped the interviewers to maximize the variety and stimulate the depth of the respondents' answers (e.g. Which long-term consequences did you experience?). The interviews lasted 30 min on average (SD=14).

[1] The interview schedule is available from the first author of the study.

Table 1 Characteristics of the counselling and non-counselling groups

Variables	Counselling group (n=16)		Non-counselling group (n=20)		t test	
	M	SD	M	SD	t (df)	p
Age	30.81	6.54	24.80	2.78	−3.44 (19.34)	.003
Semester	15.69	6.43	8.25	4.42	−3.69 (27)	.001
Academic procrastination	3.83	0.56	3.83	0.52	0.02 (34)	.475

Academic procrastination was measured by the Tuckman Procrastination Scale-German adapted to the academic context

Qualitative analysis

A team of research assistants transcribed the digitally recorded interviews. Afterwards, we analysed the interviews using the procedure of qualitative content analysis (Mayring 2008; Schilling 2006). Qualitative content analysis is "an approach of empirical, methodological controlled analysis of texts within their context of communication, following content analytical rules and step by step models, without rash quantification" (Mayring 2000, p. 2). The main result of qualitative content analysis is a category system containing categories that reflect the texts' core elements. Different levels of hierarchy or abstraction can structure the categories (e.g. main categories subsuming similar subcategories). Categories can be developed deductively or inductively. According to the deductive approach, categories are derived theoretically from literature. With the inductive procedure, categories are solely developed from textual material without any theoretical assumptions. This is particularly recommended when researchers are interested in revealing new findings.

In this study, we combined the deductive and inductive approaches to develop a comprehensive description of reasons and consequences of academic procrastination, summarized in two distinct category systems. We took the following analysis steps (cf. Mayring 2000). First, we selected the parts of the interviews containing reasons and consequences of academic procrastination for analysis. Second, we content segmented the textual data into 5,577 coding units (Chi 1997). Each unit of analysis contained one piece of information or idea and was comprehensible by itself (Tesch 1990). The smallest component for categorization was one word. The largest unit was a paragraph because some participants needed several sentences to express one idea.

Third, we deductively derived working models of the category systems from literature: one for the reasons and one for the consequences. On the topmost level of the category system concerning the reasons, we distinguished between internal (person-related) and external (situational) reasons. Regarding the category system for the consequences, we differentiated between positive and negative consequences. On further levels of each category system, we considered different main categories as reflecting different types of reasons and consequences (e.g. affective, cognitive) and subsuming subcategories (e.g. anxiety as an affective reason and consequence).

Fourth, we developed a coding scheme including definitions, examples and coding rules for the main categories and subcategories.[2] We considered three criteria: categories "[(a)] should reflect the purpose of the research, [(b)] be exhaustive, and [(c) be] mutually exclusive" (Schilling 2006, p. 33).

[2] The coding scheme is available from the first author of the study.

Fifth, before starting coding, the first two authors of the study conducted a coding training with two additional coders. After having familiarized themselves with the coding scheme and the software MAXQDA—a tool supporting the coding process—the four coders established a common understanding of categorization by coding two interviews together, discussing critical coding units and agreeing on the categorization.

Sixth, the four coders independently coded the same ten interviews and marked critical segments. They discussed and solved problems in the group. If there was a mild overlap between two main categories or two subcategories, they revised the coding rules. If there was a strong overlap between two main categories or two subcategories and all coders agreed that a revision of the coding rules would not be sufficient, they combined two main categories or subcategories (e.g. the subcategories anxiety and panic as affective consequences). The coders conducted a misfit analysis (Schilling 2006) on all residual segments that they could not categorize but which contained reasons or consequences. When the coders detected several segments with the same content among the residual segments, they developed additional subcategories and inductively added them to the category system and coding scheme. Seventh, the coders applied the revised category system to the next set of interviews. They repeated steps six and seven several times until they had categorized all statements. In a last step, the first two authors checked all codings.

We measured the quality of agreement on the categorization of reasons and consequences of academic procrastination among the four independent coders by randomly choosing segments of each interview that made up 10 % of the interview. The agreement on the categorization among the four coders on the subcategory level was very good (Fleiss' multirater kappa=.79).

Quantitative analysis

From the qualitative data, we derived two frequency measures (Schilling 2006). We used these to assess the significance of the detected reasons and consequences for the total sample, the counselling group and the non-counselling group, and to compare these between the groups. First, we calculated the *number of segments* of each subcategory that reflected the extent to which students reported a reason or consequence, which we coded in a certain subcategory. Second, because the first measure was biased by talkative students repeating the same reason or consequence several times in the interviews (cf. Chi 1997), we calculated the *number of students* contributing to each subcategory. This illustrated how many students mentioned at least one statement that we coded in a certain subcategory.

Results

Students easily generated different dilatory episodes in the interviews. Half of them reported three episodes; the other half referred to two episodes. Most frequently, students mentioned procrastinating when writing term papers or their thesis and when studying for exams. For each episode, participants described manifold reasons and consequences of their academic procrastination.

The category system concerning the reasons contained 11 main categories, subsuming 49 subcategories. The category system regarding the consequences comprised nine main categories, subsuming 32 subcategories. On the topmost level of the category system, concerning the reasons, we distinguished between internal and external reasons. Students mentioning internal reasons (eight main categories, subsuming 33 subcategories) assigned

the causes for their academic procrastination to factors within their person. External reasons (three main categories, subsuming 16 subcategories) were linked to the situation or more general conditions. On the topmost level, regarding the consequences, we differentiated between negative consequences (six main categories, subsuming 29 subcategories) and no consequences (one main category, subsuming one subcategory) of academic procrastination, as well as positive consequences resulting from finally completing the procrastinated task (two main categories, subsuming two subcategories).

Tables 2 (reasons) and 3 (consequences) give an overview of the main categories and subcategories regarding the reasons and consequences of academic procrastination and include the two frequency measures for each subcategory and for the total sample, the counselling group and the non-counselling group. When presenting our results, we only refer to the number of students contributing to each category because this measure is not biased by talkative students.

In the following, we present our results in the order of the research aims and the order used in Tables 2 and 3. Regarding the reasons and consequences, we present the *main categories* first, followed by the subcategories. Instead of describing all 81 subcategories, we limit the presentation to *frequent subcategories* that were reported by the majority of the total sample and the *inductively identified subcategories* that mirror those reasons and consequences that have not been discussed in procrastination research before. Finally, we present whether reasons and consequences differ between the counselling and non-counselling group.

Reasons for academic procrastination

Main categories The participants of our study named more internal reasons (eight main categories) than external reasons (three main categories) for academic procrastination (see Table 2). We coded all reasons relating to students' moods and emotions (e.g. anxiety) in the main category of *affective* reasons. Reasons concerning students' mental and physical well-being (e.g. illness) made up the main category of reasons relating to *students' mental and physical states*. Mental processes (i.e. rumination) causing academic procrastination comprised the main category named *cognitive* reasons. In contrast, students' mental representations of principles that strongly guided their actions (e.g. I work best under high pressure) constituted the main category of reasons relating to students' *personal beliefs*.

We coded reasons that referred to personality characteristics (e.g. laziness) in the main category, called reasons relating to students' *personality.* The main category of *competence-related* reasons included all reasons referring to a lack of study-relevant skills or knowledge. We placed all reasons associated with students' individual learning history (e.g. learned behaviour) in the main category of reasons relating to *previous learning experiences*. All task characteristics perceived by the students as contributing to academic procrastination (e.g. time-consuming) comprised the main category of reasons relating to *perceived task characteristics*.

Structuring the external reasons led to a main category, named reasons relating to students' *individual working conditions*, that is, person-specific situational conditions (e.g. study group problems). We coded all reasons linked to the lecturer in the main category of reasons relating to *lecturers' characteristics* (e.g. poor support). Any prevailing circumstances at university (e.g. poorly organized course of studies) that students reported as reasons made up the main category of reasons relating to *institutional conditions*. All subcategories in the two latter main categories were inductively developed.

Table 2 Main categories and subcategories regarding the reasons for academic procrastination including the number of segments and students per subcategory

MC SC	Total sample (N=36)		Counselling group (n=16)		Non-counselling group (n=20)	
	n of segments	*n* of students	*n* of segments	*n* of students	*n* of segments	*n* of students
Internal reasons						
Affective						
Anxiety	64	22	51	15	13	7
Dissatisfaction	29	17	20	8	9	9
Frustration	14	10	9	6	5	4
Feeling pressured	20	12	12	7	8	5
Feeling overwhelmed	21	13	16	8	5	5
Weariness	39	16	8	6	31	10
Mental and physical states						
Exhaustion	9	4	4	3	5	1
Illness	3	3	3	3	0	0
Cognitive						
Rumination	22	10	13	6	9	4
Personal beliefs						
I work best under high pressure	7	5	0	0	7	5
Everything will work out in the end	17	10	8	5	9	5
My work should be perfect	27	9	16	6	11	3
My work-life-balance is important to me	4	3	2	2	2	1
I don't do anything which is expected of me	4	4	4	4	0	0
Personality						
Negative self-concept	40	21	26	11	14	10
Laziness	19	14	9	6	10	8
Competences						
Lack of study skills	65	25	34	13	31	12
Lack of knowledge	16	11	8	6	8	5
Lack of organizational skills	29	14	23	11	6	3
Low self-regulation	61	26	27	12	34	14
Previous learning experiences						
Avoidance	13	10	4	3	9	7
Negative experiences	14	9	12	7	2	2
Learned behaviour	12	7	8	5	4	2
Perceived task characteristics						
Aversive	75	30	33	13	42	17
Complex	56	27	25	14	31	13
Difficult	35	20	12	8	23	12
Not urgent	28	16	9	5	19	11
Not interesting	25	13	2	2	23	11
Time-consuming	21	12	10	6	11	6
Novel	10	9	4	4	6	5

Table 2 (continued)

MC SC	Total sample (N=36)		Counselling group (n=16)		Non-counselling group (n=20)	
	n of segments	*n* of students	*n* of segments	*n* of students	*n* of segments	*n* of students
Not specific	10	5	4	3	6	2
Important	44	21	21	12	23	9
Compelling alternative activities	35	18	8	5	27	13
External reasons						
Individual working conditions						
High load	31	14	16	6	15	8
Study group problems	14	6	4	1	10	5
No social integration	6	5	5	4	1	1
Lecturers' characteristics						
Too lax	15	7	6	3	9	4
Disorganized	8	5	3	2	5	3
Demanding	8	5	3	3	5	2
Poor support	32	12	17	7	15	5
Poor didactical competences	11	7	6	3	5	4
Uncompromising	8	4	5	2	3	2
Unsympathetic	7	6	4	4	3	2
Institutional conditions						
Too many exams at the end of the semester	6	5	1	1	5	4
Poorly organized course of studies	14	9	6	4	8	5
Shortcomings in the content and format of lectures	10	8	7	5	3	3
Poor working conditions in library	7	5	2	2	5	3
No specialist contact person	10	7	8	5	2	2
Too little regulations in studies	13	7	12	6	1	1

Inductively developed subcategories are italicized

MC main category, *SC* subcategory, *n of segments* absolute number of segments per subcategory, *n of students* absolute number of students reporting at least one statement per subcategory

Frequent subcategories Some of the internal reasons given for academic procrastination clearly applied to the majority of the total sample of 36 students (see Table 2). Exactly 22 students reported *anxiety* as an affective reason. The students procrastinated because, for instance, they experienced fear of failure or anxiety concerning their future. Furthermore, 21 students attributed academic procrastination to a *negative self-concept*—a personality-related reason—implying self-doubts regarding students' competences and low self-esteem. The female student no. 21 (non-counselling group), studying pedagogy and German as a foreign language, explained, "Well, it's just so that in some cases, in the case of difficult things, I always think that perhaps I won't get them managed."

Most students mentioned two competence-related reasons. First, 25 participants ascribed academic procrastination to a *lack of study skills*. Students deferred their tasks because, for example, they were not able to structure a theme for an essay or interpret experimental

Table 3 Main categories and subcategories regarding the consequences of academic procrastination including the number of segments and students per subcategory

MC SC	Total sample (N=36)		Counselling group (n=16)		Non-counselling group (n=20)	
	n of segments	*n* of students	*n* of segments	*n* of students	*n* of segments	*n* of students
Negative consequences of academic procrastination						
Affective						
Anger	26	15	14	9	12	6
Anxiety	25	14	12	7	13	7
Feelings of discomfort	23	12	16	8	7	4
Shame	19	12	12	7	7	5
Sadness	16	9	12	6	4	3
Feeling pressured	14	9	10	7	4	2
Feeling overwhelmed	6	5	4	4	2	1
Dissatisfaction	9	7	5	3	4	4
Weariness	7	5	3	2	4	3
Feeling remorse	31	17	15	8	16	9
Mental and physical states						
Mental stress	34	17	9	6	25	11
Physical stress reaction	5	3	5	3	0	0
Sleep-related problems	6	5	4	3	2	2
Exhaustion	11	5	4	2	7	3
Illness	2	2	2	2	0	0
Behavioural						
No change in behaviour	14	9	4	4	10	5
Personality						
Negative self-concept	25	13	15	8	10	5
Course of studies						
Time pressure	52	21	24	9	28	12
Time lag	28	16	20	10	8	6
Repetition of study requirements	19	10	11	5	8	5
Accumulation of work	16	10	7	4	9	6
Low quality of work	21	13	7	5	14	8
Lack of knowledge	11	7	3	2	8	5
Negative appraisal of achievement	21	10	6	4	15	6
Lengthened study course	18	12	10	7	8	5
Dropout	4	2	1	1	3	1
Private life						
Financial costs	17	9	11	6	6	3
Problems in social relationships	28	12	15	5	13	7
Restricted future perspective	9	4	9	4	0	0
No consequences of academic procrastination						
No consequences						
No consequences	34	21	16	8	18	13
Positive consequences of task completion						

Table 3 (continued)

MC SC	Total sample (N=36)		Counselling group (n=16)		Non-counselling group (n=20)	
	n of segments	*n* of students	*n* of segments	*n* of students	*n* of segments	*n* of students
Affective						
Satisfaction	11	7	3	3	8	4
Course of studies						
Success	22	14	7	4	15	10

Inductively developed subcategories are italicized

MC main category, *SC* subcategory, *n of segments* absolute number of segments per subcategory; *n of students* absolute number of students reporting at least one statement per subcategory

results. Second, 26 students blamed their *low self-regulation* for their academic procrastination. Students referred to problems with initiating work as well as high distractibility when working on tasks. The male student no. 24 (non-counselling group), studying business mathematics, procrastinated because of distractions and noted,

> Well, [I was] distracted by music, listened to music while studying, and then another great song and another, and then you look to find out which song it is, and then you are a little bit out of your routine.

Most students made some perceived task characteristics responsible for their academic procrastination. We found that 30 students indicated that they procrastinated tasks when they perceived them as *aversive* (i.e. students did not like the tasks or did not enjoy working on them). Furthermore, most students procrastinated when they perceived the tasks as *complex* (27 students) or *difficult* (20 students). The female student no. 7 (counselling group), studying linguistics, English language and literature, as well as philosophy, perceived writing her term paper in philosophy as difficult: "Philosophy is a difficult business for me. And this term paper was in philosophy. This [philosophy] is a very challenging study subject." Interestingly, we identified two effects when considering task *importance* (21 students). Some students procrastinated carrying out important tasks, while others tended to defer tasks that were not important. The perceived task characteristics of the intended action were not the only cause of academic procrastination. Half of the sample procrastinated due to *compelling alternative activities*, for example, when they perceived them as easier or more fun. The male student no. 14 (counselling group), studying pedagogy, illustrated this reason by saying, "And then the sun is shining, and it's nice to do something else."

Inductively developed subcategories We identified 21 of 49 subcategories inductively concerning the reasons for academic procrastination, of which six were internal reasons (see Table 2). According to 17 of the 36 students, the affective reason of *dissatisfaction* caused academic procrastination. Students explained that they were dissatisfied with themselves or a specific situation they were in (e.g. the favourite lecturer was not allowed to supervise the student's thesis). Additionally, 12 students attributed academic procrastination for the first time to *feeling pressured* by time constraints or achievement goals that were set by themselves or others. The male student no. 27 (non-counselling group), studying German literature and language, as well as history, gave insight into his feelings of being pressured

while working on a term paper by noting, "Well, so there's so much pressure put on that you eventually recapitulate and say, now I will put off doing it."

According to nine students, remembering past *negative experiences* regarding learning (e.g. failure, problems with the lecturer) caused procrastination. Moreover, we found that three perceived task characteristics played an additional role in the process of academic procrastination. Students mentioned procrastinating when they perceived tasks as *complex* (27 students), *time-consuming* (12 students) and *novel* (nine students). The female student no. 11 (counselling group), studying pedagogy, gave an example for a novel task which caused her academic procrastination: "I have not taken an exam at university yet. I did not know exactly how it works."

While coding the external reasons, we inductively developed 15 subcategories. Two of the subcategories fell into the main category of individual working conditions. First, 14 students attributed academic procrastination to *high load*, indicating that they had many different obligations besides university (e.g. earning money to fund studies, involvement in community activities). Second, five participants considered *no social integration* (e.g. no fellow students to exchange opinions and discuss their study problems with) as a reason for academic procrastination.

With regard to the main category of lecturers' characteristics, we developed all of the subcategories inductively. A total of seven students reported that their lecturers were *too lax* (e.g. in terms of insisting on deadlines). The male student no. 31 (non-counselling group), studying physics, exemplified, "Well, it [the deadline] was always handled lax [by the lecturer]…you could write the protocol [for some experiments] a while longer and hand it in later on." Five students each procrastinated when their teachers were *disorganized* (e.g. handing out readers for preparing a written exam very late in the semester) or were *demanding* (e.g. in terms of the student's master thesis). Furthermore, 12 students ascribed their academic procrastination to the reason of *poor support*. The male student no. 5 (counselling group), studying linguistics and German as a foreign language, complained about the lack of support that induced his academic procrastination as follows:

> This is perhaps known from office hours. One [the student] has maybe five minutes to explain the request and one [the student] may want to give… more details and may get personal. So that the other person [the lecturer] understands the point made. But one [the student] cannot [because the lecturer does not take time for the student].

Moreover, seven students referred to *poor didactical competences* (e.g. resulting in insufficient explanations of complex contents) as a reason for their academic procrastination. A total of four students procrastinated due to the fact that their lecturers were *uncompromising*, whereas six students procrastinated because they found their lecturers to be *unsympathetic*.

Regarding the main category of reasons relating to institutional conditions within the university, we inductively developed all six subcategories. To start with, five students attributed their procrastination to *too many exams at the end of the semester*. Moreover, nine students referred to a *poorly organized course of studies* as a reason for their academic procrastination. The male student no. 32 (non-counselling group), studying business economics, complained about the timeframe for writing his Bachelor's thesis, which induced his academic procrastination: "One has only three months for the Bachelor's thesis… and this is in my opinion much too short. Well, searching literature, writing, revising. This is much too short." In addition, eight students ascribed their academic procrastination to *shortcomings in the content and format of lectures* (e.g. no practical relevance) and five students referred to *poor working conditions in the library* (e.g. not enough workplaces that involve low

distraction) as a reason. Exactly seven students each cited the reason of *no specialist contact person* (e.g. for personal concerns) or named *too little regulations in studies*, implying too much freedom and self-reliance concerning students' studies, as a reason for their academic procrastination.

Consequences of academic procrastination

Main categories Categorizing the consequences of academic procrastination resulted in six main categories regarding the negative consequences and one main category labelled *no consequences*, describing a lack of consequences of academic procrastination. We developed two main categories referring to the positive consequences resulting from finally working on the procrastinated task (see Table 3).

The main category, named *affective* consequences (as a negative consequence of academic procrastination and a positive consequence of the final task completion), included effects on students' emotions and moods (e.g. anger). Impacts on students' mental and physical well-being (e.g. exhaustion) constituted the main category, called consequences for the students' *mental and physical states*. We categorized statements describing students' unwillingness to change their academic procrastination as *behavioural* consequences. We placed all effects of academic procrastination on students' personalities (i.e. negative self-concept) in the main category of *personality-related* consequences. The main category of consequences for the *course of studies* (as a negative consequence of academic procrastination and a positive consequence of the final task completion) comprised all effects on students' studies (e.g. lengthened study course). All statements referring to the impact of academic procrastination on the students' private lives (e.g. financial costs) made up the main category, named consequences for their *private life*.

Frequent subcategories In contrast to the reasons, only two consequences were reported by the majority of the 36 students (see Table 3). Exactly 21 students mentioned *time pressure* as a negative consequence for the students' course of studies. The female student no. 29 (non-counselling group), studying pedagogy, illustrated her experience of time pressure when finally completing the preparation of an oral presentation as follows: "Ultimately, I sat there for three days and hardly slept." Furthermore, 21 students experienced *no consequences*, or at least no negative consequences, due to academic procrastination. The female student no. 19 (non-counselling group) noted, "Actually, mostly it [academic procrastination] has no consequences. More often than not, you can muddle through. It [academic procrastination] has never been so bad that I failed an exam or that I have [had] to study a semester longer."

Inductively identified subcategories We inductively derived 11 subcategories from the students' statements that related to the consequences of academic procrastination (see Table 3). We found three additional affective consequences. During the interviews, nine students noted that academic procrastination resulted in *feeling pressured*, caused by themselves, others or situational circumstances (e.g. changes in the study regulations), while five students explained that academic procrastination resulted in *feeling overwhelmed* by the demands of the situation. After procrastinating the preparation of a written exam, the female student no. 18 (non-counselling group), studying clinical linguistics, had the following experience: "One has the feeling that one cannot manage it [to prepare for the exam] any more, thus feeling overwhelmed." A further five students reported that academic procrastination led to *weariness*.

Referring to students' mental and physical states, we developed two additional subcategories. Due to academic procrastination, three participants experienced symptoms of a *physical stress reaction* (sweating, palpitations and twitching eyelids). Exactly five students reported that academic procrastination made them suffer from *sleep-related problems*. The male student no. 16 (counselling group), studying computer science, illustrated, "[I] woke up too early in the morning, by four o'clock, no longer able to sleep."

Regarding the behavioural consequences of academic procrastination, nine students contributed to the inductively generated subcategory *no change in behaviour*. These students indicated that they had considered changing their behaviour, but their motivation to change was either not strong enough or an attempt to change had not been successful. The female student no. 23 (non-counselling group), studying clinical linguistics, reported, "Again and again, I intend to work earlier on my tasks next time, but that's usually not the case."

Considering the consequences on the student's course of studies, four effects have not been discussed thus far. Ten students stated that they were forced to *repeat study requirements* (e.g. rewriting an essay) because they had failed to fulfil the requirements by a certain deadline or their performance was not good enough. The same amount of students referred to an *accumulation of work* as another consequence. The female student no. 12 (counselling group), becoming a teacher for German and music, described this consequence vividly: "And now, there are many new tasks coming up shortly, and, currently, I am doing my work experience and I have to write a work experience report and I still have two neglected term papers at home." We found that academic procrastination resulted in a *lengthened study course* for 12 students. The female student no. 13 (counselling group), studying pedagogy, stated the following effect of academic procrastination, "A long-term consequence is definitely that I am a long-term student by now, simply because my studies took very long….I have studied for a long time [18 semesters by now]." In addition, two students intended to *drop out* of university because of academic procrastination.

Finally, we inductively generated the subcategory of a *restricted future perspective* as a consequence for students' private lives. Four students mentioned having realized that life could have been different if they had not procrastinated. The male student no. 3 (counselling group), studying molecular biotechnology in his 22nd semester, stated the following concerning his future:

> There is a cut concerning the future perspective. In biology or chemistry you plan a little bit to receive a PhD. And I actually took it into consideration. And I think in comparison to fellow students who are doing or did their PhD, it was quite realistic for me. Yes, but, because I have never completed the first step, my diploma, it is impossible because of the time.

Thus for some students, serious problems arise due to academic procrastination.

Differences between the counselling and non-counselling groups

The main categories concerning the reasons and consequences were identical for the counselling and non-counselling groups. On the subcategory level, the counselling group referred to more profound reasons and serious consequences than the non-counselling group (see Tables 2 and 3).

For example, 15 of the 16 students (94 %) in the counselling group reported *anxiety* as a reason for academic procrastination, in contrast to seven of the 20 students (35 %) in the non-counselling group. Furthermore, 11 of the 16 students (69 %) in the counselling group

compared to three of the 20 students (15 %) in the non-counselling group attributed academic procrastination to a *lack of organizational skills* (i.e. students failed to manage their learning situations). Only the counselling group reported procrastinating academic tasks because of a serious *illness* (e.g. depression) and the personal belief of *I don't do anything which is expected of me*.

The non-counselling group attributed academic procrastination to perceived task characteristics more than the counselling group did. Eleven of the 20 students (55 %) in the non-counselling group compared to two of the 16 students (13 %) in the counselling group reported procrastinating when they perceived their tasks as *not interesting*. Similarly, 13 of the 20 students (65 %) in the non-counselling group attributed their procrastination to their preference to perform *compelling alternative activities*, while five of the 16 students (31 %) in the counselling group did so. Furthermore, while none of the counselling group reported procrastinating academic tasks because they were convinced *I work best under high pressure*, five of the 20 students (25 %) in the non-counselling group did just that.

Only the counselling group mentioned the negative consequences of a *physical stress reaction* (e.g. palpitations), *illness* (e.g. anxiety disorder) and *restricted future perspective* (e.g. not practising a profession any longer). In contrast, half of the students in the non-counselling group reported *success* as a positive consequence of finally working on a procrastinated task compared to four of the 16 students (25 %) in the counselling group.

Discussion

By conducting an interview study without taking a specific or exclusive theoretical perspective on academic procrastination, we obtained a multifaceted description of reasons and consequences of academic procrastination from the students' perspective. In addition, we found that the counselling group reported more serious reasons and consequences of academic procrastination (e.g. anxiety, illness) than the non-counselling group (cf. Day et al. 2000).

The category system concerning the reasons included 11 main categories, subsuming 49 subcategories, of which 21 (43 %) were inductively developed. Among the inductively developed reasons, the internal reasons refined previous findings (e.g. concerning affective reasons, reasons related to perceived task characteristics), whereas most of the external reasons (i.e. reasons relating to lecturers' characteristics and institutional conditions) had not been addressed before. Hence, our study identified numerous antecedents that have not been considered as relevant in procrastination research up till now.

Interestingly, all reasons relating to the lecturers' characteristics (e.g. being disorganized) that we detected in the present study were exactly the opposite of the antecedents that Schraw et al. (2007) revealed regarding the person of the lecturer (e.g. well-organized teachers). This finding suggests that both studies dealt with different constructs (i.e. academic procrastination vs. purposeful delay, see "Introduction").

Apart from some task characteristics, the majority of students referred to the competence-related reasons of lack of study skills and low self-regulation. With regard to the lack of study skills, future research should resolve whether students procrastinate because they lack the necessary study skills, as reported in our study, or whether they simply lack the confidence to use these skills (cf. Klassen et al. 2008). The reason of low self-regulation, mainly characterized by low self-motivation and high distractibility, confirmed the predominant view of researchers in recent years of considering the phenomenon of academic procrastination as a self-regulation failure (e.g. Steel 2007). The multifaceted other reasons show that this self-regulation failure might involve, for example, anxiety, (rigid) personal

beliefs or a negative self-concept. Furthermore, external factors might also provoke academic procrastination. Therefore, it seems reasonable to consider academic procrastination and, thus, self-regulation failure as originating from different internal and external sources, as well as from their interaction (cf. Funder 2008).

The category system concerning the consequences had a wide range and comprised nine main categories, subsuming 32 subcategories, of which 11 (34 %) have not been discussed in research before. Thus, in line with the reasons, our study shed light on the consequences of academic procrastination. The multifaceted consequences that we inductively detected clearly refined previously explored consequences (e.g. consequences for the course of studies). Particularly, the consequences of sleep-related problems, lengthened study course and a restricted future perspective illustrate the potential severity of academic procrastination. At first glance, the result that students experienced no consequences because of academic procrastination appeared to be surprising. However, it may be that procrastination sometimes has (at least initially) no consequences. Generally, most students were predominantly aware of short-term consequences (e.g. time pressure, feeling remorse).

Looking at both groups of students in our study, we found that academic procrastination was more severe for the counselling than for the non-counselling group. Clearly, students' tendency to procrastinate did not evoke the differences between the groups concerning the reasons and consequences because it was identical in both groups. But why did the differences between the groups emerge? The counselling group—the members of which were significantly older and had been studying for a longer time—might indeed have experienced more serious reasons and suffered more severe consequences than the non-counselling group, which perhaps made them seek support from student counselling services. However, it is also possible that the counselling group might have been educated in their counselling sessions, had a more introspective approach and had more vocabulary for describing their reasons and consequences of academic procrastination than did the non-counselling group. Because our study cannot contribute to clarifying the source of the differences, future research should examine how these differences come into existence.

Evidently, all of the reasons that the students reported were self-attributions and all of the consequences were bound to be subjective. Concerning the reasons, students' statements allowed for the distinction between internal and external reasons and, thus, modelled the locus of the reasons, according to attribution theory (Weiner 2000). Unfortunately, we do not know whether the students' reports of reasons and consequences were biased. Particularly, the internal attributions could have been biased by students' tendencies for impression management or socially desirable responding, whereas the external attributions of academic procrastination might have been due to protecting self-esteem. However, the result that the students in our study referred to more internal than external reasons contradicts the fact that actors usually attribute their behaviour more to situational than personality-related reasons because they focus on the situation when acting (Jones and Nisbett 1972). Nevertheless, future research has to examine the validity of the self-attributed reasons and subjective consequences of academic procrastination.

First hints of the validity can be derived from Patrzek et al. (2012), who explored the perspective of university counsellors on antecedents and consequences of students' academic procrastination. Most antecedents and consequences that the university counsellors reported were in line with our findings, except that the university counsellors observed some short-term positive effects of students' academic procrastination. Perhaps these might reinforce academic procrastination (cf. Ferrari et al. 1995).

One other potential limitation of the current qualitative study is that it does not allow for generalizing the results. After all, it was based on individual experiences of a small number

of students. However, quantitative studies that researchers would have conducted with specific hypotheses in mind would have presumably not revealed the multifaceted antecedents and consequences of academic procrastination (cf. Stake 2010). Thus, our qualitative approach had large benefits.

From our point of view, the reasons and consequences that we identified in the present study should establish the groundwork for designing quantitative studies. First, following an exploratory mixed-method design for instrument development (Creswell and Plano Clark 2007), future research could develop a questionnaire for assessing reasons and consequences of academic procrastination based on the contents of the category systems of the current study. Then researchers could investigate, for example, the interplay of certain reasons and consequences, and the stability and controllability of the reasons for academic procrastination (Weiner 2000). In addition, researchers could use this questionnaire to examine whether there are different types of academic procrastinators who procrastinate due to certain reasons (cf. Schouwenburg 1992; Solomon and Rothblum 1984). Thereby, as our results indicated, researchers could examine whether those students who attribute academic procrastination internally experience academic procrastination as more problematic. Besides, student counsellors could utilize the questionnaire during their diagnostic analysis. On the basis of students' responses, they could offer interventions that are tailored to students' specific reasons and needs (for a comprehensive overview of interventions to overcome academic procrastination, see Schouwenburg et al. 2004).

For now, the main categories of our category systems already point out the direction in which interventions should be developed for those students who want to reduce their academic procrastination. To tackle negative affects and dysfunctional cognitions, student counsellors could use the methods of cognitive restructuring, self-instruction and relaxation exercises. Students' personal beliefs that strongly guide behaviour could be challenged in confrontational dialogues. With regard to lack of study and organizational skills as reasons for academic procrastination, student counsellors could generate working steps for academic tasks with students and teach time management and goal setting techniques. To improve students' self-regulation, student counsellors could convey strategies to enhance self-motivation (e.g. developing a token system) and to encounter distractions (e.g. formulating self-instruction). Moreover, student counsellors could challenge and reframe task characteristics that students perceive as provoking academic procrastination.

With regard to the external reasons, lecturers could pay attention to setting fixed deadlines and to being organized to support students in reducing academic procrastination. Additionally, developing a peer feedback system, for example, for students who write their thesis, could relieve lecturers. Then students would first receive help from their peers and therefore limit the contact of lecturer and student to more serious matters. Universities could draw attention to the importance of less distracting workplaces that would help students to focus on their tasks. Moreover, universities could more intensely promote the level of awareness of student counselling services and other facilities that offer professional help to reduce academic procrastination. All in all, there are many ways to support students in overcoming academic procrastination.

Acknowledgments This research was supported by grant 01PH08005A from the German Federal Ministry of Education and Research (*Bundesministerium für Bildung und Forschung*). We would like to thank Cüneyt Sandal, Julia Brinkmann, Anne Fleck, Nina König, Melanie Kröger, Hanna Platzeck and Dana Renger for carrying out the interviews and their assistance in analysing the interviews. We also thank Katrin Klingsieck for her insightful and helpful comments on an earlier version of this article.

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Current themes of research:

Academic procrastination. Transtheoretical Model of change. Fostering self-regulated learning in university students.

Most relevant publications in the field of Psychology of Education:

Patrzek, J., Grunschel, C., & Fries, S. (2012). Academic procrastination: the perspective of university counsellors. *International Journal for the Advancement of Counselling*. Advance online publication. doi:10.1007/s10447-012-9150-z.

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Current themes of research:

Academic procrastination. Subjective theories of student counsellors.

Most relevant publications in the field of Psychology of Education:

Patrzek, J., Grunschel, C., & Fries, S. (2012). Academic procrastination: the perspective of university counsellors. *International Journal for the Advancement of Counselling*. Advance online publication. doi:10.1007/s10447-012-9150-z.

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Current themes of research:

Academic procrastination. Motivational foundations of learning and scientific reasoning. Motivational interference. Value orientation and motivation to learn.

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