



Research on the relationship between procrastination and workplace productivity

Coman Monica¹, Gherco Andreea-Carin², Rus Mihaela³

^{1,2} Independent Researcher, Romania, ³Ovidius University in Constanta, Faculty of Law and Administrative Sciences, Romania monicacoman01@gmail.com¹, ghercoandreea@gmail.com², psiholog m@yahoo.com³

Abstract. Procrastination and productivity are two interrelated concepts, and their relationship can significantly influence job performance. Procrastination refers to the postponement of tasks or activities, while productivity is the extent to which tasks are accomplished within a given time frame. The importance of studying this psychological construct stems from the fact that people today often find themselves in the situation of having to complete tasks quickly within certain deadlines. The article examines the causes of procrastination, various typologies of procrastinators, and the consequences of this phenomenon, and also offers a number of recommendations for overcoming procrastination.

Keywords. procrastination, productivity, job performance, procrastination, deadlines

1. Introduction.

Studying the mechanism of how procrastination works is relevant to the formation of personnel management strategies that reduce the level of employee procrastination, improve the quality of their work, and contribute to organizational efficiency.

Procrastination is the behaviour of postponing or delaying the start or completion of an activity or task, often to the detriment of set deadlines. It is a complex phenomenon and can involve both psychological factors and external circumstances. People who procrastinate tend to put off important activities, preferring to give their attention to other less urgent or enjoyable things at the moment.

The etymology of the word *procrastination* comes from the Latin *procrastinatus*, where *pro* means *before* and *crastinus* means *from tomorrow*.



D. Tice and R. Baumeister analyse procrastination as a complex trait, comprising cognitive, behavioural and emotional elements. It manifests itself by delaying the implementation of an intention or the achievement of stated goals to the point where it becomes late or almost too late. The reasons why people resort to procrastination are varied: resistance, boredom due to repetitiveness of work, perfectionism, lack of motivation for the task, fairness, skill deficit, rebelliousness and disorganisation. Some authors interpret procrastination as a mechanism for managing the anxiety associated with starting or completing a task or decision. According to Freud's perspective, the pleasure principle may explain procrastination; people avoid negative emotions and find postponing a stressful task until later more pleasurable. The idea that people work best under pressure provides additional satisfaction and motivation to postpone the task. For an individual, procrastination can lead to stress, feelings of guilt, loss of personal productivity, creating a crisis and disapproval from others because of not fulfilling responsibilities or commitments. These feelings combined can contribute to procrastination. Although considered normal to some extent, procrastination becomes a problem when it interferes with an individual's normal functioning. Procrastinators may find it difficult to seek support because of social stigma and the belief that task aversion is the result of laziness or unwillingness.

Classification of procrastination types and procrastinators. N. Milgram and R. Tenne identified 5 main types of procrastination according to the object of manifestation:

- a) *Daily procrastination* is considered a life strategy, manifested in the absence of the ability to complete routine, regular, lifelong tasks associated with an inability to manage time. These include housework, grocery shopping, cleaning.
- b) Decision procrastination-failure to make any decisions in a timely manner, including minor ones.
- c) *Neurotic procrastination-eliminating* important decisions related to different stages of life: choosing a field of work, starting a family, etc.
- d) *Compulsory procrastination-This* type of procrastination combines behavioural procrastination and pro-decision procrastination. It most often manifests itself as chronic procrastination in any activity.
- e) Academic procrastination-delaying implementation of learning tasks and educational projects, difficulties in completing academic tasks.

In the literature, two distinct types of procrastination behaviour are identified: *optimistic procrastination and pessimistic procrastination*. Optimistic procrastinators set their intentions without worry, showing confidence in their ultimate success. In contrast, pessimistic procrastinators are anxious about their delays, but continue to delay due to a lack of task management skills. J. Ferrari proposed a *classification of* behavioural *typologies* of people in procrastination situations:

- 1. **Thrill seekers** individuals in this category prefer to delay doing any work, seeking the sensation of increased energy they experience at the last moment.
- 2. **Indecisive procrastinators** they constantly delay making even minor decisions because of a high responsibility for the outcome. Until a decision is made, there is no chance of making a mistake and achieving unsatisfactory results. Often these individuals are inclined towards perfectionism.



3. **Avoidant procrastinators** - this behaviour is based on a desire to initially avoid unpleasant tasks and subsequently positive or negative evaluations from others.

Other authors have proposed several *categories of procrastinators*:

- a) *situational procrastinator* involves that category of individuals who sometimes procrastinate only in certain situations;
- b) the chronic procrastinator this is the category of individuals who procrastinate in almost all aspects of their lives;
- c) the relaxed procrastinator this is the category of individuals who try to avoid stress as much as possible, and in order to achieve this they try to give up certain activities or undervalue difficult activities, focusing more on activities that are fun or of minor long-term importance. This type of individual may be very attached to other individuals and concerned with attention and confirmation from others when it comes to their own behaviour;
- d) the self-destructive procrastinator this is the category of individuals who have an aversion to the tasks they have to perform, being time-dependent. The intention of these individuals is to protect their self-esteem, believing that the tasks they are faced with may endanger it;
- e) the passive procrastinator this is the category of individuals who cannot make decisions because they lack the ability to decide on the right strategy and its implementation. They feel the pressure of approaching deadlines and adopt a pessimistic attitude towards the results of their work. Last but not least, they develop feelings of guilt and depression that make them give up on tasks;
- f) the active procrastinator this is the category of individuals who are able to make decisions according to the time they have available, suspending some activities to concentrate on others. These individuals enjoy the feeling of working under pressure by feeling motivated and seeing deadlines as challenges. This perspective leads them to complete tasks at the last minute;
- g) the naive procrastinator this is the category of individuals who are unaware of the self-control problems they will have in the future when they have to complete a task.

Procrastination in the workplace can take different forms and can have significant impacts on an organisation's productivity and efficiency. Two relevant concepts associated with workplace procrastination are "soldiering" and "cyberlacking".

1. Soldiering:

- o **Definition:** The term "soldiering" refers to the tendency of some employees to limit their efforts to the minimum acceptable level in order to perform their job tasks, despite their actual capabilities.
- o **Causes:** This behavior may be caused by lack of motivation, lack of recognition or rewards, or a perception that extra effort will not be appreciated or rewarded.
- o **Impact:** Soldiering can lead to a decrease in productivity and quality of work, ultimately affecting organisational performance.

2. Cyberlacking:

- o **Definition:** Cyberlacking refers to procrastination at work through excessive use of technology, such as surfing the internet for personal purposes, using social media or playing online games during working hours.
- o **Causes:** This behavior can be influenced by lack of interest in work tasks, boredom, or even technology addiction.



o **Impact:** Cyberlacking can negatively affect productivity, concentration and quality of work. It can also create cybersecurity risks within the organisation.

The relationship between procrastination and workplace productivity has the following **effects**:

- 1. **Reduced productivity:** Procrastination can lead to delays in completing tasks, which negatively affects job performance and efficiency. Employees who constantly procrastinate may not achieve their goals in a timely manner.
- 2. **Stress and anxiety:** Procrastination can lead to stress and anxiety as deadlines approach and tasks remain unfinished. This stress can negatively affect the mental and physical health of employees, reducing overall productivity levels.
- 3. **Quality of work:** When delaying tasks, it is possible to compromise on the quality of work. Lack of time can lead to suboptimal results or neglect of important aspects of a task.
- 4. **Procrastination cycle:** Procrastination can become a perpetual cycle, in which procrastination can lead to increased pressure, and this pressure can in turn fuel the behaviour of procrastinating on more tasks.
- 5. **Missing opportunities:** Procrastination can lead to missing important opportunities at work. Putting off key projects or tasks can affect your chances of getting promoted or participating in interesting projects.
- 6. **Motivation and engagement:** Procrastination can affect employees' motivation and engagement in their tasks. Lack of motivation can reduce the desire to achieve great results and contribute to the success of the organisation.

The causes of procrastination can be multiple, and psychologists have been able to identify them, ranging from a lack of self-confidence to an individual's inability to motivate themselves to accomplish unpleasant tasks. It has been found that for perfectionists, procrastination provides the individual with protection from fear of failure and the judgement of others. There are several psychological mechanisms underlying procrastination, such as:

- 1. Fear of *failure* is one of the reasons for procrastination. Fear of failure is greater in some people than fear of the consequences of procrastination. *In other words, what I produce is a direct reflection of my ability; the level of ability shows how valuable I am as a person; the greater the ability, the greater the sense of personal worth (Burka, J. 2008).*
- 2. **Fear of success** is another reason why people procrastinate. This fear is often accompanied by a wide range of rigid beliefs. Some people fear that if they succeed and emerge from obscurity, they will attract the attention of others and feel pressured in the future to perform at least as well.
- 3. *Getting out of your comfort zone* is another reason for procrastination. We meet people around us who believe that things should come easily, without much effort or work.
- 4. *Perfectionism* can often lead to procrastination. One of the beliefs of the procrastinating perfectionist is that everything must be perfect, and he tweaks and checks endlessly until he misses the deadline.

All these causes are not always easy to identify, many of them are not aware of, which is why specialised help from a psychologist is needed. "Procrastination is like a weed, you pull it up and you think you're done with it, but then you realise the roots are too deep that it grows back" (Burka, J,2008).



2. Objectives and assumptions.

The research aims to răspondă to some of the questions that arise regarding the relationship between procrastination and productivity at work, depending on gender and work experience; we will consider procrastination and productivity as independent variables, depending on different grouping factors: gender and work experience in the field in which subjects work.

The paper pursues an objective, which is treated according to two assumptions, as follows:

Objective - to identify the level of correlation between procrastination and workplace productivity; the hypotheses followed are:

1.Hypothesis 1 - it is assumed that there is an indirect (negative) correlation between procrastination and productivity at work, depending on the gender of the respondents.

2.Hypothesis 2 - it is assumed that there is an indirect (negative) correlation between procrastination and productivity at work, depending on the degree of professional experience of the respondents.

3. Presentation of the instruments used in the research.

The research used the Workplace Procrastination Scale (384) - 12 items and the Workplace Productivity and Activity Disruption Questionnaire - Self-Administered (481) - 6 items.

The Workplace Procrastination Scale (384) was conducted by Metin, U. B., Taris, T. W., & Peeters, M. C. W. (2016) in "Measuring procrastination at work and its associated workplace aspects. Personality and Individual Differences", 101, 254-263. https://doi.org/10.1016/j.paid.2016.06.006 and translated into Romanian by Coralia Sulea, Sîrbu Alexandru-Andrei, Dumbravă Andrei Cosmin, Spînu Roxana-Mihaela.

The scale items are:

- 1. When I work, even after I make a decision, I delay acting on it.
- 2. I procrastinate before I start working on what I have to do.
- 3. At work, I so desperately want something enjoyable to distract me that I find it harder and harder to concentrate.
- 4. When a workload is dull, I catch myself daydreaming pleasantly over and over again instead of paying attention.
- 5. I prioritise less important or minor tasks, even if I should be doing something important at work.
- 6. When I'm overworked, I avoid planning my tasks and catch myself doing something totally irrelevant.
- 7. I take long coffee breaks.
- 8. I postpone some tasks just because I don't like doing them.
- 9. I use Instant Messaging (MSN, Skype, GTalk, WhatsApp...) at work.
- 10. I spend more than half an hour a day on social media sites (Facebook, Myspace, Twitter etc.) at work.
- 11. I read news online at work.
- 12. I shop online during working hours.

A summative scale is used for scoring. The scores for the items are summed. Likert scale in 7 steps, where: 0 - Never and 6 - Always:



Table 1. 7-step scale

0	1	2	3	4	5	6
Never	Almost	Rare	Occasional	From	Almost always	always
	never					

Source: Workplace procrastination scale (384)

The items are divided as follows:

- Soldiering items 1,2,3,4,5,6,7,8.
- Cyberslacking items 9,10,11,12.

The interpretation of the questionnaire scores is as follows:

Table 2. Interpretation of scores

Lack of procrastination	0 points
Low level of procrastination	12 points
Average level of procrastination	36 points
High level of procrastination	60 points
Maximum level of procrastination	72 points

Source: Workplace procrastination scale (384)

The Workplace Productivity and Work Disruption Questionnaire - Self-administered (481) was developed by Lynch, W., & Riedel, J. (2001) in the paper "Measuring employee productivity: A guide to self-assessment tools. Institute for Health and Productivity Management", p. 67 and translated into Romanian by Corbeanu Andreea, Dumbravă Andrei Cosmin, Sîrbu Alexandru-Andrei.

The questions concern:

- 1 if employed in the present;
- 2 hours lost due to health problems;
- 3 hours missed for non-health reasons;
- 4 hours actually worked;
- 5 the degree to which health affected productivity at work;
- 6 the degree to which health has affected usual activities.

For scoring purposes, results are reported as percentages of activity reduction and range from 0% to 100%, with higher percentages indicating higher activity reduction and lower productivity. Each calculated score is multiplied by 100 to render it as a percentage. The scores are calculated as follows:

- percentage of working time lost due to health problems: $\hat{I}2/(\hat{I}2+\hat{I}4)$
- percentage of work productivity reduction due to health problems: 15/10
- percentage of overall work reduction due to health problems: $\hat{I}2/(\hat{I}2+\hat{I}4) + [(1-\hat{I}2/(\hat{I}2+\hat{I}4))]$ x $(\hat{I}5/10)$
- percentage reduction in activity due to health problems: Q6/10



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The interpretation of the questionnaire scores is as follows:

Table 3. Interpretation of scores

Lack of labour productivity	0 points
Low level of productivity	25 points
Average productivity level	50 points
High level of productivity	75 points
Maximum productivity level	100 points

Source: Work productivity and disruption questionnaire - self-administered (481)

4.Presentation of the sample of subjects.

The research activity was carried out from 14.11.2023 to 14.12.2023, in the area of Vaslui county, in Huşi municipality. The aim was to verify the correlation between procrastination and productivity at work.

The research was carried out on a sample of 60 people, aged between 22 and 60, female and male, from different fields - medical, education and social work, working either in the state or in private institutions. Respondents were selected in equal numbers according to gender - 30 female and 30 male respondents. For these respondents, work experience ranged from 3 months to 41 years. The sample is convenience, with participants agreeing to participate in the research on a voluntary basis.

5. Results and discussion.

In order to carry out the research and understand the data obtained from the processing of the responses, it is absolutely necessary to analyse the data on the gender structure of the respondents. The data on the distribution of the level of procrastination and productivity within the sample according to the gender of the respondents have been summarised in Table 4.

Table 4.Case Processing Summary

	Cases								
Gen	Va	Valid		Missing		Total			
	N	Percent	N	Percent	N	Percent			
Procrastination (0-low;1-low Male	30	100.0%	0	0.0%	30	100.0%			
evel;2-medium level;3-high evel;4-maximum level Female	30	100.0%	0	0.0%	30	100.0%			
Productivity (0-low;1-low;2- Male	30	100.0%	0	0.0%	30	100.0%			
medium;3-high;4-maximum Female	30	100.0%	0	0.0%	30	100.0%			

Source: spss calculations

The data show a roughly equal distribution of respondents; thus, 50% of those who participated in the research are male and 50% are female.

Graphically, the distribution of respondents' level of procrastination by gender is shown in the histograms in Figure 1:



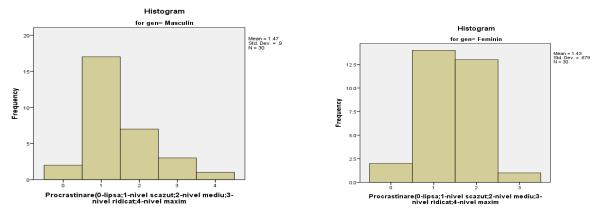


Fig 1 Histograms by gender of respondents

The data show that the majority of male research participants exhibit low levels of procrastination. In contrast, women tend to have a low to medium level of procrastination.

Graphically, the distribution of the respondents in terms of the level of labour productivity according to gender are shown in the histograms in Figure 2.

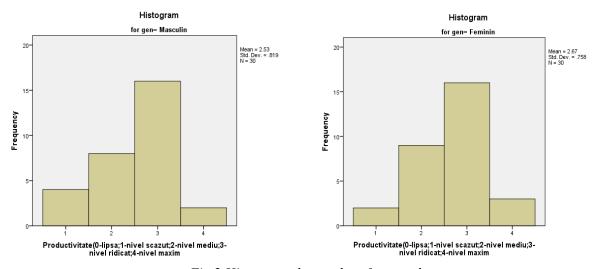


Fig 2 Histograms by gender of respondents



The data show that the majority of male participants in the research show a high level of productivity. The same trend holds for women.

Relevant to the research is the distribution of respondents' level of procrastination and productivity by work experience. The data have been summarized in Table 5.

Table 5. Case Processing Summary

Professional experience (0-low;1-low level;2-medium level;3-high level;4-maximum level			Cases							
		Va	ılid	Missing		Total				
		N	Percent	N	Percent	N	Percent			
	0	3	100.0%	0	0.0%	3	100.0%			
Procrastination (0-low;1	⁻ 1	19	100.0%	0	0.0%	19	100.0%			
low level;2-medium level;3-high level;4- maximum level	2	17	100.0%	0	0.0%	17	100.0%			
	3	14	100.0%	0	0.0%	14	100.0%			
	4	7	100.0%	0	0.0%	7	100.0%			
	0	3	100.0%	0	0.0%	3	100.0%			
Productivity (0-low;1-	1	19	100.0%	0	0.0%	19	100.0%			
low;2-medium;3-high;4- maximum	2	17	100.0%	0	0.0%	17	100.0%			
	3	14	100.0%	0	0.0%	14	100.0%			
	4	7	100.0%	0	0.0%	7	100.0%			

Source: spss calculations

Based on professional experience, it can be seen that the data distributes the 60 respondents between low and high levels for both procrastination and work productivity.

After the presentation of the researched community, we will analyze the hypotheses from which the research started. The objective is *to identify the level of correlation between procrastination and workplace productivity.*

Hypothesis 1- it is assumed that there is an indirect (negative) correlation between procrastination and productivity at work, according to the gender of the respondents

Due to the large number of respondents the calculations will be performed using SPSS Statistics.

The first step in checking the correlation between two variables is to test the normality of the data used.

Table No. 6 Tests of Normality

	Kolmog	orov-Sm	irnov ^a	Shapiro-Wilk		
gen	Statistics	df	Mr	Statistics	df	Mr
Procrastination (0-low;1-low Male	.331	30	.000	.818	30	.000
level;2-medium level;3-high level;4-maximum level Female	.272	30	.000	.822	30	.000
Productivity (0-low;1-low;2- Male	.316	30	.000	.830	30	.000
medium;3-high;4-maximum Female	.303	30	.000	.843	30	.000

a. Lilliefors Significance Correction



We observe the data obtained from the normality test. The figures obtained are below 0.05 which means that the distributions are not considered normal and a non-parametric correlation calculation method - Spearman correlation coefficient - can be applied (Table 7).

Table no. 7 Correlations

			Procrastination (0- low;1-low level;2- medium level;3- high level;4- maximum level	Productivity (0- low;1-low;2- medium;3-high;4- maximum	gender
	Procrastination (0-low;1-low	Correlation Coefficient	1.000	786**	.040
	level;2-medium level;3-high level;4-maximum level Productivity (0-low;1-low;2-medium;3-high;4-maximum	Mr (2-tailed)		.000	.760
		N	60	60	60
		Correlation Coefficient	786**	1.000	.070
Spearman's rho		Mr (2-tailed)	.000		.595
	mediam,5-nign,4-maximam	N	60	60	60
		Correlation Coefficient	.040	.070	1.000
	gen	Mr (2-tailed)	.760	.595	
		N	60	60	60

^{**.} Correlation is significant at the 0.01 level (2-tailed).

The data show a correlation between procrastination and labour productivity showing a significant correlation; the minus sign shows the opposite direction of the relationship between the two variables, i.e. the hypothesis that we assumed that the **two indicators are indirectly correlated is** confirmed. The gender of the respondents has no influence on the two indicators, the only thing that is confirmed is that **a high degree of procrastination leads to a low level of productivity at work.**

The point cloud is used to plot the correlation (Graph 1):

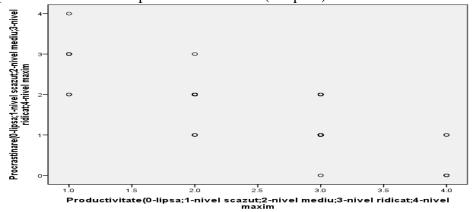


Fig. no. 1 Point cloud

The data obtained from the calculation confirm the *indirect(negative)* hypothesis *between procrastination and workplace productivity*.



Next we will test **Hypothesis 2** - it is assumed that there is an indirect (negative) correlation between procrastination and productivity at work, depending on the degree of professional experience of the respondents.

The first step in checking the correlation between two variables is to test the normality of the data used.

Table 8 Tests of Normality^a

Professional experience(0-low;1-low level;2-medium level;3-high level;4-maximum level		Kolmogorov-Smirnov ^b			Shapiro-Wilk		
		Statistics	df	Mr	Statistics	df	Mr
Drograntingtion(0 low:1	1	.266	19	.001	.895	19	.039
Procrastination(0-low;1- low level;2-medium	2	.537	17	.000	.262	17	.000
level;3-high level;4-	3	.332	14	.000	.779	14	.003
maximum level	4	.256	7	.182	.833	7	.086
	0	.385	3		.750	3	.000
Productivity(0-low;1-	1	.201	19	.041	.873	19	.016
low;2-medium;3-high;4-	2	.419	17	.000	.659	17	.000
maximum	3	.332	14	.000	.779	14	.003
	4	.296	7	.063	.840	7	.099

a. Procrastination(0-low;1-low level;2-medium level;3-high level;4-maximum level is constant when Professional experience(0-low;1-low level;2-medium level;3-high level;4-maximum level = 0. It has been omitted.

We observe the data obtained from the normality test. The figures obtained in the majority on the levels of procrastination and work productivity are below 0.05 which means that the distributions are not considered normal and a method of calculating the non-parametric correlation - the Spearman correlation coefficient - can be applied (Table 9).

Table 9 Correlations

			Procrastination (0-low;1-low level;2-medium level;3-high level;4- maximum level	Productivity (0- low;1-low;2- medium;3- high;4-maximum	Professional experience (0- low;1-low level;2-medium level;3-high level;4- maximum level
	Procrastination (0-low;1-low level;2-medium level;3-high level;4-maximum level	Correlation Coefficient	1.000	786**	471**
		Mr (2-tailed)		.000	.000
		N	60	60	60
	Productivity (0-low;1-low;2-medium;3-high;4-maximum	Correlation Coefficient	786**	1.000	.433**
Spearman's rho		Mr (2-tailed)	.000		.001
'		N	60	60	60
	Professional experience(0-	Correlation Coefficient	471**	.433**	1.000
	low;1-low level;2-medium level;3-high level;4-	Mr (2-tailed)	.000	.001	
	maximum level	N	60	60	60

^{**.} Correlation is significant at the 0.01 level (2-tailed).

b. Lilliefors Significance Correction



The data show a correlation between procrastination and work productivity as a function of work experience, showing a significant correlation; the minus sign shows the opposite direction of the relationship between the two variables, i.e. in other words, it confirms the hypothesis that we assumed that the **two indicators are indirectly correlated**.

The point cloud is used to plot the correlation (Figure 2):

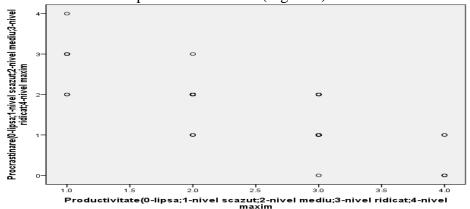


Fig. No. 2 Point cloud

The data obtained from the calculation confirm the indirect (negative) hypothesis between procrastination and workplace productivity as a function of work experience.

Similar studies are considered the following works:

- "Procrastination and work productivity of academic staff: implications to the institution"-article written by John Mark R Asio of Gordon College, Olongapo City, Philippines, and published in the volume "Shanlax International Journal of Arts Science and Humanities" in July 2021; the paper confirms the hypothesis that academic staff have times when they procrastinate and comes up with an effective measure for decreasing the degree of procrastination of academic staff, that of holding regular seminars, workshops or other training programs that maximize work productivity and decrease the level of procrastination;
- "Procrastination and well-being at work" article written by Wendelien Van Eerde of the University of Amsterdam in 2016 and published in "Chapter 11 in Sirois, F. M., & Pychyl, T. A. (Eds.) (2016). Procrastination, health, and well-being, Elsevier"; the author acknowledges that she did not include the studies on preventing and promoting concentration at work by researchers Hamstra, Van Yperen, Wisse and Sassenberg in 2011 in her research due to space limitations. However the conclusion is that researchers can take some ideas from this study for further investigation in the future.
- "Procrastination's Impact in the Workplace and the workplace's impact on procrastination", article written by Brenda Nguyen, Piers Steel and Joseph R Ferrari, from the University of Calgary, Canada; the article was published in Volume 21 of the December 2013 issue of the International Journal of Selection and Assessment. The study had 22,053 respondents and



showed that low-wage earners procrastinate more, women procrastinate less than men, and employees with high job skill requirements procrastinate significantly less than others.

Conclusions

The study provided some empirical results for procrastination behavior in organizational context.

Very young employees show a higher tendency to procrastinate, both in terms of total score and cyberlacking, compared to those in the 45-55 age group. A possible explanation could be associated with a lack of adequate organisational socialisation for younger people, together with a failure to fully assume the organisational role, which requires commitment and effective use of working time to fulfil job description tasks. In contrast, employees in the 45-55 age group are in a phase of professional maturity and fully committed to their professional role, focusing on achieving the organisation's objectives.

A potential direction for future research could be aimed at identifying the causes that contribute to procrastination and the factors that encourage it, with the aim of providing an effective basis for counteracting this time-consuming phenomenon, which can negatively affect productivity and performance at work. Effective strategies can also be developed to combat or reduce procrastination in the workplace.

I believe that the research has achieved its purpose, verifying the objectives and hypotheses proposed for the chosen sample, and the results obtained could be used especially in the organization of institutions, so that employees take more responsibility at work.

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