From the perception to the uses of time: Time perspective and procrastination among adults in Spain*

De la percepción a los usos del tiempo: perspectiva temporal y procrastinación de adultos en España

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Abstract:

The behavioural sciences have investigated the relationship between time domain or control and human development from a variety of perspectives, in recent decades, outlining two attitudinal manifestations that are deeply involved in such development: time orientations and procrastination. There is abundant literature regarding these concepts, but few works provide data about the relationship between these attitudes and aspects of everyday life, data that might identify options to regulate such attitudes. This paper analyses time perspective and procrastination with regards to age, temporal characteristics of work, and living arrangements. 720 adults (390 men and 330 women) aged between 18 and 64 years (M = 40.44; SD = 9.80) participated. The instruments used were an ad hoc questionnaire on sociodemographic data, and two scales validated for the Spanish population: the Zimbardo Time Perspective Inventory and a procrastination instrument that combines the General Procrastination Scale, the Decisional Procrastination Questionnaire, and the Adult Inventory of Procrastination. The results show an unbalanced general perspective in the sample as a whole, with significant relationships by age, living arrange-ments (e.g., more negative past — d = .33 — and hedonistic present — d = .30 — among respondents who live with their parents) and temporal characteristics of work (e.g., more fatalistic

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present in respondents with rigid schedules — *d* = .53). Procrastination is more present in young people aged between 18 and 29 (in the dilatory behaviour — *d* = .63 — and lack of punctuality — *d* = .69 — factors). Also, several of these factors are associated with living alone or with extending the working day. These findings highlight determining factors relating to attitudes to time, results that highlight specific variables from daily life which can be the subject of interventions to facilitate the development of people with the potential to dominate or control time.

Keywords: procrastination, time perspective, living arrangements, age, work.

Resumen:

Las ciencias del comportamiento han investigado desde diferentes perspectivas la relación entre el dominio o control del tiempo y el desarrollo humano, perfilándose, en las últimas décadas, dos manifestaciones actitudinales altamente implicadas en dicho desarrollo: las orientaciones temporales y la procrastinación. Respecto a estos conceptos abunda la literatura; sin embargo, pocos trabajos aportan datos relativos a la relación entre ambas actitudes y aspectos de la vida cotidiana —datos que pueden poner sobre aviso opciones para regular dichas actitudes—. En esta investigación se analizan la perspectiva temporal y la procrastinación en relación con la edad, las características temporales del trabajo y las condiciones de cohabitación (con quién se vive). Participaron 720 adultos (390 hombres y 330 mujeres) con edades comprendidas entre 18 y 64 años (*M* = 40.44; *DT* = 9.80). Los instrumentos utilizados fueron un cuestionario *ad hoc* de datos sociodemográficos y dos escalas validadas para población española: el Inventario de Perspectiva Temporal de Zimbardo y el instrumento de procrastinación que integra la *General Procrastination Scale*, el *Decisional Procrastination Questionnaire* y el *Adult Inventory of Procrastination*. Los resultados muestran una perspectiva general no equilibrada en el conjunto de la muestra, observándose relaciones significativas según la edad, la situación de cohabitación (p. e., más pasado negativo —*d* = .33— y presente hedonista —*d* = .30— en quienes viven con sus padres) y las características temporales del trabajo (p. e., más presente fatalista en quienes tienen unos horarios rígidos —*d* = .53). La procrastinación está significativamente más presente en los jóvenes entre 18-29 años (en los factores de conductas dilatorias —*d* = .63— y falta de puntualidad —*d* = .69); asimismo, varios de sus factores están asociados a vivir solo o al hecho de alargar la jornada laboral. Estos hallazgos apuntan unos condicionantes relacionados con manifestaciones actitudinales hacia el tiempo, resultados que apuntan variables específicas de la cotidianidad sobre las cuales se puede intervenir con el objetivo de facilitar el desarrollo de personas con potencial para dominar o controlar el tiempo.

Descriptores: procrastinación, perspectiva temporal, cohabitación, edad, trabajo.

1. Introduction

From a human development perspective, we understand that dominating or controlling time means subjecting it to one's own will. The behavioural sciences study this undertaking through processes

ranging from time management strategies to self-regulation of time, and including attitudes to time and the problem of procrastination.

Research into these topics has made significant contributions to our knowledge of them but few works provide specific information on the relationship between attitudes towards time and situational variables (main occupation, schedules, or living arrangements). Consequently, evaluations of time domains and intervention plans are based on standards that do not consider the particulars of the reality being studied, even though they do affect the time domain people display.

In view of these ways of studying time, the present work focusses on the temporal orientations and procrastinatory tendencies of working people in relation to age, the temporal characteristics of their work (hours worked and labour flexibility criteria), and types of living arrangements, which should be considered in studies and interventions regarding this domain or control, all with the aim of showing how these variables affect time domain or control.

1.1. Time perspective

Temporal orientations are attitudes towards time that form an often unconscious way of dominating or controlling time, shape people's behaviour (Zimbardo & Boyd, 1999), and play a decisive role in their well-being (Boniwell, Osin, Linley, & Ivanchenko, 2010; Drake, Duncan, Sutherland, Abernethy, & Henry, 2008; Simons, Peeters, Janssens, Lataster, & Jacobs, 2018). These attitudes have been studied with the names time perspective and temporal orientation.

Time perspective basically refers to the cognitive distance at which lived experiences and goals are placed (Nuttin, 1985) and *temporal orientation* to the subject's particular tendency to focus on the past, present, or future (Lewin, 1948). However, in recent years, many authors (including the authors of the present work) have tended to use both expressions interchangeably to refer to the second concept, following one of the most influential theoretical models, that of Zimbardo and Boyd (1999). According to this model, temporal orientation is a process situated at the origin of individual and social behaviour, and it codifies, organises, and recalls lived experiences, building new targets, expectations, and future scenarios.

According to Zimbardo's theory (Zimbardo & Boyd, 2008/2009; Zimbardo, Keough, & Boyd, 1997), a person's time perspective comprises the following five dimensions and their corresponding attitudes: 1) *past negative*, which reflects a pessimistic, negative, or aversive attitude towards the past; 2) *past positive*, which is expressed as nostalgia and a positive construction of the past; 3) *present hedonistic*, which leads to people to live from one day to the next, seeking immediate gratification and pleasure; 4) *present fatalistic*, which is associated with a certain level of despair regarding the future and an inability to expect a pleasant future based on present behaviour; and 5) *future*, relating to the achievement of future objectives, delayed gratification, and avoidance of time wasting (Zimbardo & Boyd, 2009).

These temporal orientations are present in different proportions in each person's time perspective, resulting in temporal attitudes that might inhibit or favour the person's development. Specifically, one dimension being predominant over the others results in particular attitudes and dispositional styles.

So, if the past negative or positive dimension is dominant, an individual will tend to act in response to recurring situations that reflect past experiences and will display signs of anxiety and negative affect (D'Alessio, Guarino, De Pascalis, & Zimbardo, 2003, Drake et al., 2008); if present fatalistic is dominant, an individual will be inclined to believe that the future is predetermined and that they have to live with resignation (Zimbardo & Boyd, 2009); if present hedonistic is dominant, there is a tendency to think that what matters most is to live for the moment without considering future consequences (Zimbardo & Boyd, 2009) but if the present is very dominant, this will result in an increase in procrastination, impulsiveness, and aggression (Ferrari & Díaz-Morales, 2007); if fatalistic and hedonistic presents are predominant, there is a tendency to feel good and secure in different settings; and, finally, when future is predominant, individuals will try to guide their behaviour in accordance with the proposed objectives and their benefits, as well as planning their time and activities (Ferrari & Díaz-Morales, 2007; Shell & Husman, 2001, Zimbardo & Boyd, 2009).

Beyond these dispositional styles — because of the specific dominance of one dimension — it has been observed that an optimal and balanced time perspective is found when there are lower levels of the dysfunctional orientations (past negative and present fatalistic), higher levels of the functional ones (past positive and future), and moderate levels of present hedonistic. In other words, people tend to experience greater well-being and better adaptive capacity (Boniwell & Zimbardo, 2004; Sircova et al., 2014; Boniwell et al., 2010; Drake et al., 2008; Webster, 2011; Wiberg, Sircova, Wiberg, & Carelli, 2012). The importance of maintaining this balance has led to this situation being called *time competence* (Zaleski, 1994): a competence that means that the individual confronts adverse life situations and successful life situations with a lower psychological cost and greater success. Therefore, in the dynamic of the five time perspectives, a balanced combination seems to be desirable, or in its absence, a dynamic in which the future dimension stands out.

Although there has been considerable research into temporal orientations, researchers recognise that the results are often inconsistent and contradictory owing to the diversity of variables and study approaches (Kooij, Kanfer, Betts, & Rudolph, 2018). Accordingly, they argue that there is a need for more specific research and more reflection on the sociodemographic variables and sociocultural values that affect people's time perspective (Codina, Pestana, & Ponce de León, 2018; Levasseur, Shipp, Fried, Rousseau, & Zimbardo, 2020; Soylu & Ozekes, 2019;

Stolarski, Wiberg, & Osin, 2015). Regarding these challenges, some scholars have specifically identified the need to study the phenomenon in greater depth in relation to the variables we consider in this paper: age (Codina & Pestana, 2016; Laureiro-Martínez, Trujillo, & Unda, 2017; Matthews & Stolarski, 2015), temporal characteristics of work (Bluedorn, 2002), and living arrangements (which, as far as we know, has not been the subject of any major studies).

1.2. Procrastination

Procrastination is a problem relating to time domain or control, which consists of the habit of delaying the start, completion, or both of a task or activity one intends to perform (Lay, 1986). In more detail, procrastination manifests itself through four types of behaviour (Díaz-Morales, Ferrari, Díaz, & Argumedo, 2006): 1) dilatory behaviour, which involves deferring the execution of the intended activity; 2) indecision, which takes the form of putting off decisions within a specific time frame; 3) lack of punctuality, which manifests itself in an inability to satisfactorily comply with temporal commitments; and 4) lack of planning, which is expressed in a lack of self-discipline focussed on a specific task. The habit of procrastination in any of the dimensions identified, manifests itself in school, university, work, health, daily routines, the family, social life, and administrative processes (Klingsieck, 2013) and also in leisure (Pestana, Codina, & Valenzuela, 2020), among other settings.

While most people are aware of and practise procrastination in specific situations, when it becomes a habit or becomes generalised, it causes serious personal, interpersonal, and social problems (Goroshit, 2018). Owing to its impact on health and development, and given that it is a habit shared by over 20% of the adult population (Harriott & Ferrari, 1996; Díaz-Morales & Ferrari, 2015), procrastination has inspired numerous studies into its nature. Consequently, it has been examined from perspectives ranging from the impact of personality variables (Kim, Fernández, & Terrier, 2017; Steel, 2007), to psychosocial variables such as teaching styles, and situational temporal variables such as pressure, scarcity, and patterns (Codina, Castillo, Pestana, & Balaguer, 2020; Codina, Valenzuela, Pestana, & González-Conde, 2018; Valenzuela, Codina, Castillo, & Pestana, 2020; Valenzuela, Codina, & Pestana, 2020). However, in the case of situational variables, research has barely considered the impact of variables that structure everyday life such as temporal characteristics of work or living arrangements; variables that might entail certain patterns with a negative effect on procrastination.

1.3. The present study

In view of this background information, our aim in this study is to show how time perspectives and procrastination relate to personal and situational variables such as age, living arrangements, and the temporal characteristics of work. In so doing, we intend to expand the body of knowledge about these two processes and argue for these variables to be included in research and to guide intervention strategies.

2. Method

This study comprises a non-experimental associative (correlational) and transverse investigation (Ato, López, & Benavente, 2013). Accordingly, the relationship observed between the variables is oriented towards comparing groups, in other words, identifying the sectors of the population — in accordance with the variables studied — where differences are observed in accordance with time perspectives and factors of procrastination.

2.1. Participants

The sample comprised 720 working adults resident in Spain (390 men and 330 women), aged between 18 and 64 (M = 40.44; SD = 9.82). The sample was obtained purposively by proportional affixation based on an online panel, with a 95% confidence interval and 3.2% margin of error. The quotas used for the sample — based on the Spanish census as of 01/01/2018 (INE, 2018) — were sex and age (for the range of 18-64 years).

2.2. Instruments

Three questionnaires were used to obtain the information: an *ad hoc* questionnaire for the sociodemographic data and two validated scales, one for the time perspective and another for procrastination.

Sociodemographic data These were obtained through the questionnaire, which recorded: sex, age, participants' living arrangements (living alone, with children/parents/dependents) and organisation of time in work (time spent travelling to the place of work, hours worked, flexibility with start and end times, and extending working hours).

Time perspective. This was analysed using the Zimbardo Time Perspective Inventory (ZTPI: Zimbardo & Boyd, 1999), adapted for the Spanish population by Díaz-Morales (2006). This instrument comprises 56 items relating to 5 dimensions (for each of them an example from the Inventory is given): two relating to the present (*hedonistic*: "When listening to my favourite music, I often lose all track of time"; and *fatalistic*: "Life today is too complicated; I would prefer the simpler life of the past"); two relating to the past (*positive*: "I like family rituals and traditions that are regularly repeated"; and *negative*: "Painful past experiences keep being replayed in my mind"); and one relating to the *future* ("Meeting tomorrow's deadlines and doing other necessary work comes before tonight's play" — without distinguishing between positive and negative extremes). The response format used a 5-point Likert-type scale, ranging from 1 ("very unlike me") to 5 ("very characteristic of me"). The observed Cronbach's alpha was acceptable (α = .87) and even slightly higher than the values obtained by Díaz-Morales (2006), which were between .74 and .82.

Procrastination. This was measured using an instrument with 40 items validated for the Spanish population by Díaz-Morales et al. (2006). This test comprises three questionnaires (in each case, the Cronbach's alpha values obtained by Díaz-Morales et al. (2006) are

specified): the General Procrastination Scale (GP: Lay, 1986; α_{GP} = .84), the Decisional Procrastination Questionnaire (DP: Mann, 1982; α_{DP} = .83), and the Adult Inventory of Procrastination (AIP: McCown & Johnson, 1989; α_{AIP} = .81). Combining these tests gives a total of 40 items, which correspond to four factors (with an example from each factor in each case): delaying behaviour ("I take several days to do tasks, including ones where I only need to sit down and do them"), indecision ("I delay making decisions until it is too late"), lack of punctuality ("My friends and family think I always wait until the last minute"), and lack of planning ("I prepare my clothes the night before an interview so that I am not late" —the scoring for this item is inverted). A Likert-type format was used with five response options (ranging from 1 —"very unlike me"— to 5 —"very characteristic of me"). All of the Cronbach's alpha values obtained in the present study were acceptable (α_{GP} = .79; α_{DP} = .88; α_{AIP} = .87).

2.3. Data collection procedure

The study followed the requirements of the bioethics committee of the Universidad de Barcelona (CBUB IRB00003099), and no further approval was required as the data obtained did not involve animal experiments or clinical experiments. This research also complies with the recommendations of the Consejo General de la Psicología de España, the Spanish Organic Data Protection Act (15/1999: Jefatura del Estado, 1999), and the Declaration of Helsinki (World Medical Association, 2013).

The fieldwork was preceded by two preparatory phases following the patterns of previous research performed in the field of leisure activities (Codina & Pestana, 2017; Codina, Pestana, & Stebbins, 2017; Codina, Pestana, Romeo, & Yepes, 2019) that used the panel of participants format. In the first phase, the research team worked with specialist technical staff to enter items into the software with the format that the participants would see. To prevent data loss, the questionnaire was programmed so that all of the questions had to be answered in order to complete it. The answer categories for each question were visible on one screen to avoid the need to move round it. After verifying the final programming of the questionnaire, the second phase started with a pilot test. Based on this test, the necessary changes in format were made.

Following some final operational checks, the potential participants on the panel were sent an email inviting them to take part in the study with a direct link to the instrument. This was a unique link that could not be reused once the responses had been submitted. Access to the questions was enabled during November 2019. The invitation was only sent to people from the panel of potential participants who fulfilled the age requirement established.

2.4. Information analysis process

The data obtained were analysed using the SPSS program, version 25. After the descriptive statistics (frequencies and percentages for sociodemographic variables; means, standard deviations, skew, kurtosis, and homoscedasticity for time perspective

and procrastination), associations between the variables were calculated with comparison of means (Student's *t* or ANOVA as appropriate). In the case of significant associations, the effect size is stated in the text.

3. Results

3.1. Sociodemographic data

From the sociodemographic information obtained (Table 1), age was analysed in the following three age groups: 18-29 (n = 128; 17.8%), 30-49 (n = 417; 57.9%), and 50-64 (n = 175; 24.3%).

Regarding living arrangements (Table 1), 101 participants from the sample as a whole lived alone (14%), 452 lived with their partner (62.8%), 299 with children (41.5%), 53 with their parents (7.4%), and 37 had dependants (6% of the total).

TABLE 1. Prevalence of sociodemographic variables: sex, age, and living arrangements (N = 720).

Variables	n	%
Gender		
Male	390	54.2
Female	330	45.8
Age		
18-29	128	17.8
30-49	417	57.9
50-64	175	24.3
Cohabitating		
Alone		
Yes	101	14
No	619	86
Partner		
Yes	452	62.8
No	268	37.2
Children		
Yes	299	41.5
No	421	58.2
Parents		
Yes	53	7.4
No	667	92.6
Dependents		
Yes	37	6
No	683	94

Source: Own elaboration.

Of the variables relating to the temporal characteristics of work (Table 2), the largest group take a maximum of half an hour to travel to their place of work (n = 524; 72.8%), work for 40 hours or more per week (n = 417; 57.9%), have rigid working hours (n = 330; 45.8%), and do not usually extend their working hours (n = 240, 33.33%), although 18.6% of participants extend their working hours infrequently.

TABLE 2. Prevalence of sociodemographic variables: temporal organisation of work (N = 720).

Variables	n	%
Travel time		
Max. 30'	524	72.8
Max. 60'	156	21.7
Over 60'	40	5.6
Hours worked		
Up to 39 h	303	42.1
40 h or more	417	57.9
Flexible work hours		
Rigid	330	45.8
Flexible (worker)	239	33.2
Flexible (company)	151	21
Extension of working day		
(Almost) every day	101	14
More than once a week	128	17.8
At least once a month	117	16.3
Infrequent	134	18.6
No	240	33.33

Source: Own elaboration.

3.2. Time perspective

Of the five time perspective dimensions (Table 3), the highest values were observed in cases of future (M = 3.49; SD = 0.42) and past positive (M = 3.42; SD = 0.46). In contrast, the lowest values corresponded to present fatalistic (M = 2.88; SD = 0.57). With regards to skew values, kurtosis, and the Kolmogorov-Smirnoff test, in all of the dimensions of the time perspective, the non-normality of the sample was established.

When connecting these values to the sociodemographic data, several dimensions of the time perspective displayed significant differences by sex, age, living arrangements, and temporal organisation of the working environment

TABLE 3. Means, standard deviations, Skewness, kurtosis and Kolmogorov-Smirnov test (K-S) for time perspectives and procrastination factors.

			Skewness		Kurtosis		K-S	
	M	SD	Value	SE	Value	EE	Value	p
Time perspectives								
Past negative	2.98	0.62	.094	.091	.349	.182	.085	.000
Past positive	3.42	0.46	-.105	.091	.524	.182	.055	.000
Present hedonistic	3.20	0.52	.085	.091	.978	.182	.063	.000
Present fatalistic	2.88	0.57	.321	.091	.687	.182	.081	.000
Future	3.49	0.42	-.075	.091	.371	.182	.046	.001
Procrastination factors								
Delaying behaviour	2.56	0.65	.176	.091	.170	.182	.051	.000
Indecision	2.58	0.68	.066	.091	-.008	.182	.072	.000
Lack of punctuality	2.28	0.71	.211	.091	-.485	.182	.079	.000
Lack of planning	2.26	0.41	.163	.091	1.118	.182	.063	.000

Source: Own elaboration.

(Tables 4 and 5), albeit with different effect sizes.

When comparing men and women (Table 4), higher values for present fatalistic (t = -2.43; p < .015; d = .17) were observed for women, albeit with a small effect size. With regards to age, the highest values for past negative (F = 7.67; p < .001; d = .61), present hedonistic (F = 7.70; p < .000; d = .51), and present fatalistic (F = 5.703; p < .003; d = .59) were observed among the youngest age group with a large effect size in all cases.

As for living arrangements (Table 4), present fatalistic (t = -2.08; p < .039; d = .20) was more apparent and future less apparent (t = 2.41; p < .016; d = .27) among people who live alone, with a small effect size in both cases. Among people with children, less present hedonistic (t = 2.31; p < .021; d = .17) and present fatalistic (t = 2.35; p < .019; d = .19) was observed, with a small effect size. For their part, people living with their parents display — at a significant level and with a moderate effect size — more past negative (t = 2.35; p < .019; d = .33) and present hedonistic perspectives (t = -2.16; p < .031; d = .30). In contrast, people living with dependents display more accentuated present fatalistic (t = 2.29; p < .027; d = .22), although the effect size is small.

Finally, four aspects of the work environment influenced dimensions of the time perspective (Table 5) with a large effect size in all cases. People who spend more than an hour travelling to work display a higher level of present hedonistic (F = 4.15; p < .016; d = .51).

TABLE 4. Descriptive statistics for time perspectives by sex, age and living arrangements (N = 720).

	Past negative (2.98±0.62)			Past positive (3.42±0.46)			Present hedonistic (3.20±0.52)			Present fatalistic (2.88±0.57)			Future (3.49±0.42)		
Variables	**M ± SD**	**t**	**p**	**M ± SD**	**t**	**p**	**M ± SD**	**t**	**p**	**M ± SD**	**t**	**p**	**M ± SD**	**t**	**p**
Gender		-0.99	.321		0.63	.524		-0.16	.872		-2.43	.015		-1.52	.127
Male	2.95±0.61			3.43±0.45			3.19±0.52			2.84±0.58			3.47±0.42		
Female	3.00±0.64			3.41±0.48			3.20±0.53			2.94±0.56			3.52±0.43		
Age*		7.67	.001		1.16	.314		7.70	.000		5.70	.003		.91	.403
18-29	3.17±0.65			3.47±0.47			3.35±0.52			3.04±0.61			3.44±0.45		
30-49	2.95±0.61			3.42±0.47			3.17±0.52			2.86±0.57			3.50±0.42		
50-64	2.91 0.61			3.38±0.44			3.13±0.49			2.84±0.53			3.50±0.41		
Living arrangements															
Alone		-0.35	.725		1.94	.053		-0.71	.476		-2.08	.039		2.41	.016
Yes	3.00±0.60			3.34±0.43			3.23±0.45			2.99±0.54			3.39±0.54		
No	2.97±0.63			3.43±0.47			3.19±0.53			2.87±0.58			3.51±0.42		
Partner		0.53	.594		-1.92	.054		-0.14	.883		0.65	.511		-0.79	.426
Yes	2.97±0.64			3.44±0.47			3.20±0.52			2.87±0.56			3.50±0.43		
No	2.99±0.60			3.38±0.45			3.19±0.53			2.90±0.59			3.47±0.42		
Children		1.21	.226		-0.42	.674		2.32	.021		2.35	.019		-1.73	.083
Yes	2.94±0.64			3.43±0.46			3.14±0.55			2.82±0.58			3.52±0.40		
No	3.00±0.61			3.41±0.47			3.23±0.50			2.93±0.56			3.47±0.44		
Parents		-2.79	.007		0.11	.910		-2.16	.031		-1.73	.084		1.68	.097
Yes	3.17±0.51			3.41±0.51			3.34±0.53			3.02±0.59			3.40±0.38		
No	2.96±0.63			3.42±0.46			3.18±0.52			2.87±0.57			3.50±0.43		
Dependents		0.62	.533		-1.26	.207		1.34	.178		2.29	.027		-0.29	.770
Yes	3.04±0.58			3.34±0.46			3.30±0.52			3.06±0.53			3.49±0.33		
No	2.97±0.63			3.44±0.47			3.18±0.53			2.85±0.58			3.51±0.43		

Note: * *F* reported in the case of this variable. Source: Own elaboration.

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TABLE 5. Descriptive statistics for time perspectives by temporal organisation of work (N = 720).

	Past negative (2.98±0.62)			Past positive (3.42±0.46)			Present hedonistic (3.20±0.52)			Present fatalistic (2.88±0.57)			Future (3.49±0.42)		
Variables	**M ± SD**	**F**	**p**	**M ± SD**	**F**	**p**	**M ± SD**	**F**	**p**	**M ± SD**	**F**	**p**	**M ± SD**	**F**	**p**
Work environment															
Travel time		1.18	.307		0.61	.542		4.15	.016		2.62	0.73		0.60	.549
Max. 30'	2.96±0.61			3.42±0.47			3.19±0.51			2.87±0.55			3.48±0.42		
Max. 60'	3.01±0.63			3.42±0.45			3.16±0.51			2.89±0.56			3.52±0.42		
Over 60'	3.10±0.71			3.34±0.48			3.42±0.62			3.08±0.77			3.47±0.51		
Hours worked*		-1.24	.214		-1.91	.056		-156	.119		0.37	.709		-0.50	.612
Up to 39 h	2.94±0.59			3.38±0.43			3.16±0.48			2.89±0.53			3.48±0.40		
40 h or more	3.00±0.65			3.45±0.49			3.22±0.54			2.88±0.60			3.50±0.44		
Flexible work hours		2.17	.114		1.01	.364		0.72	.484		3.50	.031		0.07	.932
Rigid	3.03±0.62			3.44±0.43			3.19±0.51			2.94±0.56			3.51±0.39		
Flexible (worker)	2.93±0.64			3.39±0.51			3.17±0.56			2.81±0.60			3.49±0.48		
Flexible (company)	2.94±0.60			3.42±0.46			3.24±0.48			2.89±0.63			3.44±0.39		
Extension of working day		1.73	.141		0.53	.713		3.13	.014		1.13	.339		1.84	.119
(Almost) every day	3.10±0.70			3.46±0.49			3.35±0.54			2.99±0.61			3.55±0.42		
More than once a week	3.01±0.59			3.40±0.47			3.22±0.52			2.89±0.59			3.55±0.39		
At least once a month	2.90±0.61			3.37±0.43			3.18±0.48			2.83±0.54			3.43±0.46		
Infrequent	2.90±0.55			3.44±0.45			3.18±0.49			2.85±0.57			3.48±0.43		
No	2.96±0.64			3.42±0.48			3.13±0.54			2.88±0.56			3.47±0.42		

Note: * *t* reported in the case of this variable. Source: Own elaboration.

When working hours are rigid, more present fatalistic is observed (F = 3.50; p < .031; d = .53). And when working hours are extended every day or almost every day, there is more present hedonistic (F = 3.13; p < .014; d = .51).

3.3. Procrastination

In the sample as a whole, of the four procrastination factors (Table 3), the highest scores were for indecision (M = 2.58; SD = 0.68) and delaying behaviour (M = 2.56; SD = 0.65), both with similar values. Consequently, arriving late (M = 2.28; SD = 0.71) and lack of planning (M = 2.26; SD = 0.41) were the factors with the lowest presence (again with similar scores for the two). Regarding the skew, kurtosis, and Kolmogorov-Smirnoff test values, all of the procrastination factors are non-normally distributed in the sample as a whole.

When associating sociodemographic values with procrastination values, there were significant differences by age, living alone/with children, and extending working hours (Tables 6 and 7).

In the case of sex, no significant differences were observed in procrastination for men and women. However, participants aged 18-29 had the highest scores for all of the factors of this problem of time domain or control (Table 6), apart from indecision. Specifically, the following significant values were obtained: delaying behaviour (F = 7.67; p < .001; d = .63), lack of punctuality (F = 7.70; p < .000; d = .69), and lack of planning (F = 5.70; p < .003; d = .40), with large effect sizes for delaying behaviour and lack of punctuality and a moderate effect size for lack of planning.

Regarding participants' living arrangements (Table 6), living alone is characterised by a greater lack of planning (t = -3.09; p < .002; d = .34) with a moderate effect size, In contrast, there is a greater lack of planning when living with a partner (t = 2.45; p < .014; d = .19), although the effect size is small. Living with children is characterised by more presence of delaying behaviour (t = 2.41; p < .016; d = .18), indecision (t = 2.64; p < .008; d = .20), and lack of punctuality (t = 2.33; p < .020; d = .18), although the effect sizes are small.

Of the variables relating to the temporal organisation of work (Table 7), people who extend their working hours every day or almost every day display more delaying behaviour (F = 3.15; p < .014; d = .64). This association is significant and has a large effect size.

4. Discussion

This research expands knowledge of both time perspectives and procrastination by providing new information about them in relation to personal and situational variables such as age, living arrangements, and the temporal characteristics of work. This information can be used in both research and interventions.

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TABLE 6. Descriptive statistics for procrastination factors by sex, age and living arrangements (N = 720).

	Delaying behaviour (2.56±0.65)			Indecision (2.58±0.68)			Lack of punctuality (2.28±0.71)			Lack of planning (2.26±0.41)		
Variables	**M ± SD**	**t**	**p**	**M ± SD**	**t**	**p**	**M ± SD**	**t**	**p**	**M ± SD**	**t**	**p**
Gender		0.94	.345		0.58	.558		-1.16	.246		1.87	.062
Male	2.58±0.63			2.60±0.67			2.25±0.67			2.29±0.40		
Female	2.53±0.67			2.57±0.70			2.31±0.75			2.23±0.42		
Age*		7.67	.001		1.16	.314		7.70	.000		5.70	.003
18-29	2.82±0.64			2.86±0.65			2.52±0.77			2.35±0.41		
30-49	2.53±0.62			2.57±0.66			2.24±0.69			2.25±0.42		
50-64	2.42±0.67			2.41±0.69			2.19±0.66			2.22±0.37		
Cohabitating												
Alone		-1.23	.218		-0.62	.532		-0.84	.400		-3.09	.002
Yes	2.63±0.69			2.62±0.69			2.33±0.74			2.38±0.45		
No	2.54±0.64			2.58±0.68			2.27±0.70			2.24±0.40		
Partner		0.60	.543		0.75	.451		0.91	.362		2.45	.014
Yes	2.55±0.64			2.57±0.69			2.26±0.71			2.23±0.39		
No	2.58±0.67			2.61±0.67			2.31±0.69			2.31±0.43		
Children		2.41	.016		2.64	.008		2.33	.020		1.76	.078
Yes	2.49±0.62			2.50±0.65			2.20±0.65			2.23±0.38		
No	2.61±0.67			2.64±0.70			2.33±0.74			2.28±0.43		
Parents		-2.89	.004		-3.57	.000		-2.60	.009		-1.21	.229
Yes	2.81±0.67			2.90±0.74			2.52±0.72			2.32±0.38		
No	2.54±0.65			2.56±0.67			2.26±0.70			2.26±0.41		
Dependents		0.15	.881		-0.86	.387		-0.22	.827		-0.08	.935
Yes	2.56±0.67			2.48±0.68			2.25±0.59			2.24±0.40		
No	2.54±0.64			2.58±0.68			2.27±0.71			2.24±0.40		

Note: * *F* reported in the case of this variable. Source: Own elaboration.

TABLE 7. Descriptive statistics for procrastination by temporal organisation of work (N = 720).

	Delaying behaviour (2.56±0.65)			**Indecision (2.58±0.68)**			**Lack of punctuality (2.28±0.71)**			**Lack of planning (2.26±0.41)**		
Variables	**M ± SD**	**F**	**p**	**M ± SD**	**F**	**p**	**M ± SD**	**F**	**p**	**M ± SD**	**F**	**p**
Work environment												
Travel time		1.98	.139		0.25	.774		1.27	.280		0.47	.625
Max. 30'	2.56±0.64			2.58±0.67			2.27±0.70			2.27±0.39		
Max. 60'	2.49±0.65			2.57±0.69			2.25±0.67			2.24±0.42		
Over 60'	2.72±0.81			2.66±0.76			2.45±0.87			2.23±0.55		
Hours worked*		0.14	.886		1.54	.124		1.69	.091		-0.53	.591
Up to 39 h	2.56±0.62			2.63±0.65			2.33±0.70			2.25±0.38		
40 h or more	2.55±0.67			2.55±0.70			2.24±0.71			2.27±0.43		
Flexible work hours		0.07	.932		0.49	.613		0.26	.765		1.40	.247
Rigid	2.56±0.65			2.61±0.69			2.29±0.72			2.23±0.39		
Flexible (worker)	2.57±0.67			2.57±0.68			2.29±0.69			2.29±0.41		
Flexible (company)	2.54±0.62			2.55±0.67			2.24±0.69			2.27±0.43		
Extension of working day		3.15	.014		0.27	.896		1.53	.190		0.88	.471
(Almost) every day	2.75±0.72			2.65±0.81			2.42±0.78			2.29±0.39		
More than once a week	2.51±0.69			2.55±0.73			2.29±0.76			2.24±0.43		
At least once a month	2.60±0.52			2.57±0.61			2.29±0.65			2.31±0.39		
Infrequent	2.53±0.65			2.57±0.60			2.21±0.68			2.26±0.43		
No	2.49±0.64			2.58±0.67			2.24±0.68			2.24±0.40		

Note: * *t* reported in the case of this variable. Source: Own elaboration.

We found that the sample studied does not display a dynamic of time perspectives that comprise a balanced temporal orientation (Boniwell & Zimbardo, 2004; Sircova et al., 2014, among others). Nonetheless, in general — and in a reasonably stable way across the different age groups — the sample scores highly in the two functional perspectives (past positive and future) and has low scores in one of the two dysfunctional ones (present fatalistic). Therefore, while it does not match the standard of the profile of a balanced or optimal time perspective, it does approach it. In a more practical sense, in the sample studied, temporal competence (Zaleski, 1994) to adapt skilfully and flexibly to challenges in life, is negatively affected by a certain presence of past negative.

In light of these general results, workers aged between 18 and 29 display a more worrying time perspective profile: they score highly on the two dysfunctional time perspectives — past negative and present fatalistic — and on present hedonistic. According to previous studies (Ferrari & Díaz-Morales, 2007; Shell & Husman, 2001), the high score on the two high present perspectives indicates that they feel good and secure in different settings. However, it is noteworthy that among young working people, no prevalence of the future perspective is apparent, something which suggests that — very probably compensating for an uncertain future — the present hedonistic perspective is intensified.

With regards to living arrangements, a sociodemographic variable that had not previously been studied in relation to time perspective, the data obtained reflect unexpected realities. In effect, they show how potent living arrangements are in personal time perspectives. Specifically, we observed that people who live alone score highly on the present fatalistic and future perspectives and so they seem to have temporal attitudes that are not very positive and stimulating; this leads us to note the importance of cohabiting with other people, a question that will have to be explored in more detail in future. With people who live with other generations, we found the following: the presence of children in the home inhibits present time perspectives (fatalistic and hedonistic), perhaps because of the novelties, uncertainties, and changes linked to the children's lives; living with parents activates the past negative and present hedonistic perspectives, as a balance between the attitude towards an unsatisfactory past and living in the present in the best way; and, finally, living with other dependants is associated with a predominance of the present fatalistic perspective. In this case, the living arrangements-dependence conditions might be experienced as a limiting factor for living in the present or making plans for the future. Therefore, living with people from other generations clearly and in a differentiated way — depending on the role performed in the home — shapes the predominant time perspectives.

The results obtained suggest that psycho-educational interventions oriented towards good time domain or control practices should consider the differing realities living arrangements promote in different individuals. For example, while people with dependants might find their attitudes to the future impaired, this characteristic should change when the position of responsibility for a dependant changes (for interventions with carers of dependants, see Yuan & Jhian, 2017).

As for the relationship between time perspectives and the temporal characteristics of work, we have also identified unexpected negative and positive temporal attitudes. Regarding the negative ones, if the working day has a rigid timetable, the present fatalistic perspective scores highly. This agrees with the results obtained by Cladellas and Badia (2010) regarding teachers' time management; having working hours that are fixed and established by other people is dysfunctional. With regards to the positive relationships, if travelling to work takes more than 60 minutes or if the working day is extended, higher scores are found for the present hedonistic perspective. Therefore, far from being a negative load, this travel time (which is neither work nor leisure) seems to provide optimism in temporal attitudes, with a similar outcome from extension of the working day. As a result of these data, flexibility in working hours and enjoyment of the time spent travelling to work seem to be two elements to consider when promoting the experience of control of time in working people — something which, in the long term, could comprise a source of well-being, quality of life, or both (as noted by Yang, Xu, & Zhu, 2015).

For its part, procrastination is a problem which, in general terms, does not occur in all of its dimensions in the sample studied. In particular, its manifestations as late arrival or not planning are not relevant; in contrast, procrastinatory behaviour is observed with regards to indecision and delay. That said, when procrastination is evaluated by age bands, we found that people aged between 18 and 29 have significant high scores for almost all procrastination factors (except for indecision). Consequently, among working people — not university students — the younger ones generally procrastinate the most, a trend documented above all in the academic field (van Eerde, 2003). This finding concerning procrastination in young working people, along with the finding relating to present time perspectives alerts us to the need to investigate in detail young workers as a group, as well as agreeing with previous studies where the lack of future correlates with procrastination (Díaz-Morales, 2019).

Regarding living arrangements and procrastination, we found that people who live alone plan less; in this sense, it seems that the lack of a need to coordinate with others means that they disregard this aspect of time management (it should be recalled that people who live alone had the least future perspective). In contrast, people who live with

a partner score higher in planning. It is also interesting to evaluate procrastinatory tendencies among people who live with their children. In this case, scores for delaying behaviour, indecision, and late arrival are low. These results seem to derive from the role of the person who cares for, educates, and protects descendants. As can be seen, in interventions aimed at favouring time control or domain — counteracting the effects of procrastination — it is also important to consider living arrangements. For example, it is worth considering the changes people might experience when they stop being the main figure responsible for their children's routine.

The results obtained — which are both revealing and promising — are not unaffected by the limitations of the study. Accordingly, using samples in future which as well as being distributed by sex and age include other variables (such as geographical distribution or activities other than work) might strengthen the associations obtained in time perspective and procrastination (and their corresponding effect sizes). Something else to consider in future research is the type of sampling used; so, unlike intentional panel sampling, it could be worth considering random sampling based on the municipal census.

In summary, this work underlines how living arrangements and certain temporal characteristics of work are associated with people's time perspectives profiles as well as procrastinatory tendencies. These findings reveal working and living arrangements — which agencies involved in interventions can affect — that are positively and negatively related in time domain, comprising evidence regarding variables that future research cannot neglect.

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