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Original

Impact of a strategic time management programme on burnout, anxiety, depression, and emotional regulation in university students

Lourdes Luceño-Moreno[1], Beatriz Talavera-Velasco[1], Sara Esteban-Gonzalo[1] and Daniel Vázquez-Estévez[2]

[1]*Department of Social and Work Psychology and Individual Differences. Faculty of Psychology. Complutense University of Madrid*
[2]*Department of Psychobiology and Methodology in Behavioral Sciences. Faculty of Psychology. Complutense University of Madrid*

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A B S T R A C T

Time management is related to academic success and reduces stress if it is developed effectively. However, in the university context, there are few or no time management programmes in training. This study aims to analyse the impact of a Strategic Time Management Programme (STMP) on variables associated with academic stress in university students (burnout, anxiety, depression, emotional regulation skills). A longitudinal study was carried out in which 164 university students participated. The Strategic Time Management Programme comprising eight activities was applied. The results indicated that those students to whom the programme was applied felt more effective and presented less anxiety and better emotional regulation skills than students in the control group. The impact of the STMP on the aforementioned variables is highlighted and its implementation in the university context is recommended.

Impacto de un programa de gestión estratégica del tiempo sobre burnout, ansiedad, depresión y regulación emocional en estudiantes universitarios

Palabras clave:
Burnout
Ansiedad
Depresión
Regulación emocional
Gestión del tiempo

R E S U M E N

La gestión del tiempo está relacionada con el éxito académico y reduce el estrés si se desarrolla con eficacia. Sin embargo, en el contexto universitario, los programas de formación en gestión del tiempo son escasos o inexistentes. Este estudio pretende analizar el impacto de un Programa de Gestión Estratégica del Tiempo (GET) sobre variables asociadas a estrés académico en estudiantes universitarios (burnout, ansiedad, depresión, estrategias de regulación emocional). Se realizó un estudio longitudinal en el que participaron 164 estudiantes universitarios. Se aplicó el Programa Gestión Estratégica del Tiempo, compuesto por ocho actividades. Los resultados indicaron que los estudiantes a los que se aplicó el programa se sentían más eficaces y presentaban menos ansiedad y mejores estrategias de regulación emocional que los estudiantes del grupo de control. Se destaca el impacto del programa GET sobre las variables mencionadas y se recomienda su aplicación en el contexto universitario.

* Corresponding author.
E-mail address: beatriztalavera@ucm.es (B. Talavera-Velasco).

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Introduction

A high percentage of young people and adolescents could be at risk of mental pathologies such as anxiety, stress, and depression (World Health Organizaton, 2022). Moreover, recent studies have indicated that the COVID-19 pandemic has exacerbated this trend. Young people have been further impacted by isolation and disruption to their traditional lifestyles, which has increased risk factors for their mental health (Varma et al., 2021; Zheng & Echave, 2021). It has been found that factors such as sleep quality and resilience are key, as well as coping resources such as cognitive and behavioral strategies and sports practice, among others (Varma et al., 2021). In this sense, while it is not always possible to control the negative events that affect our young people and adolescents, providing them with resources to help them manage such events has been seen as a good empowerment strategy, thus reinforcing their sense of control over the situation (Halsall et al., 2014).

Skills such as planning and organizing tasks, time allocation, and managing expectations regarding expected results are found to be effective in strengthening the internal locus of control of our young people. Autonomy, self-efficacy, and self-control may be key competencies to enhance to deal with anxiety and stress during youth and adolescence (Chen et al., 2020; Evans et al., 2016; Yang et al., 2015). Time management can be defined as the way people control and monitor their time (Eilam & Aharon, 2003). Other definitions could include the concept of self-management when performing multiple tasks in a limited period of time, which is also linked with the idea of regulating and monitoring oneself (Claessens et al., 2007). Processes involved in time management may be as important as time management itself: using one's time efficiently, completing goals in the established deadlines, being able to set up short and long-term goals in an attainable way, or planning and prioritizing tasks needed to achieve these goals). While the definition of time management is very broad, the skills involved have been the focus of psychologists' attention in recent decades because of their relationship with health-related variables such as stress, anxiety, and well-being (Alvarez-Sainz et al., 2019). Time management training has become popular in recent times because of its importance in tackling life's tasks in an efficient, effective, and healthy way, which is particularly important among students to achieve adequate levels of academic performance (Karakose, 2015). In fact, training in time management is useful not only for improving academic performance, but also to decrease avoidance behaviors and procrastination, improving planning, prioritizing, assertiveness, reduction of stress levels, and increasing perceived control (Green & Skinner, 2005; Karakose, 2015). In addition, relations between time management and emotional regulation must be highlighted. While emotional regulation concerns all tasks related to adequately handling emotions when it comes to concern and care for oneself and others and making effective decisions in challenging situations, it makes sense to believe that both concepts are associated (Arguedas et al., 2016). After all, time management and self-management skills are both connected, in a way that self-regulating skills will provide resources for students' learning processes and make them succeed in challenging tasks in with time limits are involved (Cobb, 2003).

One of the sources of stress and anxiety among young people is the difficulty in completing all their assigned tasks at university on time. Time pressure, and the pressure to achieve the expected results to secure their professional future, is a major challenges for young people (García-Ros et al., 2004). Time management training for students has focused on the following areas of improvement: reducing procrastination, gaining more control, and reducing stress, being able to complete more tasks and increasing the likelihood of succeeding, and enjoying free time (MacCann et al., 2012; Nadinloyi et al., 2013). It has been demonstrated that time management skills can be trained (Nadinloyi et al., 2013). Moreover, it seems that these positive contributions may have a sustainable, long-term impact (Noftle & Robins, 2007; O'Connor & Paunonen, 2007).

Time management training has been associated with other indicators related to students' physical and mental health and well-being (Lakein & Leake, 1973). Concretely, some authors have found that while perceived stress may be reduced, perceived control may be increased after the training (Häfner et al., 2015). Also, other health-related indicators such as anxiety, self-efficacy, and burnout may be associated with or mediated by adequate time management (Kordzanganeh et al., 2021). In fact, time management training has been particularly useful to manage anxiety and stress in vulnerable students such as those who suffer from dyslexia (HosseinKhanzadeh, 2018).

In the current context of learning during the pandemic, students have been forced to modify their learning routines and methods (Lischer et al., 2021). Online learning has been a major challenge for those in higher education, with significant consequences for their mental health and symptoms such as depression, anxiety, and/or even suicidal thoughts (Wang et al., 2020). Adapting to new learning methods has been a predictor of mental pathology (Chrikov et al., 2020). In this context, time management skills have been key when it comes predicting anxiety during the pandemic, under online learning conditions (Hassan et al., 2021).

For all these reasons, the objective of the present study was to assess the effectiveness of a time management program among college students, and evaluate its effects on emotional regulation, anxiety and depression levels and burnout prevalence. As main hypotheses, the following are proposed: 1) Students in the experimental group will have lower scores in burnout, anxiety, or depression, compared to students in the control group; 2) Students in the experimental group will have better emotional regulation strategies than students in the control group.

Method

Participants

The research involved 174 students, 30 in the control group and 134 in the experimental group. Of the experimental group, 10 students did not answer all the questionnaires and were eliminated, 6 of them did not answer in time two, and 4 did not answer the questionnaires in time three. Therefore, the response rate in the experimental group was 94.2%, and 100% in the control group. The study of longitudinal design involved 164 fourth-year psychology students. The experimental group consisted of 134 students, 24 males (17.9%) and 110 females (82.1%), with a mean age of 21.85 (SD = 2.9). The control group consisted of 30 students, 4 males (13.3%) and 26 females (86.7%), with a mean age of 22.1 (SD = 2.6).

Instruments

Academic Burnout. Maslach Burnout Inventory - Student Survey, MBI-SS (Schaufeli et al., 2002): consists of 15 items assessing three factors: Exhaustion (5 items), Cynicism (4 items), and Efficacy (6 items). It is answered with a response scale from 0 (Never/Never) to 6 (Always/Every day). A combination of high scores on Exhaustion and Cynicism with low scores on Efficacy indicates the presence of burnout. The MBI-SS shows Cronbach's alpha values of more than .70 for all scales and an adequate three-factor fit (Schaufeli et al., 2002).

Anxiety and depression. Hospital Anxiety and Depression Scale, HADS (Terol et al., 2007): consisting of 14 items, it assesses anxious (7 items) and depressive (7 items) symptoms in the general Spanish population. It is answered on a Likert scale with 4 response options, from 0 to 3. Higher scores indicate a higher prevalence of anxiety and depressive symptoms. It shows adequate reliability values, α = .77 for the Anxiety scale and α = .71 for the Depression scale, as well as a two-factor fit.

Emotion regulation. Difficulties in Emotion Regulation Scale, DERS (Hervás & Jódar, 2008). It assesses emotional regulation problems. It consists of 28 items and five subscales: Emotional Discontrol, which assesses difficulties in maintaining control of behaviour when experiencing negative emotions; Daily Interference, which assesses difficulties in concentrating when experiencing negative emotions; Emotional Inattention, which assesses difficulties in attending to and knowing emotions; Emotional Confusion, which examines the difficulty in knowing the emotions that are being experienced; and finally, Emotional Rejection, which assesses reactions of non-acceptance of one's distress. The items are answered on a Likert-type scale from 1 (rarely) to 5 (almost always). Reliability indices were adequate, ranging from .73 to .71, demonstrating an adequate five-factor fit.

Time management. Spanish adaptation of the Time Management Behavior Questionnaire-TMBQ (García-Ros & Pérez-González, 2012). Made up of 34 items and four subscales: (1) goal setting and priorities, which assesses goal setting and the need to prioritize tasks; (2) time management tools, which assesses the use of tools related to time management, and (3) preference for disorganization, which assesses disorder in the work environment; and finally, (4) perception of time control, which refers to the degree to which the subject perceives that he/she can control his/her time. The items are scored on a five-point Likert-type scale, from 0 (never) to 5 (always). The internal consistency of the scales ranges from .90 for goal setting to .68 for perceived time control. Factor analyses confirm the model's four-factor fit (García-Ros & Pérez-González, 2012).

Procedure

This study obtained the favorable report from the Ethics Committee of the Complutense University of Madrid (ref: CE_20211118-01_SAL). Student data were collected through the aforementioned questionnaires, sent in Google Forms and using non-probabilistic convenience sampling. Students must complete the previous informed consent to start the evaluation. The first data collection was carried out in September 2022 (time point 1, T1). In November 2022, the second completion of the questionnaires by the students was carried out (T2), at which time the implementation of the entire programme was completed. In February 2023, the last administration of the questionnaires was carried out for follow-up (time point 3, T3). Participants assigned to the experimental and control groups were randomly assigned.

The activities that complete the Strategic Time Management Programme (STMP) carried out are explained below and must follow the established order (see Figure 1). In activity 1, the student reflects and reflects in a quadrant what his/her short, medium, and long-term work and personal goals are and, if necessary, reformulates some of them. In activity 2, the student explores the Strengths, Weaknesses, Opportunities, Threats, and Opportunities (SWOT) following the objectives and goals set out in the previous exercise, which will allow him/her to assess his/her current reality and generate (and prioritise) actions. In activity 3, the student will be able to find out which behaviours associated with time management should be improved by completing the Time Management Behaviour Questionnaire-TMBQ (García-Ros & Pérez-González, 2012). Subsequently, the student should use the self-recording technique (activity 4) to explain how to become aware of the investment of time by indicating how he/she is spending the hours of the day during a week. Activity 5 explains to the learner how to plan his/her time properly by setting tasks using a general master list and a list of specific daily tasks. He/she should then include these tasks in a monthly calendar, marking deadlines (activity 6). He/she should then plan these daily tasks in a weekly calendar (activity 7), identifying the concepts of urgency and importance of the tasks. They should keep this calendar in sight and review it regularly. Finally, the learner will carry out an analysis to check whether he/she has acquired the concepts adequately or whether the study habit has been insufficient (activity 8).

Figure 1. Strategic Time Management Programme (STMP) applied to the study.

Data analysis

The statistical analyses were conducted using the SPSS 26 statistical package. Firstly, descriptive statistics were calculated for the variables under study. Secondly, statistical inference analyses were carried out with the aim of analysing whether there are statistically significant effects of the Group factors (experimental and control) and time (T1, T2, T3). For this purpose, mixed ANOVAs were performed with an intersubject factor (group) and an intrasubject factor (time). Mauchly's W test was used to analyse the assumption of sphericity. If this assumption was not met, the Greenhouse-Geisser correction was taken into account in the presentation of results. A posteriori, pairwise comparisons were carried out to distinguish between which groups there are statistically significant differences.

Results

Time Management

A mixed ANOVA was conducted to analyse the effect of Group and Time on each of the four scales that make up the Time Management construct (Goals, Tools, Disorganisation, and Control). In none of these ANOVA's were statistically significant interaction effects between factors found, nor main effects of time or group ($p > .05$).

Table 1. Mixed ANOVA´s. Results and descriptives in TMBQ and MBI factors.

	Experimental group (n = 134)			Control group (n = 30)			F
Factor	Time			Time			
	T1	T2	T3	T1	T2	T3	
Goal setting and priorities	35.10±4.67	35.50±4.86	35.59±5.11	33.58±5.04	33.70±6.34	34.07±6.15	(T) F(2, 322) =.90 (IT) F(2, 322) =.11 (I) F(1, 161) =3.02
Time managemet tools	33.72±6.98	34.05±7.05	33.95±7.01	33.30±5.45	33.50±5.62	33.63±5.45	(T) F(2, 322) =.23 (IT) F(2, 322) =.03 (I) F(1, 161) =.12
Perception of time control	14.46±1.48	14.28±2.27	14.50±2.14	14.13±1.99	14.77±1.94	14.60±2.47	(T) F(2, 322) =1.08 (IT) F(2, 322) =2.22 (I) F(1, 161) =.05
Preference for disorganization	19.54±3.77	19.31±4.36	19.69±3.95	19.93±3.99	19.97±3.58	20.53±3.62	(T) F(2, 322) =1.38 (IT) F(2, 322) =.27 (I) F(1, 161) =.76
Exhaustion	14.71±6.11	14.05±6.13	14.29±6.35	14.69±6.15	15.97±6.13	14.63±5.63	(T) F(2, 322) =2.24 (IT) F(2, 322) =1.85 (I) F(1, 161) =.26
Cynicism	5.38±5.59	5.50±5.71	5.80±5.79	6.13±5.56	6.20±5.19	6.20±5.69	(T) F(2, 322) =.37 (IT) F(2, 322) =.24 (I) F(1, 161) =.36
Efficacy	26.48±4.92	26.25±5.31	27.05±5	24.50±5.40	24.37±5.59	24.30±5.87	(T) F(2, 322) =.57 (IT) F(2, 322) =1.03, (I) F(1, 161) =5.13, η^2 partial = .03*

Note. (T)= Time, (IT) = Interaction, (I) = Intersubject, *$p > .05$, **$p > .01$, ***$p > .001$

Academic Burnout

A mixed ANOVA was conducted to analyse the effect of Group and Time on the Exhaustion factor. Mauchly's test of sphericity indicates that the assumption of sphericity is met for the Time factor, $\chi^2(2) = 4.55$, $p > .05$. The interaction effect between Group and Time was not statistically significant. The main effect for Time was also not statistically significant. The main effect for Group was not statistically significant.

A mixed ANOVA was performed to analyse the effect of Group and Time on the factor Cynicism. Mauchly's test of sphericity indicates that the assumption of sphericity is met for the time factor, $\chi^2(2) = 4.61$, $p > .05$. The interaction effect between Group and Time was not statistically significant. The main effect for Time was also not statistically significant. The main effect for Group was not statistically significant.

A mixed ANOVA was conducted to analyse the effect of Group and Time on the Efficacy dimension. Mauchly's test of sphericity indicates that the assumption of sphericity is met for the time factor, $\chi^2(2) = .95$, $p > .05$. The interaction effect between Group and Time was not statistically significant. The main effect for Time was also not statistically significant. The main effect for Group was statistically significant. Table 1 shows that subjects in the experimental group obtained a higher mean.

Anxiety and depression

A mixed ANOVA was conducted to analyse the effect of Group and Time on the Anxiety dimension. Mauchly's test of sphericity indicates that the assumption of sphericity is not met for the time factor, $\chi^2(2) = 7.23$, $p < .05$. The interaction effect between Group and Time was not statistically significant. The main effect for Time was also not statistically significant. The main effect for Group was statistically significant. In Table 2, it can be seen that subjects belonging to the control group obtained a higher mean.

A mixed ANOVA was performed to analyse the effect of Group and time on the Depression factor. Mauchly's test of sphericity indicates that the assumption of sphericity is not met for the time factor, $\chi^2(2) = 9.39$, $p < .01$. The interaction effect between Group and Time was not statistically significant. The main effect for Time was statistically significant. The main effect for Group was not statistically significant. When performing a posteriori comparison on the time factor, no statistically significant differences are found, so the factor effect appears to be negligible.

Emotional regulation

A mixed ANOVA was performed to analyse the effect of Group and Time on the Inattention factor. Mauchly's test of sphericity indicates that the assumption of sphericity is not met for the time

Table 2. Mixed ANOVA´s. Results and descriptives in HADS factors.

	Experimental group (n=134)			Control group (n=30)			F
Factor	Time			Time			
	T1	T2	T3	T1	T2	T3	
Anxiety	7.22±3.48	7.27±3.62	7.71±3.64	8.43±4.67	8.67±4.88	9.43±4.36	(T) F(1.92, 308.38) =3.01 (IT) F(1.92, 308.38) =.31 (I) F(1, 161) =4.66, $\eta^2_{partial}$ = .03*
Depression	3.28±2.95	3.62±3.38	3.95±3.52	4.60±3.32	3.87±2.91	4.83±3.69	(T) F(1.89, 304.64) =3.32, p<.05* (IT) F(1.90, 304.64) =2.17 (I) F(1, 161) =1.87

Note. (T)= Time, (IT) = Interaction, (I) = Intersubject, *$p > .05$, **$p > .01$, ***$p > .001$

Table 3. Mixed ANOVA´s. Results and descriptives in DERS factors.

	Experimental group (n=134)			Control group (n=30)			F
Factor	Time			Time			
	T1	T2	T3	T1	T2	T3	
Emotional Inattention	8.37±3.36	8.25±3.12	8.30±3.29	8.07±3.18	8.33±3.22	7.60±3.13	(T) F(1.92, 308.97) =1.11 (IT) F(1.92, 308.97) =1.43 (I) F(1, 161) =.27
Emotional Confusion	6.72±2.28	6.69±2.34	6.67±2.32	8.03±3.15	7.67±2.36	8.10±3.23	(T) F(2, 322) =1.36 (IT) F(2, 322) =.30 (I) F(1, 161) =7.21, $\eta^2_{partial}$ = .04**
Emotional Rejection	13.69±6.81	14.56±6.92	13.50±6.26	15.65±7,70	15.47±7.19	16.80±7.75	(T) F(2, 322) =.50 (IT) F(2, 322) =3.44, $\eta^2_{partial}$ = .02* (I) F(1, 161) =2.56
Daily Interference	10.96±3.72	10.75±3.89	11.07±3.93	12.43±4.24	11.53±3.51	12.50±3.56	(T) F(1.91, 306.67) =2.52 (IT) F(1.91, 306.67) =.91 (I) F(1, 161) =3.18
Emotional Discontrol	16.01±6.08	15.82±5.69	15.76±5.82	18.63±7.80	18.27±6.66	19.13±7.22	(T) F(2, 322) =.51 (IT) F(2, 322) =.67 (I) F(1, 161) =6.01, $\eta^2_{partial}$ = .04*

Note (T)= Time, (IT) = Interaction, (I) = Intersubject, *p > .05, **p > .01, ***p> .001

factor, $\chi^2(2)$ = 6.90, p < .05. The interaction effect between Group and Time was not statistically significant. The main effect for Time was also not statistically significant. The main effect for Group was not statistically significant.

Regarding the Confusion factor, a mixed ANOVA was conducted to analyse the effect of Group and Time. Mauchly's test of sphericity indicates that the assumption of sphericity is met for the time factor, $\chi^2(2)$ = 4.83, p > .05. The interaction effect between Group and Time was not statistically significant. The main effect for Time was also not statistically significant. The main effect for Group was statistically significant. In Table 3, it can be seen that participants in the control group obtained a higher mean.

A mixed ANOVA was performed to analyse the effect of Group and Time on the Rejection factor. Mauchly's test of sphericity indicates that the assumption of sphericity is met for the time factor, $\chi^2(2)$ = .87, p > .05. The interaction effect between Group and Time was statistically significant. The main effect for Time was not statistically significant. The main effect for Group was also not statistically significant. The differences were significant between the experimental group at time 2 (T2) and the experimental group at time 3 (T3), with a higher mean at T2, p < .05. The different scores can be seen in Table 3.

Regarding the Interference factor, Mauchly's test of sphericity indicates that the assumption of sphericity is not met for the time factor, $\chi^2(2)$ = 8.21, p < .05. The interaction effect between Group and Time was not statistically significant. The main effect for Time was also not statistically significant. The main effect for Group was not statistically significant.

Finally, with respect to the factor Out of Control, Mauchly's test of sphericity indicates that the assumption of sphericity is met for the time factor, $\chi^2(2)$ = 5.91, p > .05. The interaction effect between Group and Time was not statistically significant. The main effect for Time was also not statistically significant. The main effect for Group was statistically significant. Table 3 shows that participants in the control group obtain a higher mean.

Discussion

The present study evaluates the impact of the Strategic Time Management Programme (STMP) on burnout, anxiety, depression symptoms, and emotional regulation skills in university students. The results revealed that the group of participants who underwent the programme felt more efficacious than the control group. The association between perceived efficacy and time management skills has been shown in other research. For example, it has been shown that poor time organisation can lead to feelings of lack of professional competence and worsen perceptions of work efficacy (Afsaneh et al., 2019). The intervention aimed at improving time management skills in university students has been particularly approved in online education and has had positive effects on performance and perceived competence to manage their tasks, self-regulate learning and achieve academic success (Fokkens-Bruinsma et al., 2021). Similarly for workers, introducing time management elements into training has been shown to increase feelings of work effectiveness in nursing and medical care professionals (Heusinkvelt & Tracy, 2020).

Another noteworthy aspect of the results of the present study is that the programme applied had an impact on experienced anxiety and certain emotional regulation strategies associated with stress. Students who carried out the programme activities showed fewer anxiety symptoms, less confusion, and less emotional dyscontrol. This means that they were better able to identify the emotions they were experiencing and take control of their behaviour in the face of negative emotions. This could be useful for students since, in general, university students suffer from alterations in the management of their emotions, as well as memory problems, decreased energy, insomnia, depression, and anxiety that are associated with a lack of interest in their daily activities and academic performance (Diotaiuti et al., 2021). Other authors have shown that working on time management skills in students reduces anxiety, increases their sense of control, and raises their grade point average; furthermore, time management has the advantage that it does not differ according to gender or age (Adams & Blair, 2019).

From the results found, it is worth mentioning that the participants in the experimental group showed a lower acceptance of stress at time 2. One possible explanation for this is that at the time these data were collected, the students had to take on a heavier workload and more classes at the university, having to adapt to the new activities involved in the programme used in this study. However, this perception was temporary, diminishing as the contents of the intervention progressed.

Regarding the absence of differences in time management, it is possible that they are related to the different type of the activities. Time management is a complex skill, as previously mentioned. In addition, it requires a high level in self-management skills.

Therefore, it is intended to review this point in the future to improve the implementation of the activities.

Overall, it can be said that the hypotheses stated at the beginning are partially fulfilled (students in the experimental group will have lower scores in burnout, anxiety, or depression, compared to students in the control group, hypothesis 1; and students in the experimental group will have better emotional regulation strategies than students in the control group, hypothesis 2). As strengths of this work, it is considered that the application of the Strategic Time Management Programme (STMP) used is useful to increase the perception of efficacy or credibility in one's ability to achieve success in a study. It is important to note that time management is associated with effort and psychological flexibility, which, worked together, reduce procrastination in studying, thus improving academic results (Hailikari et al., 2021). Apart from that, the applied programme can be useful for the management of emotions in the academic environment and the reduction of anxiety. Therefore, this intervention is proposed as a tool to improve efficacy and emotional regulation skills to manage the demands of the academic environment. Likewise, this study aims promoting time management as a competence to be worked on in universities through short-term activities. Other authors have highlighted the importance of universities being able to teach their students to regulate their time to reduce stress and strengthen their coping resources in the face of non-normative transitions, such as the changes they have experienced with the COVID-19 pandemic (von Keyserlingk et al., 2022).

Concerning other recently implemented interventions, it should be noted that this programme focuses on learning time management through eight activities of short duration, adaptable to the pace of each student. Other authors have also used eight sessions or activity blocks; however, the duration of their activities is one and a half hours per session (Zhang et al., 2021). In addition, time management has been used together with other variables, such as motivation or memory techniques, as part of programmes to generally reduce anxiety (Motevalli et al., 2013). In the intervention presented, the content is exclusively aimed at time management, showing that it has an impact on other variables associated with the academic environment.

At this point, it is necessary to point out some limitations. Some of them are the loss of certain participants from the first assessment to the following ones, due to a possible lack of interest or unavailability to continue in the study. Also, the use of the same online questionnaires at three points in time may have encouraged the disinterest of these students. Finally, for future research, it would be interesting to compare the proposed intervention with others already in use, such as mindfulness practice, which has been widely used to reduce stress in university students, including academic staff and doctoral students (Marais et al., 2020). In future work, the programme could also be applied to teaching staff, as other interventions that have included time management have led to an improvement in teachers' perceptions of efficacy and regulation of learning, which in turn has contributed to improved teaching and student perceptions (Zhang et al., 2023).

Conclusions

As main implications, the results suggest that including the activities in the programme can improve time management and reduce negative emotions such as anxiety, improving emotional regulation strategies. Including these program activities at certain times can be beneficial for curricula and universities, as well as for other educational institutions. For example, if these activities are applied or taught prior to assessment exams, students may face such exams with better coping strategies and anxiety may not be an obstacle to obtaining marks appropriate to their study efforts. On the other hand, time management, in the work context, is also considered a transversal competence; in fact, it is among the twenty most demanded competencies by employers (García-Álvarez et al., 2022). The need to improve these aspects in students in their final academic years is crucial for their insertion into the labor market.

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