Gender stereotypes and vocational variables in secondary education female students[1]

Estereotipos de género y variables vocacionales en alumnas de educación secundaria

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Abstract

Gender stereotypes are at the root of gender inequalities in education and employment. These stereotypes affect adolescent girls' academic performance, interests, behaviours and career choices. The aims of the study are: a) to examine whether there are differences in career decision self-efficacy, career adaptability and clarity of lifedesign of adolescent girls according to their gender stereotypes; b) to introduce a model with the independent variable "gender stereotype" to

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understand the relationship between the analyzed variables. The study involved 1,012 female students in the 3rd and 4th years of secondary education. Data collection was carried out using the Academic and Vocational Guidance Questionnaire. Correlation analyses and parametric tests were carried out; a structural equation model was run to understand the relationships between variables and to test a hypothetical model predicting the effect of gender stereotypes. Results showed that girls with high gender stereotypes have lower scores on career decision-making self-efficacy, career adaptability and clarity of life-design than girls with low stereotypes. A parsimonious model was constructed to fit the data, in which adolescent girls' stereotypes predicted career decision-making self-efficacy, and in turn self-efficacy predicted career adaptability and clarity of life-design. The improvement of these vocational variables in adolescent female students requires a critical analysis of the beliefs that underlie gender stereotypes; an analysis that allows them to become aware of the socio-cultural nature of these stereotypes, promote their deconstruction and empower them vocationally.

Keywords: gender stereotypes; career choice; secondary school students; self-efficacy; career adaptability; life-design

Resumen

Los estereotipos de género son la base de las desigualdades entre hombres y mujeres en la educación y el empleo. Estos estereotipos afectan al rendimiento académico, intereses, comportamientos y elecciones de carrera de las adolescentes. Los objetivos del estudio son: a) examinar si existen diferencias en la auto-eficacia para la toma de decisiones de la carrera, la adaptabilidad de la carrera y la claridad del diseño del proyecto de vida de las adolescentes según sus estereotipos de género; b) introducir un modelo con la variable independiente "estereotipo de género" para comprender la relación entre las variables analizadas. En el estudio participaron 1.012 alumnas de 3º y 4º de educación secundaria. La recogida de datos se realizó a través del Cuestionario de Orientación Académica y Laboral. Se realizaron análisis de correlación y contrastes paramétricos; se ejecutó un modelo de ecuaciones estructurales para comprender las relaciones entre las variables y contrastar un modelo hipotético que predice el efecto de los estereotipos de género. Los resultados mostraron que las chicas con altos estereotipos de género tienen puntuaciones más bajas en la autoeficacia para la toma de decisiones de la carrera, la adaptabilidad de la carrera y en la claridad del diseño del proyecto de vida, frente a las chicas con bajos estereotipos. Se construyó un modelo parsimonioso que se ajusta a los datos, en el que los estereotipos de las adolescentes predijeron la autoeficacia para tomar decisiones de carrera y, a su vez, la autoeficacia predijo la adaptabilidad para la carrera y la claridad del diseño del proyecto vital. La mejora de estas variables vocacionales en las alumnas pasa por el análisis crítico de las

creencias que subyacen a los estereotipos de género; un análisis crítico que les permita tomar conciencia de la naturaleza sociocultural de dichos estereotipos, promover su deconstrucción y empoderarlas vocacionalmente.

Introduction

Throughout the history of mankind inequality between sexes has been present in all social and political systems. The woman´s situation has been marked by a patriarchal culture which has established social, educational, political and economic restrictions for them (Kollmayer et al., 2018; Solbes-Canales et al., 2020). The inequality between men and women has made itself felt in access to education, professional training and work; it is also present in the housework distribution, in advertising, in text books and in other cultural expressions (Sánchez-García & Suárez-Ortega, 2021).

Gender stereotypes are the basis for inequalities between males and females in education and employment (Smith, 2014). These stereotypes refer to expected patterns of behaviour for women and men, based on beliefs of what is appropriate for each other Martínez-Marín, 2018; (Santana-Vega et al., 2012; Villanueva-Blasco & Grau Alberola, 2019). The emergence of gender stereotypes begins in the early childhood, and by early adolescence most individuals have completely developed them (; McGuire et al., 2020; Olsson & Martiny, 2018; Picho & Schmader, 2018; Schuster & Martiny, 2017). Moreover, gender stereotypes affect adolescents' academic achievement, interests, behaviours and vocational choices (Hadjar & Aeschlimann, 2015; Martínez-Marín, 2018; Ramaci et al., 2017).

Several studies have analyzed the role of gender in adolescents in a wide range of topics such as bullying (Navarro et al., 2015), problematic smartphone use (Haro et al., 2022), social networking and fear of missing out (Oberts et al., 2016; Santana-Vega et al., 2019a), professional choices (Alnıaçık et al., 2019; García et al., 2017; Heilman, 2015), study habits (Santos, et al., 2020), and subject and career choice (Dunlap & Barth, 2019; Makarova et al., 2019). These studies have mainly focused on differences between boys and girls regarding the beliefs associated to each gender.

However, little research has been conducted to assess how gender stereotypes specifically affect high-school girls when they make vocational decisions and plan their life-design. This warrants special attention if we consider that students start planning their careers during compulsory secondary education, and they have to make important vocational decisions at the end of this educational stage (Babarović, 2016).

Decision making is a challenge for adolescents in an increasingly global and diverse society undergoing rapid socio-economic and technological changes (Savickas et al., 2009; Sawyer et al., 2018; Viola et al., 2017). Gender stereotypes influence and hinder women's career development (Heilman, 2015), lead them to not choose certain academic and high-status fields (Olsson & Martiny, 2018) and affect their career decision-making process when they consider that they have fewer academic-employment opportunities than men (Migunde et al., 2015). The presence of women in university studies or in different spheres of professional activity is not uniform (Martínez et al., 2016); gender does not affect women in the same way as men, it does not equally influence men and women on their life-design, and the labour market is manifestly segregated by gender. According to European Institute for Gender Equality (2020), the EU's progress on gender equality is still low; the change of this situation is only possible when legislative measures and other proactive government actions are implemented. There is no doubt that there is a social and educational need to better understand how gender stereotypes affect girls' career development, especially in adolescence.

Career decision self-efficacy and gender stereotypes

The development of vocational behaviors coexists with the emergence and establishment of Career Decision-Making Self-Efficacy (CDSE) (Cepero, 2009). CDSE is an underlying variable in the decision-making process (Bandura et al., 2001). It is a type of self-perception of personal efficacy with respect to the competencies and skills intrinsic to the career choice process. This self-perception has a direct impact on the process of making decision (Lozano, 2006). According to Social Cognitive Theory, CDSE affects people's vocational choice tasks: people tend to feel more committed, and to show more effort, persistence and self-confidence toward tasks in which they feel more effective (Betz & Schifano, 2000). In this way, CDSE plays an important role as a cognitive mediator for vocational

behaviour (Jo et al., 2016). Research shows that adolescents' CDSE is positively related to proactivity, number of tasks aimed at exploration, persistence and motivation in the career decision-making process; however, it has an inverse relationship with perceived barriers to decision-making and indecision (Blanco, 2009; Creed et al., 2006; Duffy et al., 2015; Lam & Santos, 2018; Lozano, 2006;; Shin et al., 2014;).

Students' beliefs about their own academic competence are shaped by gender stereotypes (Bouchey & Harter, 2005). Shin et al. (2019) observed that relationship between career gender stereotypes and CDSE was significant only for female students. Leaper et al. (2012) note that girls who hold beliefs about gender equality show more positive self-efficacy in maths and science. According to Brown (2019), girls who are more supportive of gender stereotypes have less academic self-efficacy and less orientation to mastery goals over time. The under-representation of women in science, technology, engineering and mathematics (STEM) has been the focus of a number of studies. This under-representation has been linked to gender stereotypes and beliefs about the capabilities of boys and girls (Dunlap & Barth, 2019; Makarova et al., 2019; Moè et al., 2020). Jasko et al. (2019) point out that when girls focused on the similarities between men and women, they were more motivated to participate in STEM-related activities than when they focus on gender differences.

According to Tellhed et al. (2017), gender differences in interest towards scientific careers are related to girls' lower perceived self-efficacy for those careers, and to girls' lower expectations of social belonging in this kind of careers. Ramaci et al. (2017) point out that men perceive themselves to be more self-efficacious in military, scientific and agricultural professions than women, and that the parents' profession is a predictor of self-efficacy in their vocational choice. Harding & Longhurst (2016) observed that girls at the beginning of their science careers had less coping self-efficacy than boys. Therefore, it is necessary to explore gender role stereotypes in girls, as well as to design intervention programmes that minimise their negative effects on CDSE (Shin et al., 2019). Efforts to explore the mechanisms intermediating between gender stereotypes and vocational behaviours are still highly warranted, and they constitute an urgent social and educational requirement.

Career adaptability and gender stereotypes

Career Adaptability (CA) plays a fundamental role in the decision-making process. CA is conceptualized as a set of psychosocial self-regulation strategies and resources that allow coping and solving problems arising in vocational development tasks, in occupational transitions, or in negative work episodes that alter people's social integration (Rudolph et al., 2017; Savickas, 2013). These self-regulation strategies and resource are organized in four dimensions: 1) Concern or interest to be involved in decision making; 2) Confidence or feeling of efficacy to achieve goals and overcome obstacles; 3) Curiosity or inquiry into future alternatives and the actions to be taken to achieve them; 4) Control or awareness of personal responsibility in decision making (Savickas & Porfeli, 2012). According to Hartung & Cadaret (2017), a lack of concern results in indifference/pessimism about the future; a lack of confidence results in inhibition regarding decision making; a low level of curiosity limits exploration; a low level of control results in indecisiveness.

Several studies (Duffy, et al., 2015; Hirschi, 2009; Marcionetti & Rosier, 2019; Merino-Tejedor et al., 2016; Negru-Subtirica & Pop, 2016; Tolentino et al., 2014; Viola et al., 2017) evidence that people with higher CA strategies and resources: a) are proactive in building their career; b) consider that they can successfully manage career-related tasks; c) have low levels of anxiety, high levels of extraversion and openness to experience; d) possess higher vocational identity and academic-job satisfaction. In this regard, Zhang et al. (2021) found that among male students, unlike female students, there is a significant negative association between career insecurity and worry, and a positive association between deep career exploration and concern. Shin et al. (2019) observed a CDSE-mediated effect on the relationship between career gender stereotypes and career adaptability in female students. Dostanić et al. (2021) observed that gender moderated how CDSE affected career adaptability: self-efficacy was a significant predictor of adaptability for the female student body, but not for male students. These results suggest that counselors should approach decision making with consideration of the constraints created by gender stereotypes, and that the role of gender in career decision making and adaptability should be investigated. Students have a stereotypical view of different

professions (Miller et al., 2015), and the psychological barriers created by stereotypes are a handicap for women in accessing certain academic fields or jobs (Olsson & Martiny, 2018). It is necessary to explore in depth the effects that gender stereotypes have specifically on career adaptability of female students in compulsory secondary education.

Life-design and gender stereotypes

Life-design is an active and continuous construction; its configuration requires a personal and contextual exploration, a decision-making process, a personal goals specification and a concrete action plan. It is an orientation towards the future in which people give meaning and purpose to their lives in a constantly changing socio-economic and employment context (Maree & Twigge, 2016). Life-design is the result of the conciliation between emotional and rational decision-making, which is strongly influenced by the personal and contextual conditions of each individual (Lomelí-Parga et al., 2016; Melendro et al., 2017; Savickas, 2016). The construction of the life-design begins during secondary education, implying serious difficulties for students due to the fact that they have to develop strategies to define their life goals, to recognize the required personal and material resources, to establish priorities, and to select aims based on these priorities in a stage characterized by fast change (Santana-Vega et al., 2016).

Villanueva-Blasco & Grau-Alberola (2019) point out that there are significant differences in the internalization of gender stereotypes between adolescents according to sex and age, with the transition to middle adolescence being the critical moment of this internalization. In childhood and adolescence, different socialization processes occur for boys and girls; this process have an impact on the prioritization of life design goals and, in particular, on academic and labor trajectories considered optimal for each gender (Ginevra & Nota, 2017; Selimbegovic et al., 2019). Santana-Vega et al. (2019b) observed differences between boys and girls with respect to the prioritization of their academic and labour goals, as well as with respect to family, leisure and physical appearance goals. Different studies have analyzed how gender differences affect students' academic goals, observing meaningful differences between girls and boys (García et al., 2017; Picho & Schmader, 2018; Santana-Vega et al., 2012; Zhao et al., 2018). Struthers and Strachan (2019)

found that gender stereotypes limit girls' interest in courses and careers where there is a greater presence of men. The low presence of women in male-dominated vocational training courses means that occupational segregation of occupations remains resistant to change. Ehrtmann et al., (2019) say that students with male stereotypes have a high interest in mathematics, research and entrepreneurship, and a low interest in the artistic, social and conventional domains; while students with a female stereotype present the opposite pattern.

Despite the progress made in our society in terms of equality, there are still differences in academic and work opportunities based on gender. Although women's access to the education system and the labour market has improved, they still encounter structural barriers (gender-differentiated socialization) and business barriers (limited access to certain occupations or responsibility for the positions they hold) marked by gender stereotypes (Jang et al., 2019). According to Buxarrais Estrada & Valdivielso Gómez (2021) education should be directed towards the realization of basic universal values and the construction of fairer and more inclusive societies; therefore, it is urgent to give gender equality more space and prominence in the educational system and in the curriculum.

Gender stereotypes can negatively affect girls' life-design during adolescence, insofar as they diminish their CDSE and limit the range of possible academic-professional objectives to be met. From a coeducational perspective it is necessary to pay attention to how gender stereotypes affect girls' life-design and vocational development (Zhao et al., 2018).

The aim of this study is to explore the relationships between girls' gender stereotypes and vocational variables, such as career decision self-efficacy, career adaptability, and clarity of life-design. Specifically, the aims are: a) to determine whether there are significant differences in those vocational variables according to girls' gender stereotypes; and b) to introduce a model with the independent variable gender stereotype to fully understand the relationship between the variables tested.

The following research questions were addressed:

- Are there significant differences in career decision self-efficacy, career adaptability, and clarity of life-design according to girls' gender stereotypes
- Do gender stereotypes predict career decision self-efficacy and does this, in turn, predict career adaptability and clarity of life-design in adolescents girls?

Based on the literature reviewed, we hypothesized statistically significant relationships between girls' gender stereotypes, career decision self-efficacy, career adaptability, and clarity of life-design. We also hypothesized that girls' gender stereotypes will predict girls' career decision self-efficacy, and this, in turn, will predict girls' career adaptability and clarity of life-design (see Figure I).

FIGURE I. Hipothesized model
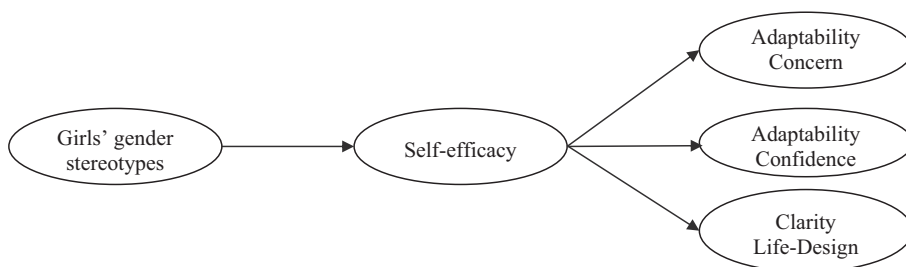
Source: Compiled by author

Method

Participants

A total 1,012 female students were recruited from 22 secondary Spanish schools (20 state schools and 2 private schools). It is a sample of convenience. Girls were from third to fourth grades of compulsory secondary education, and their mean age was 15.26 (SD = 1.00). The management teams of the participating centers communicated to the research group their desire to participate in the project to facilitate to male and female students' decision making.

Instruments

Data collection was carried out using the Academic and Vocational Guidance Questionnaire, designed by the Educational and Vocational Guid-

ance Research Group of La Laguna University. The questionnaire examines demographic, institutional, academic and vocational variables, and includes the following scales:

■ *Vocational Gender Stereotypes Scale.* An ad hoc scale was designed to assess girls' vocational gender stereotypes. Several studies were consulted for the design of the scale (García-Cueto et al., 2015; Hadjar & Aeschlimann, 2015; Sánchez et al. 2011; Steele & Barlin, 1996). In addition, a brainstorming session was conducted with female students of compulsory secondary education on "the beliefs of girls with vocational stereotypes in which they consider themselves inferior to boys". The brainstorming sessions were conducted with six groups of six female students (three of third grade and three of fourth grade). Four sessions were held in public schools and two in private schools. A first draft of items was prepared and evaluated by university professors of psychology, educational sciences and sociology. Two criteria were assessed: 1) the relevance of the items to be analyzed for examining vocational gender stereotypes, and 2) the adequacy of the item wording. Items considered irrelevant by more than 80% of the experts were eliminated. The final scale consisted of five items relating to girls' beliefs about their academic and employment inequality with respect to boys ("Girls are less likely than boys to study what they want"; "When choosing studies, boys think more about what job they are going to do than girls"; "Boys are more ambitious about their professional future than girls"; "Boys have more need to work than girls"; "Boys tend to choose harder careers than girls"). Items were rated on a 4-point Likert-type scale, ranging from 1 (*I strongly agree*) to 4 (*I do not agree at all*). To gather evidence of construct validity, we performed a CFA. We used the Confirmatory Fit Index (CFI), the Tucker-Lewis Index (TLI), and the Root Mean Square Error of Approximation (RMSEA) as fit indexes. The model fits well when CFI and TLI > .90, and RMSEA ≤ .08. Regarding the CFA, the $\chi2$ value and fit indexes were $\chi2$ (1011, 5) = 54,864 (p < .01), RMSEA = .10, CFI = .94, and TLI = .89. CFI and TLI values indicated the scale is adequate for the purposes of the study, even the $\chi2$ value and RMSEA are high, which is expected due to the large sample size, the small degrees of freedom and the simplicity of the model (Kenny et al., 2014). McDonald's Omega was .83.

■ *Decision-Making Self-Efficacy Scale.* To assess career decision self-efficacy, the Decision-Making Self-Efficacy subscale from the Career Self-Efficacy scale developed by Carbonero y Merino (2002) was used. This subscale consists of 13 items relating to students' self-confidence in their decision-making (e.g. "When I have to make decisions, the opinion of others influences me more than my own"). Items were rated on a 4-point Likert-type scale, ranging from 1 (*I strongly agree*) to 4 (I do not agree at all) with the scores reverting to negative items. McDonald's Omega was .95.

■ *Inventory of Attitudes toward Career Choice.* To assess career adaptability, a reduced version of the Spanish adaptation of the Inventory of Attitudes toward Career Choice (Álvarez et al., 2007; Crites & Savickas, 1996) was used. This inventory is a particular measure of career adaptability for choosing a career (Chan et al., 2015; Savickas & Porfeli, 2011). The instrument is made up of two subscales: a) The *C*onfidence Subscale consists of 5 items related to the students' feeling of self-efficacy in overcoming obstacles and deciding on a career (e.g. "I can't understand how some people can be so certain about what they want to do"), McDonald's Omega was .81; b) The Concern Subscale is made up of 9 items relating to students' interest in making a career decision *(*e.g. *"*I am not worried about choosing a career, something will come up sooner or later*")*, McDonald's Omega was .79. The items were rated on a 4-point Likert-type scale, ranging from 1 (*I strongly agree*) to 4 (*I do not agree at all*).

■ Clarity of life-design Scale. This scale developed by Santana-Vega et al., (2016) was used to assess the degree of security that students have about their life design objectives. It consists of 3 items (e.g. "Planning my future is problematic for me") rated on a 4 point Likert-type scale, ranging from 1 (I strongly agree) to 4 (I do not agree at all). McDonald's Omega was .74.

Procedure

The objectives and characteristics of the study were explained to the school management teams. The management teams accepted the condi-

tions of participation, informed the teachers and the students' families and requested their agreement. The students were informed about the process to be followed, the confidentiality and anonymity of the data collected, and their consent was obtained for the completion of the instruments. The information was used anonymously following the Organic Law 3/2018 of December 5, on Personal Data Protection and Guarantee of Digital Rights, and was used strictly for research purposes. The administration of the instruments was carried out during class hours by the tutor teachers, and they were completed in a 40-minute session.

Data analyses

Data analysis was carried out using SPSS 21 statistical software and Mplus 8.2 software (Muthén & Muthén, 2017), and included: descriptive statistics for each variable, Pearson's correlation coefficient, analysis of variance, T-test contrast of means for independent groups, and the Cohen's d to assess the significant effects and the effect sizes. In order to check whether there were significant differences in the vocational variables according to gender stereotypes, 25% of the subjects with high scores and 25% with low scores on the stereotypes scale were selected. In addition, a structural equation model (SEM) was run to fully understand the relationships between the variables and to contrast a hypothesized model predicting the effect of Girls' Gender Stereotypes on Career Decision Self-Efficacy, factors of Career adaptability (Concern and Confidence) and Clarity of life-design. Standardized scores were used to simplify the interpretations and to reduce non-essential multicollinearity. The Chi-square (χ^2) and its associated probability (p), the Comparative Fit Index (CFI), the Tucker Lewis Index (TLI), and the Root Mean Square Error of Approximation (RMSA) were used. The model fits when CFI and TLI > .90, and RMSA ≤ .05. Regarding the estimation method, maximum likelihood with robust standard error was performed, as it has shown evidence of performing accurately even when data is non-normally distributed (Schmitt, 2011). Missing data were processed using the full information maximum-likelihood (FIML), which provides unbiased parameters in missing at random conditions and in cases where data is not missing at random (Enders, 2010).

Results

Preliminary analyses

Descriptive statistics and correlations between the variables are shown in Table I.

TABLE I. Means, standard deviations, and correlations between variables

	Mean	SD	I	2	3	4
I. Gender stereotypes	15.32	3.50	-			
2. Self-efficacy	38.30	5.38	.412**	-		
3. Concern	21.34	3.55	.488**	.470**	-	
4. Confidence	13.85	2.66	.237**	.443**	.451**	-
5. Clarity of life-design	11.45	2.51	.267**	.477**	.368**	.589**

** sig. < 0.05
Source: Compiled by author

Gender stereotypes and vocational variables

We found significant differences between the mean age scores of high and low stereotypes groups in all variables (Table II). Overall, results showed that the higher Girls' Stereotypes, the lower Vocational Self-Efficacy, Concern, Confidence, and Clarity of life-design.

Specifically, the contrast of means for Vocational Self-Efficacy showed that the group with lower stereotype had a significantly higher mean score (M= 40.90; SD= 5.88; p < .01) than the group with higher stereotype (M= 35.15; SD= 5.33). The effect size was high (d= 1.02). With regard to Career Adaptability, we also found significant differences between the mean average scores both in the Concern factor (high stereotype: M = 12.12; SD = 2.51; low stereotype: M = 23.64; SD = .63; p < .01) and in the Confidence factor (high stereotypes: M = 8.11, SD = 2.37; low stereotypes: M = 13.83, SD = 2.75; p < .01). The effect sizes were high for both Concern (d = 6.32) and Confidence (d = 2.24).

TABLE II. T-test according to gender stereotyping

|	M	SD	t	gl	Sig	d
Vocational self-efficacy						
High stereotype	35.15	5.33	-13.919	810	.000	1.02
Low stereotype	40.90	5.88				
Concern						
High stereotype	12.12	2.51	-103.24	709.72	.000	6.32
Low stereotype	23.64	.63				
Confidence						
High stereotype	8.11	2.37	-29,841	481.57	.000	2.24
Low stereotype	13.89	2.75				
Clarity of life-design						
High stereotype	7.10	2.40	-8.345	850	.000	.61
Low stereotype	8.57	2.42				

Source: Compiled by author

Finally, regarding Clarity of life-design the contrast of means showed that the group with lower stereotype had a significantly higher mean score (M =8.57; SD = 2.42) than the group with higher stereotype (M = 7.10; SD = 2.40; $p < .01$). The effect size for Clarity of life-design was moderate (d = .61).

Test of the hypothesized explanatory model

To fully understand the relationship between the variables tested, a structural equation model (SEM) was used to contrast a hypothesized model predicting the effect of Girls' Gender Stereotypes on Career Decision Self-Efficacy, factors of Career adaptability (Concern and Confidence) and Clarity of life-design. The $\chi 2$ test and fit indexes for the SEM were $\chi 2$ (1011, 3) = 11.403 (p < .01), RMSEA = .05, SRMR = .021, CFI = .988,

TLI = .962. With regard to the relationships between the variables, Girls' Gender Stereotypes predicted Career Decision Self-Efficacy (β = .445; SE = .026; p < .001), and this, in turn, predicted Girls' Concern (β = .429; SE = .029; p < .001), Girls' Confidence (β = .410; SE = .025; p < .001), and Clarity of life-design (β = .337; SE = .034; p < .001). As the results show, a parsimonious model was obtained that fits the data, showing that the model is plausible to correctly explain the relationships between the variables tested (Figure II).

FIGURE II. Results of the structural equation model
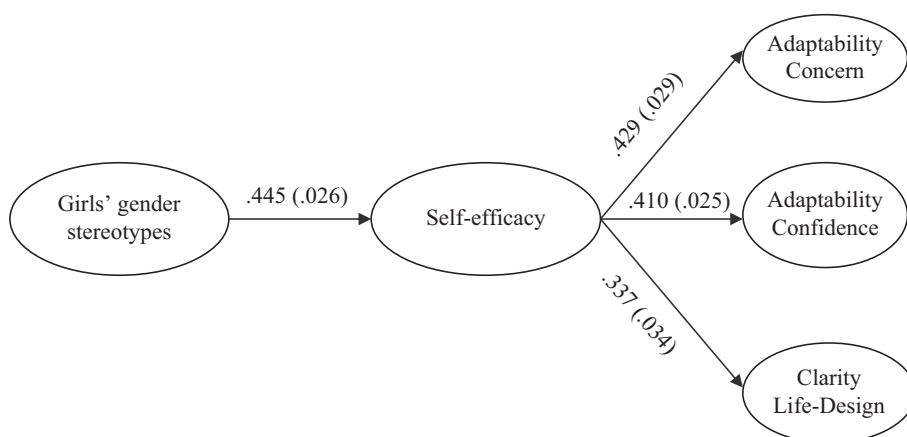
Source: Compiled by author

Discussion

Social progress in the field of gender equality is undeniable. However, stereotypes that establish gender-differentiated behavior patterns continue to persist; such stereotypes condition academic and socio-labour expectations and imply limitations in career development for both sexes (Villanueva-Blasco & Grau Alberola, 2019). In this sense, Koening (2018) points out the existence of prescriptive stereotypes for women and men. Women should be communal and avoid being dominant. Men should be independent, masculine in appearance, and interested in science and technology, and avoid being weak, emotional, shy, and feminine in

appearance. According to these stereotypes, girls often do not perceive themselves represented in scientific-technological careers, while boys do not perceive themselves represented in social and humanistic careers. If the aim is to empower female students to shape life designs free of social prejudices, it is necessary to analyze the mechanism through which vocational gender stereotypes modulate their vocational behavior. The purpose of the present research work was to analyze how adolescent girls' gender stereotypes are related to career development self-efficacy, career adaptability and clarity of life-design.

a) *Are there significant differences in career decision self-efficacy, career adaptability, and clarity of life-design according to girls' gender stereotypes?* The results obtained regarding gender stereotypes show that not all adolescent girls are vocationally empowered: there are those who consider that 'girls are less likely than boys to study what they want', or that 'boys tend to choose more difficult studies than girls'. These beliefs are the basis of vocational gender stereotypes that limit female students' career development (Blažev et al., 2017). Gender stereotypes simplify or ignore a socially complex and diverse reality, reducing girls' career decision self-efficacy, their concern and confidence in the decision-making process, and the clarity of their life-design (Dinella et al., 2014; Plante et al., 2019). Girls who maintain an unequal vocational gender stereotype tend to: 1) lack confidence in their ability to perform career development tasks and make professional decisions; 2) show no concern about their academic and professional future; 3) feel more uncertainty than confidence in facing the decision-making process. Developmental studies carried out from an ecological perspective confirm that these influences come from the closest environments, mainly family and school, and also from other systems such as media or cultural values. As children are socialized in these norms and values, they increasingly internalize those schemes and use them to construct expectations (Solbes-Canales, et al., 2020).

b) *Do gender stereotypes predict career decision self-efficacy and does this, in turn, predict career adaptability and clarity of life-design in adolescents girls?*

In accordance with our second aim we proposed a model to explain the impact of gender stereotypes on vocational variables. Our results show how gender stereotypes affects CDSE; in turn CDSE is an important cognitive mediator of career adaptability and clarity of life-design. These results coincide with and complement those obtained in previous studies (Bouchey & Harter; 2005, Brown, 2019; Eccles, 2011; Jo et al., 2016; Shin et al., 2019). The improvement of self-efficacy and career adaptability of adolescent girls involves the critical analysis of the beliefs underlying gender stereotypes; an analysis that allows them to become aware of the socio-cultural nature of such stereotypes, promotes their deconstruction and empowers them vocationally. Educational and vocational guidance should help adolescent girls to decipher and understand the relationship of gender stereotypes with academic and occupational decision-making processes (Kessels et al., 2014). Unmasking what is hidden under these stereotypes implies becoming aware of differential socialization practices based on gender, carried out in families, schools and the peer group (Ecless, 2011). These practices condition the career development of adolescent girls, to the extent that they assume as real the differences in self-efficacy and academic-work expectations between boys and girls.

Many people have private convictions and implicit beliefs that often rely on stereotypical associations without them realizing that is the case. Indeed, across different cultures and contexts, even those who are reluctant to claim that women are less competent may still believe that women are particularly sensitive and need to be protected by men (Ellemers, 2018). To answer to this situation it is necessary to carry out, among other actions: 1) girls and boy should analyze collaboratively the contents of textbooks and mass media contents in order to check if the women are represented in politic, economic and social life, and analyzing the reasons why they are not made visibles; 2) to encourage adolescent to critically analyze their immediate social context and to explore their "possible selves" in a dynamic and flexible way (Sávickas et al., 2009).

Some implications for the professional practice of school counselors are: a) Counselors must be activists to change educational practices governed by a patriarchal culture. They should encourage the analysis of discourses elaborated by students to high light gender biases in decision making. According to Sávickas et al. (2009) counselors should help boys and girls tell a story that represents their life trajectory; a story through which they can understand their own life issues, vocational personality

and adaptive resources. The role of the counselor should be to help adolescents formulate identity in their own words, how a given individual sees themselves and others in a particular context, and how they relate to others. Within the Tutorial Action Plan, awareness-raising activities, exploration of the self, exploration of the environment, exploration of the relationship between self and environment should be designed to analyze gender barriers in the development of the life-design. b) Career education programmes must be developed from a non-sexist approach to studies and professions. Such programmes should: to increase the adaptability of students to effectively manage their career development in a changing society; to promote analysis, discussion and reflection on the effect of personal, academic, family and social dimensions on decision making; to foster human, open and authentic dialogue with students so that they feel supported by significant others (Klehe et al., 2021).

Despite its strengths, the study has some limitations: a) The cross-sectional nature of the research does not allow us to establish a cause-effect relationship between the variables analysed; it would be advisable to carry out a longitudinal study. b) Likewise, a qualitative study could be conducted through discussion groups with adolescents in different educational stages and with different socio-familiar characteristics in order to examine their vocational stereotypes in greater depth, and to analyze how these stereotypes affect their self-efficacy and their career adaptability.

The research opens up new lines of study on vocational gender stereotypes in adolescent girls. Specifically, the following questions are posed for further research: a) What socio-familiar characteristics have the greatest impact on the development of vocational gender stereotypes?; b) how does the peer group contribute to reinforcing/eliminating these stereotypes?; c) how do the academic-professional trajectories of adolescent girls evolve according to their vocational stereotypes?; d) what personality factors characterize adolescent girls who maintain vocational stereotypes?; e) how can the deconstruction of gender stereotypes be facilitated in female students?; g) are vocational gender stereotypes maintained in students participating in vocational guidance programs?

References

Alnıaçık, A., Gökşen, F., & Yükseker, D. (2019). School to work or school to home? An analysis of women's vocational education in Turkey as a path to employment. *Gender and Education*, *31*(8), 1040-1056. https://doi.org/10.1080/09540253.2018.1465897

Álvarez, M. *(Coord.),* Bisquerra, R., Espín, J., & Rodríguez, S. (2007). *La madurez para la carrera en la Educación Secundaria. Evaluación e intervención*. EOS.

Babarović, T. (2016). Vocational development in adolescence: Career construction, career decision-making dificulties and career adaptability of croatian high school students. *Primenjena Psihologija*, *9*, 429–448. https://doi.org/10.19090/pp.2016.4.429-448

Bandura, A., Barbaranelli, C., Caprara, G. V., & Pastorelli, C. (2001). Self-efficacy beliefs as shapers of children's aspirations and career trajectories. *Child Development, 72(1)*, 187–206. https://doi.org/10.1111/1467-8624.00273

Betz, N. E., & Schifano, R. S. (2000). Evaluation of an intervention to increase realistic self-efficacy and interests in college women. *Journal of Vocational Behaviour*, *56*(1), 35–52.

Blanco, A. (2009). El modelo cognitivo social de desarrollo de la carrera. Revisión de más de una década de investigación empírica. *Revista de Educación*, *350*, 423–445.

Blažev, M., Karabegović, M., Burušić, J., & Selimbegović, L. (2017). Predicting gender-STEM stereotyped beliefs among boys and girls from prior school achievement and interest in STEM school subjects. *Social Psychology of Education, 20*(4), 831-847. https://doi.org/10.1007/s11218-017-9397-7

Bouchey, H. A., & Harter, S. (2005). Reflected appraisals, academic self-perceptions, and Math/Science performance during early adolescence. *Journal of Educational Psychology, 97*(4), 673–686. https://doi.org/10.1037/0022-0663.97.4.673

Brown, C. (2019). Sexualized gender stereotypes predict girls' academic self-efficacy and motivation across middle school. *International Journal of Behavioral Development, 43*(6), 523-529. https://doi.org/10.1177/0165025419862361

Buxarrais Estrada, M. R., & Valdivielso Gómez, S. (2021). La perspectiva feminista en la educación y sus debates actuales. *Teoría de la*

Educación. Revista Interuniversitaria, 33(2), 129–147. https://doi.org/10.14201/teri.25923

Carbonero, M. A., & Merino, E. (2002). La escala de autoeficacia vocacional. Desarrollo, análisis y aplicaciones del instrumento. *Revista de Psicodidáctica*, *14*, 99-114.

Cepero, A.B. (2009). Las preferencias profesionales y vocacionales del alumnado de secundaria y formación profesional específica. Unpublished PhD thesis. Granada: Universidad de Granada. Retrieved from http://hera.ugr.es/tesisugr/18751362.pdf

Chan, K., Uy, M.. Ho, M., Sam, Y., Chernyshenko, O., & Yu, K. (2015). Comparing two career adaptability measures for career construction theory: relations with boundaryless mindset and protean career attitudes. *Journal of Vocational Behavior, 87*, 22–31. https://doi.org/10.1016/j.jvb.2014.11.006

Creed, P., Patton, W., & Prideaux, L-A. (2006). Causal Relationship Between Career Indecision and Career Decision-Making Self-Efficacy. *Journal of Career Development, 33*(1), 47-65. https://doi.org/10.1177/0894845306289535

Crites, J.O., & Savickas, M. (1996). Revision of the Career Maturity Inventory. *Journal of Career, 4*(2), 131-138. https://doi.org/10.1177/106907279600400202

Dinella, L. M., Fulcher, M., & Weisgram, E. S. (2014). Sex-typed personality traits and gender identity as predictors of young adults' career interests. A*rchives of Sexual Behavior, 43*(3), 493–504. https://doi.org/10.1007/s10508-013-0234-6

Dostanić, J., Suvajdžić, K., & Krpović–Bojanić, Ž. (2021). Decision-Making Styles, Career Decision Self-Efficacy, and Career Adaptability Among High School Students. *The Career development quarterly*, 69 (1),.63-77. https://doi.org/10.1002/cdq.12249

Duffy, R.D. Douglass, R.P., & Autin, K.L. (2015). Career adaptability and academic satisfaction: Examining work volition and self-efficacy as mediators. *Journal of Vocational Behavior, 90*, 46-54. https://doi.org/10.1016/j.jvb.2015.07.007

Dunlap, S.T., & Barth, J.M. (2019). Career Stereotypes and Identities: Implicit Beliefs and Major Choice for College Women and Men in STEM and Female-Dominated Fields. *Sex Roles, 81*, 548–560. https://doi.org/10.1007/s11199-019-1013-1

Ecless, J. (2011). Gendered educational and occupational choices: Applying the Eccles et al. model of achievement-related choices. *International Journal of Behavioral Development 35*(3), 195-201. https://doi.org/10.1177/0165025411398185

Ellemers, N. (2018). Gender Stereotypes. *Annu. Rev. Psychol. 69*, 275–98. https://doi.org/10.1146/annurev-psych-122216-011719

Enders, C. K. (2010). *Applied missing data analysis*. Guilford Press.

Ehrtmann, L., Wolter, I., & Hannover, B. (2019). The interrelatedness of gender-stereotypical interest profiles and students' gender-role orientation, gender, and reasoning abilities. *Frontiers in Psychology, 10*, 1-15. https://doi.org/10.3389/fpsyg.2019.01402

García, B., Ramos-Pardo, F. J., & Sánchez-Antolín, P. (2017). Análisis de las motivaciones, apoyos y dificultades de mujeres participantes en cursos de formación ocupacional. *Revista Complutense de Educación*, *28*(3), 861–873. https://doi.org/10.5209/rev_RCED.2017.v28.n3.50500

García-Cueto, E., Rodriguez-Díaz, F., Bringas-Molleda, C. López Cepero, J. Paino-Quesada, S. et al. (2015). Development of the Gender Role Attitudes Scale (GRAS) amongst young Spanish people. *International Journal of Clinical and Health Psychology, 15*, 61-69. http://dx.doi.org/10.1016/j.ijchp.2014.10.004

Ginevra, M.C. & Nota, L. (2017). Occupational Gender Stereotypes and Problem-Solving in Italian Adolescents. *British Journal of Guidance & Counselling, 45*(3) 312-327. doi: 10.1080/03069885.2015.1063584

Hadjar, A., & Aeschlimann, B. (2015). Gender stereotypes and gendered vocational aspirations among Swiss secondary school students. *Educational Research*, *57*(1), 22–42. https://doi.org/10.1080/00131881.2014.983719

Hardin, E. E., & Longhurst, M. O. (2016). Understanding the gender gap: Social cognitive changes during an introductory stem course. *Journal of Counseling Psychology, 63*(2), 233–239. https://doi.org/10.1037/cou0000119

Haro, B., Beranuy, M., Vega, M.A., Calvo, F., & Carbonell, X. (2022). Uso problemático del móvil y diferencias de género en formación profesional [Problematic smartphone use and gender differences in vocational education and training]. *Educación XX1, 25*(2), 271-290. https://doi.org/10.5944/educxx1.31492

Hartung, P., & Cadaret, M. (2017). Career Adaptability: Changing Self and Situation for Satisfaction and Success. En K. Maree (Ed.), *Psychology*

of Career Adaptability, Employability and Resilience (pp. 15-28). Springer International Publishing.

Heilman, M. (2015). Gender stereotypes: Impediments to women's career progress. In I. Welpe, P. Brosi, L. Ritzehöfer, & T. Schwarzmüller (Eds.), *Auswhal von Männern und Frauen als Führungskräfte. Perspektiven aus Wirtschaft, Wissenschaft, Medien und Politik* (pp. 73–84). https://doi.org/10-1007/978-3-658-09469-0_1

Hirschi, A. (2009). Career adaptability development in adolescence: Multiple predictors and effect on sense of power and life satisfaction. *Journal of Vocational Behavior, 74*(2), 145-155. https://doi.org/10.1016/j.jvb.2009.01.002

European Institute for Gender Equality (2020). *Gender Equality Index 2020. Digitalisation and the future of work.* EIGE

Jang, H., Pak, S., & Lee, D. (2019). Meta-Analysis: The role of race/ethnicity and gender in career choice. *Journal of Asia Pacific Counseling, 9*(2), 119-135. http://doi.org/10.18401/2019.9.2.8

Jasko, K., Dukala, K. & Szastok, M. (2019). Focusing on gender similarities increases female students' motivation to participate in STEM. *Journal of Applied Social Psychology, 49*(8), 473-487. https://doi.org/10.1111/jasp.12598

Jo, H., Y-A, Ra., Lee, J., & Kim, W. (2016). Impact of dysfunctional career thoughts on career decision self-efficacy and vocational identity. *The Career Development Quarterly, 64*(4), 333-344. https://doi.org/10.1002/cdq.12069

Kenny, D.A., Kaniskan, B., & McCoach, D.B. (2014). The performance of RMSEA in models with small degrees of freedom. Sociological Methods & Research. https://doi.org/10.1177/0049124114543236

Kessels, U., Heyder, A., Latsch, M., & Hannover, B. (2014). How gender differences in academic engagement relate to students' gender identity. *Educational Research, 56*(2), 220-229. https://doi.org/10.1080/00131881.2014.898916

Klehe, U. C., Fasbender, U., & van der Horst, A. (2021). Going full circle: Integrating research on career adaptation and proactivity. *Journal of Vocational Behavior, 126*, 103526. https://doi.org/10.1016/j.jvb.2020.103526

Koenig, A.M. (2018) Comparing Prescriptive and Descriptive Gender Stereotypes About Children, Adults, and the Elderly. *Front. Psychol. 9*:1086. doi: 10.3389/fpsyg.2018.01086

Kollmayer, M., Schober, B., & Spiel, C. (2018). Gender stereotypes in education: Development, consequences, and interventions. *European Journal of Developmental Psychology, 15*(4), 361-377. https://doi.org/10.1080/17405629.2016.1193483

Lam, M. & Santos, A. (2018). The impact of a college career intervention program on career decision self-efficacy, career indecision, and decision-making difficulties. *Journal of Career Assesment, 26*(3), 425-444. https://doi.org/10.1177/1069072717714539

Leaper, C., Farkas, T. & Brown, C. (2012). Adolescent girls' experiences and gender-related beliefs in relation to their motivation in math/science and English. *Journal of Youth and Adolescence, 41*(3), 268-282. https://doi-org.ezproxy.uky.edu/10.1007/s10964-011-9693-z

Lomelí-Parga, A., López-Padilla, M., & Valenzuela-González, J. (2016). Autoestima, motivación e inteligencia emocional: Tres factores influyentes en el diseño exitoso de un proyecto de vida de jóvenes estudiantes de educación media. *Revista Electrónica Educare*, *20*(2), 1–22.

Lozano, S. (2006). Validación de un modelo de medida de la auto-eficacia en la toma de decisión de la carrera. *Revista de Investigación Educativa, 24*(2), 423-442. Recuperado a partir de https://revistas.um.es/rie/article/view/97131

Makarova E, Aeschlimann B., & Herzog W. (2019) The gender gap in STEM fields: The impact of the gender stereotype of math and science on secondary students' career aspirations. *Frontiers in Education 4*(60), 1–11. https://doi.org/10.3389/feduc.2019.00060

Marcionetti, J., & Rossier, J. (2019). A Longitudinal Study of Relations Among Adolescents' Self-Esteem, General Self-Efficacy, Career Adaptability, and Life Satisfaction. *Journal of Career Development, 48*(4), 475-490. https://doi.org/10.1177/0894845319861691

Maree, J., & Twigge, A. (2016). Career and self-construction of emerging adults: The value of life designing. *Frontiers in Psychology, 6*, 1-12. doi: 10.3389/fpsyg.2015.02041

Martínez-Marín, M. D. (2018). Negative and positive attributes of gender stereotypes and gender self-attributions : A study with Spanish adolescents. *Child Indicators Research*, 1–21. https://doi.org/10.1007/s12187-018-9569-9

Martínez, A., Castro, M., Lucena, M., & Zurita, F. (2016). Election of degree and expectations of results of teenagers from Granada. *Revista*

Española de Orientacion y Psicopedagia, 26(3), 63-77. doi: 10.5944/reop.vol.26.num.3.2015.16401

McGuire; L., Mulvey, K., Goff, E., Irvin, M., Winterbottom, M., Fields, G., Hartstone-Rose, A., & Rutland, A. (2020). STEM gender stereotypes from early childhood through adolescence at informal science centers. *Journal of Applied Developmental Psychology, 67*: 101109. https://doi.org/10.1016/j.appdev.2020.101109

Melendro, M., De-Juanas, A., & Rodríguez, A. E. (2017). Déficits en la intervención socioeducativa con familias de adolescentes en riesgo de exclusión. *Bordón*, *69*(1), 123–138. https://doi.org/10.13042/Bordon.2016.48596

Merino-Tejedor, E., Hontangas, P. M., & Boada-Grau, J. (2016). Career adaptability and its relation to self-regulation, career construction, and academic engagement among Spanish university students. *Journal of Vocational Behavior, 93*, 92-102. https://doi.org/10.1016/j.jvb.2016.01.005

Migunde, Q., Othuon, L., & Mbagaya, C. (2015) Career maturity and career decision making status of secondary school students in Kisumu municipality, Kenya. *Educational Research, 6*(3) 50-54. https://doi.org/10.14303/er.2015.023

Miller, D. I., Eagly, A. H., & Linn, M. C. (2015). Women's representation in science predicts national gender-science stereotypes: Evidence from 66 nations. *Journal of Educational Psychology*, *107*(3), 631–644.

Moè, A., Hausmann, M., & Hirnstein, M. 2020). Gender stereotypes and incremental beliefs in STEM and non-STEM students in three countries: relationships with performance in cognitive tasks. *Psychological Research*. https://doi.org/10.1007/s00426-019-01285-0

Muthén, L. K., & Muthén, B. O. (2017). *Mplus user's guide* (7th ed.). Muthén & Muthén.

Navarro, R., Larrañaga, E., & Yubero, S. (2015). Gender identity, gender-typed personality traits and school bullying : Victims, bullies and bully-victims. *Child Indicators Research*, *9*(1), 1–20. https://doi.org/10.1007/s12187-015-9300-z

Negru-Subtirica, O., & Pop, E. I. (2016). Longitudinal links between career adaptability and academic achievement in adolescence. *Journal of Vocational Behavior, 93*, 163-170. https://doi.org/10.1016/j.jvb.2016.02.006

Oberts, U., Chamarro, A., & Renau, V. (2016). Estereotipos de género 2.0: Auto-representaciones de adolescentes en Facebook. *Comunicar*, *24*, 81–90.

Olsson, M., & Martiny, S. E. (2018). Does exposure to counterstereotypical role models influence girls' and women's gender stereotypes and career choices? A review of social psychological research. *Frontiers in Psychology*, *9*, 1–15. https://doi.org/10.3389/fpsyg.2018.02264

Picho, K., & Schmader, T. (2018). When do gender stereotypes impair Math performance? A study of stereotype threat among Ugandan adolescents. *Sex Roles*, *78*(3–4), 295–306. https://doi.org/10.1007/s11199-017-0780-9

Plante, I., O'Keefe, P., Aronson, J., Fréchette-Simard, C., & Goulet, M. (2019). The interest gap: how gender stereotype endorsement about abilities predicts diferences in academic interests. *Social Psychology of Education, 22*(1), 227–245 https://doi.org/10.1007/s11218-018-9472-8

Ramaci, T., Pellerone, M., Ledda, C., Presti, G., Squatrito, V., & Rapisarda, V. (2017). Gender stereotypes in occupational choice: a cross-sectional study on a group of Italian adolescents. *Psychology Research and Behavior Management*, *10*, 109–117. https://doi.org/10.2147/PRBM.S134132

Rudolph, C., Lavigne, K., Katz, I., & Zacherb, H. (2017). Career adaptability: A meta-analysis of relationships with measures of adaptivity, adapting responses, and adaptation results. *Journal of Vocational Behavior, 98*, 17–34. https://doi.org/10.1016/j.jvb.2016.09.002

Sanchez-García, M. F., & Suárez-Ortega, M. (2021). Professional success and satisfaction in the career development: Gender patterns. *Revista de Investigación Educativa*, 39(1), 31-48. https://doi.org/10.6018/rie.374121

Sánchez, M., Suarez, M., Manzano, N., Oliveros, L., Lozano, S. Fernádez, B., et al. (2011). Gender stereotypes and work values of Spanish students. *Revista de Educación, 355*, 331-354. doi: 10-4438/1988-592X-RE-2011-355-027

Santana-Vega, L.E, Gómez-Muñoz, A., & Feliciano-García, L. (2019a). Adolescents problematic mobile phone use, Fear of Missing Out and family communication. [Uso problemático del móvil, fobia a sentirse excluido y comunicación familiar de los adolescentes]. *Comunicar, 59,* 39-47. https://doi.org/10.3916/C59-2019-04

Santana-Vega, L. E., Medina-Sánchez, P. C., Feliciano-García, L. (2019b). Proyecto de vida y toma de decisiones del alumnado de Formación Profesional. *Revista Complutense de Educación, 30*(2), 423-440, https://doi.org/10.5209/RCED.57589

Santana-Vega, L. E., Feliciano-García, L., & Jiménez-Llanos, A. B. (2012). Toma de decisiones y género en el Bachillerato. *Revista de Educación, 359,* 357-387, doi: 10.4438/1988-592X-RE-2011-359-098

Santana-Vega, L. E., Feliciano-García, L., & Jiménez-Llanos, A. B. (2016). Apoyo familiar percibido y proyecto de vida del alumnado inmigrante de Educación Secundaria. *Revista de Educación, 372,* 35-62, doi: 10.4438/1988-592X-RE-2015-372-314

Santana-Vega, L. E., Feliciano-García, L. A., & Santana Lorenzo, J. A. (2012). Análisis del proyecto de vida del alumnado de educación secundaria. *REOP-Revista Española de Orientación y Psicopedagogía*, *23*(1), 26–38. https://doi.org/10.5944/reop.vol.23.num.1.2012.11391

Santos, M. A. Lorenzo, M., Priegue D., & Torrado, J. (2020). Variaciones en los hábitos de estudio en función del género y origen étnico-cultural del alumnado y su relación con el rendimiento escolar. *Revista Complutense de Educación, 31*(2), 163-171, https://dx.doi.org/10.5209/rced.62000

Savickas, M. (2013). Career construction Theory and Practice. In S. Brown y B. Lent (Eds.), *Career Development and Counseling. Putting Theory and Research to work* (pp. 42-70). John Wiley & Sons Inc.

Savickas, M. L. (2016). Reflection and reflexivity during life-design interventions: Comments on Career Construction Counseling. *Journal of Vocational Behaviour*, *97*, 84–89. https://doi.org/10.1016/j.jvb.2016.09.001

Savickas, M.L., & Porfeli, E.J. (2011). Revision of the Career Maturity Inventory: The Adaptability Form. *Journal of Career Assessment, 19*(4), 355-374. https://doi.org/10.1177/1069072711409342

Savickas, M., & Porfeli, E. (2012). Career Adapt-Abilities Scale: Construction, reliability, and measurement equivalence across 13 countries. *Journal of Vocational Behavior, 80*(3), 661-673. https://doi.org/10.1016/j.jvb.2012.01.011

Savickas, M., Nota, L., Rossier, J., Dauwalder, J., Duarte, M., Guichard, J., Soresi, S., Van Esbroek, R., & Van Vianen, A. (2009). Life designing: A paradigm for career construction in the 21st century. *Journal of*

Vocational Behavior, 75(3), 239–250. https://doi.org/10.1016/j.jvb.2009.04.004

Sawyer, S., Azzopardi, P., Wickremarathne, D., & Patton, G. (2018). The age of adolescence. *Child and Adolescent Health, 2*(3), 223-228. https://doi.org/10.1016/s2352-4642(18)30022-1

Schmitt, T. A. (2011). Current methodological considerations in exploratory and confirmatory factor analysis. *Journal of Psychoeducational Assessment*, *29*(4), 304–321. https://doi.org/10.1177/0734282911406653

Selimbegovic, L., Karabegovic, M., Blažev, M., & Burušić, J. (2019). The independent contributions of gender stereotypes and gender identification in predicting primary school pupils' expectancies of success in STEM fields. *Psychology in the Schools, 56*(10) 1614-1632. https://doi.org/10.1002/pits.22296

Shin, J.Y., Steger, M.F., & Lee, K.H. (2014). Major incongruence and career development among American and South Korean college students. *Journal of Career Assessment, 22*(3), 433–450. https://doi.org/10.1177/1069072713498485

Shin, Y., Lee, E.S., & Seo, Y. (2019). Does traditional stereotyping of career as male affect college women's, but not college men's, career decision self-efficacy and ultimately their career adaptability? *Sex Roles, 81*, 74–86. https://doi.org/10.1007/s11199-018-0976-7

Schuster, C., & Martiny, S. E. (2017). Not feeling good in STEM: Effects of stereotype activation and anticipated effect on women's career aspirations. *Sex Roles, 76*(1-2), 40–55. https://doi.org/10.1007/s11199-016-0665-3

Smith, S. (2014). Limitations to equality: Gender stereotypes and social change. *Juncture*, *21*, 144–150. https://doi.org/10.1111/j.2050-5876.2014.00795.x

Solbes-Canales, I., Valverde-Montesinos, S., & Herranz-Hernandez, P. (2020). Socialization of Gender Stereotypes Related to Attributes and Professions Among Young Spanish School-Aged Children. *Frontiers in Psichology, 11*:609. https://doi.org/10.3389/fpsyg.2020.00609

Steele, J., & Barlin, J. (1996). Influence of maternal gender-role beliefs and role satisfaction on daughters' vocational interests. *Sex Roles, 34*(9-10), 637–648 https://doi.org/10.1007/BF01551499

Struthers, K., & Strachan, G. (2019). Attracting women into male-dominated trades: Views of young women in Australia. *International*

Journal for Research in Vocational Education and Training, *6*(1), 1-19. https://doi.org/10.13152/IJRVET.6.1.1

Tellhed, U., Bäckström, M., & Björklund, F. (2017). Will I fit in and do well? The importance of social belongingness and self-efficacy for explaining gender differences in interest in STEM and heed majors. *Sex Roles,* 77(1-2), 86-96. https://doi.org/10.1007/s11199-016-0694-y

Tolentino, L., Garcia, P., Lu, V., Restubog, S., Bordia, P., & Plewa, C. (2014). Career adaptation: The relation of adaptability to goal orientation, proactive personality, and career optimism. *Journal of Vocational Behavior, 84*(1), 39-48. https://doi.org/10.1016/j.jvb.2013.11.004

Villanueva-Blasco, V., & Grau-Alberola, E. (2019). Gender and age differences in the internalization of gender stereotypes in early and mid adolescence. *Electronic Journal of Research in Educational Psychology, 17*(47),107-128. doi: 10.25115/ejrep.v17i47.2184

Viola, M.M., Muso, P., Ongoglia, S., Lo Coco, A., & Inguglia, C. (2017). Relationships between career indecision, search for work self-efficacy, and psychological well-being in italian never-employed young adults. *Europe's Journal of Psychology, 13*(2), 231-250. https://doi:10.5964/ejop.v13i2.1277

Zhang, J., Yuen, M., & Chen, G. (2021). Career-Related Parental Support, Vocational Identity, and Career Adaptability: Interrelationships and Gender Differences. The Career Developmnet Quarterly, 69(2), 130-144. https://doi.org/10.1002/cdq.12254

Zhao, F., Zhang, Y., Alterman, V., Zhang, B., & Yu, G. (2018). Can Math-gender stereotypes be reduced? A theory-based intervention program with adolescent girls. *Current Psychology*, *37*(3), 612–624. https://doi.org/10.1007/s12144-016-9543-y

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