

Perfectionism in primary and secondary education: Bibliometric and thematic analysis

Abstract

In the present work we intend to analyze the perfectionism as a characteristic feature of primary and secondary education students. Students with traits of perfectionism are characterized by setting very high standards in academic performance, making impeccable efforts, and establishing critical self-assessment. On the other hand, students with socially prescribed perfectionism are characterized by the beliefs that the subject has about the demands of significant people in their environment, whether these are real or not. This research aims to know the scientific production on perfectionism in Primary and Secondary Education students, published in the *Web of Science* database between 2017 and 2020. After analysing all the writings, a total of 227 articles were obtained, which were analyzed through various bibliometric indicators. It was observed that in relation to various thematic categories, such as family, emotional changes or academic performance, the most repeated in the works analyzed was that of Associated Psychopathologies, related to eating disorders, anxiety or depression. In addition, the results show that most of the works focus on Secondary Education students, and, therefore, older students, leaving Primary Education in the background. The conclusions of the investigation show that the age range from 6 to 12 years has not been investigated yet. Finally, different aspects of the subject are discussed and concluded in relation to the hypotheses raised at the beginning of the work, the limitations found throughout the study are presented, and reference is made to the conclusions. As possible future lines of research, it is proposed to analyze perfectionism in relation to various factors such as gender or the sociocultural environment of the students.

Keywords: perfectionism, bibliometric analysis, primary education, secondary education, childish, teen

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Introduction and justification

Nowadays, young people are part of a society in which too many demands are often placed on them. This is when the term infantile-juvenile perfectionism appears. This is defined.¹ as a personality disposition that is characterized by making impeccable efforts and setting high standards in academic performance, but which is also accompanied by critical self-evaluation, the so-called self-oriented perfectionism. But perfectionism is not only manifested through a personal trait of the individual, but can also be forced and imposed by the social environment of children and adolescents. This is conceptualized as socially prescribed perfectionism and has been defined by Vicent et al.² as an interpersonal facet, according to which perfectionism would come from the beliefs that the subject has about the demands of significant others in his or her environment, through the imposition of very high performance expectations and the tendency to judge results harshly. These beliefs may or may not be real, since sometimes the student himself comes to confuse and misinterpret the demands of the environment.

Perfectionism is increasingly present in the classroom, but not only in relation to academic performance, but also in other areas, such as physical appearance through sport or social acceptance.³ Within Compulsory Secondary Education there are some traits of perfectionism that can be considerably important in adolescence.⁴ Perfectionism is one of the characteristic features of people with eating disorders such as bulimia nervosa or anorexia. Adolescents with either of these disorders are also often characterized by high expectations for academic performance, social interactions, and career success.

Not all children and adolescents self-impose a series of goals or demands on themselves; on many occasions these impositions are determined by external agents or by the young people's own family

members.⁵ At younger ages, the impositions come from the parents of the students, while, at later ages such as adolescence, the impositions come from the subject himself, but are conditioned by his peers or people in his environment.⁶

In this line, parents are a determining element in perfectionism, and many of them influence the social and academic life of their children, some in a positive way, but others in a more negative way.⁷ Unrealistic goals to achieve, exaggerated beliefs about their children, and expectations that are too high or impossible to achieve are some of the mistakes that families make.⁸

All students with signs of perfectionism⁹ show a series of common characteristics that, although they are treated in a generalized way, are based on a series of empirical evidences.^{10, 11} The most general characteristics are: a rigid thinking style, cognitive errors, low self-esteem, cognitive avoidance, weak beliefs in relation to self-efficacy, unproductive logical analysis, etc. But in addition to these characteristics based on resource deficits and dysfunctional coping, it can be observed that perfectionist tendencies can lead to a series of more serious problems such as anxiety, eating disorders, depression, social phobia, suicidal thoughts or aggressive attitudes.¹²

Gender characteristics have been analyzed with respect to perfectionism.¹³ Boys have a higher level in self-oriented perfectionism, whereas, in socially prescribed perfectionism, both boys and girls have a similar level.

Another study¹⁴ shows how socially prescribed perfectionism is directly related to high scores in school rejection. This school rejection is accompanied by a refusal to be separated from the affective figure of the student, which generates excessive anxiety. For this type of anxiety, socially prescribed perfectionism acts as a "positive

predictor". Similarly, Socially Prescribed Perfectionism is linked to Positive Affect and Negative Affect and various works¹⁵ establish a positive relationship between this type of perfectionism and Negative Affect, and a negative relationship with Positive Affect.

As for self-oriented perfectionism, different authors¹⁶ conclude that students with this type of perfectionism gradually lose the various interactions with their peers, so they become more inflexible, less empathetic and isolate themselves more often, even reaching aggressive or hostile behaviors young.¹⁷ This may be due to various characteristics such as responsibility, the need for achievement and success or because of their competitiveness. These students may also present high social and achievement or learning goals.¹⁸

As indicated above, although these characteristics are general, they are not applicable to all students, since on many occasions they go unnoticed or are not paid attention to. This is because it is not considered a need as such, and on several occasions the perfectionism that some students may show is interpreted as a need to attract attention or to be the best at something.¹⁹ When this happens, and perfectionism takes a back seat, and numerous problems such as those mentioned above are triggered.

Bibliometric studies on perfectionism

For the elaboration of this work, several review papers by different authors have been taken into account, but more specifically, bibliometric studies have been analyzed.^{5,20} These studies show that there is little production on perfectionism in the child and adolescent population, compared to the production of studies on perfectionism in adults. Despite this scarcity of works on the subject, there are some upturns, such as in 2009, when production increased. Similarly, it should be noted that the vast majority of the studies carried out so far are based on the negative aspects of perfectionism, taking into account only those elements that relate the construct to eating disorders, anxiety, depression, among others.²¹

On the other hand, there is still a tendency to conduct studies related to perfectionism and adolescents, leaving aside the younger population, such as students in kindergarten and primary education.⁵ Other authors²⁰ take into account various indicators such as production by journals, so the fact that there are no specific journals for this phenomenon can be considered a limitation. Perfectionism is studied in different fields and the works on it, for the most part, are published in eating disorders journals such as the *International Journal of Eating Disorders*.

The 2009 spike has not happened again, so research on perfectionism in children and adolescents is needed. In this way, more current information on the subject can be accessed to find out whether the number of publications has increased.

Objectives and hypotheses

Due to the relevance of the topic of perfectionism, because of its consequences on the emotional well-being and academic adjustment of children, and its close relationship with education, the following objectives are established for the present work:

- i. To analyze and quantify existing work on perfectionism in Primary and Secondary Education between 2017 and 2020.
- ii. To identify possible variables or thematic categories of perfectionism in children and adolescents.

At this point, and after reviewing different studies on the subject, it is necessary to establish the hypotheses of the present work. First,

the first hypothesis is that the journals in which studies on child and adolescent perfectionism have been published will continue to be mainly those related to eating disorders. Secondly, the second hypothesis refers to the fact that, despite the fact that there has been an increase in the production of papers on perfectionism in the child population, the adolescent population continues to be the most studied. Perfectionism does not cause the same consequences in children as in adolescents,²² the latter being more significant.

Method procedure

First, a literature search was conducted in the *Web of Science database*, with a time interval of 4 years, from 2017 to 2020. For this purpose, the search strategy ("perfectionism*" or "perfectionist") and ("primary education" or child* or teen* or adolescent* or "secondary education") was used. This strategy was used in the database obtaining a total of 682 documents. We then proceeded to read the abstracts of all the documents or, in cases where the abstract was not complete, to read the full text. In order to limit the search, we discarded those documents that did not contain an abstract, because the keywords and title did not provide sufficient information to understand the content, those that were not signed by any author, and those that did not fit the subject of the study, such as, for example, perfectionism based on adults. In addition, the papers that were repeatedly indexed in the database were counted only once. In this way, a total of 227 documents were collected and subsequently analyzed according to different study variables. The study variables used were: temporal production, by journals, by authors, by content, by research area and by countries (Figure 1).

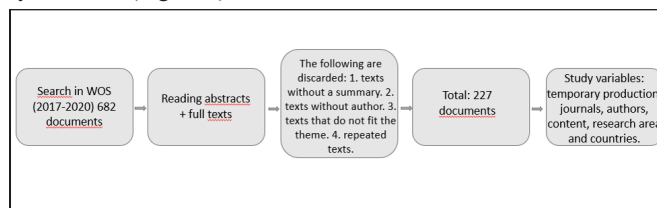


Figure 1 Search strategy

*Method: procedure * Part 2.

Materials

In the search for the unit of analysis, the *Web of Science database* was used; this is a well-known platform in the world of research and collects a multitude of scientific papers from all countries. In addition, it contains works of all types and is therefore considered multidisciplinary.

Data design and analysis

The unit of analysis consisted of a total of 227 documents published in the *Web of Science database*, between the years 2017 and 2020. The design of this study is an *ex post facto retrospective* design in relation to the classification made by Montero and León (2007).

Results

Temporary production

In relation to the analysis of the 227 documents according to the year in which they were published, the number of publications fluctuated between 36 (15.8%) and 83 (36.5%), obtaining an average percentage of annual productions of 56.7%. As can be seen in Figure 1, the time period from 2019 to 2020 is the highest in terms of production, with 2019 being the most productive year. Likewise, it

can be seen how in previous years the production level was lower, and this trend has returned past 2019, since in 2020 a drop in production is again observed (Figure 2).

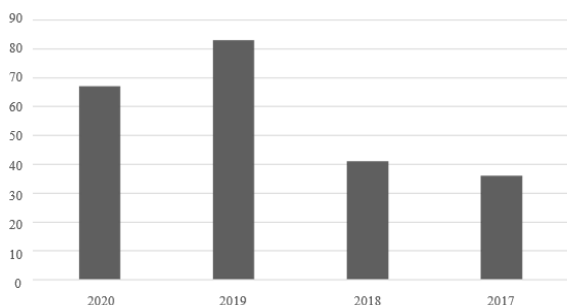


Figure 2 Temporal distribution of production according to year of publication.

*Results: temporary production

Production by magazines

The papers included in this analysis were published in 148 journals. The following table shows the 9 journals with the most papers on the topic in question. It can be seen how the journal *Personality and Individual Differences* stands out for its greater production in comparison with the rest of the journals (Table 1).

Table 1 Journals with the highest production and number of published papers

Magazines	Frequency	%
Personality and Individual Differences		7,04%
Eating Behaviors		2,64%
International Journal of Eating Disorders	5	2,20%
Korean Journal of Youth Studies		1,76%
Child Psychiatry Human Development		1,76%
International Journal of Environmental Research and Public Health		1,76%
Eating and Weight Disorders Studies on Anorexia Bulimia and Obesity		1,76%
Anxiety Stress and Coping		1,32%
Journal of Child and Family Studies		1,32%

*Results: Production per magazine

Production by author

The 227 documents analyzed for this study were signed by a total of 624 authors. Figure 2 shows the productivity of the authors in relation to the papers published on the topic under investigation. The classification has been made following the criteria of Crane,²³ who distinguishes between bystanders (authors with only one paper), aspirants (authors who have published 2 to 4 papers), moderate producers (5 to 9 publications) and major producers (between 10 and more publications) based on the papers produced by the authors. As shown in Figure 2, most of the authors are part of the group of bystanders with only one published work, and only 1% are part of the group of large producers.

On the other hand, Table 2 shows the authors with the greatest number of publications, with González C., García Fernández J.M., Sanmartín R., and Vicent M. being the greatest producers on the subject (Figure 3 & Table 2).

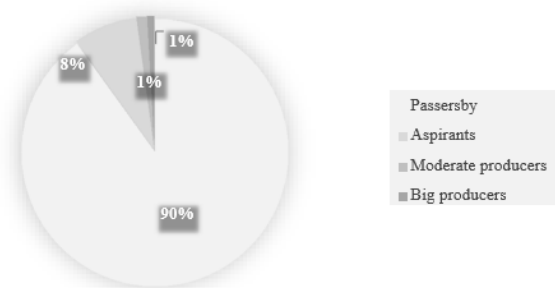


Figure 3 Ranking of authors according to productivity

*Results: production by author

Table 2 Production of papers by author

Authors	Frequency	%
González C.		5,72%
García-Fernández J.M.		5,28%
Sanmartín R.		5,28%
Vicent M.		5,28%
Egan S.J.		4,40%
English C.J.		4,40%
Hill A.P.		3,96%
Madigan D.J.		3,08%
Wade T.D.		3,08%

*Results: production by author

Analysis of thematic areas

Table 3 shows the different thematic categories extracted from all the papers analyzed in this research. As can be seen, seven categories have been established in which the 227 articles that make up this work have been classified.

Table 3 Thematic categories

Categories	Frequency	%
Associated psychopathologies		52,86%
Family and perfectionism		14,09%
Intervention, revisions or validations		11,89%
Emotional or personality changes		11,01%
Social variables		5,28%
Academic performance		2,64%
Age or sex variables	5	2,20%

Results: analysis of thematic areas

As can be seen in Table 3, the category with the largest number of papers is Associated Psychopathologies, with a total of 120 papers. Each of the categories is explained individually below.

Associated psychopathologies

If we consider perfectionism as a personality characteristic of the child and adolescent population, several variables can be found within this category. The main one refers to Eating Behavior Disorders (ED),

which are the subject of most of the 120 papers (52.86%) collected in this first category. On the other hand, a large number of papers related to anxiety, depression or stress have also been found.

Family and perfectionism

This category includes 32 documents in which the origin of perfectionism is defined within the family nucleus itself. Different models of fathers and mothers, high expectations, unconstructive criticism or parental control are some of the variables found in this category.

Intervention, revisions or validations

The third of the established categories refers to interventions, reviews or validations in relation to perfectionism. Of the works reviewed, 27 have been grouped in this category, since they are interventions within Primary Education groups or at adolescent stage, reviews of other works on perfectionism, validations of different scales to measure perfectionism in students.

Emotional or personality changes

This theme includes 25 papers, which focus on emotional variables or on the changes that the personality of perfectionists may undergo. Changes in self-esteem is one of the most characteristic features of the papers grouped in this category. Similarly, papers have been found related to behavior modification, emotional well-being or sudden changes in mood.

Social variables

Some of the studies, 12 in particular, have dealt with social variables affecting children and young people. Problems in their social relationships, thinking that their peers expect too much from them or loneliness in relation to poor social competence, are the main variables that have been found.

Academic performance

A total of 6 documents related to perfectionism and academic performance were found. Although this topic is often related to student perfectionism, it is not the main determinant of it. Numerous studies have been found in which the family has favored perfectionism in children because of a continuous need to improve their children's grades. In addition, a less numerous number of studies have also been found in which the students themselves are the ones who seek perfectionism in their grades.

Age or sex variables

In last place is the category of age or gender with 5 papers. These papers made a differentiation in relation to the age of the students or their gender, in order to learn more about the influence of perfectionism. In other words, a study of perfectionism was made taking into account only the age of the children or their gender with the intention of finding out whether there is a greater or lesser degree of perfectionism.

Research area

The main areas of research in which perfectionism in primary and secondary school students can be included are shown in Figure 3. The papers have been classified in the different areas taking into account their subject matter, as well as the journals in which they were indexed.

The four areas that stand out in the subject are Psychology, Psychiatry, Education and Neuroscience. However, the area of

Psychology is of special relevance, since it has 146 papers (61%) of the 227 papers selected. As shown in Figure 3, in second place is the area of Psychiatry, but it has only 52 papers (22%) of the 227 documents (Figure 4).

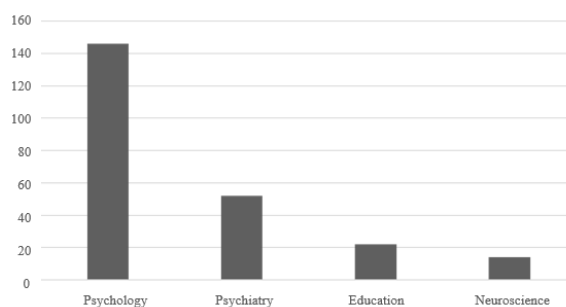


Figure 4 Research areas

*Results: research areas

Countries

The countries with the greatest number of studies on the topic addressed in this paper are the United States with 50 studies (21%), England with 35 (14%), Spain with 35 (14%), Australia with 26 (11%) and Canada with 17 (7%). As can be seen in the graph, the United States is in first place, followed by England and Spain, which have the same number of papers on perfectionism in primary and secondary education. In last place is Canada with 17 papers on the subject. In addition to these countries, others such as Italy, Belgium and Argentina have published on the subject in question. This classification has been made taking into account the institutional affiliation of the authors of the papers (Figure 5).

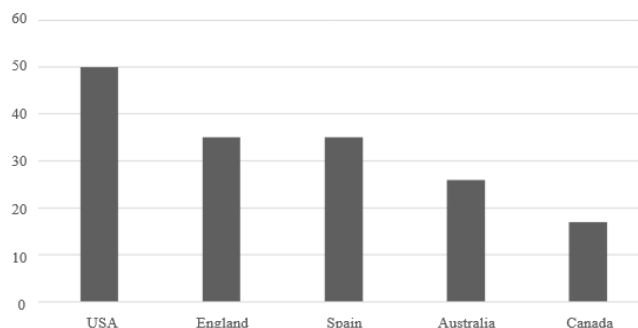


Figure 5 Number of publications by country

*Results: countries

Discussion

The aim of the present study was to analyze and quantify the existing published works on perfectionism in Primary and Secondary Education and to identify the possible variables of perfectionism in children and adolescents. Taking into account the stated objectives, the results of the research are discussed.

After analyzing all the scientific production on perfectionism in Primary and Secondary Education between 2017 and 2020, it has been observed that there has been an increase in research on the topic. Although the increase has not been very significant, it is true that more and more attention is being paid to the topic in question. The results obtained show that, despite this upturn, in 2020 the number of works carried out on the study of perfectionism in children and adolescents decreased again, which is why greater involvement in the subject is necessary.

On the other hand, considering the first hypothesis, which was focused on the journals where works on child and adolescent perfectionism are published, it can be confirmed that this hypothesis is maintained, since the first journals in which the analyzed works are found are related to eating disorders. Specifically, the second and third journals: "Eating Behaviors" and "International Journal of Eating Disorders". As for the first journal with the largest number of papers on the subject in question, despite not being a journal specializing in eating disorders, it has collected the vast majority of papers on the subject.

On the other hand, the second hypothesis established, which referred to the fact that the adolescent population is the most studied in the area of perfectionism, has also been fulfilled. Although the number of studies in the field of primary education has increased over the years, it is also true that the amount of research on perfectionism in adolescents and adults is greater. This may be directly related to the subject matter of the studies. That is, as has been shown in this research, the category with the largest number of papers has been Associated Psychopathologies. This category contains to a greater extent, as explained above, papers related to ED or anxiety and depression. For these reasons, it is possible that these cases occur more in Secondary Education than in Primary Education. It should be noted that most of the studies reviewed show the negative side of perfectionism in students, and on few occasions do they talk about any positive characteristic of perfectionism.

As stated by Chemisquy²⁴ and as demonstrated by this research, most of the papers on perfectionism deal with psychological health problems such as Eating Disorders, anxiety or depression. This category represents the majority of the works published on perfectionism to date. Likewise, the works carried out with adolescent and adult population are more present in the databases. On the other hand, studies related to primary school students are less numerous than those mentioned above. In cases of perfectionism in primary education, the main consequences are school anxiety and school rejection.²⁵

If the results obtained in the present research are observed, it can be seen how the results coincide with other studies.^{24,25}, since the main area of research is Psychology, where the aforementioned variables are included. In addition, the main journal "Personality and Individual Differences" would also be directly related to the characteristics and consequences defined in the main works on perfectionism.

With regard to the limitations encountered in carrying out this work, it should be pointed out that, on occasions, the information provided by the abstracts of the papers analyzed was insufficient to classify them in a given category. For these reasons, it has been necessary on many occasions to read the complete papers in order to expand the information. This has meant an increase in time in relation to the analysis of the papers published in WOS. In addition, only one database has been used in this research; for future work it would be interesting to consider other databases and other bibliometric indicators with which to obtain more information to carry out a complementary study on the subject.

Conclusion and future lines of research

In conclusion, it is necessary to emphasize that most of the works that have been analyzed, comment on and study the negative aspects of perfectionism in which the results are equally negative. Fewer studies have been found that discuss possible solutions, strategies or activities to control or improve cases of maladaptive perfectionism.²⁶ With this

conclusion in mind, some lines of future research can be drawn. After analyzing the topics on which perfectionism is worked on in primary and secondary education, the determinants of perfectionism could be assessed, such as the gender factor of the students, the sociocultural factor or the relationship with peers. In addition, it would be interesting to work on and continue researching perfectionism in the classroom, that is, to investigate how perfectionism influences the integral development of students and to propose strategies that minimize its possible negative consequences.

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None.

Conflicts of interest

The author declares that there are no conflicts of interest.

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