Interventions to foster creativity in training programs for future counselors: a systematic review

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Abstract

Background: Creativity has been thought to be beneficial in the counseling practice, not only as a resource or an intervention, but as a skill used by the counselors themselves. However, creativity is hardly ever part of the curricula in higher education programs for future counselors. The aim of this thesis is to provide an overview of the current knowledge regarding the characteristics and effects of interventions to foster creativity in students in counseling training and education programs.

Methods: A systematic literature review was conducted using the electronic databases PubMed, PsycINFO and Web of Science in May 2022. For each database, combinations of four search themes were used: "counseling education creativity", "counselor education creativity", "counseling training creativity", and "counselor training creativity". This resulted in a total of 580 studies. The application of several criteria of inclusion and exclusion resulted in a final selection of five studies.

Results: It was found that creativity training comes in many forms, interventions varied in conceptualizations, processes targeted for development, characteristics, and measures of evaluating the results. The five selected studies suggest that interventions to foster creativity in future counselors have positive results, though evidence of the effectiveness needs to be taken with caution.

Conclusion: This systematic review is an attempt to get an overview of the characteristics and effects of interventions to foster creativity in counseling training and education. There appears to be potential in these interventions to develop creativity, however, more research is necessary to help enhance understanding of how such interventions can be implemented and their effectiveness determined.

Table of contents

1. Introduction

One of the biggest challenges in counselor's education is the development of a broader range of skills and competences for the demands that the profession requires in an "increasingly complex" millennium, marked by war, natural disasters, social uprising, economic downturns, and never-ending technological advancements (Lawrence et al., 2015). As far as counseling education goes, research has found that basic counseling skills appear to be taught effectively in training programs, but are hard to maintain through time, indicating that skill instruction alone may not be adequate for counselor competence (Brendel et al., 2002).

Creativity, which has been described as the combination and recombination of ideas that can lead to adaptive notions, solutions, or even insights, could help with maintaining skills taught in training (Lawrence, 2012). Creativity is assumed to be a thought processes that can be carried out to some degree by all of us, can produce innovations and result in problem solving (Weisberg, 2006). Research shows that creativity is essential to keeping pace with the complexity of our times (Lawrence et al., 2015); and it can also be utilized to enhance understanding and strengthen the application of counseling concepts and skills (Wells & Dickens, 2020). Furthermore, when in the counseling environment, creativity can deepen connections, increase intimacy, and foster new ways of thinking about therapeutic work (Duffey et al., 2009).

Creativity is found to be a trait necessary for a professional, and can be learned, developed, and fostered over time to be used in counseling, though it rarely appears to have a place in counselor education programs (Hecker & Kottler, 2002). Moreover, existing research tends to be done in relation to creative arts training (Smith, 2011). Establishing successful interventions or programs to foster creativity in counselors is important, nonetheless, there seems to be a lack of research on this matter, even less so studies to evaluate the effectiveness of these interventions. The goal of this paper is to do a systematic literature review to identify what the literature proposes for interventions that foster creativity in clinical training programs for future counselors, describe their characteristics and effects. This could be beneficial to understand how creativity training should be regarded as a vital part of counselor education, and it can be a starting point for further research.

1.1 Counseling education

Throughout history, psychology has endeavored to stand among other so called "hard sciences" by using comparable research procedures (Tachella, 2011). As a result, there have been

a lot of challenges in trying to integrate or discuss different paradigms and practices in the field. Even reaching a consensus on the definition of counseling often proves to be difficult, because of the multiple uses and practices for which the term is applied. For this research, counselor will be defined as a graduate degreed professional trained to work with individuals in various settings; and counseling as a process that involves professional relationships designed to assist those individuals toward mental health, wellness, education, and career goals (Kaplan et al., 2014).

Many counselors can feel like they must either adhere to scientific methods or ground their work only on the latest findings in order to be taken seriously (Lilienfeld et al., 2014). This is not necessarily a problem, however, there can be some who "adhere dogmatically to rules of procedure and exclude specific interventions that could be helpful even if not generally recommended by the particular approach" (Dryden, 2018, p. 6). There is no doubt that practitioners in clinical psychology and related mental health disciplines need to have evidence-based practices. Nevertheless, Marks-Tarlow (2014) talks about the need for counselors to understand the limitations of a popular generalized treatment regimen or manual techniques and make use of intuition, being open "to honor the mystery of irreducible uniqueness" (p. 392). This does not mean that one should start trying out questionable treatment methods, it has more to do with understanding that every client is unique, and the counselor needs to be open to exploring this with them.

Hecker and Kottler (2012) affirmed that counseling involves a blending of well-crafted skills that are theoretically grounded, with the clinical judgement to apply those methods in ways that are consistently helpful to others. It is in the applying of these methods that both therapists and clients need to tap into their creative resources. Studies on counseling effectiveness often distinguish between two sorts of components: particular factors, which are unique to each theory, and non-specific elements, which are aspects common to any counseling procedure, regardless of the techniques used and the theories that support it (Winkler et al., 1989). Creativity is considered one of these non-specific elements.

1.2 Counseling and creativity

One of the main factors that seems important in creativity is the ability to see things in an original way, but that is not the only ingredient in the construction of the creative person. After all, the original solution to a problem can be new, but it may be useless (Cabral, 2000). Creativity is then more than being original, as it relates to the action, but also to the purpose behind it. Not all

methods work for everyone, which is why it is so important for the counselor to keep in mind the uniqueness of every client that steps foot in their practice.

Landau (2008) compares the counseling process to the creative process and believes that the counselor's behavior oscillates between that of a scientist and that of an artist, depending on how they employ their creativity. It is also fundamental to understand that the generative process of creativity goes hand in hand with the art and science of counseling (Hecker & Kottler, 2002). In the mental health context, Jacobs and McNiff (1992; 1981, as cited in Lumadue et al., 2005) define creativity as that which "speaks in part to a therapist's willingness and ability to responsibly and creatively think outside the box, while fostering in their clients their own creative and innovative capacities to consider and work through issues and problems" (p. 8).

Creativity can be both an end and a means of counseling. An end, because patients are encouraged to acquire new insights, a new way of looking at things that is more flexible, to broaden their possibilities of action and to improve their abilities to adapt. And means, because the treatment process relies on the creativity of both the patient and the therapist, as they enter a therapeutic relationship oriented to the joint discovery of new meanings (Brasini, 2020). The application of creativity in the clinical practice is necessary because most counselors can, at times, feel stuck with their clients, which has little to do with the client and can instead be a result of the clinician's own rigidity and lack of inventiveness (Hecker & Kottler, 2002). Creativity, Hecker and Kottler (2002) reiterate, is a process typically born from frustration and need for a solution, which occurs when we keep going over the same problems without finding a solution or an alternative path to take. Rothenberg (1988) talks about the need for counselors to work with this desire and engage in an ongoing mutual creative process. The counselor should be flexible, take risks and be as creative as possible; yet, always base their technical approaches on science, from a systemic body of knowledge and theory.

Carson and Kent (2004) made a critical analysis of several articles of the role of creativity in counseling. In it, they found that creativity is needed to promote positive or corrective emotional experiences of clients, which facilitates the "flow" of therapy. They also found that it allows counselors to apply traditional approaches to help in new and fresh ways; and that it is useful to better achieve the short-term approaches that clients demand nowadays.

Creativity appears to be an important element in counseling but is thought to be a characteristic that is only present in some individuals. Yet, research has found that everyone has

personal creativity, and effort to enhance it could prove to be effective, as one can give someone with moderate potential the strategies and skills they need, and they can get to perform at a higher level than someone who has more potential but less interest (Runco, 2006). In fact, an extensive review on the matter of creativity training was conducted by Scott et al. (2004), which found evidence that creativity training programs can be successful. A more recent methodological analysis on the topic by Valgeirsfotty and Onarheim (2017) concluded that there are numerous well-documented and successful creativity training programs, though the question of what makes one program more effective than another remains undetermined. Understanding which methods of intervention work, could encourage counseling programs to have creativity training and intervention as part of their coursed, as its implementation would be perceived as important as the training of other counseling skills.

This paper aims to summarize the existing literature on creativity education for counselors in higher education settings by conducting a systematic review that provides an overview of the current research on interventions to foster creativity in counseling education. The following questions are used as guides to accomplish that:

a) What are the characteristics of the interventions proposed for creativity training in counseling education?

b) What are the effects of the interventions to foster creativity on counseling education?

2. Method

2.1 Search strategies

This research was carried out using the methodology of a systematic review of the scientific literature, like the methodology guided by the PRISMA model (Preferred Reporting Items for Systematic reviews and Meta-Analyses) (Page et al., 2021). A search was conducted in the electronic databases PubMed, PsycINFO and Web of Science in May 2022. Combinations of four search themes were used to search, which covered "counseling education creativity", "counselor education creativity", "counseling training creativity", and "counselor training creativity". Terms like "psychotherapy" or "psychotherapist" were also used as synonyms of "counselor" and "counseling" to heighten the chance to find topic relevant articles. Search terms were combined with the operator "AND". Table 1 lists the number of articles found in each database, as well as the search parameters used. Backward and forward snowballing, which refers to using the references and citations to identify additional papers, was done using PsycINFO. Moreover, and

to further ensure the finding of all relevant articles, the "Citation" tool on the network ResearchGate was used, as it can have resources not found elsewhere.

Table 1

Search Parameters and Initial Results

Search terms	Database	Search Limiters	Hits
counseling AND education AND creativity psychotherapy AND education AND creativity counselor AND education AND creativity psychotherapist AND education AND creativity counselor AND education AND creativity	Web of Science	Add terms: Topic (searches title, abstract, author keywords, and Keywords Plus) Document Types: Articles Research Areas: Psychology, Education Educational Research, Social Sciences Other Topics, Arts Humanities Other Topics, Psychiatry, Behavioral Sciences Languages: English	380
psychotherapist AND education AND creativity	PubMed	Add terms: Title/Abstract Language: English	112
counseling AND training AND creativity psychotherapy AND training AND creativity counselor AND training AND creativity psychotherapist AND training AND creativity	PsycINFO	Select a Field: Title, Subjects, Abstract, Keywords Source Types: Academic Journals Language: English Peer Reviewed	16
	Initial Total		*508*

Note. All searches were limited to publications between 2002-2022.

2.2 Eligibility criteria

The first basic criteria for inclusion of studies were: a) published in a peer-reviewed journal, b) published between January 2002 and April 2022, c) written in English, d) took place in counseling education programs with teachers or students, e) included description of the intervention or programs. Studies were excluded if they a) were a case study, b) had interventions focused on fostering the use of art creativity, c) had creativity as the medium and not the desired result, d) used creativity as a medium to improve another skill.

2.3 Study selection

After an initial identification of studies in three databases, duplicates were recognized and removed using the tool Zotero (version 6 for Mac), first within the databases, as different combination of keywords resulted in similar findings, and later between all databases. After that, titles were screened, followed by abstracts, and the remaining papers were examined based on the eligibility criteria. Full texts were retrieved and screened, leading to further exclusion of texts that failed to meet the inclusion criteria. Backward and forward snowballing resulted in no other studies than the ones already selected from the database search. A manual search using ResearchGate identified two additional studies that were ultimately included in this review.

2.4 Data extraction

Using Numbers spreadsheets, the studies selected were read and relevant data was extracted. The following information was extracted from the included papers: author, date of publication, aim, study design, intervention, methods and results. Furthermore, given that only five studies were ultimately included in this research, the interventions/programs proposed in each study are extensively described, as well as the results on their effectiveness.

3. Results

3.1 Included articles

The literature search identified 508 records. After excluding 316 duplicates, 192 records were screened on title and abstract. Of these, 27 studies were examined for further consideration, leading to further exclusion of 24, resulting in three studies. A manual search yielded two additional studies that met inclusion criteria. Overall, five studies were included in the review. The whole selection process is illustrated in the PRISMA flow diagram in Figure 1.

Figure 1

PRISMA 2020 Flow Diagram for Screenings and Selections
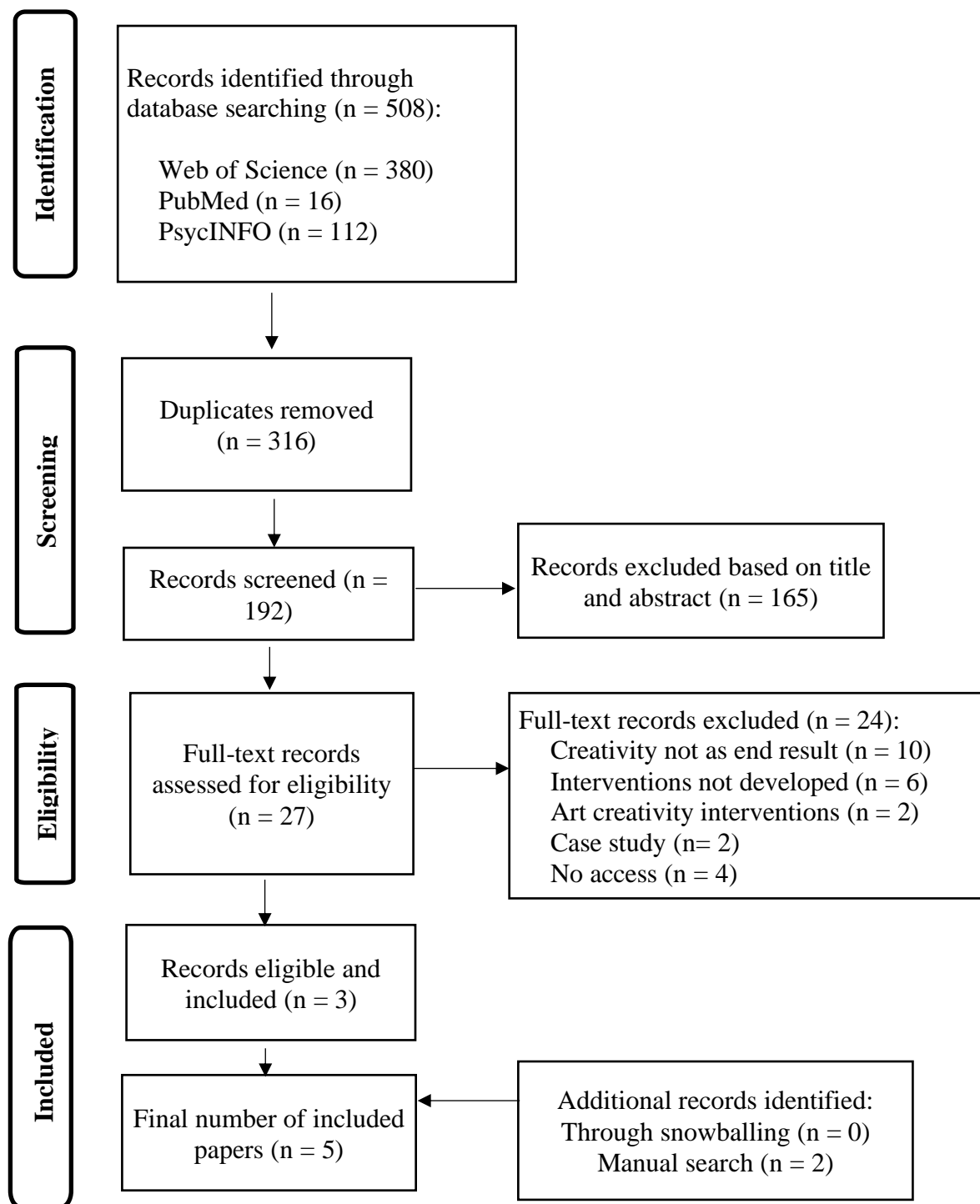
Note. Filled using the PRISMA 2020 flow diagram model by Page et al. (2021).

3.2 General characteristics of the included studies

The included studies came from four different countries (United States, Spain, Turkey, and Ukraine), and were published between 2011 and 2021. Three studies were qualitative study designs (Buser et al., 2011; Canel, 2015; Duenyas & Perkins, 2021), one quantitative (experimental) (Bellosta-Batalla et al., 2021), and one had mixed methods, including an experimental intervention with qualitative analysis of the results (Kryshtanovych et al., 2021). Studies aimed to analyze and test the effects of different models and interventions to increase verbal creativity, creative thinking or creative skills. One study mainly aimed to understand the creative experience of the participants, but also had the purpose of developing creativity in them (Duenyas & Perkins, 2021). Authors, publication year, location, study design, and aims of the included studies can be found in more detail in Table 2.

Table 2

Characteristics of the Selected Studies

Authors	Year	Location	Study design	Aims
Bellosta-Batalla, et al.	2021	Spain	- Quantitative - Experimental analysis	Analyze the effects of a mindfulness and compassion-based intervention (MCBI) on verbal creativity in students of clinical and health psychology.
Buser, et al.	2011	United States	- Qualitative - Constant comparison analysis	Examine the experiences of counseling students in learning and applying the SCAMPER model for creative thinking.
Canel	2015	Turkey	- Qualitative - Content analysis	Test the effectiveness of an 11- week program that aims to enhance the creativity and the creative counseling skills of counseling candidates
Duenyas & Perkins	2021	United States	- Qualitative - Phenomenolo-gical research	Understand the creative experiences of counseling graduate students using a makerspace to develop a counseling intervention
Kryshtanovych, et al.	2021	Ukraine	Mixed methods: experimental and qualitative design	Systematize the process of increasing the creativity of psychology students with the help of mechanisms and elements of the functional model of IDEF0.

3.3 Characteristics of the interventions

An overview of all selected studies' interventions is shown in Table 3, where each article is accompanied by a description of the intervention design, as well as the sample and participant type. Participants in the studies all had similar characteristics, as they were students enrolled in various programs to become counselors, either in bachelor or master level. One study that differed was due to the intervention being aimed first at teachers, who then had to apply it to the students (Kryshtanovych et al., 2021). Sample size varied a lot, from n = 7 to n = 90, with the largest sample being the one with the experimental design (Bellosta-Batalla et al., 2021), and the smallest being the phenomenological research (Duenyas & Perkins, 2021).

A study with an intervention involving elements of mindfulness and compassion to improve verbal creativity (Bellosta-Batalla et al., 2021) was assigned to an experimental group, and compared to a waiting list group with no intervention, and a non-randomized active control group who received basic psychotherapy skills. The intervention for the experimental group lasted two months and consisted in weekly sessions of two hours, which addressed basic aspects of mindfulness and compassion, and included 20-minute guided meditation exercises, as well as activities and exercises proposed. Participants recorded the minutes dedicated for meditation each week. The active control group received weekly practical sessions of three hours each, throughout five months, and were taught several therapeutic approaches, performed exercises simulating clinical situations, observed psychotherapeutic and supervisory sessions.

Another intervention (Buser et al., 2011) was an 8-week program to teach SCAMPER (Substitute, Combine, Adapt, Modify, Purpose, Eliminate, and Reverse) model, originally created by Bob Eberle in 1971. In it, the researchers wanted to explore the experiences of participants learning and using the SCAMPER model in a lengthy training intervention, so they employed the qualitative method of constant comparison analysis to extract meaningful categories from their recounts. The first week of the program was dedicated to explaining the model in class, and the following seven involved participants being assigned to task groups of four to five members to apply the model to case studies or topics. Reflecting on the experience by journaling was intended to better understand the usage of the model, as well as the relevance of group work.

In the qualitative study by Canel (2015), a Creative thinking and creative counseling development program was designed and implemented for 11 weeks, not only to enhance creative thinking, but also creative counseling skills of students, by teaching them how to apply them. The

program was implemented twice, first in the 2012-2013 academic year, and after an evaluation and implementation of changes to make it more effective, in the 2013-2014 academic year. The enhancement was based on Guilford's (1966) sub-dimensions: fluency, flexibility, originality, and elaboration. These sub-dimensions are considered thinking skills that, when trained, can greatly enhance counseling skills. This intervention was skills-based, as it involved didactic and practice elements, focused on increasing the abilities of the participants to partake in creative thinking.

A phenomenological study by Duenyas and Perkins (2021), consisted of a creative intervention assignment in the form of the use of a makerspace to create an intervention to use on a client during the participant's internships. A markerspace is a designated workspace within a school or another facility designed for making, learning, innovating, exploring, and sharing, that uses both high-tech and low-tech tools in combination. The assignment was explained on the first class of the Field Experience in Clinical Mental Health Counseling course, the university's maker space was introduced in the fifth class, and at the end of the semester, after having created and applied the intervention with a client, a five-minute presentation to describe the process and the perceived effectiveness was required.

A mixed-method study by Kryshtanovych et al. (2021) made use of a functional model of IDEF0, as a methodology to help teachers organize and optimize the development process of creativity in students. The Integration Definition for Function Modeling (IDEF0) is a methodology for strategic plan development and management, which, according to the authors, can fully provide visibility and partially or completely systematize a subjective process like increasing creativity in psychology students, as it allows for constant changes and improvements.
Each part of the model serves to integrate the different elements that should be considered when attempting to achieve the goal of training for creativity. The intervention lasted one semester and it consisted in four practical stages: 1) Acquaintance with students, educational conversations; 2) Construction of the IDEF0 model considering the individual and group characteristics of students; 3) Executing each step of the model; and 4) Evaluation of the success of applying the model. Each stage is further decomposed for a better and more comprehensive practical implementation of the model.

Table 3

Characteristics of the Interventions

Authors/Year	Intervention	Design	Sample and participant type
Bellosta-Batalla et al. (2021)	Mindfulness and compassion-based interventions (MCBIs)	- Weekly session lasting two hours for two months. - Sessions included 20-minute guided meditation exercises, and a series of weekly activities and exercises was proposed - Students recorded minutes devoted for meditation - No intervention for Waiting List group, and basic psychotherapy skills sessions for active control group	90 students of clinical and health psychology (bachelor and master) - Experimental group (n = 37) - Waiting list groups (n = 26) - Active control group (n = 27)
Buser et al. (2011)	8-week program to teach SCAMPER model to develop creative thinking skills	- First week included an in-class lecture and large group discussion led by course professor - 7 weeks of task group sessions of 4-5 members each, employing the SCAMPER model to case studies or topics, lasting 20-30 minutes. Participants rotated being the leader. - Following each task group, large group discussion lasting 10-15 minutes with course professors - Journaling after each task group about the experience	54 counseling students from three different universities

Authors/Year	Intervention	Design	Sample and participant type
Canel (2015)	Creative Thinking and Creative Counseling Development Program (based on the Guilford Model)	11 week program with the following content: define and examine characteristics of creativity; positive influences of creative thinking on problem solving; what blocks creativity; provide awareness of single thought pattern; advantages of developing student's creativity: importance of imagination; original thinking; creative thinking in counseling; synectics, metaphors, and analogies applications in counseling; examples of verbal creativity, writing and imagination in counseling; and working on a project.	- 24 students in academic year 2012-2013 - 23 students in academic year 2013-2014
Duenyas & Perkins (2021)	Create intervention using makerspace	- Creative intervention assignment described on the first class and outlined in the course syllabus - Introduction to makerspace on the fifth class - Create an intervention to use with a client - Five-minute presentation at the end of the semester to describe the intervention, perceived effectiveness, and the process of using creativity	7 master level students from the course of Field Experience in Clinical Mental Health Counseling

Authors/Year	Intervention	Design	Sample and participant type
Kryshtanovych et al. (2021)	IDEF0 functional model	- One semester long - Acquaintance with students, educational conversations - Construction of the IDEF0 model - Executing each step of the model: 0) Increasing the creativity of psychology students 1) Creating the conditions necessary to enhance creativity 2) Activation of creative potential with the help of specially selected technologies of creative self-research and self-expression 3) Analysis of problems, limitations and locks that arise in the process of creativity, with their subsequent development 4) Consolidation of the skills acquired at the previous stages and the use of these skills in further professional activities	- 10 teachers to implement model to 2 experimental groups, each comprised of 10 students - Non-disclosed control groups with standard teaching methods

3.4 Effect of the interventions

All five studies reported having positive results in the form of an increase in either verbal creativity, creative skills or creative thinking. Among the five studies, three had different designs of qualitative research: phenomenological (Duenyas & Perkins, 2021), content analysis (Canel, 2015) and constant comparison analysis (Buser et al., 2011). The other two had experimental analysis (Bellosta-Batalla et al., 2021) and mixed methods, which included both an experimental and a qualitative design (Kryshtanovych et al., 2021).

Bellosta-Batalla et al. (2021) focused on improving mindfulness and self-compassion, which would in turn improve verbal creativity. This was the study included in this review with an experimental design, which assessed pre-, post-, and follow-up with three measures. They used two self-reports, the Five Facet Mindfulness Questionnaire (FFMQ, Spanish version); and the Self-Compassion Scale-Short Form (SCS-SF, Spanish version) to assess the first two focuses of the intervention. As they expected, based on previous studies, mindfulness and compassion increased in the experimental group after the intervention. No significant differences were found in pre-assessment across the three groups, but both post and follow-up assessment showed significant higher scores for the experimental group. For verbal creativity, they used the Creative Imagination Test for Adults (PIC-A), which is one of the most widely used test in creativity research (Bellosta-Batalla et al., 2021). It evaluates three subscales: fluency (number of ideas produced), flexibility (variety or divergence of ideas), and originality (statistical infrequency of the ideas). These three subscales are variables that research has shown to be relevant to the study of creativity. In verbal creativity's post-assessment, there was an increase on all three subscales, with higher scores on the experimental group in relation to the waiting list group, but not in relation to the active control one, which had the basic psychotherapy skills. This suggests that interventions to target creativity, or those which have an effect on it as a premeditated consequence, are necessary to improve on skills that would be important for the counselor in their professional life. Follow-up assessment showed higher scores on the fluency and flexibility subscales in the experimental group in relation to the waiting list group, and on the flexibility subscale in relation to the active control group.

Buser et al. (2011)'s qualitative analysis resulted in the identification of three themes. The authors relate the first two themes: the "SCAMPER model as a method to «stretch our thinking»" and "the value of «structured creativity»", to divergent and convergent thinking, often considered the two thought processes involved in creative thought. Divergent thinking is perceived as the

ability to generate a wide range of ideas, which responds to the first theme of "stretching our thinking", and convergent thinking, which is a more structured approach to thinking, where the analysis made results in the best solution to a problem, and it corresponds to having a structure in creativity that a framework provides. The third theme "shifting from right to wrong application to flexibility" was not explicitly equated by the authors to be related to the process of creativity, however, it corresponds to known cognitive shifts in the context of counselor training, from the rigidity in the following of the rules at the start of the training, to a more flexible way to approach their work, which is what the participants reported in their journals.

In Canel (2015), qualitative analysis methods were used to evaluate the effectiveness in the implementation of both academic terms 2012-2013 and 2013-2014. This consisted of open-ended questions before and at the end of final implementation, followed by content analysis. The conduction of the study for two years was used as a reliability and validity measure, as well as the analysis of the data being done by three researchers. Guilford's definition of creativity thinking served to provide skills and abilities to be scored (fluency, flexibility, originality, and elaboration) in two different categories: creativity and creative counseling. Basic criteria for each category were taken into consideration to identify the skill or ability in the students' data. Results of the students' fluency, flexibility, originality, and elaboration scores were examined and tabulated, and were found to have increased post-assessment. An important finding of this study is that the creative counseling skills thought to the students were observed in supervision the year after, which implies that the training works long term, particularly because they were not just thought, but also transferred to counseling sessions.

Duenyas and Perkins (2021) used the qualitative method of data analysis from semi-structured interviews that lasted from 22 to 32 minutes, over a two-month period (December 2018-January 2019). To enhance trustworthiness, the researchers explained the use of four strategies: epoché, peer review, member checking, and using rich, thick description of participants experiences. The intent of this study was to capture the essence of the participants' creative experience while using a creative tool like maker space to develop a counseling intervention. Four overarching themes emerged and were reported on with the participants' descriptions: unfamiliar territory, challenging and empowering, parallel process, and redefining creativity. The four themes, as they explain, influenced participants' abilities to be creative and develop skills to use

in their practice. By having to be creative themselves, they could better grasp the importance of creativity in their practice, as well as the influence it has in the process.

One intervention that did not fully disclose their method to reach results was Kryshtanovych et al. (2021). The effectiveness of this intervention was also not directly assessed by the researchers. The teachers who were taught the model were to assess it by doing remote interviews in the form of questionnaires to their students. Furthermore, the evaluation of the success of the goal of the model, which was to increase creative abilities, came from the subjective assessment of the teachers, who compared the level of creativity of the students in the control and experimental groups. No further information is disclosed on how this assessment was made, the data that resulted from it, or on the characteristics of the groups of students. The teachers confirmed that the model facilitated the process of increasing students' creativity in the form of a clear algorithm for this process, but nothing more was detailed. A detailed overview of the extracted data regarding the effect of the interventions can be found in Table 4.

Table 4

Main Results

Authors/Year	Intervention	Measures	Results	Key findings
Bellosta-Batalla et al. (2021)	Mindfulness and compassion-based interventions (MCBIs)	Pre-, post-, follow-up assessment - Creative Imagination Test for Adults (PIC-A) - Self-reports: Five Facet Mindfulness Questionnaire (FFMQ, Spanish version); and Self-Compassion Scale-Short Form (SCS-SF, Spanish version)	Significant increase on 3 verbal creativity sub scales on experimental group. Flexibility and fluency were also higher in follow-up.	The MCBI was effective in improving verbal creativity, increasing number of ideas and boosting variety and originality. Increased verbal creativity could positively influence psychotherapists' sensitivity to new scenarios, improve their ability to explore and respond to patient's needs.
Buser et al. (2011)	8-week program to teach SCAMPER model to develop creative thinking skills	Constant comparison analysis on journal entries, data coding and choosing themes	Three themes emerged from the SCAMPER model: a) model assisted in "stretching our thinking;" b) provided a structure for the creative process; and c) indicated a developmental shift in the use of the model.	First two themes relate thought patterns viewed as central to the process of creativity. The SCAMPER model may be a way to stimulate creative thought patterns among counseling students. Integrating the model to counseling coursework would be beneficial.

Authors/Year	Intervention	Measures	Results	Key findings
Canel (2015)	Creative Thinking and Creative Counseling Development Program (based on the Guilford Model)	Open-ended questions before and at the end of final implementation followed by content analysis	The implementation of the program was successful in all dimensions: fluency, flexibility, originality, and elaboration.	The application of such a creative intervention resulted in self-awareness, openness to feedback, flexibility, and positive change. After the implementation of the program, the creative skills of the candidates were observed later in their supervision course.
Duenyas & Perkins (2021)	Create intervention using makerspace	Data analysis from semi-structured interviews of 22 to 32 minutes in length, over a two-month period (December 2018-January 2019)	Four overarching themes emerged: unfamiliar territory, challenging and empowering, parallel process, and redefining creativity	Participants' creative experiences made them reevaluate creativity's place in their practice and broaden their understanding of creativity in general.
Kryshtanovych et al. (2021)	IDEF0 functional model	- Questionnaire survey - Non-disclosed method to compare creativity between experimental and control groups	Teachers confirmed that the model facilitates process of increasing students' creativity.	Use of an existing mathematically proven and practically effective method for modeling the main stages of a process can make easier the evaluation of creativity and can also help establish key directives to be followed.

4. Discussion

The focus of this systematic review was to provide an overview on the state of research on interventions that aim to foster creativity in counseling education, describe its characteristics, and what are the effects they have. We identified five studies that adhered to our exclusion and inclusion criteria, which also allowed us to have a clearer picture of the current gaps in research on these types of interventions.

Regarding our first research question, which is to describe the characteristics of the interventions, we found that they had very different approaches. Two of them focused on the participants experiences on learning how to be creative while using specific models or techniques (Duenyas & Perkins, 2021; Buser et al., 2011). One made use of an intervention that targets other constructs, as a way to increase verbal creativity (Bellosta-Batalla et al., 2021), another used a program that specifically targeted the development of creativity (Canel, 2015), and the last one focused on coming up with a mechanism to systemize the process of increasing creativity, only actually doing so as a byproduct of implementing the model to see if it worked (Kryshtanovych et al., 2021). This review found that there is little consistency in how these studies were designed, which matches the concerns critics have had about the methodology and validity of creativity training reviews in general, as well as the general construct of creativity (Rose & Lin, 1984). As far as the quality of the studies, only two of the studies used control groups, one of which did not disclose their methodology to compare between the experimental group with the intervention, and the control group who received a standard teaching method (Kryshtanovych et al., 2021).

With these reservations in mind, and to answer our second research question on the effectiveness of the interventions, this review shows that all five studies reported positive effects at the end of them, though effect sizes reported varied quite a lot, given that all of them used different measures to evaluate their results. The research by Bellosta-Batalla et al. (2021) is the one evaluated more rigorously. It reported a significant increase in three subscales of verbal creativity post-assessment while compared to waitlist and active control groups. Three other qualitative interventions that analyzed participants experiences found an overall increase in creative thinking. Buser et al. (2011) concluded that the themes found in their analysis related to thought patterns central to the process of creativity, which indicates an increase in creative thinking. Canel (2005) saw an increase in creative skills (fluency, flexibility, originality, and elaboration) in their content analysis. And Duenyas and Perkins (2021) study found that the

participants were stimulated to incorporate creative models in their work, and to have a better understanding of the importance of creativity for their future profession. One last study (Kryshtanovych et al., 2021) reported that the model they used to increase creativity had been useful for the teachers who implemented it and had a positive effect (in that creativity increased) in the students, though lack of disclosure makes us take the results with caution.

Based on the studies found for this systematic review, but in contrast with the articles dedicated to the importance of incorporating creativity into counseling programs (Gladding, 2016; McCarthy, 2017; Smith, 2011), it would appear as if the field in in the early stages of development. Notwithstanding, research linking education and creativity has been growing since the early 2000s (Hernández-Torrano & Ibrayeva, 2020). Several studies have been made to better understand the importance and initiatives taken to develop creativity in higher education (Gaspar & Mabic, 2015; De Alencar, De Souza & Pereira, 2017; Egan at al. 2017; Georgiou et al. 2022). Furthermore, literature on the the role of creativity in counseling is substantial (Gladding, 2008; Duffey, Haberstroh & Trepal, 2009; Holm-Hadulla & Hofmann, 2012; Patrick, 2020). The general results of this research suggest that training does seem to influence creativity. Having said that, evidence on the effectiveness of interventions to foster creativity is mixed because, just like Davies et al. (2013) found in their systematic review, there is a strong belief in these interventions' effectiveness, but significant evidence gaps due to much of the literature in this area being either philosophical, anecdotal, or polemical.

We cannot draw firm conclusions on the interventions effectiveness based on five studies, though the positive results reported could suggest that creativity can be improved in future counselors through several approaches. This might also indicate that different interventions that have been properly qualified could have a positive effect. However, there is a distinct lack of research on the methodology of these interventions, and more so on their effectiveness, which would support researchers claims that creativity training is an integral part of the counselor education, if done correctly. A variety of approaches in creativity training can be taken, but consistency in the assessment of the training effects is an issue that needs to be addressed in order to consider the interventions successful. Proper assessment to determine the effectiveness would mean been able to evaluate whether or not there is an increase in the areas and skills targeted by the intervention, be it creativity skills, divergent thinking, verbal creativity, or another construct related to creativity chosen by the researchers. By having clearer methodologies for these

interventions, and the results to back them up, it would also encourage universities to put an emphasis on placing creativity in their curricula. Creativity could be fostered in the same way counseling programs encourage basic counseling skills like active listening, open interviewing, ethics, among others.

5. Strengths and limitations

This systematic review's strength is that it confirms earlier findings about the effectiveness of creativity interventions, which could aid in the development of a realistic and structured interdisciplinary intervention for counseling students. It also provides an overview of various programs and their outcomes, which can be useful for future research on the subject. Another strength is that the search was carried out in a systematic manner, using PRISMA's approved protocols, and so each stage can be replicated. While the number of studies was small, which could question the relevance of the review, the research question and the inclusion and exclusion criteria were quite specific, as one of the research questions attempted to provide an overview of current existing studies and find the gaps where research is needed. Four of the five studies used a qualitative approach. This type of research, when done right, is considered appropriate for these types of interventions, because they have strong interpretative dimensions.

This review also has limitations. The quality of the studies was not formally assessed, which results in varying levels of quality in the studies included, and some reports had incomplete accounts of the assessment of the interventions, which interferes with a full depiction of the findings. The search was restricted to certain databases, which might have excluded relevant publication. This limitation was diminished by the snowballing technique, but evidence never reflected in the published or grey literature could have been missed. Studies were small-scale, there was an over-reliance on self-report metrics in general, and no consensus on the specific component that leads to the desired effects make it hard to compare the findings, and difficult to replicate the research. One problem that continues to be present is the lack of agreement on an operational definition or model of creativity across the literature, which can explain part of the difficulty in comparing findings between the studies.

6. Implications for future research

The goal of this research was to identify what the literature proposes for interventions that foster creativity in clinical training programs for future counselors, and what are their effects. A lot has been said about the need for creativity to be a part of counselors training, but so far, there

has been little research to sustain this claim, and even less to find evidence on how fostering creativity has an impact in counseling practice. Providing an overview of the current research on creativity interventions for counseling education, and more so, evaluating if they have positive effects when implemented, could validate researchers plight to make it a part of programs curricula.

Based on the findings, we propose that future research should aim to address research limitations. Studying the increase of creativity after training, both short and long-term, would be helped by longitudinal studies. For example, it would be beneficial to evaluate once the students have become professionals, to really see if the increase in creative skills or creative thinking translates to their practice. Interventions should include active and control groups, so that the effects can be compared against each other, as well as similar interventions, and studies need to build in more measures to assess and report findings. Additionally, it is recommended that qualitative research should adhere to criteria like quality of reporting, and sufficiency of strategies for establishing reliability or validity (Thomas, 2004).

7. Conclusions

Although creativity training seems to have an important impact in the professional development of future counselors, the research about the characteristics of interventions to foster it, is scarce. In this systematic review, only five articles were found, though all of them explored interventions which led to an increase in different aspects of creativity. Based on the preliminary evidence, it was demonstrated that there is potential in these interventions to develop abilities and skills required for professional practice. To help enhance understanding of how such interventions can be better administered and generate more significant benefits, a variety of implications for research and practice are offered.

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