


## DESIGN, EVALUATION AND OUTCOMES OF LEISURE EDUCATION PROGRAMS: A SYSTEMATIC REVIEW<sup>1</sup>

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**ABSTRACT:** This study aimed to detail and analyse the design, evaluation and outcomes of leisure education programs. Each program was designed for a particular population with specific set of components, principles and goals. Some techniques were identified as useful to assist deliverers in effectively providing these services (e.g. contents, deliverers, delivery methods, settings and duration), which are essential aspects to consider when preparing and planning leisure education. In general, these programs may have a positive influence on diverse audiences, highlighting the potential of leisure-related activities engagement. Additionally, an evaluation of the used instruments was performed given that selecting an adequate instrument may determine the quality of reporting and whether a program may effectively broaden leisure-related experiences. We hope to contribute to the processes of developing such programs.

**KEYWORDS:** Leisure Activities. Psychometrics. Reproducibility of Results.

### CONCEPÇÃO, AVALIAÇÃO E RESULTADOS DE PROGRAMAS DE EDUCAÇÃO PARA O LAZER: UMA REVISÃO SISTEMÁTICA

**RESUMO:** Este estudo objetivou detalhar e analisar a concepção, avaliação e resultados de programas de educação para o lazer. Cada programa foi projetado para uma determinada população com um conjunto específico de componentes, princípios e objetivos. Algumas técnicas foram identificadas como úteis para auxiliar os distribuidores na prestação eficaz desses serviços (por exemplo, conteúdos, distribuidores, métodos de entrega, configurações e duração), os quais são aspectos

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essenciais a serem considerados ao preparar e planejar a educação para o lazer. Em geral, esses programas podem ter uma influência positiva em diversos públicos, destacando o potencial de engajamento em atividades do âmbito do lazer. Além disso, foi realizada uma avaliação dos instrumentos utilizados, visto que a escolha de um instrumento adequado pode determinar a qualidade do relato, bem como se um programa pode efetivamente ampliar as vivências da esfera do lazer. Espera-se que o presente estudo possa contribuir com os processos de desenvolvimento de tais programas.

**PALAVRAS-CHAVE:** Atividades de Lazer. Psicometria. Reprodutibilidade de Resultados.

## **Introduction**

Leisure education consists of a process in which individuals build “[...] an understanding of leisure, of self in relation to leisure, and of the relationship among leisure, their own lifestyle, and society.” (MUNDY; ODUM, 1998, p. 5). It is through leisure education that people “[...] develop a sense of freedom, enjoyment, self-worth and personal growth, and discover their talents and potential” (BENDER *et al.*, 1984, p. 20). Individuals may also acquire “[...] personal values, individual goals and objectives, self-confidence and self-esteem skills, knowledge, competencies” (HAYES, 1977, p. 208; JORDAN *et al.*, 2018; RUSKIN, 1995; SIVAN; STEBBINS, 2011) and self-determination (DATILLO; MURPHY, 1991) enhancing social support and subjective vitality (CHANG; KAO, 2019), and promoting a healthy and active lifestyle (FALLAHPOUR *et al.*, 2016; YATES *et al.*, 2016).

Even though leisure education has been identified as a potential process to encourage individuals to optimise their lives, leisure attitudes, knowledge and competence, allowing them to use their leisure time more effectively, (BURTON; BAXTER, 2019; CHANG, 2014; CHANG; YU; JENG, 2014; JORDAN *et al.*, 2018; KAO; CHANG, 2017; YANG; KIM; HEO, 2019; SIVAN; STEBBINS, 2011) it remains an underutilised tool (DATILLO, 2015). Leisure education may occur in

multiple ways. One way is to develop programs specifically intended to empower individuals to engage in meaningful educational and learning experience (SAMARA; IOANNIDI, 2019) through enjoyable leisure-related activities (DATILLO, 2015).

Although there are numerous research studies devoted to developing leisure education programs (Table 1), an absence of a recent systematic presentation of the processes (e.g. structure, delivery method, evaluation and outcomes) of developing these programs in order to maximise effectiveness has motivated the present study. The development of the process of leisure education involves an important aspect, which is incorporating a systemic approach (DATILLO, 2015; MCCAY; COTRONEA, 2015). Accordingly, when structuring leisure education, Datillo (2015, p. 157) recommended “[...] to clearly delineate a purpose to guide service delivery. Based on a purpose statement, goals are generated that further specify the intent of the services.” When statement of purpose and goals are established, specific programs are developed (DATILLO, 2015, p. 157). Stumbo and Peterson (2009) identified a specific program as a systemically developed set of learning activities and processes. Subsequently, these learning activities and processes are designed to promote achievements in particular subjects.

The syntheses of these processes may help inform users, researchers and specialists about what has or not been designed in light of suggested strategies. Therefore, a thorough and detailed study regarding the processes such as how programs are designed and evaluated is of understandable importance. Thus, the purposes of the present study were twofold. First, to conduct a systematic review and identify the characteristics of the studies that developed leisure education programs. Second, to detail and analyse the design, evaluation and outcomes of these programs intended for each selected study.

## **Materials and methods**

### ***Search methods***

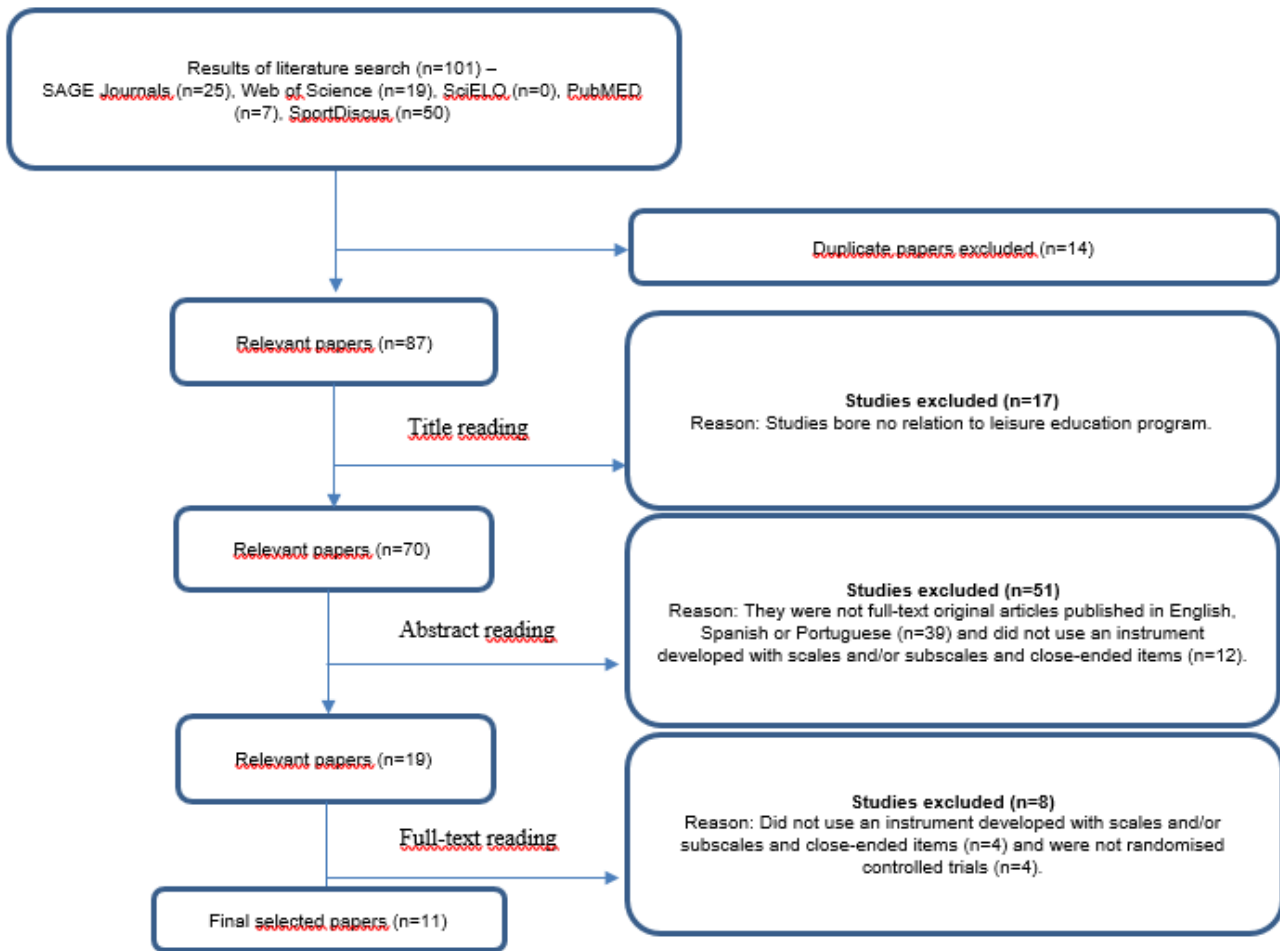
The methodological procedure used a qualitative methodology and it was based on a systematic review in the following databases: SAGE journals, Web of Science, SciELO, PubMed, SportDiscus. These databases were selected as they specifically approach topics related to social sciences and humanities. The keywords and Boolean operators used were: (“leisure education”) AND (“leisure education program”). The following three key inclusion criteria were used: (1) full-text original articles published in English, Spanish or Portuguese, (2) articles using an instrument developed with scales and/or subscales and close-ended items (i.e. Likert), and (3) randomised controlled trials. Those papers that did not meet the eligibility criteria were eliminated from this review. There were not any restrictions regarding the publication date of the papers and all studies were reviewed from January to March, 2018. Along with the search in the aforementioned databases, the authors performed a manual search in the reference list of the selected papers. All data from the final selected papers were analysed using the Content Analysis, which refers to a set of techniques in order to obtain by systematic and objective procedures the content of messaging, allowing the inference of knowledge (BARDIN, 2011). To minimise bias, the authors independently gathered information from the included studies and any discrepancies were resolved by a third person. The present review was carried out according to the Preferred Reporting Items for Systematic Reviews and Meta-Analyses (PRISMA) guidelines (MOHER *et al.*, 2009).

## **Results**

### ***Search Outcome***

The results of literature search yielded one hundred and one studies: SAGE Journals (n=25), Web of Science (n=19), SciELO (n=0), PubMed (n=7) and SportDiscus (n=50). Initially, fourteen papers were excluded because they were duplicated. Subsequently, based on the title reading, seventeen studies were discarded, as they did not bore any relation to either leisure education or leisure education program. The next step was reading the abstracts of the remaining relevant seventy papers, of which fifty-one were excluded, as they did not meet any inclusion criteria. Therefore, nineteen studies met the eligibility criteria for full-text reading, of which eight papers were discarded because they did not use an instrument developed with scales and/or subscales and close-ended items (n=4) and were not randomised controlled trials (n=4). Thus, eleven papers were included in the present review (Figure 1).

**Figure 1: Flowchart illustrating the study selection process.**



## Descriptive Results

Table 1 provides a detailed summary of the eleven selected studies according to four different categories: (1) study design, (2) aim, (3) sampling, and (4) conclusion.

**Table 1: Characteristics of the studies included in the final selection.**

Authors/ Title	Study Design	Aim	Sample	Findings/ Conclusion
Carbonneau, H.; Caron; Desrosiers. (2011). Effects of an adapted leisure education program as a means of support for caregivers of people with dementia.	Quantitative and qualitative research approaches	To determine the effects of the leisure education program on the general well-being of caregivers, the quality of caregivers and care receiver relationship, the caregiver's perception of self-efficacy and the meaning of the caregiver's role in daily life	(1)Intervention group (n=21) (2)Control group (n=19)	The quantitative part of this study showed few positive effects of the leisure education program for caregivers. However, the qualitative part highlighted the potential of the leisure education program to improve the quality of life of caregivers and care receivers with dementia
Chang, L. (2014). Leisure education	Quantitative research approach	To examine whether a leisure education	(1)Intervention group (n=30) (2)Control group (n=30)	The intervention group demonstrated significantly

reduces stress among older adults.		program could facilitate leisure competence and whether it could reduce stress in older adults		higher posttest scores of leisure competence than the control group. Also, post-test scores of stress were significantly lower in the intervention group.
Chang, L.; Yu; Jeng, (2014). Effects of a leisure education on self-rated health among older adults.	Quantitative research approach	To verify the effects of a leisure education program on self-rated health among older adults	(1) Intervention group (n=30) (2) Control group (n=29)	The scores of both leisure autonomy and self-rated health were significantly higher in the experimental group. In addition, leisure autonomy was significantly positively related to self-rated health in pretest and posttest.
Desrosiers, J., <i>et al.</i> (2007). A home leisure education program may reduce depression after a stroke.	Quantitative research approach	To evaluate the effect of a home leisure education program on people with stroke	(1) Intervention group (n=29) (2) Control group (n=27)	The intervention increased significantly the participation in leisure activity and satisfaction with leisure in the experimental group. Both groups statistically improved their health-related quality of life and reduced their depressive symptoms.
Jordan, K., <i>et al.</i> (2018). Enhancing the college student experience: Outcomes of a Leisure education program.	Quantitative research approach	To explore the impact of a leisure education program on school satisfaction, student life satisfaction, school belonging and self-esteem	(1) Leisure skills students (n=531)  (2) Non-leisure skills students (n=136)	Leisure skills students fared better than non-leisure skills students in the measured variables, maintaining similar levels of school satisfaction, life satisfaction, school belonging and self-esteem whereas non-leisure skills students experienced decreases
Kao, I. & Chang, L. (2017). Long-term effects of leisure education on leisure needs and stress in older adults.	Quantitative research approach	To examine whether a 12-week leisure education program could promote leisure autonomy, leisure competence and reduce stress in older adults	(1) Intervention group (n=20) (2) Control group (n=20)	The leisure education program could significantly promote and leisure autonomy leisure competence, which are related to stress reduction in older adults
Lovell, T.; Datillo; Jekubovich, (2008). Effects of leisure education on women aging with disabilities.	Qualitative and quantitative research approaches	To examine the effects of leisure education program on older women's perception of leisure, control and freedom	(1) Intervention group (n=6) (2) Control group (n=6)	Findings support the belief that the leisure education program appeared to have a positive impact on women aging and admitted to agencies for short or long-term care
Mahon, M., & Searle, M. (1994). Leisure education: Its effect on older adults.	Quantitative research approach	To determine if a leisure education program would affect leisure satisfaction and life satisfaction of older adults and enhance their leisure participation	(1) Intervention group (n=22) (2) Control group (n=22)	The intervention group demonstrated significantly higher levels of leisure participation and leisure satisfaction at posttest.
Munson, W. (1988). Effects of leisure education versus physical activity or informal discussion on behaviourally disordered youth offenders.	Quantitative research approach	To investigate the effects of a leisure education program on behaviourally disordered youth offenders	(1) Leisure education group (n=13) (2) Physical education group (n=14) (3) Informal discussion group (12)	No significant differences were found within or between participants on the major outcomes.

Ritcey, A., <i>et al.</i> (2016). An exploratory study as to the effect of a leisure education program on a geriatric day hospital patient population.	Quantitative research approach	To explore the effectiveness of a leisure education program on participants' overall leisure functioning	(1) Intervention group (n=22) (2) Control group (n=20)	No significant differences were found between the intervention and the control groups. According to the authors, participants were abler and higher functioning than they first anticipated.
Zoerink, D., & Lauener, K. (1991). Effects of a leisure education program on adults with traumatic brain injury.	Quantitative research approach	To determine the effects of a leisure education program on adults who have experienced traumatic brain injury	(1) Intervention group (n=7) (2) Control group (n=5)	Although pretest and posttest mean scores were not statistically significant, the leisure education program was modestly effective in helping brain injured people experience greater freedom and satisfaction in leisure

According to Table 1, the studies ranged from 1988 to 2017. The studies are international, which lead us to consider that the theme leisure education in Brazil is not yet explored and, continuously, deepened by researchers. Three study designs were used, however, emphasis was on quantitative research approach. Each program was designed for a particular population with specific set of components, principles and goals (e.g. effects of leisure education on general well-being of caregivers, etc...). In general, leisure education programs optimised individuals' overall lives, evidencing the benefits of leisure engagement.

Table 2 detailed the programs intended for each selected study with regard to: (1) content, (2) delivery method, (3) deliverer, (4) setting and (5) duration, according to the Transparent Reporting of Evaluations with Nonrandomised Designs (TREND) statement. The content of each program included but did not limit to the definitions, benefits and appreciations of leisure, as well as leisure-related knowledge, role-playing, self-awareness and awareness, preferences and barriers, among others. The delivery method was as either a group or individual basis. There was a predominance of recreational specialists as to program deliverers. The setting varied among schools, participants' homes, hospitals, and others. Finally, the number of sessions ranged from



four to 48 sessions and the duration of each session ranged from approximately 60 to 120 minutes.

**Table 2: Details of the interventions intended for each selected study.**

Authors/ Title	Content	Delivery Method	Deliverer	Setting	Duration
Carbonneau, H.; Caron; Desrosiers. (2011).	The topics included (1) Clarification of caregivers personal situation and communication issues; (2) Presentation of pleasant events and experiencing adapted activities with the care receiver; (3) Leisure approach presentation and identifying significant activities; (4) Activities integration; (5) Face difficulties; and (6) Learning consolidation	Individual basis	Two trained facilitators	--	Four to six individual sessions with a follow-up over the phone. Authors did not mention the duration of each session
Chang, L. (2014).	The intervention consisted of 12 units. The units comprised a variety of activities such as discussion related to leisure activities (e.g. "benefits of leisure on physical and psychological well-being), role-playing and participation in leisure activities (e.g. Identify skills and develop plans to facilitate participation in leisure activities)	The subjects attended unit lectures and completed all units together	--	--	Twice a week over a period of three months. Each session was approximately two hours
Chang, L.; Yu; Jeng, (2014).	The intervention consisted of 12 units. The units comprised a variety of activities such as discussion related to leisure activities (e.g. "benefits of leisure on physical and psychological well-being), role-playing and participation in leisure activities (e.g. Identify skills and develop plans to facilitate participation in leisure activities)	The subjects attended unit lectures and completed all units together	--	At a school	Twice a week over a period of three months. Each session was approximately two hours
Desrosiers, J., <i>et al.</i> (2007).	The program was divided into 12 steps and three components: (1) leisure awareness; (2) self-awareness and (3) competency development	Individual basis	An occupational therapist and a recreational therapist	At the participants' homes and in the community	Once a week for 8 to 12 weeks. Each session was approximately 60 minutes
Jordan, K., <i>et al.</i> (2018).	The program consisted of a wide variety of 1-credit hour courses from fly-tying to yoga	--	--	At a school	Once or twice a week between 8:00 a.m. and 5:00 p.m. for one semester
Kao, I. & Chang, L. (2017).	The intervention consisted of 12 units. The units comprised a variety of activities such as discussion related to leisure activities (e.g. "benefits of leisure on physical and psychological well-being), role-playing and participation in leisure activities (e.g. Identify skills and develop plans to	The subjects attended unit lectures and completed all units together	--	At a school	Twice a week over a period of three months. Each session was approximately two hours

facilitate participation in leisure activities)					
Lovell, T.; Datillo; Jekubovich, (2008).	The program consisted of (1) awareness of self in leisure; (2) appreciation of leisure; (3) understanding of self-determination in leisure; (4) ability to make decisions regarding leisure participation; (5) knowledge and utilization of resources facilitating leisure participation; and (6) knowledge of effective social interaction skills	The sessions were conducted with the participants seated in a circular grouping and the first author	Certified therapeutic recreation specialist	A meeting room within the nursing facility was used for pre- and posttesting and for the intervention sessions	Five evenings a week for a period of three weeks. Each session was 60 minutes
Munson, W. (1988).	Sessions 1, 2 and 3 focused on self and leisure awareness, and decision-making. Sessions 4, 5 and 6 regarded social interaction. Sessions 7 and 8 were designed to allow youths' to become aware of leisure resources. Sessions 9 and 10 focused on the importance of decision making in leisure	As a group	The investigator and two recreation specialist	At a maximum-security institution	Once a week for a period of ten weeks. Each session was 60 minutes
Mahon, M., & Searle, M. (1994).	Weeks (1) Definition of leisure; (2) Individual leisure needs assessment; (3) Constraints related to leisure; (4) Leisure preferences; (5) Needs were reviewed and goals sets in accordance with the preferences and knowledge constraints; (6) Connects with community; (7) Decision-making skills; and (8) Action plans	Individual basis	Recreation specialist	At a day hospital	Once a week for a period of eight weeks. Each session was 60 minutes
Ritcey, A., <i>et al.</i> (2016).	The program consisted of (1) leisure appreciation; (2) awareness of self in leisure; (3) self-determination in leisure; (4) making decisions regarding leisure participation; (5) knowledge and utilization of resources facilitating leisure; (6) personal leisure resources; (7) social interaction and (8) leisure overview and review	--	One interventionist	At a Geriatric Day Hospital	Twice a week for a period of four weeks. Each session was 60 minutes
Zoerink, D., & Lauener, K. (1991).	The topics included (1) Identification of enjoyable recreation experiences; (2) Choosing alternatives and examining choices made; (3) Examining alternatives associated with different activities; (4) Exploring past events; (5) Building pattern of consisted action; (6) Examining benefits and alternatives; (7) Removing barriers to actions; and (8) Future planning	As a group	Recreation specialist	At a day hospital	Once a week for a period of eight weeks. Each session was 90 minutes

-- Information not clear.

Table 3 displays all the instruments used in each study for assessing outcomes of these programs. Twenty-four instruments were identified.

**Table 3: Instruments used for evaluating the effects of the leisure education programs in the selected studies**

Authors/ Title	Instruments
Carbonneau, H.; Caron; Desrosiers, (2011).	(1) GWS, (2) RECS, (3) Feeling of self-efficacy, (4) RRM
Chang, L. (2014).	(1) LCS (Chinese version), (2) PSS (Chinese version)
Chang, L; Yu; Jeng, (2014).	(1) LAS (Chinese version) (2) Self-rated Health Assessment
Desrosiers, J., <i>et al.</i> (2007).	(1) LSS, (3) ILP, (4) GWS, (5) CES-D, (6) SA-SIP30
Jordan, K., <i>et al.</i> (2018).	(1) Butler’s Scale, (2) Vaquera’s Measure, (3) BMSLSS-C, (4) 10-item Rosenberg
Kao, I. & Chang, L. (2017).	(1) LAS (Chinese version), (2) LCS (Chinese version), (3) PSS (Chinese version)
Lovell, T.; Datillo; Jekubovich, (2008).	(1) LDB (Short-form Version B), (3) BLI
Munson, W. (1988).	(1) SEI, (2) LDB
Mahon, M., & Searle, M. (1994).	(1) LSS, (2) LSI, (4) LPI
Ritcey, A., <i>et al.</i> (2016).	(1) LSS, (2) LMS, (3) LCM
Zoerink, D., & Lauener, K. (1991).	(1) LES, (2) LSS, (3) LDB (Short-form Version B)

The General Well-being Schedule (GWS), Relationships in Elder Care Scale (RECS), Relationship Reward Measure (RRM), Leisure Competence Scale (LCS), Perceived Stress Scale (PSS), Leisure Autonomy Scale (LAS), Leisure Satisfaction Scale (LSS), Individualized Leisure Profile (ILP), Centre for Epidemiological Studies Depression Scale (CES-D), Stroke-Adapted Sickness Impact Profile (SA-SIP30), Brief Multidimensional Student’s Life Satisfaction Scale – College (BMSLSS-C), The Leisure Diagnostic Battery (LDB), Barriers to Leisure Involvement (BLI), The Self-esteem Inventory (SEI), Life Satisfaction Index (LSI), Participation Inventory (LPI), Leisure Motivation Scale (LMS), Leisure Competence Measure (LCM), Leisure Ethic Scale (LES).

Table 4 briefly described each instrument as to their objectives, cut-off points and developers. Unfortunately, detailed description or instruction for the Leisure Participation Inventory (MAHON; SEARLE, 1994) was not encountered. Thus, the instrument was not considered for further analyses.

**Table 4: Description of each instrument used for evaluating the effects of the leisure education programs.**

Instruments	Description
GWS	Eighteen-item scale and measures six dimensions (anxiety, depression, positive well-being, emotional control, vitality and general health). The score can range from 0 to 110 with a higher score representing a better well-being (DUPUY, 1977).
RECS	Twelve-item scale developed to assess aspects of the relationship (respect, sympathy, admiration for the older person as well as frustration, conflict and resistance to the care provided). The items scored on a five-point scale from (strongly agree) to (strongly disagree). The score ranges from 12 to 60 with a higher score suggesting a poorer quality of relationship (LYONETTE & YARDLEY, 2003).
Feeling of self-efficacy	Four-question and sub-question tool to assess the feeling of self-efficacy. The response scale ranged from feeling completely able (10) to not at all able (0) to plan, organise and accomplish shared leisure. The final score ranges from 0 to 150 with a higher score corresponding to a greater feeling of self-efficacy (BANDURA, 1982; CARBONNEAU; CARON; DESROSIERS, 2011).
RRM	Four-item scale to assess the extent to which the past relationship was perceived as rewarding. The scale rates from 1 (never) to 4 (always). (Williamson & Shaffer, 2001).
LCS	Six-item scale regarding the perception of older adults in relation to their ability to participate in leisure activities. The response scale varies from 1 (not at all) to 5 (completely). The total score can range from 6 to 30 with a higher score indicating greater leisure competence (Chang, 2012).
PSS	Fourteen-item scale developed to rate the degree of stress they felt regarding each item on a 5-point scale, from 1 (never) to 5 (always). The total scores vary from 14 to 70 with a greater score representing higher

	stress (KAO & CHANG, 2017; COHEN, KAMARCK, & MERMELSTEIN, 1983).
LAS	Six-item scale related to how free older adults perceive themselves in making choices related to leisure activities. The scale rates from 1 (not at all) to 5 (completely). The total score ranges from 6 to 30 with a higher score indicating better leisure autonomy (CHANG & YU, 2012).
Self-rated Assessment	Single-item developed to assess the extent one rates their health at present. The item scores on a five-point scale from 1 (poor) to 5 (excellent) (CHANG, 2012).
LSS	24-item scale developed to assess the degree to which one's needs are met through leisure activities. It scores can range from 1 (almost never true for me) to 5 (almost always true for me) and higher scores represent greater leisure satisfaction (RAGHEB & GRIFFITH, 1982).
ILP	Two sections consisted of 24-item related to satisfaction. Each item is scored on a scale from 0 to 3 with a score representing a higher satisfaction (OUELLET & CARBONNEAU, 2002).
CES-D	Twenty-item scale developed to assess depressive symptoms. The total score ranges from 0 to 60 with a lower score indicating a lower level of depressive symptoms (RADLOFF & TERI, 1986).
SA-SIP30	Thirty-item composed by psychosocial and physical components. One point is given when an item is checked and a higher score represents poorer health-related quality of life (VAN STRATEN <i>ET AL.</i> , 1997; BERGNER, 1981).
The Bluter's Scale	Six-item scale developed to assess school satisfaction (i.e., satisfaction with being a student, with the educational experience, and with the university in general). The response scale ranged from 1 (strongly disagreed) to 5 (strongly agreed) (BUTLER, 2007).
Vaquera's Measure	Three-item measure referred to the attachment the student felt toward school. The response scale ranged from 1 (strongly disagreed) to 5 (strongly agreed) (VAQUERA, 2009).
BMSLSS-C	Nine-item scale designed to address multiple aspects of student life satisfaction. The 7-point scale ranged from 1 (terrible) to 7 (delighted) (ZULLIG <i>et al.</i> , 2009).
10-item Rosenberg Self-Esteem Scale	Five-item scaled developed to assess the self-esteem. The 5-point scale ranged from 1 (strongly disagreed) to 5 (strongly agreed) (ROSENBERG, 1965).
LDB	Twenty-five-item scale designed to assess perceived freedom in leisure and potential barriers to it. Each item is scored using a five-point Likert type format from "strongly agree" to "strongly disagree" (WITT & ELLIS, 1987).
BLI	Twenty-four-item scale regarding perceived barriers to leisure involvement. Each item score ranges from 1 (strongly agree) to 5 (strongly disagree) (ELLIS & WITT, 1984).
SEI	Fifty-item measure developed to assess the attitudes towards oneself. Each item is checked on either "like me" or "unlike me". The maximum score is 25 (COOPERSMITH, 1967).
LSI	Twenty-item index designed to assess general feelings of well-being among older adults in order to identify successful aging. The original scoring method ranges from 0 (dissatisfaction) to 1 (satisfaction) (NEUGARTEN, HAVIGHURST & TOBIN, 1961).
LPI	---
LMS	Twelve-item scale developed to assess psychological and sociological motives for participation in leisure activity. Each item varies from 1 (never true) to 5 (always true) with a greater score representing better motivation (BEARD & RAGHEB, 1983).
LCM	Seven subscales to assess basic competencies required for successful leisure functioning. Each item ranges from 1 (total dependence with total assistance) to 7 (complete independence) with a higher score indicating fully competence (KLOSECK <i>et al.</i> , 1996).
LES	Ten-item scale developed to assess the degree of positive and negative affect related to leisure. All items are scored on a four-point Likert-type format from 1 (completely disagree) to 4 (completely agree) (CRANDALL & SLIVKEN, 1980).

Table 5 outlines a three rating summary evidence of reliability and of validity for each instrument (0) no reported evidence of reliability or validity; (\*) reliability or validity only by the original authors of the scale; (\*\*) several studies by different authors have reported reliability or validity. It is worth noting that reliability and validity are key indicators of the quality of an instrument (HEALE; TWYLCROSS, 2015; KIMBERLIN; WINTERSTEIN, 2008).

Evidence of reliability was not mentioned in “feeling of self-efficacy” (CARBONNEAU; CARON; DESROSIERS, 2011) and “self-rated health assessment” (CHANG *et al.*, 2012). Evidence of validity was not mentioned in “feeling of self-efficacy” (CARBONNEAU; CARON; DESROSIERS, 2011), “relationship reward measure” (CARBONNEAU; CARON; DESROSIERS, 2011), “self-rated health assessment” (CHANG *et al.*, 2012), “Butler’s measure” (JORDAN *et al.*, 2018), “Vaquera’s measure” (JORDAN *et al.*, 2018).

**Table 5: Psychometric properties of the instruments.**

Instruments	Reliability	Validity	Instruments	Reliability	Validity
GWS	**	**	The Bluter’s Scale	**	0
RECS	*	*	Vaquera’s Measure	**	0
Feeling of Self-efficacy	0	0	BMSLSS-C	**	*
RRM	*	0	10-item Rosenberg Self-Esteem Scale	**	**
LCS	*	*	LDB	*	*
PSS	**	**	BLI	*	*
LAS	*	*	SEI	*	*
Self-rated Assessment	0	0	LSI	**	**
LSS	**	**	LMS	**	**
ILP	*	*	LCM	**	**
CES-D	**	**	LES	*	*
SA-SIP30	**	**			

No reported evidence of reliability or validity (0); Reliability or validity only by the original authors of the scale (\*); Several studies by different authors have reported reliability or validity (\*\*).

## Discussion

The present systematic review aimed to identify basic characteristics of studies devoted to developing leisure education programs as well as to detail and analyse the design, evaluation and outcomes of these programs. In nine studies (out of eleven studies), experimental groups demonstrated increased posttests scores when compared to pretests and controls’ scores (CARBONNEAU; CARON; DESROSIERS, 2011; CHANG, 2014; CHANG; YU; JENG, 2014; DESROSIERS *et al.*, 2007; JORDAN *et al.*, 2018; KAO; CHANG, 2017; LOVELL; DATILLO; JEKUBOVICH, 2008; MAHON; SEARLE, 1994; ZOERINK; LAUENER, 1991). In general, studies evidenced that leisure education had a positive influence on diverse populations (e.g. caregivers of people with dementia, older adults, women with disabilities, adults with

traumatic brain injuries, among others), highlighting the potentiality of participation in leisure-related activities.

An evaluation of each developed program was carried out according to the TREND statement (Table 2). An important aspect of selecting meaningful leisure education contents is, whenever possible, to work collaboratively with the individual, the individual's family and friends, and consider their environment and community (POULIN *et al.*, 2019; DATILLO, 2015; SIVAN; STEBBINS, 2011). It has been suggested three considerations when developing the content of a program. First, the designed program should address particular needs. Second, the content should include pro-social leisure-related activities and third, sessions should allow self-expression (MCCAY; COTRONEA, 2015). Preferences may include tools and resources that promote an active participation, social interaction, and opportunities for choice and control (POULIN *et al.*, 2019). Delivering leisure education may be challenging as stated by Poulin *et al.*, (2019), given that the profile of participation in leisure vary among individuals, and therefore, individuals may “[...] consider different elements of an experience to be important.” (DATILLO, 2015, p. 158). Therefore, developing and implementing leisure education requires a “[...] careful consideration of cultural factors and contexts.” as suggested by Trilla; Ayuste and Agud (2014, p. 871), which might had been enabled through prepared deliverers. The preference for a recreational specialist was evident (DESROSIERS *et al.*, 2007, MUNSON, 1988, MAHON; SEARLE, 1994, ZOERINK; LAUENER, 1991) however, only Lovell; Datillo; Jekubovich (2008) mentioned if the specialist had a certification or not. Ritcey *et al.* (2016) and Carbonneau; Caron; Desrosiers (2011) deliverers' data was vague (e.g. facilitators, interventionist). Chang (2014), Chang *et al.* (2014), Jordan *et al.* (2018), and Kao and Chang (2017) did not mention the deliverer of the program. Deliverers are encouraged

to develop multicultural abilities and competence in order to serve individuals from diverse backgrounds (DIESER, 2013). With regard to the setting, hospitals were prevalent followed by schools, maximum-security institution and participants' homes. Carboneau; Caron; Desrosiers (2011) and Chang (2014) did not mention their setting. When designing a leisure education program, some techniques were identified as useful to assist deliverers in effectively providing these services. In Ritcey *et al.* (2016), for instance, no significant differences were found between the intervention and the control groups. According to the authors, participants were abler and higher functioning than they first anticipated. Therefore, determining the appropriateness of leisure education contents, deliverers, delivery methods, settings and duration are essential techniques to consider when preparing and planning leisure education services. As stated by Wight *et al.* (2016), in order to improve the effectiveness of programs, a systematic approach to a program development is required, as well as rigorous evaluation. The authors suggested a six key steps process: (1) defining and understanding the problem; (2) identifying modifiable determinants; (3) deciding on how to bring about change; (4) clarifying how these will be delivered; (5) testing and adapting the intervention; and (6) collecting initial evidence of effectiveness.

To determine whether these leisure education programs effectively broaden leisure-related experiences, we analysed the instruments used on each study to assess outcomes of leisure education (Table 4). As mentioned previously, selecting an appropriate instrument is an important step in designing valid and useful programs (WIGHT *et al.*, 2016). The quality of a study's outcomes may be directly associated with adequate psychometric properties, which will ensure safety regarding the decision-making related to the program in question.



### **Reliability of the Instruments**

Reliability of an instrument refers to the extent to which it yields the same result if used repeatedly (HEALE; TWYACROSS, 2015; LAI, 2013; LOBIONDO-WOOD; HABER, 2014). Reliability coefficients range from 0.00 to 1.00, the closer Cronbach's Alpha coefficient is to 1.00, the greater the internal consistency of the items in each instrument. There is no consensus on the lower limit to the coefficient however, George and Mallery (2003) suggested the following: > 0.9 (excellent), > 0.8 (good), > 0.7 (acceptable), > 0.6 (questionable), > 0.5 (poor), and below 0.5 is unacceptable. Perhaps the Cronbach's Alpha (1951) is the most widely method for estimating internal consistency.

### **Validity of the Instruments**

Validity of an instrument is often defined as the extent to which an instrument measures what it purports to measure. Validity requires that an instrument is reliable, however, an instrument may be reliable without being valid. Evidence of validity is built over time, with validations occurring in different populations (HEALE; TWYACROSS, 2015; KIMBERLIN; WINTERSTEIN, 2008; LOBIONDO-WOOD; HABER, 2014).

In accordance with Table 4, the “feeling of self-efficacy” and “self-rated health assessment” neither reported evidence of reliability nor of validity. The “feeling of self-efficacy” was an adapted measurement instrument developed using the Bandura's method (BANDURA, 1982) to self-rate one's health with a single item: “Overall, how would you rate your health at present”. Although there was no evidence of reliability or validity, Bandura's method has been successfully used to develop self-efficacy measurements (BANDURA, 2006). The “relationship reward measure”, “Butler's



measure”, and “Vaquera’s measure” demonstrated satisfactory evidence of reliability, however evidence of validity was unavailable. Unreliable or invalid instruments may harm a study to a similar extent as a poor study design or inadequate sample size (KIMBERLIN; WINTERSTEIN, 2008) and, compromise decision making, leading to deleterious outcomes (MAYO, 2015). Psychometric instruments should be reliable, valid, standardised and free from bias (KIMBERLIN; WINTERSTEIN, 2008; MOKKINK *et al.*, 2010). It is important to note that evidence of reliability (consistently) or validity (accurately) from instruments is applicable only if the researchers follow the same administration procedures as used in the validation study. Otherwise, instruments must undergo psychometric testing before being utilised in another research study (LOBIONDO-WOOD; HABER, 2014; MAYO, 2015).

The present study identified that Chang (2014), Chang; Yu; Jeng (2014), Jordan *et al.* (2018) and Kao and Chang (2017) had retested some instruments prior to their use. However, some other instruments had only been tested by the original author of the instrument or by different audiences (CARBONNEAU; CARON; DESROSIERS, 2011; DESROSIERS *et al.*, 2007; MAHON; SEARLE, 1994; MUNSON, 1988; RITCEY *et al.*, 2016). Lovell; Datillo; Jekubovich (2008) and Zoerink *et al.* (1991) neither performed a reliability or validity testing nor reported if the selected instruments underwent psychometric testing (Table 5). Interestingly, Zoerink *et al.* (1991) collected data mean scores (pretest vs posttest) were not statistically significant. In other words, the lack of specific psychometric testing may represent an important challenge with regard to enabling satisfactory programs and outcomes.

The present review is valuable for multiple reasons. First, it characterised studies that developed leisure education programs. Second, it gathered and analysed the processes (design, evaluation and outcomes) of each program. Third, it analysed

whether the psychometric instruments used in evaluating outcomes of these programs had satisfactory psychometric properties. Psychometric instruments may be a useful strategy to not only provide feedback on the effectiveness of a program but also to help determine whether there are any issues that need to be resolved as the program is implemented (COSTER, 2013). Finally, studies such as the current review may provide brief discussion of factors to consider when designing and implementing leisure education programs. Several criteria tools are available to provide guidance on how to assess the methodological quality of reporting and estimate psychometric properties such as criteria tools proposed by Mokking *et al.* (2010) and Terwee *et al.* (2007).

## **Conclusion**

The syntheses of the studies' basic characterisation and analyses of their processes regarding the development of the leisure education programs and the instruments used for evaluating the outcomes may guide the development of a program with respect to the content, delivery method, deliverer, setting and duration. Enabling users, researchers and specialists to access a diversity of developed programs regarding what has or not been designed recently. According to the analysed studies, although their design were slightly different, they all strived to enhance the leisure experiences of the audience for which they were developed. It is worth remembering that a systematic approach to a program development is required in order to guarantee the effectiveness of a program. Additionally, professionals must assess and demonstrate the usefulness of these programs. However, evaluating methods such as psychometric instruments must be valid, reliable and free from biases in order to produce trustworthy outcomes. Only five instruments used were not tested for their validity or reliability. Hopefully, the present study will help to empower these professionals to access the processes (e.g.

design, evaluation and outcomes) that are involved in programs development and, if carefully addressed, they may avoid costly evaluation, or program implementation of unpromising leisure education programs. These elements may be of valuable use when preparing and planning leisure education services. Some limitations should be outlined: the databases, keywords and Boolean operators selected for the present review could have not covered a variety of programs. The findings of the present study suggest that further research deepening the processes (design, evaluation and outcomes) as well as the knowledge, accuracy and potential involved in leisure education programs are needed. We, therefore, recommend for future studies to diverse and alter the databases, keywords and Boolean operators, and to extend approaches beyond examining the design, evaluation and outcomes of the interventions by considering additional features of the programs and instruments that may effectively and precisely contribute to the quality of research and programs' design, evaluation and outcomes. Thus, allowing deepening and generalisation of the findings.

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